



The future burden of obesity-related diseases in the 53 WHO European-Region countries and the impact of effective interventions: A modelling study

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**The future burden of obesity-related diseases in the 53 WHO
European-Region countries and the impact of effective interventions:
A modelling study.**

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Disclaimer

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ABSTRACT

Objectives: This paper utilises a sophisticated modelling approach to project the future burden of Coronary Heart Disease (CHD), stroke, type 2 diabetes and seven cancers to 2030 in all 53 WHO European-Region countries based on current and past obesity trends. It also tests the eventual impact of effective obesity interventions upon the future disease burden.

Setting: Body Mass Index (BMI), and disease incidence and mortality data were sourced from country statistics databases, published sources or contact with authors and country representatives. A two module, microsimulation modelling process was used to simulate longitudinal projections to 2030. The effect of three hypothetical interventions on the future burden of disease were tested: Baseline intervention, BMI trends go unchecked; intervention 1, BMI trends decrease by 1%; intervention 2, BMI levels decrease by 5%.

Participants: Data by age and sex were sourced for each of the 53 WHO-European region countries, however where these were not available other 'proxy' country data were used.

Results: By 2030, rates of diabetes, and CHD and stroke are projected to reach an average of 2354 and 1604 cases respectively per 100,000 of the population across Europe. The highest increased incidence of diabetes was predicted in Slovakia reaching over 3000 cases per 100,000 of the population. For CHD and stroke the highest projected incidence was in Austria, Latvia and Turkey where >2500 cases were predicted by 2030.

Conclusion: Obesity-related non-communicable diseases are increasing. Modelling future disease trends is important for policy makers in realistically allocating resources and implementing policies that prevent disease incidence. Future research will allow real policy interventions to be tested, however better surveillance data on NCDs and their risk factors are particularly important if accurate estimates of future trends are to be quantified.

STRENGTHS AND LIMITATIONS

- Use of a dynamic, microsimulation model to project obesity trends and related diseases in all 53-WHO Euro-region countries allowing quantification of the disease burden
- The model also forecasts future healthcare costs and the cost-effectiveness of specific interventions creating a useful tool for policy makers in planning future health expenditure.
- A paucity of surveillance data in some countries means that projections are less accurate than countries with more current and detailed data.
- Childhood obesity trends were not included due to the lack of data availability
- A key assumption of the model is that people do not reverse in the BMI categories. At a population level this generally reflects reality.

BACKGROUND

Noncommunicable diseases such as cardiovascular and respiratory disease are the highest cause of death globally (1). In 2008 the World Health Organization (WHO) estimated that mortality from diseases such as heart disease, stroke, chronic lung disease, cancer and diabetes totalled 36.1 million (2). As a result, global leaders made a political declaration to provide a coordinated response to preventing and controlling NCDs at the UN High-Level Meeting on NCDs in September 2011 (3). Nine global voluntary targets were set that aimed to reduce NCDs. The mortality goal pledges to reduce premature mortality from NCD by 25% by 2025 (the 25 by 25 goal) (4).

NCDs are particularly high on the European parliament's agenda since they account for 86% of deaths and 77% of disease burden (2), and this burden is addressed in Health 2020, the new European Policy (5). Health 2020 highlights the stark inequality in across Europe, where the risk of NCDs is higher in individuals from the most disadvantaged groups since they have poorer access to health care and fewer resources such as education, employment, and housing making choosing healthy lifestyles more difficult. The WHO European Region is determined to take forward the UN political declaration to reduce avoidable deaths from NCDs turning the declaration into action and the WHO is working to provide public health tools that help all countries across the broader European region to implement more effective programmes based on an extensive reflection process(5).

The causes of NCDs are genetic, behavioural and environmental (6). Rapid changes in health related behaviours in recent decades has seen an upsurge in NCD prevalence (7) through modifiable lifestyle factors such as diet and exercise. Market forces driving down costs of high calorie fatty, salty and sugary foods have made them cheap and readily available resulting in increased consumption and

expanding waistlines. In addition, advances in technology such as motorised transport and television have promoted sedentary lifestyles and reduced physical activity (8). Interventions that are able to tackle important risk factors such as obesity are likely to have a positive impact upon NCD prevalence and premature mortality caused by NCDs.

5 Projections from the UK show that effective behavioural interventions will be effective in reducing future incidence of diseases such as coronary heart disease, stroke, type 2 diabetes and some cancers. For example, reducing body mass index (BMI) by 1% across the population (equivalent to 1kg weight loss) was estimated to substantially reduce health burden, saving 179,000-202,000 incident cases of type 2 diabetes, 122,000 cases of cardiovascular diseases and 32,000-33,000 incident cases of cancer over 20 years(9). Data from Russia showed that obesity rates are predicted to increase to as high as 76% in males by 2050, and rates of CHD and Stroke will reach 12,723 cases per 100,000 of the population (10). Similar projections have been carried out in other European countries (11): though to our knowledge estimates of the future burden of obesity-related diseases in all European countries have not been carried out.

15 There is, therefore a new threat menacing recent progress in NCD mortality and morbidity which needs to be quantified and this study ignites this discussion within the context of health impact models. This study also hypothesises that while reduction in the burden of NCDs has been sustained, obesity is actually threatening those gains. As such this study updates and extends this work by using a microsimulation model to project NCD trends to 2030 in all 53 Euro-region countries and assesses the impact of two hypothetical interventions, intervention 1: a 1% reduction in population BMI and intervention 2: a 5% reduction in population BMI, upon the future incidence of CHD and Stroke, type 2 diabetes and obesity-related cancers.

25 SETTING AND PARTICIPANTS

BMI data extraction

Online databases (Global database on Body Mass Index (12), EU members' statistical office databases, Pubmed (13) and Science Direct (14)) were searched for published data on age and sex-specific country obesity prevalence data presented according WHO definitions of normal weight, overweight and obesity (ref WHO database). Article references were also searched and individual researchers and public health officers were contacted for further data. A table of BMI references are

presented in appendix 1 and methods of BMI data manipulation are explained in appendix 2 of the supplementary information.

Disease data sources

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A second review of statistical databases and literature was carried out to locate country-specific incidence, prevalence, survival and mortality data for CHD, stroke and obesity-related cancers (colorectal, pancreas, breast, kidney, liver, corpus uteri and oesophageal) as well as incidence and/or prevalence data of type 2 diabetes.

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Where prevalence, but not incidence, data were available by age and sex the prevalence was converted to incidence using equations devised for DISMOD II software (15). Where neither incidence nor prevalence data were available data from a proxy country were used. CHD incidence was often rare, so UK, Georgia, Spain, Russia, Uzbekistan incidence data were used as proxies for countries with a similar geographical location or had comparable average prevalence rates. For example, for CHD data Russian data were used as a proxy for Belarus; and Uzbekistan data were used for Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan. Greater detail of which countries were used as proxies is presented in appendix 3. For fatal diseases the ratio of the target-to-proxy countries' mortality rates was used to scale the proxy country's incidence rates. For type 2 diabetes proxy country data were adjusted for the different population BMI-distributions.

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For survival data, the probability of survival, p , for a number of years, T , after acquiring a fatal disease was modelled in one of two ways depending on the disease. Either as a simple exponential distribution $p=e^{-RT}$, or as an exponential distribution allowing for different probability, p_1 , of survival in the first year, $p = p_1 e^{-R(T-1)}$. Stroke used the latter model; other fatal diseases the former. Disease survival statistics consist of the rate R or the rate R together with the first year survival probability p_1 . These statistics are further classified by age group and gender. The rate R was usually inferred from quoted 5-year survival statistics.

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The relative risks of contracting each disease according to pre-obesity (BMI 25-29.9 kg/m²) and obesity (BMI 30≥ kg/m²) relative to normal weight (BMI 18.5-24.9 kg/m²) were taken from the International Association for the Study of Obesity (16).

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A table of disease references for each country is presented in appendix 3.

Statistical analysis

Detailed statistical analysis is described in appendix 4, Foresight: Tackling Obesities (17) and Wang and colleagues(9). A dual-module modelling process was carried out: Module one fits cross-sectional BMI data from each country using a non-linear multivariate, categorical regression model. Module two creates virtual country cohorts of 5,000,000 individuals using a microsimulation method to produce longitudinal projections to 2030 based on module one BMI distributions. Microsimulation is a computer modelling technique that works at the level of the individual; it generates individual life-histories of a specified population and this population reflects the age profile, birth, death and health statistics to make future projections. A BMI value is probabilistically assigned as a function of age, sex and calendar year and an individuals' BMI percentile in the same age cohort assumed to stay the same over time. Population size, births and deaths were also simulated in a large number of individuals as they age using data from the United Nations population statistics (18). Population pyramids are presented in appendix 5. Within the simulation, individuals are at greater risk of getting a particular disease each year if he or she did not have the disease at the beginning of the year. Individuals can continue living with the disease or die from it (if it is fatal). The software for this program was written in C++ (19).

To estimate the disease burden associated with the trends in overweight and obesity, as well as the effect of possible interventions, future increases in obesity-related diseases were projected from 2010 to 2030, using three different trend interventions: intervention 0: obesity trends go unchecked; intervention 1: obesity levels decrease by 1% and intervention 2: obesity levels decrease by 5%. The cumulative incidence cases avoided for the whole of Europe was analysed by summing the weighted average of incidence for each country.

RESULTS

Only 36 countries had three or more years of BMI data. Less than or equal to two points of BMI data were available for the remaining 17 countries (Albania, Andorra, Belarus, Bosnia, Croatia, Cyprus, Georgia, Hungary, Macedonia, Monaco, Montenegro, Romania, San Marino, Serbia, Slovenia, Tajikistan and Turkmenistan) so results in this instance are interpreted with caution.

Alongside obesity, obesity-related diseases are projected to increase in almost all countries. Figure 1 presents the average projected prevalence rates for Europe (weighted for total population) by intervention. A 1% reduction in population BMI would result in an average of 1575 CHD & stroke prevalence cases per 100,000 of the population in Europe. This is a prevalence gain of 29 cases per

100,000, equating to a 1.8% reduction. A 5% reduction in population BMI would result in an average of 2021 cases of type 2 diabetes by 2030 per 100,000 of the population in 2010. This is a reduction in prevalence of 333 cases per 100,000, equating to a 16% reduction across Europe relative to intervention 0 (rates continue unabated). There was wide variability between countries.

- 5 Figure 2 shows the projected prevalence to 2030 of each disease by country per 100,000 of the population in 2010. The highest projected prevalence of cancers was observed in Finland with 5615 cases per 100,000 of the population in 2010. The highest projected prevalence of CHD and stroke was observed in Greece with 11,292 cases and the highest projected prevalence of type 2 diabetes was in Slovakia with 10,870 cases per 100,000 of the population in 2010.
- 10 Figure 3 presents the European average cumulative incidence gains by 2030 for each disease given a 1% or 5% reduction in population BMI relative to intervention 0 (rates continue unabated). A 1% reduction in BMI would result in an average of 56 cases of cancer per 100,000 of the population in 2010 being gained by 2030. A 5% reduction in population BMI would result in the avoidance of 1153 cumulative incidence cases of CHD and stroke per 100,000 of the population by 2030.
- 15 Data tables for each country displaying cumulative incidence cases, cumulative incidence cases avoided, prevalence cases and prevalence cases avoided per 100,000 of the population are presented in appendix 6.

CONCLUSION

- 20 This study used a microsimulation model to test the impact of effective interventions that reduce population BMI upon the future burden of disease. With only a few exceptions, obesity rates across the 53 countries were projected to increase by 2030. This is worrying given the extent of the related disease burden associated with obesity. There appeared to be very little pattern to the projected disease trends regionally across Europe.

- Because of increasing obesity trends our findings suggest that in 20 years an increasing number of people will be living with an obesity-related chronic disease in almost every county in Europe. Interestingly, there was sometimes a rapid increase from 2010 to 2020 then a steadier increase to 2030. Birth rates are low across Europe with most total fertility rates (TFR) below 2. This means that the population is ageing with fewer young people. Only Azerbaijan (2.12), Israel (2.62), Tajikistan (3.13) and Uzbekistan (2.19) have TFRs above 2. Projecting further we may observe a dip in

prevalence rates as those with the disease die while there are fewer younger people to contract the disease. Differences in the population profiles across countries may therefore result in different estimates even if current disease incidence is comparable. Population profiles for each country are illustrated in appendix 5 of the supplementary information.

- 5 Obesity-related cancers are rare and have relatively low rates compared with the other diseases. However, rates are projected to increase. Recent trends in cancer survival across Europe between 2000 and 2004 reported that the survival of breast cancer was lower in Eastern Europe (Poland, Estonia, Slovenia) than elsewhere in Europe (20). Screening and medical advances and less access to effective treatment are likely to account for differences with Western Europe.
- 10 Obesity is closely linked with insulin resistance and in recent years an epidemic of type 2 diabetes has evolved alongside rapid increases in obesity. In the UK alone, a continued increase in obesity is projected to add 6-8.5 million incidence cases of type 2 diabetes by 2030, at a substantial cost to the UK health system⁽⁹⁾. Rates of Coronary Heart Disease and Stroke too were projected to increase across most countries. Highest prevalence rates were seen in Greece (11,292 per 100,000 population) and the lowest in Spain (1030 per 100,000 population). However, since very little CHD data were available, UK data was often used as a proxy, possibly underestimating the rates of CHD in Europe. Where data were available (e.g. Ireland, Finland) much higher rates were predicted suggesting that rates may be underestimated when using UK data and interpretation of proxy data should be made with caution. Data for stroke incidence was mostly taken from estimates by
- 20 Truelson and colleagues (21). These data were compared with Estonia from the 2007 Tartu Stroke registry (22) and appear to be slightly inflated. Similarly, rates were higher in the Truelson estimates compared with Polish data from 2005-2006 so rates of stroke incidence maybe slightly overestimated.
- Quantification of the burden of NCDs is important both to patients and public health professionals because of the long-term consequences to patients' functioning and demand for health care(23). However, quantification via microsimulation is dependent upon good quality surveillance data yet the present study highlights the lack of up-to-date surveillance data – especially annual measured BMI from the same survey and disease incidence data. These data are necessary if national policies to control NCDs are to be appraised objectively. For some countries no satisfactory BMI data were
- 30 available so proxy country data were used (in the case of Member States with very small populations) or extrapolated from mean data (in the case of other countries). Some of the trends shown by the analysis have large confidence intervals due to the small number of data points used as well as the small sample sizes of some of the studies, and therefore the observed trends can only

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4 be indicative. Ideally the data should be measured, but for most countries we had to use studies in
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6 which anthropometry had been self-reported. This weakens the analysis, particularly if used in
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8 combination with measured data, because people tend to underreport their weight in interviews or
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10 surveys.

11 5 Relative risk data may also be limited in the extent to which they estimate the true impact of BMI on
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13 disease. Relative risks were taken from the International Association for the Study of Obesity (16) as
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15 these were deemed the best available at the time of development of the country models. However,
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17 there are limitations to these risks due to the lack of suitable metanalyses used to calculate them. It
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19 was assumed that the relative risk estimates are the same for all age groups since data were not
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21 always available by age. They are also based on both measured and self-reported data and do not
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23 account for ethnic differences in body composition. In the present study we included the same
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25 relative risk for each Member State; however given the paucity of epidemiological data on both BMI
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27 and disease within many of the countries of interest it is unknown whether this assumption is valid.

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15 Increased surveillance and monitoring of NCDs is one of the six key objectives of the WHO 2008-
2013 Global strategy for the Prevention and Control of Non-communicable Diseases (24). This
strategy aims to target governments in making policies that control and abate the increasing
prevalence of NCDs across Europe and our results provide further evidence for raising the priority of
NCD prevention. In particular, this study promotes the need for interventions that are effective in
reducing major NCD risk factors (objective 3 of the strategy). In addition to this, in early 2013 the
WHO formed a global monitoring framework which aims to track the progress of prevention of
major non-communicable diseases and their key risk factors and consists of nine global targets and
25 indicators adopted by the WHO Member States during the 66th World Health Assembly in May
2013.

The microsimulation models are easily adaptable to include new data when it becomes available
from such strategies. For example, we were not able to include data on children because of the
limited amount of standardised data but with initiatives such as the WHO Childhood Obesity
Surveillance Initiative (25) assessment of future childhood obesity trends will be possible. The
models can also forecast future healthcare costs and the cost-effectiveness of specific interventions
since our model incorporates our sophisticated economic module. Withrow and Alter (26) carried
out a systematic review of the direct costs of obesity and found that obesity accounted for 0.7-2.8%
of a countries total healthcare cost. Further, obese individuals have 30% higher healthcare costs
than non-obese individuals though little published data on healthcare costs exists. Another
important point of future work is to explore joint risk factors such as tobacco, physical activity and

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4 alcohol. Integration of these would be a valuable next step in quantifying the total life-style related
5 disease burden.
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8 A key assumption of the model is that people do not reverse in the BMI categories. At a population
9 level this generally reflects reality, where weight loss is often only temporary. However this
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11 5 assumption does not take into account future changes in circumstances, such as fluctuations in food
12 prices. It relies on our best estimate based on previous trends. That said, this approach allows for
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14 future trends to be forecast so that policy makers can plan interventions and allocate resources
15 appropriately.
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18 It is clear that tackling NCDs and obesity is a major challenge across Europe placing unsustainable
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20 10 burden on struggling health systems. Governments need to initiate change that effectively reduces
21 key risk factors such as obesity through preventative measures such as food tax, industry pledges
22 and reduced junk food marketing that may go some way into reducing obesity-related mortality.
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24 Primary prevention is crucial if increasing trends are to be averted (27).
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Data sharing

Data used in these analyses are from published sources and can be accessed upon request.

Competing Interests

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

Contributorship

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

LW and DD carried out the acquisition, analysis and interpretation of data for the work in this study and drafted the manuscript. TM, JB, KM, GG contributed to the conception and design of this study. JB, GG, TM, MB, KM revised the document for important intellectual content.

All authors edited and approved the final version of this manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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FIGURE LEGENDS

Figure 1. Total projected prevalence rates by 2030 per 100,000 of the population in 2010 for all 53 Euro-region countries.

Figure 2. Projected disease prevalence of diabetes, CHD & Stroke, cancers per 100,000 of the population by 2030 by country.

Figure 3. Projected incidence gain in 2030 by disease and intervention per 100,000 of the population in 2010

Figure 4. Projected cumulative incidence gain per 100,000 of the population by 2030 in each of the 53 Euro-region countries given a 5% reduction in population BMI.

APPENDICES

Appendix 1: A table of BMI references

Appendix 2: BMI manipulation methods

Appendix 3: Disease references

Appendix 4: Detailed statistical methods

Appendix 5: Population pyramids

Appendix 6: Data tables presenting prevalence rate, prevalence gains, cumulative incidence cases and incidence cases avoided by 2030 for each country.

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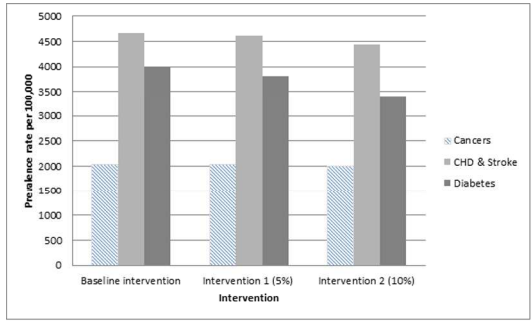


Figure 1. Total projected prevalence rates by 2030 per 100,000 of the population in 2010 for all 53 Euro-region countries.
304x171mm (300 x 300 DPI)

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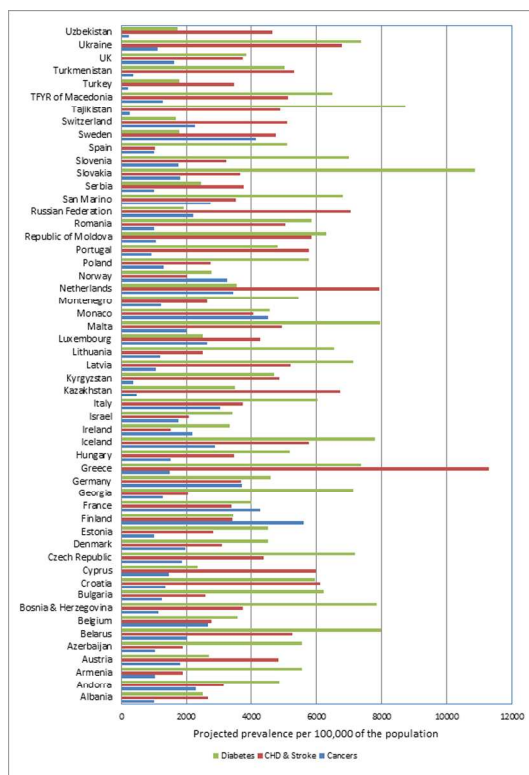


Figure 2. Projected disease prevalence of diabetes, CHD & Stroke, cancers per 100,000 of the population by 2030 by country.
304x234mm (300 x 300 DPI)

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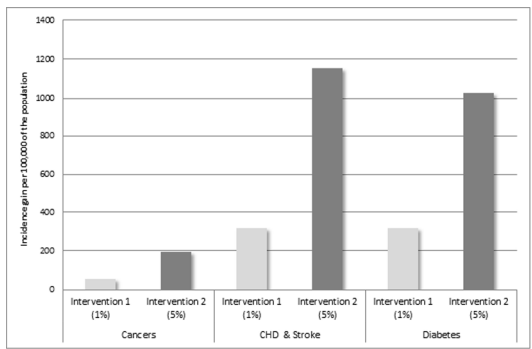


Figure 3. Projected incidence gain in 2030 by disease and intervention per 100,000 of the population in 2010
304x234mm (300 x 300 DPI)

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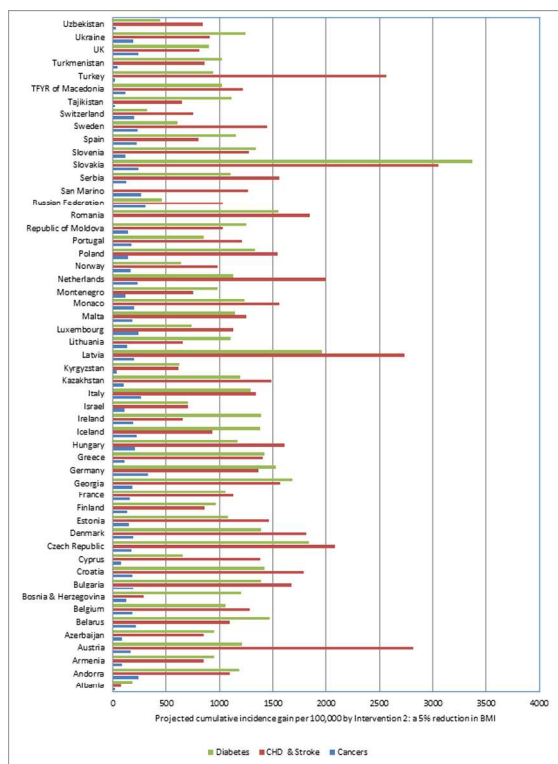


Figure 4. Projected cumulative incidence gain per 100,000 of the population by 2030 in each of the 53 Euro-region countries given a 5% reduction in population BMI.
304x234mm (300 x 300 DPI)

Appendix 1 Table of BMI references for each country

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Albania	Shapo et al, 2003 Demographic and Health Survey	2001	535	585	24-65+	Measured	Regional
		2009	2972	7330	15-49	Measured	National
Andorra	No BMI data, Spain proxy adjusted for Monaco population size and structure						
Armenia	Demographic and Health Survey	2000	-	5962	15-49	Measured	National
	Personal communication B. Roberts	2001	745	1049	18-60+	Self-reported	National
	Demographic and Health Survey	2005	-	6016	15-49	Measured	National
	Personal communication B. Roberts	2010	789	932	18-60+	Self-reported	National
Austria	Health Statistics Austria, 2002	1999	3368	3624	15-100	Self-reported	National
	Schwarz, Abdominal Obesity and Cardiometabolic Risk Factors in Austria, 2007	2006	528	526	30-74	Self-reported	National
	Klimont et al, Österreichische Gesundheitsbefragung, 2006/2007	2007	2914	3203	20-100	Self-reported	National
Azerbaijan	WHO ¹ : Reproductive Health Survey	2001	-	1772	20-44	Measured	National
	Demographic and Health Survey	2006	2382	7793	15-49	Measured	National
	Personal communication B. Roberts	2010	789	821	18-60+	Self-reported	National
	Azerbaijan Statistical yearbook 2012	2011	2056	2194	15-65+	Unknown	National
Belarus	Personal communication B. Roberts	2001	758	925	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	764	991	18-60+	Self-reported	National
Belgium	Belgian Health Interview Survey, 1997	1997	3934	4137	15-100	Self-reported	National
	Belgian Health Interview Survey, 2001	2001	4582	4809	15-100	Self-reported	National
	Belgian Health Interview Survey, 2004	2004	4836	5483	15-100	Self-reported	National
	Belgian Health Interview Survey, 2008	2008	4093	4738	15-100	Self-reported	National
Bosnia and Herzegovina	WHO: Laatikainen T et al, 2002	2002	1118	1613	25-64	Measured	National
	Estimated from Global Burden of Disease mean data ²	2008					
Bulgaria	WHO; Survey of the Health Status of the Population	2001	8008		25-74	Self-reported	National
	WHO; Petrova et al 2006	2004	515	516	25-74	Self-reported	National
	Eurostat database: Health Interview Survey 2008 Bulgaria	2008	5664		25-84	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Croatia	WHO; Budak, 2003	97-99	1967	2982	0-100	Measured	National
	WHO; Croatian Adult Health Survey	2003	2878	6162	18+	Measured	National
Cyprus	Statistical Service Cyprus, personal communication	2003	267866	284397	15-100	Self-reported	National
	Statistical Service Cyprus, personal communication	2008	277077	300761	15-100	Self-reported	National
Czech Republic	WHO; Sample Survey of the Health Status of the Czech Population HIS CR 1993	1993	734	833	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population 1996	1996	1031	1123	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population HIS 1999	1999	1603	1760	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population HIS 2002	2002	1142	1284	20-74	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Czech Republic	2008	940	1015	20-74	Self-reported	National
Denmark	SUSY 2000, National Institute of Public Health	2000	8126	8275	16-100	Self-reported	National
	Ekholm et al, Health and mortality survey Denmark, 2005	2006	7046	7441	16-100	Self-reported	National
	SUSY 2010, National Institute of Public Health	2010	79347	92873	16-100	Self-reported	National
Estonia	Unpublished data obtained from Mare Tekkel	1998	561	743	16-64	Self-reported	National
	Kasmel et al. Health behaviour among Estonian adult population, spring 2000	2000	547	790	16-64	Self-reported	National
	Kasmel et al. Health behaviour among Estonian adult population, spring 2002	2002	542	779	16-64	Self-reported	National
	Tervise Arengu Instituut, Health behaviour among Estonian adult population	2004	1299	1743	16-64	Self-reported	National
	Tekkel et al. Health Behavior among Estonian Adult Population, 2006	2006	1112	1706	16-64	Self-reported	National
	Tekkel et al. Health Behavior among Estonian Adult Population, 2008	2008	1248	1702	16-64	Self-reported	National
	Tekkel and Veideman, Health Behaviour among Estonian Adult Population 2010	2010	1227	1760	16-64	Self-reported	National
Finland	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 1998	1998	1689	1816	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 1999	1999	1523	1801	15-64	Self-reported	National
	WHO; Raitarki et al, Distribution and determinants of serum high-sensitive C-reactive protein	2001	1026	1193	20-39	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2002	2002	1462	1757	15-64	Self-reported	National
	WHO ; Helakorpi et al, Health behaviour among Finnish adult population, 2003	2003	1516	1819	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2004	2004	1520	1805	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2005	2005	1500	1727	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2006	2006	1450	1761	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2007	2007	1397	1789	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2008	2008	1346	1776	15-64	Self-reported	National
	Helakorpi et al, Health behaviour among Finnish adult population, 2009	2009	1240	1620	15-64	Self-reported	National
Helakorpi et al, Health behaviour among Finnish adult population, 2010	2010	1221	1539	15-64	Self-reported	National	
Helakorpi et al, Health behaviour among Finnish adult population, 2011	2011	1181	1565	15-64	Self-reported	National	

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
France	Maillard et al, Trends in the prevalence of obesity in the French adult population, 1999	1992	7250	7856	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	1997	-	-	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2000	-	-	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2003	25770		18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2006	-	-	18-100	Self-reported	National
	Eurostat database; Health Survey 2008 France	2008	3115		18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2009	-	-	18-100	Self-reported	National
Georgia	Personal communication B. Roberts	2001	874	994	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	728	1134	18-60+	Self-reported	National
Germany	WHO; Hoffmester et al, National trends in risk factors for CVD in Germany, 1994	1991	2556	2715	25-69	Measured	National
	Microcensus 1999, Federal Statistics Office, personal communication	1999	24513	25765	18-100	Self-reported	National
	Microcensus 2003, Federal Statistics Office, personal communication	2003	24222	25235	18-100	Self-reported	National
	Microcensus 2005, Federal Statistics Office, personal communication	2005	25873	26654	18-100	Self-reported	National
	Nationale Verzehrs Studie II 2008, personal communication	2008	6117	7090	18-80	Self-reported	National
	Microcensus 2009, Federal Statistics Office, personal communication	2009	25112	25560	18-100	Self-reported	National
Greece	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	1998	4659710	5133801	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	1999	4428897	4912742	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2000	4398975	4831754	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2001	4360600	4867626	15-100	Self-reported	National
	WHO; Kapantais et al, 2004	2003	8234	9107	20-69	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2009	4369422	4618038	15-100	Self-reported	National
Hungary	WHO: Boros et al. National Health Interview Survey 2003	2003	2214	2741	25-64	Self-reported	National
	Eurostat database: Health Interview Survey 2008 Hungary	2009	5051		25-64	Self-reported	National
Iceland	Personal communication E. Gisladdottir	1990	557	577	15-80	Self-reported	National
	Personal communication E. Gisladdottir	2002	591	656	18-79	Self-reported	National
	Personal communication E. Gisladdottir	2007	2670	2995	18-79	Self-reported	National
	Personal communication E. Gisladdottir	2010	621	640	18-79	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Ireland	North/South Ireland Food Consumption Survey (NSIFCS)	1998	2688	3074	18-64	Self-reported	National
	Survey of Lifestyle, Attitudes and Nutrition in Ireland (SLAN)	2002	2164	3149	18-100	Self-reported	National
	Survey of Lifestyle, Attitudes and Nutrition in Ireland (SLAN)	2007	942	1224	18-100	Measured	National
	Growing Up in Ireland (GUI)	2008	6761	7799	18-100	Measured	National
	Combined NANS and GUI data	2009	8389	8415	18-100	Measured	National
	North/South Ireland Food Consumption Survey (NSIFCS)	2010	361	375	18-100	Measured	National
Italy	Calza et al, Obesity and prevalence of chronic diseases, personal communication	2000	55303	59716	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Stili di vita e condizioni di salute, 2004	2002	21851	23738	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Stili di vita e condizioni di salute, 2004	2003	21233	23151	18-100	Self-reported	National
	WHO; Gallus et al, Overweight and obesity in Italian adults, 2004	2004	1407	1525	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Health conditions and risk factors, 2007	2005	19384	21165	18-100	Self-reported	National
	Istituto Nazionale Di Statistica . La vita quotidiana nel 2006, personal communication	2006	19378	21169	18-100	Self-reported	National
	Istat database, personal communication	2007	19187	20822	25-100	Self-reported	National
	Istat database, personal communication	2008	23522	25437	18-100	Self-reported	National
	Istat database, personal communication	2009	23689	25592	18-100	Self-reported	National
	Istat database, personal communication	2010	19151	21060	25-100	Self-reported	National
Israel	Keinar-Boken et al, 2005	2000	1371	1410	15-64	Self-reported	National
	Personal communication with A. Ifrah	2002	3029	3287	18-64	Self-reported	National
	Personal communication with A. Ifrah	2004	1455	1910	18-64	Self-reported	National
	Personal communication with A. Ifrah	2008	1987	2199	21-64	Self-reported	National
	Personal communication with N. Goldberger	2009	4880	5451	21-64	Self-reported	National
Kazakhstan	WHO: Demographic and Health Survey	1999	-	2238	15-49	Measured	National
	Personal communication B. Roberts	2001	802	986	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	851	939	18-60+	Self-reported	National
	Personal communication S. Tazhybayev	2012	1299	2430	15-65+	Measured	National
Kyrgyzstan	WHO: Popkin BM and Martinchik AN, 1994	1993	2267	2647	18-100	Measured	National
	WHO: Demographic and Health Survey	1997	-	3518	15-49	Measured	National
	Personal communication B. Roberts	2001	845	988	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	870	930	18-60+	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Latvia	Pudule et al. Health behaviour among Latvian adult population, 2002	2002	856	1091	15-64	Self-reported	National
	Unpublished data obtained from Dace Krievkalne	2003	3189	3647	20-74	Self-reported	National
	Pudule et al. Health behaviour among Latvian adult population, 2004	2004	742	1014	15-74	Self-reported	National
	Pudule et al. Health behaviour among Latvian adult population, 2006	2006	665	873	15-74	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Latvia	2008	2867	3591	18-94	Self-reported	National
Lithuania	WHO; Grabauskas et al, 1998	1998	811	1044	20-64	Self-reported	National
	WHO; Grabauskas et al, 2000	2000	989	1183	20-64	Self-reported	National
	Grabauskas et al. Lithuanian health behaviour monitoring, 2002	2002	1650	1027	20-64	Self-reported	National
	Grabauskas et al. Health Behaviour among Lithuanian adult population, 2004	2004	757	1009	20-64	Self-reported	National
	Unpublished data obtained from Sigita Mačiukienė	2005	3801	5707	15-100	Self-reported	National
	Grabauskas et al. Health Behaviour among Lithuanian Adult Population, 2006	2006	704	1001	20-64	Self-reported	National
	Grabauskas et al, Health Behaviur among Lithuanian Adult Population, 2008	2008	715	994	20-64	Self-reported	National
Grabauskas et al, Health Behaviur among Lithuanian Adult Population, 2010	2010	578	1359	20-64	Self-reported	National	
Luxembourg	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	1995	-	-	16-64	Self-reported	National
	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	2005	-	-	16-64	Self-reported	National
	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	2008	-	-	16-64	Self-reported	National
Malta	WHO; Asciak et al, The first national health interview survey, 2003	2002	1844	2022	16-100	Self-reported	National
	National Health Survey 2007, personal communication	2007	151898	161082	18-65	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Malta	2008	-	-	18-100	Self-reported	National
Monaco	No BMI data, France proxy adjusted for Monaco population size and structure						
Montenegro	WHO: Health status and health needs in Serbia., 2002	2000	4458	4975	20-100	Measured	National
	Estimated from Global Burden of Disease mean data ²	2008					

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Netherlands	Netherlands Central Bureau voor de Statistiek	2000	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2001	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2002	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2003	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2004	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2005	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2006	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2007	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2008	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2009	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2010	-	-	16-100	Self-reported	National
Netherlands Central Bureau voor de Statistiek	2011	-	-	16-100	Self-reported	National	
Norway	WHO: Johansson et al, 1998	1994	1461	1559	16-100	Self-reported	National
	Health Interview Survey	1998	3456	3669	16-100	Self-reported	National
	Health Interview Survey	2002	3410	3417	16-100	Self-reported	National
	WHO: Hougen HC, 2006	2005	3401	3365	16-100	Self-reported	National
	WHO: Wilhelmsen , 2009	2008	3172	3293	16-100	Self-reported	National
Poland	WHO; CINDI 2003	1992	792	904	25-64	Measured	Subnational
	Eurostat database: National Health Interview Survey for Poland	1996	3137	9411	15-100	Self-reported	National
	Szponar et al. Household food consumption and anthropometric survey, 2003	2001	1949		19-100	Both	National
	Statistical Office Poland, personal communication	2004	19335	19446	15-70	Self-reported	National
	Statistical Office Poland, personal communication	2009	11932	14673	15-70	Self-reported	National
Portugal	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	1996	38504		18-75	Self-reported	National
	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	1999	38688		18-75	Self-reported	National
	WHO; Carmo et al, Overweigh and obesity in Portugal, 2008	2004	8116		18-64	Both	National
	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	2006	25348		18-75	Self-reported	National
Republic of Moldova	Personal communication B. Roberts	2001	816	973	18-60+	Self-reported	National
	Demographic and Health Survey	2005	-	7062	15-49	Measured	National
	Personal communication B. Roberts	2010	744	967	18-60+	Self-reported	National
Romania	Eurostat database: National Health Interview Survey 2002 Romania	2000		21200	15-100	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Romania	2008		18172	18-100	Self-reported	National

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Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/self-reported	National/regional data
			M	F			
Russian Federation	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1995	3364	4445	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1996	3288	4382	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1999	3399	4494	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2000	3497	4719	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2001	3859	5328	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2002	4034	5484	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2003	4089	5570	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2004	4113	5593	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2005	3997	5436	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2006	4969	6609	20-80+	Self-reported	National
Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2007	4950	6587	20-80+	Self-reported	National	
Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2008	4693	6402	20-80+	Self-reported	National	
Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2009	4708	6427	20-80+	Self-reported	National	
San Marino	No BMI data, Italy proxy adjusted for Monaco population size and structure						
Serbia	Grujic et al, 2002	2000	4458	4974	20-100	Measured	National
	Unpublished data obtained from Tatjana Pavlica	2001-07	1865	2382	20-100	Measured	Regional
Slovakia	Eurostat database: National Health Interview Survey 2002 Slovakia	2002	1569		15-64	Self-reported	National
	Annual Health Report, Slovak Public Health Authority, personal communication	2006	1393	1443	15-65	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Slovakia	2009	1457	1423	15-65	Self-reported	National
	Annual Health Report , Slovak Public Health Authority, personal communication	2010	1437	1438	15-65	Self-reported	National
Slovenia	Eurostat database: National Health Interview Survey 2002 Slovenia	2001	1097		15-100	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Slovenia	2007	2118		18-100	Self-reported	National
Spain	National Statistics Institute online database, National Health Survey 2003	2003	16296	17248	18-100	Self-reported	National
	National Statistics Institute online database, National Health Survey 2006	2006	16911	16478	18-100	Self-reported	National
	National Statistics Institute online database, National Health Survey 2009	2009	17558	17718	18-100	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Sweden	WHO; Swedish Survey of Living Conditions	1999	5587	5762	16-84	Self-reported	National
	WHO; Swedish Survey of Living Conditions	2001	5515	5838	16-84	Self-reported	National
	Statistics Sweden, personal communication	2004	2742	2849	16-84	Self-reported	National
	Statistics Sweden, personal communication	2008	11118		16-84	Self-reported	National
	WHO; Enkätundersökning 2009, Det nationella urvalet	2009	4570	5604	16-84	Self-reported	National
	Statistics Sweden, personal communication	2011	2633	2914	16-100	Self-reported	National
Switzerland	WHO: Enquete Suisse sur la Sante 2003	1992	6749	8150	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2003	1997	6716	7105	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2003	2002	8843	10629	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2009	2007	8339	10134	15-100	Self-reported	National
Tajikistan	Estimated from Global Burden of Disease mean data ² 1995 through 2008	1995-2008					
TFYR Macedonia	Estimated from Global Burden of Disease mean data ² 1995 through 2008	1995-2008					
Turkey	Erem et al, 2001	1998/99	1324	1322	20-100	Measured	Subnational
	Turkish Obesity and Hypertension Study, Hatemi et al, 2003	1999-2000	15144	4975	20-100	Measured	Subnational
	Yumuk et al, 2005	2001	5866	7000	20-100	Measured	Subnational
	Erem et al, 2004	2001-2002	2288	2728	20-69	Measured	Subnational
	Oguz et al, 2008	2004-2005	2110	2154	20-100	Measured	National
	Iseri et al, 2008	2007	2263	1942	20-85	Measured	National
Turkmenistan	Estimated from Global Burden of Disease mean data ³ 1995 through 2008	1995-2008					
Ukraine	WHO: CINDI programme, 2003	1995	788	892	25-64	Measured	Subnational
	Personal communication B. Roberts	2001	830	1229	18-60+	Self-reported	National
	WHO: Kravchenko et al, 2005	2002	-	856	15-49	Measured	National
	Personal communication B. Roberts	2010	794	1098	18-60+	Self-reported	National

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Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
UK	Health Survey for England	2000	3260	3703	16-100	Measured	National
	Health Survey for England	2001	6267	7414	16-100	Measured	National
	Health Survey for England	2002	2969	3509	16-100	Measured	National
	Health Survey for England	2003	6519	6570	16-100	Measured	National
	Health Survey for England	2004	2772	2812	16-100	Measured	National
	Health Survey for England	2005	3144	3184	16-100	Measured	National
	Health Survey for England	2006	6014	6074	16-100	Measured	National
	Health Survey for England	2007	3008	2983	16-100	Measured	National
	Health Survey for England	2008	6385	6450	16-100	Measured	National
	Health Survey for England	2009	2055	2045	16-100	Measured	National
Uzbekistan	Health Survey for England	2010	3563	3523	16-100	Measured	National
	WHO: Demographic and Health Survey	1996	-	4038	15-49	Measured	National
	Demographic and Health Survey Estimated from Global Burden of Disease mean data ²	2002 2008	2058	4967	15-65	Measured	National

¹ Denotes that data were taken from the WHO BMI database.

² http://www1.imperial.ac.uk/publichealth/departments/ebs/projects/eresh/majidezzati/healthmetrics/metabolicriskfactors/metabolic_risk_factor_maps/

Appendix 2. Methodology of BMI data manipulation

Computing BMI distribution from mean data

Assumptions

Assumption 1

For each data-year, y , $\log(\text{BMI})$ has a Normal distribution $N(\mu(y), \sigma(y))$.

Assumption 2

The value for $\mu(y)$ is taken as $\ln(\text{mean-BMI}_{\text{Ezzati}}(y))$

Assumption 3

The value for $\sigma(y)$ is obtained from the HSE data for that year and age-gender group by fitting a normal distribution to the $\log(\text{bmi})$ data and taking the ML estimate. This is a programmed function in the obesity_distribution program

For each year these assumptions allow the computation of

$$p_{ok} \equiv P(\text{BMI} < 25) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

$$p_{ow} \equiv P(25 < \text{BMI} < 30) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{\ln(25)}^{\ln(30)} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

$$p_{ob} \equiv P(30 < \text{BMI}) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{\ln(30)}^{\infty} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

Assumption 4

The 95% confidence intervals for the 3 p values above are derived from The Ezzati 95% confidence intervals for the mean, thus for $p(\text{BMI} < 25)$

$$\frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y) + \text{cl}(y))^2}{2\sigma^2(y)}\right) < P(\text{BMI} < 25) < \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y) - \text{cl}(y))^2}{2\sigma^2(y)}\right)$$

The difference between the upper and lower limits is taken as $4\sigma_{ok}$.

Similar relations for pre-obesity and obese give a data point for each year y :

$$\{(p_{ok}, \sigma_{ok}), (p_{ow}, \sigma_{ow}), (p_{ob}, \sigma_{ob})\}$$

Predicting BMI

The data set for the most recent 10 years of Ezzati data and associated HSE data σ -values are used as described to compile a Text Data Entry file for the obesity_distribution program.

Sample sizes, probabilities and variances

Imagine a population having some uniformly distributed characteristic q . The population is sampled N times resulting in n occurrences of the characteristic q . The posterior distribution of q is the beta distribution

$$p(q|N, n) = \frac{(N+1)!}{(N-n)!n!} q^n (1-q)^{N-n}$$

Equation 1

This Beta distribution is mathematically awkward to deal with directly and it is usual practice to approximate it by a Normal distribution. When it is valid to do so the best approximation is provided by a Normal distribution whose mean is the maximum likelihood estimate for q - the value for which the beta distribution has a maximum and is easily calculated as $\hat{q} = \frac{n}{N}$. The posterior distribution is

approximated as a Normal distribution with this value as its mean, it has the variance $\hat{\sigma}^2 = \frac{1}{N} \hat{q}(1-\hat{q})$.

[This approximation is obtained by writing $q^n (1-q)^{N-n} = \exp(n \ln q + (N-n) \ln(1-q))$ and expanding the argument of the exponential as a Taylor series about \hat{q} as far as terms quadratic in $(q - \hat{q})$.]

This is OK provided that \hat{q} is neither very close to zero or very close to 1, in which case this approximation of q 's beta distribution as a Normal distribution with mean \hat{q} is not valid. In these circumstances it is better to approximate the posterior distribution as a Normal distribution having mean and variance as given by the actual mean and variance of the Beta distribution, namely

$$\hat{q} = \frac{(n+1)}{(N+2)}$$

$$\hat{\sigma}^2 = \frac{(n+1)(N-n+1)}{(N+1)(N+2)(N+3)}$$

Equation 2

Note that, when $N \gg n$, these approximations agree; Equation 2 has the advantage that n can take the value 0.

Means and distributions

Suppose BMI is distributed in the range 15-45 and that it has a mean m . If it is assumed that the distribution, $\rho(\text{bmi})$, is uniform for $15 < \text{bmi} < B$ and for $B < \text{bmi} < 45$ then we have

$$\rho = \begin{cases} \alpha & \text{for } 15 < b < B \\ \beta & \text{for } B < b < 45 \end{cases}$$

The condition that the distribution must integrate to unity is,

$$\int_{15}^{45} \rho db = \alpha(B-15) + \beta(45-B) = 1$$

The condition that it has the required mean is,

$$\int_{15}^{45} \rho b db = \frac{1}{2}\alpha(B - 15)(B \pm 15) \pm \frac{1}{2}\beta(45 - B)(45 \pm B) = m$$

These equations can be solved for α and β ,

$$\alpha = \frac{45 \pm B - 2m}{30(B - 15)}, \quad \beta = \frac{2m - B - 15}{30(45 - B)}$$

The probability that a person has a bmi: $p(\text{bmi} < B) = (45 \pm B - 2m)/30$; $p(\text{bmi} > B) = (2m - B - 15)/30$

When $B=25$ these values are $(35-m)/15$ and $(m-20)/15$ respectively

OTF-type distributions

Suppose the distribution is

$$p(\text{bmi}) = \begin{cases} p_1, & b_0 < \text{bmi} < b_1 \\ p_2, & b_1 < \text{bmi} < b_2 \\ p_3, & b_2 < \text{bmi} < b_3 \end{cases}$$

Equation 3

Typically $b_0=15, b_1=25, b_2=30, b_3=45$.

Because it is a distribution, the sum of the probabilities $\{p_i\}$ must add to 1:

$$p_1 \pm p_2 \pm p_3 = 1$$

Equation 4

The mean, m , is calculated as:

$$p_1(b_0 \pm b_1) \pm p_2(b_1 \pm b_2) \pm p_3(b_2 \pm b_3) = 2m$$

Equation 5

If we know the mean and we want to determine the 3 probabilities we need one other equation.

Suppose we know one of the p 's – p_3 say. The other p -values are calculated as

$$p_1 = \frac{(b_1 \pm b_2) \pm p_3(b_3 - b_1) - 2m}{(b_2 - b_0)}, \quad p_2 = 1 - p_3 - p_1$$

If, instead, we knew p_1 then the other values are given as

$$p_2 = \frac{(b_2 \pm b_3) \pm p_1(b_1 - b_2) - 2m}{(b_3 - b_1)}, \quad p_3 = 1 - p_1 - p_2$$

And, finally, if we know p_2 :

$$p_3 = \frac{(b_3 \pm b_1) \pm p_2(b_2 - b_3) - 2m}{(b_1 - b_2)}, \quad p_1 = 1 - p_2 - p_3$$

[These are obtained by cyclically permuting the indices 1,2,3]

BMI distributional data – age group standardisation

BMI data is quoted for a variety of age groups and BMI groups. The idea is to break this down into a standardised set of age groups and BMI groups. The standardised age groups will be 5 year age groups:

20-24, 25-29, 30-34, 35-39, etc.

The BMI groups will be the standard IOTF set: bmi<25 (ok), 25<bmi≤29.9 (pre-ob), bmi≥30 (ob).

Example

Given the measured data

Age group	Bmi group	Year	Sample size	probability	variance
20-39	ok	Y_1	N_{ok}	P_{ok}	$P_{ok}(1-P_{ok})/N_{ok}$
20-39	pre-ob	Y_1	N_{po}	P_{po}	$P_{po}(1-P_{po})/N_{po}$
20-39	ob	Y_1	N_{ob}	P_{ob}	$P_{ob}(1-P_{ob})/N_{ob}$

We assume that the different five year age groups are uniformly distributed among the 20 year age group and that each five year age group has the same proportion of ok/pre-ob/ob as the 20 year age group. The only difference is that the sample size must be reduced appropriately for the smaller age groups.

Age group	Bmi group	Year	Sample size	probability	variance
20-24	ok	Y_1	$N_{ok}/4$	P_{ok}	$4P_{ok}(1-P_{ok})/N_{ok}$
25-29	ok	Y_1	$N_{ok}/4$	P_{ok}	$4P_{ok}(1-P_{ok})/N_{ok}$
30-34	ok	Y_1	$N_{ok}/4$	P_{ok}	$4P_{ok}(1-P_{ok})/N_{ok}$
35-39	ok	Y_1	$N_{ok}/4$	P_{ok}	$4P_{ok}(1-P_{ok})/N_{ok}$
20-24	pre-ob	Y_1	$N_{po}/4$	P_{po}	$4P_{po}(1-P_{po})/N_{po}$
25-29	pre-ob	Y_1	$N_{po}/4$	P_{po}	$4P_{po}(1-P_{po})/N_{po}$
30-34	pre-ob	Y_1	$N_{po}/4$	P_{po}	$4P_{po}(1-P_{po})/N_{po}$
35-39	pre-ob	Y_1	$N_{po}/4$	P_{po}	$4P_{po}(1-P_{po})/N_{po}$
20-24	ob	Y_1	$N_{ob}/4$	P_{ob}	$4P_{ob}(1-P_{ob})/N_{ob}$
25-29	ob	Y_1	$N_{ob}/4$	P_{ob}	$4P_{ob}(1-P_{ob})/N_{ob}$
30-34	ob	Y_1	$N_{ob}/4$	P_{ob}	$4P_{ob}(1-P_{ob})/N_{ob}$
35-39	ob	Y_1	$N_{ob}/4$	P_{ob}	$4P_{ob}(1-P_{ob})/N_{ob}$

The standardised data can then be combined for different years

Comparison of means

Suppose we have two means m_1, m_2 with variances σ_1^2, σ_2^2 which are supposed to be Normally distributed. The test for them being 'the same' is that the ratio, $\frac{m_1 - m_2}{\sqrt{\sigma_1^2 + \sigma_2^2}}$, should be suitably small –

typically it should lie between ± 1.96 (1.96 is approximately 2; it occurs here because 95% of a zero mean, unit variance, Normal distribution $N(x; 0, 1)$ lies in the region $|x| < 1.96$ and the normalised difference of the two means has a zero mean, unit variance, Normal distribution).

The mean of a BMI distribution of the form of Equation 3 is given by Equation 5.

For the Imperial College/Ezzati website,

<http://www1.imperial.ac.uk/publichealth/departments/ebs/projects/eresh/majidezzati/healthmetrics/metabolicriskfactors/>

the link [Download the numerical results \(by age group\)](#) produces an excel spread sheet for mean BMI values by year with 95% upper and lower UI [Uncertainty intervals].

Denoting the upper and lower UI by UI_{\pm} and UI_{-} , the associated standard deviation σ is given by the equation

$$\sigma = (UI_{\pm} - UI_{-})/3.92$$

So, for any given year for which we have data, the means can be tested. The value of the zero mean, unit variance residual statistic, $\frac{m_1 - m_2}{\sqrt{\sigma_1^2 \pm \sigma_2^2}}$ should be recorded

Calculating the variance of the mean

Suppose we have a distribution (Equation 3) in which the variances of p_1 and p_2 are s_1^2 and s_2^2 respectively. The mean of the distribution is given by equation 2, the variance of the mean is given by

$$\sigma^2 = \frac{1}{4}(b_0 \pm b_1 - b_2 - b_3)^2 s_1^2 \pm \frac{1}{4}(b_1 - b_3)^2 s_2^2$$

Equation 6

The optimal inclusion of dissimilar (complementary) data

Suppose we have two measurements $N(p_1, s_1^2)$ and $N(p_2, s_2^2)$ for, say, the percentage obese for two sections of a community – e.g rural and urban, male and female. Suppose that the rural population has n_1 members and the urban population has n_2 members. Thus, a person drawn at random from the whole population has a probability π_1 of being rural and π_2 of being urban where

$$\pi_1 = \frac{n_1}{n_1 \pm n_2}, \quad \pi_2 = \frac{n_2}{n_1 \pm n_2}$$

The probability (and variance) the same random person being obese is

$$p(\text{obese}) = p(\text{obese}|\text{rural})p(\text{rural}) \pm p(\text{obese}|\text{urban})p(\text{urban})$$

$$p_{ob} = p_1 \pi_1 \pm p_2 \pi_2$$

$$\sigma_{ob}^2 = \pi_1^2 s_1^2 \pm \pi_2^2 s_2^2$$

The optimal combination of similar data

Suppose we have two independent measurements $N(p_1, s_1^2)$ and $N(p_2, s_2^2)$ of some quantity p . The

optimal (Bayesian) combination of the two is given as $N\left(p_1 + \frac{s_1^2}{s_1^2 + s_2^2}(p_2 - p_1), \frac{s_1^2 s_2^2}{s_1^2 + s_2^2}\right)$. The new

mean lies between the p_1 and p_2 ; the new variance is less than both s_1^2 and s_2^2 . [$N(x, s^2)$ is a normal distribution with mean x and variance s^2 .]

Variable age grouping

We suppose that the set {a labels age groups} of distributions are $\{p_{a1}(t), p_{a2}(t), p_{a3}(t)\}$. We need consider only the first two values (subscripts 1 and 2 - the third is determined by the condition that the sum is unity). The probabilities, here regarded as random variables, are supposed to grow linearly with time

$$p_{ai}(t) = p_{ai}(t_0) + (t - t_0) \dot{p}_{ai}(t_0)$$

Each of these two equations can be written as the vector equation

$$\begin{pmatrix} p_{ai}(t) \\ \dot{p}_{ai}(t) \end{pmatrix} = \begin{pmatrix} 1 & t - t_0 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} p_{ai}(t_0) \\ \dot{p}_{ai}(t_0) \end{pmatrix} \equiv \Phi(t - t_0) \begin{pmatrix} p_{ai}(t_0) \\ \dot{p}_{ai}(t_0) \end{pmatrix}$$

Equation 7

The quantity $p_a(t)$ and its time derivative are themselves random variables. Supposing they are Normally distributed and their mean and covariance are denoted X_{ai} and P_{ai} respectively, then Equation 7 implies the two matrix equations:

$$X_{ai}(t) = \Phi(t - t_0) X_{ai}(t_0)$$

$$P_{ai}(t) = \Phi(t - t_0) P_{ai}(t_0) \Phi^T(t - t_0)$$

Equation 8

It is conventional to drop the explicit time dependence in favour of the more compact notation that relates the predicted values (\hat{x}, \hat{p}) to the previous best estimate (\tilde{x}, \tilde{p})

$$\hat{X}_{ai} = \Phi \tilde{X}_{ai}$$

$$\hat{P}_{ai} = \Phi \tilde{P}_{ai} \Phi^T$$

Equation 9

At a new data point – a measurement z of $p_{ai}(t)$ with variance σ_z^2 say – the predicted values are optimally combined with the measured values via Bayes' rule to give the well known Kalman Bucy equations, that here can be written

$$\tilde{X}_{ai} = \hat{X}_{ai} + K(z - H \hat{X}_{ai})$$

$$\tilde{P}_{ai} = (I - KH) P_{ai}$$

$$K = \hat{P}_{ai} H^T (H \hat{P}_{ai} K^T + \sigma_z^2)^{-1}$$

$$H \equiv (1 \quad 0)$$

Equation 10

Suppose we know the distribution at some year y_1 for a consecutive set of age groups A_1, A_2, \dots, A_n .

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3 ...to be continued
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5 Computing of distribution from one plot and the mean
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7 Assuming BMI cuts $B_0=15$, $B_1=25$, $B_2=30$, $B_3=45$ and a 3-dimensional BMI distribution $\{p_1(t), p_2(t), p_3(t)\}$
8

9 where, for all times t , the probabilities $\{p_i\}$ must add to 1:
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$$11 \quad p_1 \pm p_2 \pm p_3 = 1$$

12
13
14 Equation 11
15

16 Suppose at some time t_0 we know the point $\{p_1(t_0), p_2(t_0), p_3(t_0)\}$ the following equations allow for the
17 computation of another point $\{q_1(t_1), q_2(t_1), q_3(t_1)\}$ at some time t_1 :
18

19 At time t_1 we suppose we know the mean. Further suppose that the ratio of the proportion obese to
20 the proportion overweight remains the same, thus
21

$$22 \quad q_3 = \lambda q_2, \quad \lambda \equiv \frac{p_3}{p_2}$$

23
24 The q 's are now determined from the equations
25

$$26 \quad q_1(B_0 \pm B_1) \pm q_2((B_1 \pm B_2) \pm \lambda(B_2 \pm B_3)) = 2m$$

$$27 \quad q_1 \pm q_2(1 \pm \lambda) = 1$$

28
29 Hence
30
31

$$32 \quad q_2 = \frac{2m - B_0 - B_1}{(B_1 \pm B_2) \pm \lambda(B_2 \pm B_3) - (1 \pm \lambda)(B_0 \pm B_1)}$$

33
34 etc
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37 The variance of the new plot q can be taken to be the same as p .
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46 Computation of distribution from mean and variance
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48 Given the mean m and variance v the distribution $\{p_1, p_2, p_3\}$ can be computed from the equations
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$$\begin{aligned}
 p_1 + p_2 + p_3 &= 1 \\
 \beta_1 p_1 + \beta_2 p_2 &= \mu \equiv 2m - b_2 - b_3 \\
 \gamma_1 p_2 + \gamma_2 p_2 &= v \equiv 3(v + m^2) \\
 \beta_1 &= b_0 + b_1 - b_2 - b_3 \\
 \beta_2 &= b_1 - b_3 \\
 \gamma_1 &= v_1 - v_3 \\
 \gamma_2 &= v_2 - v_3 \\
 v_1 &\equiv b_0^2 + b_0 b_1 + b_1^2 \\
 v_2 &\equiv b_1^2 + b_1 b_2 + b_2^2 \\
 v_3 &\equiv b_2^2 + b_2 b_3 + b_3^2
 \end{aligned}$$

Equation 12

These are solved:

$$\begin{aligned}
 \beta_1 p_1 + \beta_2 p_2 &= \mu \\
 \gamma_1 p_1 + \gamma_2 p_2 &= v \\
 &\Rightarrow \\
 p_1 &= (\mu \gamma_2 - v \beta_2) / d \\
 p_2 &= -(\mu \gamma_1 - v \beta_1) / d \\
 d &\equiv \beta_1 \gamma_2 - \gamma_1 \beta_2
 \end{aligned}$$

Equation 13

Monte Carlo trials and accuracy

Suppose N trials are performed attempting to observe a quantity whose prevalence is p and that n hits are obtained. The maximum likelihood estimate for p is

$$\hat{p} = \frac{n}{N}$$

The variance of the estimate is $\frac{\hat{p}(1-\hat{p})}{N}$.

Suppose that p is small, $p=10^{-k}$ for $k=1,2,3,4,\dots$ and that $N=10^K$, typically $K=6,7,8,\dots$ then the standard deviation, σ , of the estimate is approximately

$$\sigma = \sqrt{\frac{\hat{p}(1-\hat{p})}{N}} \approx 10^{-\frac{1}{2}(k+K)} \text{ and the 'accuracy', } \frac{\sigma}{\hat{p}} \approx 10^{-\frac{1}{2}(K-k)}.$$

For example, the number of trials to achieve an accuracy of 1 part in 100 is determined as

$$\frac{1}{2}(K - k) = 2 \text{ or } K=4 \pm k.$$

Hence the rule: the smaller the prevalence being observed; the larger the number of trials that is necessary.

More precisely stated: to observe a prevalence of 10^{-k} to an accuracy of one part in 10^A ($A=1,2,3,\dots$) will require $10^{2A \pm k}$ Monte Carlo trials.

An individual's body mass index (BMI) is defined as:

$$BMI = \frac{w}{h^2},$$

where w and h correspond to individual's weight and height, respectively. BMI provides a simple measure of a person's "fatness" or "thinness". Although BMI is measured on a continuous scale, it is grouped in the following five categories:

- 1) BMI : <18.5 (underweight)
- 2) BMI from 18.5 to 24.99: (healthy weight)
- 3) BMI from 25 to 29.99: (overweight)
- 4) BMI from 30 to 39.99: (obese)
- 5) $BMI \geq 40$: (morbidly obese)

Let $g=1,\dots,5$, denote BMI group (lower and larger values of g correspond to groups with lower and larger values of BMI on the continuous scale, respectively). Let $q_g(t)$ be the prevalence of individuals with BMI values that correspond to group g at time t . To ensure that $q_g(t)$ takes values within $[0,1]$, we model $q_g(t)$ by

$$q_g(t) = \frac{1}{2} [1 + \tanh(\beta_0^g + \beta_1^g t)]. \quad (1)$$

An alternative way to estimate $q_g(t)$ is through a logistic regression model with percentage for BMI group g as the outcome, and time, t , as the single explanatory variable:

$$\ln\left(\frac{q_g(t)}{1-q_g(t)}\right) = \beta_0^g + \beta_1^g t. \quad (2)$$

By solving equation (2) for $q_g(t)$ we obtain

$$q_g(t) = \frac{\exp(\beta_0^g + \beta_1^g t)}{1 + \exp(\beta_0^g + \beta_1^g t)}.$$

Equations (1) and (2) are mathematically identical, but (1) provides greater numerical stability. Fitting separate models for the estimation of $q_g(t)$ for each group g , does not guarantee that

$$\sum_{g=1}^5 q_g(t) = 1.$$

Thus, to ensure that the estimates of prevalence of individuals in all BMI groups sum up to 1 for each time t , we estimate the prevalence of individuals with BMI values that correspond to group g at time t by

$$P_g(t) = \frac{q_g(t)}{\sum_{g=1}^5 q_g(t)}. \quad (3)$$

Micro simulation – BMI growth model

The distribution of BMI in the population is estimated using regression analysis stratified by both sex (S) and age group ($A=0-9, 10-19, 20-29, \dots, 70-79, 80+$). The fitted models are extrapolated to forecast the distribution of BMI groups in the future. For each sex-and-age-group stratum, the set of cross-sectional, time-dependent, discrete distributions of BMI groups, $D = \{P_g(t) | g = 1, \dots, 5; t > 0\}$, is used to manufacture BMI growth models for individual members of the population. This is done in a way that guarantees that the cross-sectional BMI group distributions obtained by simulation under the growth models match the BMI group distributions of the observed data. The details are as follows;

For each such discrete distribution in D , there is a continuous counterpart. Let β denote BMI in the continuous scale and let $f(\beta|A, S, t)$ be the probability density function of β for age group A and sex S at time t . Then

$$P_g(t|A, S) = \int_{\beta \in g} f(\beta|A, S, t) d\beta. \quad (4)$$

Equations (3) and (4) both refer to the same quantity. However, equation (4) uses the definition of a probability density function to express the age-and-sex-specific percentage of individuals in BMI group g at time t . Equation (3) gives an estimate of the this quantity using model (1) for all $g=0, \dots, 5$. The cumulative distribution function of β is

$$F(\beta|A, S, t) = \int_0^\beta f(\beta|A, S, t) d\beta. \quad (5)$$

At a time t , a person with sex S belonging to the age group A is said to be on the p -th percentile of this distribution if $F(\beta|A, S, t) = p/100$. Given the cross-sectional information of D , it is possible to simulate longitudinal trajectories by forming pseudo cohorts within the population. A key requirement for these sets of longitudinal trajectories is that they reproduce the cross-sectional distribution of BMI groups for any year with available data. The method adopted here and in the earlier Foresight report¹ is based on the assumption that people's BMI changes throughout their lives in such a way that they always stay on the same BMI percentile. As they age, individuals move from one age group to another and their BMI changes so that they remain on the same percentile but of a different distribution. This rule is not too far from the truth; and has as a result that relatively fat people stay relatively fat and relatively thin people stay relatively thin. Crucially it meets the important condition that the cross-sectional BMI group distributions obtained by simulation match the BMI group distributions of the observed data. This can be seen as follows:.

¹ Foresight report

When the population's BMI distributions by sex and age are known for all years (by extrapolation of fitted model (3)), a person who is in age group A and who grows ten year older will at some time move into the next age group A' and will have a BMI that was described first by the distribution $f(\beta|A, S, t)$ and then at the later time t' by the distribution $f(\beta|A', S, t')$. If the BMI of that individual is on the p^{th} percentile of the BMI distribution, his BMI will change from b to b' so that

$$\beta = F^{-1}\left(\frac{p}{100} \mid A, S, t\right) \quad (6)$$

$$\beta' = F^{-1}\left(\frac{p}{100} \mid A', S, t'\right) \Rightarrow \beta' = F^{-1}(F(\beta|A, S, t) \mid A', S, t') \quad (7)$$

Where F^{-1} is the inverse function of the cumulative distribution function of β . **Error! Reference source not found.** guarantees that the transformation taking the random variable b to b' ensures the correct cross-sectional distribution at t' .

The micro simulation both generates individuals from the BMI distributions of the set D and, once generated, grows the individual's BMI in a way that is also determined by the set D . It is possible to implement equation 7 as a suitably fast algorithm.

Micro simulation: Birth, disease and death models.

Simulated people are generated with the correct demographic statistics in the simulation's start-year. In this year women are stochastically allocated the number and years of birth of their children – these are generated from known fertility and mother's age at birth statistics (valid in the start-year). If a woman has children then those children are generated as members of the simulation in the appropriate birth year.

In the course of their lives, simulated people can die from one of the BMI related diseases that they might have acquired or from some other cause. The probabilities that a person of a given age and gender dies from a cause other than a BMI related disease are calculated in terms of known death and disease statistics valid in the start-year and are held constant over the course of the simulation. The death rates from BMI related diseases will change as a consequence of the population's changing BMI distribution.

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Appendix 3. Table of disease reference for each country

Country	Disease	Incidence	Prevalence	Mortality	Survival
Albania	Diabetes	Converted from prevalence	Shapo et al, 2004	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Czech Republic proxy
	Stroke	Hungary proxy		WHO, 2008	Estonia proxy
	Hypertension	Shapo et al, 2004	Shapo et al, 2004	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy	
Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy	
Andorra	Diabetes	Spain proxy		Non-fatal	Non-fatal
	CHD	Spain proxy		Spain proxy	Spain proxy
	Stroke	Spain proxy		Spain proxy	Spain proxy
	Hypertension	Spain proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Spain proxy		Spain proxy	Spain proxy
	Colorectal	Spain proxy		Spain proxy	Spain proxy
	Corpus uteri	Spain proxy		Spain proxy	Spain proxy
	Kidney	Spain proxy		Spain proxy	Spain proxy
	Liver	Spain proxy		Spain proxy	Spain proxy
Oesophagus	Spain proxy		Spain proxy	Spain proxy	
Pancreas	Spain proxy		Spain proxy	Spain proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Armenia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Georgia proxy		WHO, 2008	Georgia proxy
	Stroke	Georgia proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2005	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008		Globocan, 2008	Belarus proxy	
Austria	Diabetes	Converted from prevalence	Statistics Austria, 2007	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Statistics Austria, 2007	WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence	Statistics Austria, 2007	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Azerbaijan	Diabetes	Converted from prevalence	DHS, 2006	Non-fatal	Non-fatal
	CHD	Georgia proxy		WHO, 2008	Georgia proxy
	Stroke	Aliyev, 2008		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2006	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008		Globocan, 2008	Belarus proxy	

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Belarus	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Russia proxy		WHO, 2008	Russia proxy
	Stroke	Kulesh et al, 2010		WHO, 2008	Kulesh et al, 2010
	Hypertension	Converted from prevalence	Balashenko NS, 2011	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Colorectal	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Corpus uteri	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Kidney	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Liver	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
Oesophagus	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005	
Pancreas	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005	
Belgium	Diabetes	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Institute of Public Health, 2008	WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006	Institute of Public Health, 2008	WHO 2008	UK proxy
	Hypertension	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Bosnia and Herzegovina	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Czech proxy
	Stroke	Converted from prevalence	Vasilj et al, 2006	WHO, 2008	Smajlovic at al, 2006
	Hypertension	Converted from prevalence	Pilav, 2006	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy	
Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Bulgaria	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO, 2008	Non-fatal Czech proxy
	CHD	UK proxy			
	Stroke	Powles et al, 2002			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			
Croatia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO, 2008	Non-fatal Czech proxy
	CHD	UK proxy			
	Stroke	Hungary proxy			
	Hypertension	Uhernick et al, 2009			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			
Cyprus	Diabetes	Converted from prevalence	Cystat, 2008	Non-fatal WHO 2008	Non-fatal Euroheart, 2008
	CHD	Cystat, 2008			
	Stroke	Truelsen et al, 2006			
	Hypertension	Converted from prevalence			
	Osteoarthritis	Converted from prevalence			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Czech Republic	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Denmark	Diabetes	Steno 2010	National Health Survey 2010	Non-fatal	Non-fatal
	CHD	Converted from prevalence		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	EU Chronic Disease Report, 2007
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Colorectal	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Corpus uteri	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Kidney	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Estonia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Vibo et al, 2007
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		

Country	Disease	Incidence	Prevalence	Mortality	Survival
Finland	Diabetes	Finnish Health Survey, 2011	Finnish Health Survey, 2000	Non-fatal	Non-fatal
	CHD	THL/KTL database, 2009		WHO 2008	THL database 2008
	Stroke	Truelsen et al, 2006		WHO 2008	THL database 2008
	Hypertension	Finnish Health Survey, 2011		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
France	Diabetes	Personal comm. INVS, 2006	Personal comm. Entred, 2009	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Radi et al, 2004		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Georgia	Diabetes	Converted from prevalence	Ezzati, 2008 Personal communication B. Roberts	Non-fatal	Non-fatal
	CHD	Iskadze et al, 2011		WHO, 2008	NCDC, 2009
	Stroke	Tsiskaridze et al, 2000-2003		WHO, 2008	Tsiskaridze et al
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	NCDC, 2010
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Germany	Diabetes	Wilke et al 2012 (2008)		Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Greece	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	France proxy
	Colorectal	Globocan, 2008		Globocan, 2008	France proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	France proxy
	Kidney	Globocan, 2008		Globocan, 2008	France proxy
	Liver	Globocan, 2008		Globocan, 2008	France proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	France proxy
	Pancreas	Globocan, 2008		Globocan, 2008	France proxy
Hungary	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
	Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy

Country	Disease	Incidence	Prevalence	Mortality	Survival
Iceland	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO, 2008	Non-fatal Euroheart, 2012
	CHD	UK proxy			
	Stroke	Truelsen et al, 2006	Ingvarsson et al, 1999	Non-fatal WHO, 2008	Non-fatal Euroheart, 2012
	Hypertension	UK proxy			
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Ireland	Diabetes	Converted from prevalence	Personal comm. L. Keaver	Non-fatal WHO 2008	Non-fatal Personal comm. L. Keaver
	CHD	Personal comm. L. Keaver			
	Stroke	Truelsen et al, 2006	Personal comm. L. Keaver	Non-fatal WHO 2008	Non-fatal Personal comm. L. Keaver
	Hypertension	Converted from prevalence			
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Italy	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO 2008	Non-fatal Euroheart, 2008
	CHD	UK proxy			
	Stroke	Truelsen et al, 2006	Ezzati, 2008	Non-fatal WHO 2008	EU chronic disease report, 2007
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Gondos et al, 2008	

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Israel	Diabetes	Converted from prevalence	Pers. communication N. Goldberger	Non-fatal	Non-fatal
	CHD	Kark et al, 2005		Kark et al, 2005	Ehnheart, 2009
	Stroke	Converted from prevalence	Pers. communication N. Goldberger	WHO, 2008	Ehnheart, 2009
	Hypertension	Converted from prevalence	Pers. communication N. Goldberger	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
Oesophagus	Globocan, 2008		Globocan, 2008		
Pancreas	Globocan, 2008		Globocan, 2008	Rozen et al, 2009	
Kazakhstan	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	Personal communication B. Roberts	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
Oesophagus	Globocan, 2008		Globocan, 2008		
Pancreas	Globocan, 2008		Globocan, 2008		
Kyrgyzstan	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	Young et al, 2005	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
Oesophagus	Globocan, 2008		Globocan, 2008		
Pancreas	Globocan, 2008		Globocan, 2008		

Country	Disease	Incidence	Prevalence	Mortality	Survival
Latvia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
	Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy
Lithuania	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	EU chronic disease report
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Pancreas	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Luxembourg	Diabetes	Converted from prevalence	Alkerwi et al, 2010	Non-fatal	Non-fatal
	CHD	UK proxy	Alkerwi et al, 2010	WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	France proxy
	Colorectal	Globocan, 2008		Globocan, 2008	France proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	France proxy
	Kidney	Globocan, 2008		Globocan, 2008	France proxy
	Liver	Globocan, 2008		Globocan, 2008	France proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	France proxy
	Pancreas	Globocan, 2008		Globocan, 2008	France proxy

Country	Disease	Incidence	Prevalence	Mortality	Survival
Malta	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Monaco	Diabetes	France proxy		Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	France proxy
	Stroke	France proxy		WHO, 2008	France proxy
	Hypertension	France proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	France proxy		France proxy	France proxy
	Colorectal	France proxy		France proxy	France proxy
	Corpus uteri	France proxy		France proxy	France proxy
	Kidney	France proxy		France proxy	France proxy
	Liver	France proxy		France proxy	France proxy
	Oesophagus	France proxy		France proxy	France proxy
Pancreas	France proxy	France proxy	France proxy		
Montenegro	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Czech proxy
	Stroke	Hungary proxy		WHO, 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Poland proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Netherlands	Diabetes	Ubink-Veltmaat et al, 2003	Ubink-Veltmaat et al, 2003 (2000)	Non-fatal	Non-fatal
	CHD	Netherlands Morbidity Stats (2007)		WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006	Netherlands Morbidity Statistics Netherlands Morbidity Statistics, 2011 (2007)	WHO 2008	UK proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Norway	Diabetes	Converted from prevalence	Langhammer et al, 2012	Non-fatal	Non-fatal
	CHD	Mannsverk et al, 2011		WHO, 2008	Euroheart, 2012
	Stroke	Truelsen et al, 2006	Langhammer et al, 2012 Langhammer et al, 2012	WHO, 2008	Euroheart, 2012
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Poland	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	UK proxy
	Stroke	Wawrzyńczyk et al, 2011		WHO 2008	EU chronic disease report ,2007
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Portugal	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal	Non-fatal UK proxy UK proxy Non-fatal Non-fatal
	CHD	UK proxy			
	Stroke	Truelsen et al, 2006			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				
Republic of Moldova	Diabetes	Converted from prevalence	Ezzati, 2008 Ukraine proxy Personal communication B. Roberts	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal	Non-fatal UK proxy Ukraine proxy Non-fatal Non-fatal
	CHD	Converted from prevalence			
	Stroke	Ukraine proxy			
	Hypertension	Converted from prevalence			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				
Romania	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal	Non-fatal Czech proxy Estonia proxy Non-fatal Non-fatal
	CHD	UK proxy			
	Stroke	Hungary proxy			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				

Country	Disease	Incidence	Prevalence	Mortality	Survival
Russian Federation	Diabetes	Converted from prevalence	Shishkin NS et al, 2005 Federal State Institute statistics, 2005	Non-fatal Boytsov SA, 2010 WHO, 2008 Non-fatal Non-fatal www.oncology.ru www.oncology.ru www.oncology.ru www.oncology.ru www.oncology.ru www.oncology.ru www.oncology.ru	Non-fatal Tunstall-Pedoe et al, 1999 Feigin et al, 1995 Non-fatal Non-fatal www.mednet.ru www.mednet.ru info.cancerresearchuk.org info.cancerresearchuk.org info.cancerresearchuk.org www.mednet.ru info.cancerresearchuk.org
	CHD	Boytsov SA et al, 2010			
	Stroke	Feigin et al, 1995			
	Hypertension	Converted from prevalence			
	Osteoarthritis	www.mednet.ru			
	Cancers				
	Breast	www.oncology.ru/service/statistics			
	Colorectal	www.oncology.ru/service/statistics			
	Corpus uteri	www.oncology.ru/service/statistics			
	Kidney	www.oncology.ru/service/statistics			
	Liver	www.oncology.ru/service/statistics			
	Oesophagus	www.oncology.ru/service/statistics			
Pancreas	www.oncology.ru/service/statistics				
San Marino	Diabetes	Italy proxy		Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal Personal comm. Personal comm. Personal comm. Personal comm. Personal comm. Personal comm. Personal comm.	Non-fatal Italy proxy Italy proxy Non-fatal Non-fatal Personal comm. Personal comm. Italy proxy Italy proxy Italy proxy Italy proxy Personal comm.
	CHD	UK proxy			
	Stroke	Italy proxy			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Personal comm. with Dr F. Masi			
	Colorectal	Personal comm. with Dr F. Masi			
	Corpus uteri	Personal comm. with Dr F. Masi			
	Kidney	Personal comm. with Dr F. Masi			
	Liver	Personal comm. with Dr F. Masi			
	Oesophagus	Personal comm. with Dr F. Masi			
Pancreas	Personal comm. with Dr F. Masi				
Serbia	Diabetes	Serbian diabetes registry, 2010		Non-fatal ACS registry, 2010 WHO, 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Czech proxy Estonia proxy Non-fatal Non-fatal Slovenia proxy Estonia proxy Czech proxy Estonia proxy Lithuania proxy Poland proxy Poland proxy
	CHD	Acute coronary syndrome registry, 2010			
	Stroke	Hungary proxy			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Slovakia	Diabetes	Preliminary 2011 data personal communication		Non-fatal	Non-fatal
	CHD	Preliminary 2011 data (IHD), personal communication		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	Preliminary 2011 data personal communication		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Sant et al, 2003
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008	Globocan, 2008	Poland proxy		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Poland proxy	
Slovenia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Spain	Diabetes	Converted from prevalence	Encuesta Europea de Salud en Espana, 2009	Non-fatal	Non-fatal
	CHD	Encuesta Europea de Salud en Espana		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence		Encuesta Europea de Salud en Espana, 2009	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	

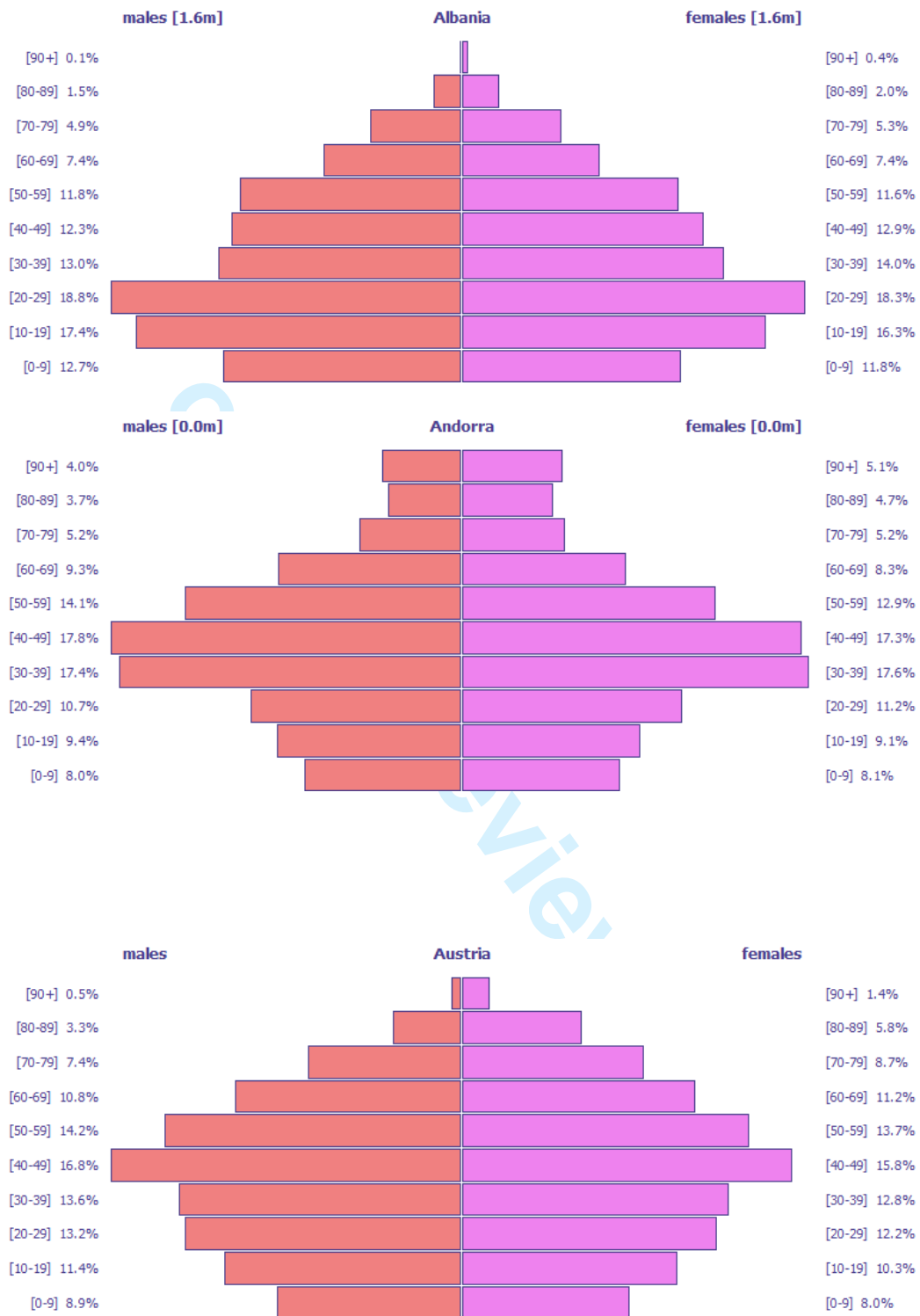
Country	Disease	Incidence	Prevalence	Mortality	Survival
Sweden	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Thunander et al, 2008 Statistics Sweden, 2010 Truelsen et al, 2006 Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Statistics Sweden, 2010	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Case fatality 2010 EU chronic disease report 2007 Non-fatal Non-fatal Verdecchia et al, 2007 Verdecchia et al, 2007 Verdecchia et al, 2007 Verdecchia et al, 2007 Sant et al, 2009 Sant et al, 2009 Sant et al, 2009
Switzerland	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Converted from prevalence UK proxy Truelsen et al, 2006 Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Swiss Federal Statistics Office, 2007 Swiss Federal Statistics Office, 2007	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Euroheart, 2012 Euroheart, 2012 Non-fatal Non-fatal Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008
Tajikistan	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Converted from prevalence Uzbekistan proxy Azerbaijan proxy Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Ezzati, 2008 Azerbaijan proxy	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Georgia proxy Georgia proxy Non-fatal Non-fatal Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kyrgyzstan proxy Kazakhstan proxy Kazakhstan proxy

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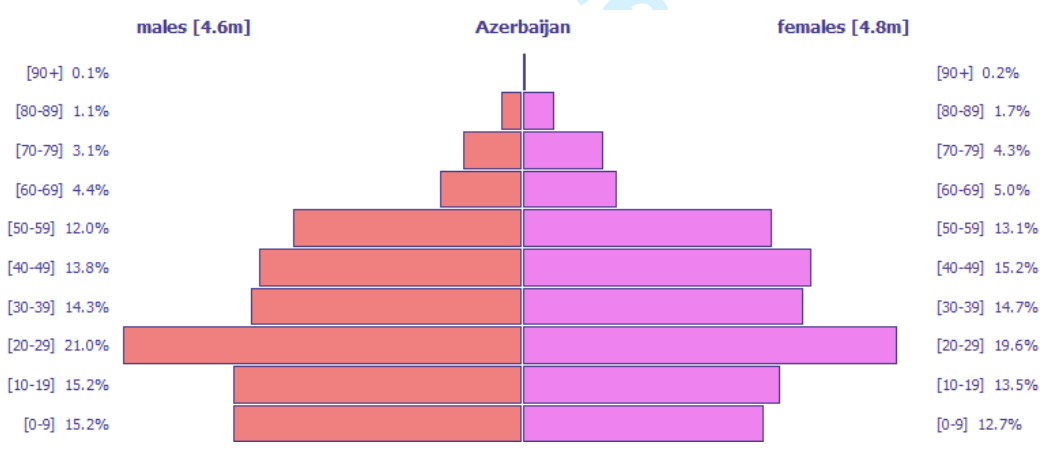
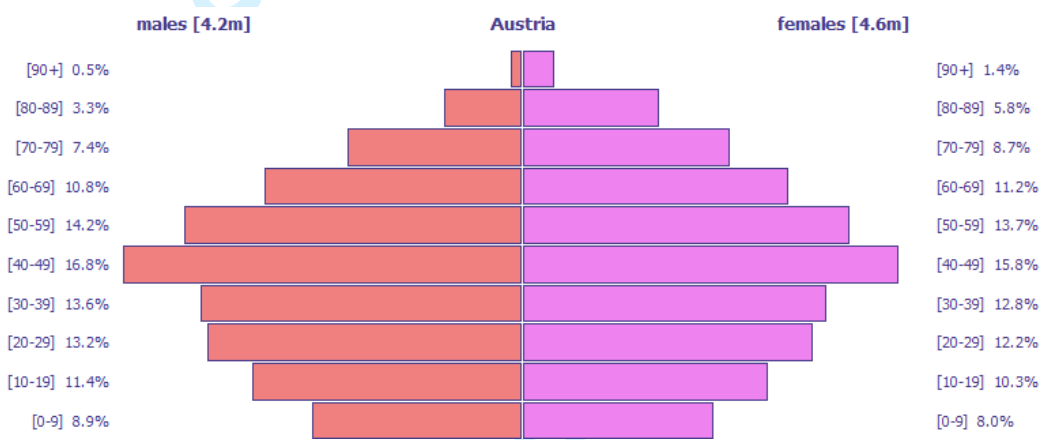
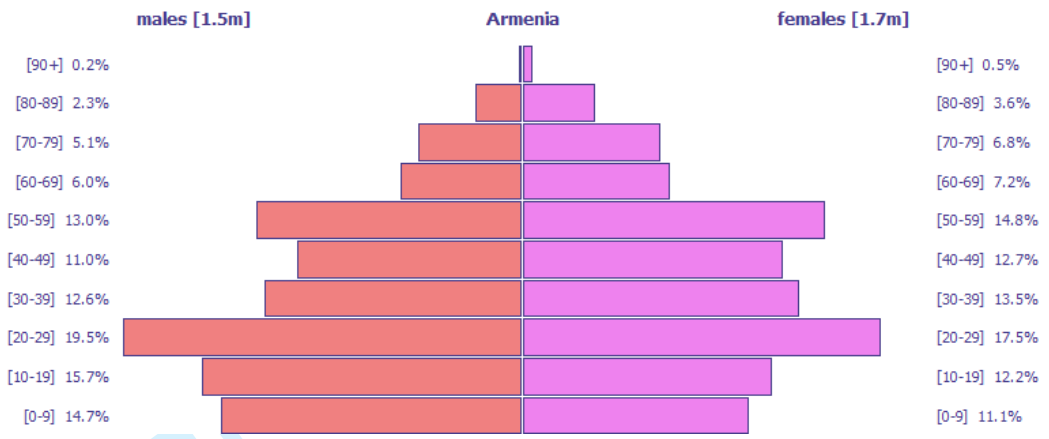
Country	Disease	Incidence	Prevalence	Mortality	Survival
TFYR of Macedonia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Slovenia proxy
	Stroke	Hungary proxy		WHO, 2008	Slovenia proxy
	Hypertension	Albania proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Poland proxy	
Turkey	Diabetes	Converted from prevalence	Yumuk VD et al, 2005	Non-fatal	Non-fatal
	CHD	Converted from prevalence		WHO, 2008	Georgia proxy
	Stroke	Greece proxy	Onat et al, 1993	WHO, 2008	Kumral et al, 1998
	Hypertension	Arici et al, 2010	Non-fatal	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy	Non-fatal	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy	
Turkmenistan	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy	Azerbaijan proxy	WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy	Non-fatal	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy
	Colorectal	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy
	Corpus uteri	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy
	Kidney	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy
	Liver	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kyrgyzstan proxy
	Oesophagus	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Ukraine	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Gorbas IM, 2009	WHO, 2008	Russia proxy
	Stroke	Mihalka et al, 2001		WHO, 2008	Mihalka et al, 2001
	Hypertension	Converted from prevalence	DHS, 2007	Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Povorozniuk VV, 2009	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Korchinskaya A, 2012
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Konanaychin, 2011
	Kidney	Globocan, 2008		Globocan, 2008	Kondratenko, 2009
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Ganul et al, 2012
Pancreas	Globocan, 2008		Globocan, 2008	Schepotin et al, 2011	
UK	Diabetes	BHF statistics		Non-fatal	Non-fatal
	CHD	EU CVD statistics 2008		BHF statistics	Euroheart, 2008
	Stroke	BHF Stroke statistics, 2009		BHF statistics	BHF statistics
	Hypertension	BHF statistics		Non-fatal	Non-fatal
	Osteoarthritis			Non-fatal	Non-fatal
	Cancers				
	Breast	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Colorectal	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Corpus uteri	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Kidney	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Liver	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009
	Oesophagus	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009
Pancreas	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009	
Uzbekistan	Diabetes	Converted from prevalence	Sultanov, 2008	Non-fatal	Non-fatal
	CHD	Mamutov et al, 2012		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2002	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Kidney	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Liver	Globocan, 2008		Globocan, 2008	Kyrgyzstan proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
Pancreas	Globocan, 2008		Globocan, 2008	Kazakhstan proxy	

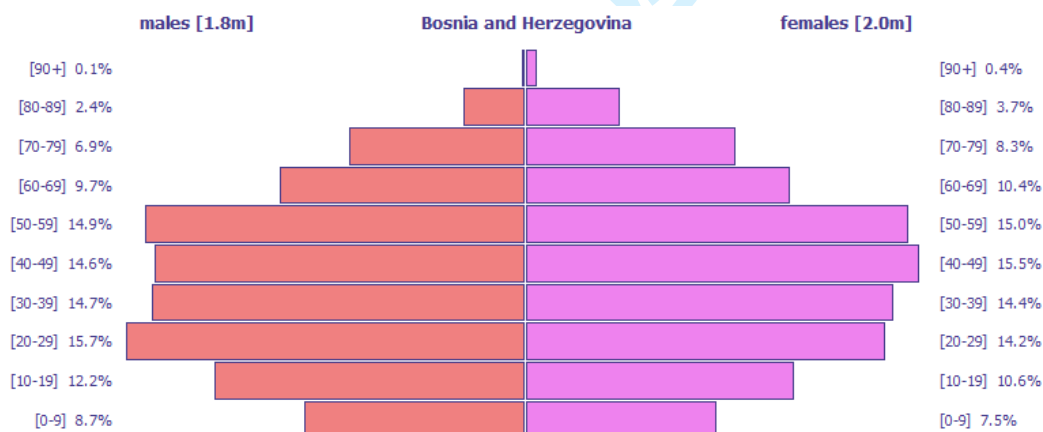
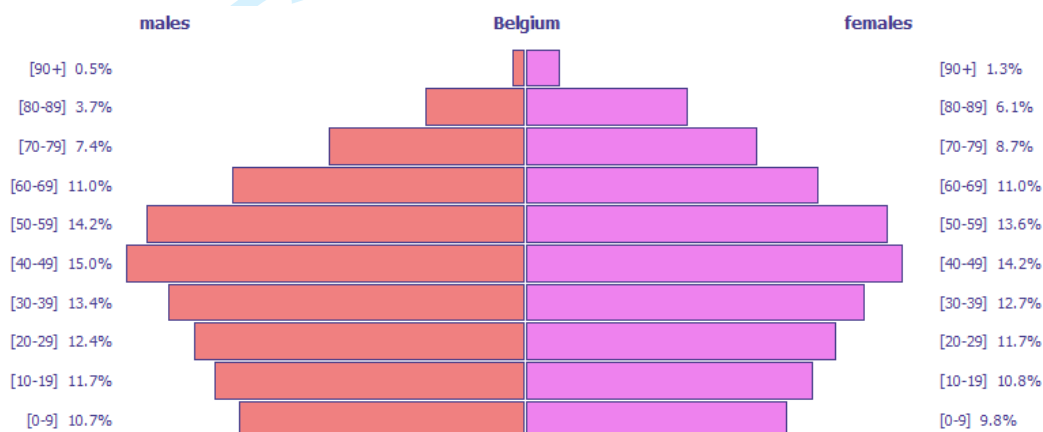
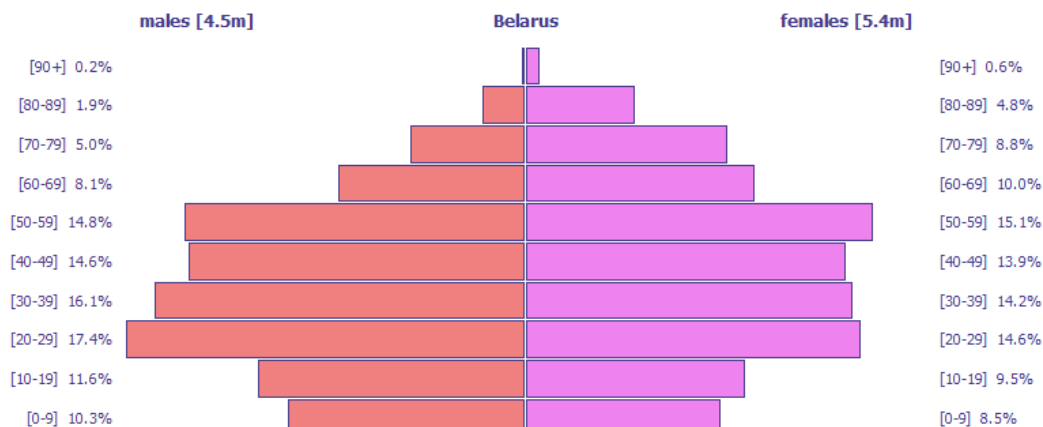
Appendix 4. Population pyramids by country in 2010

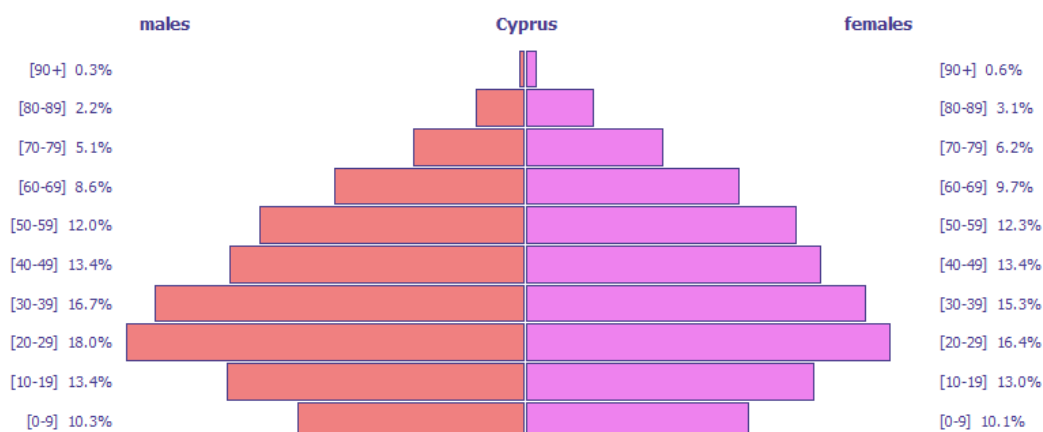
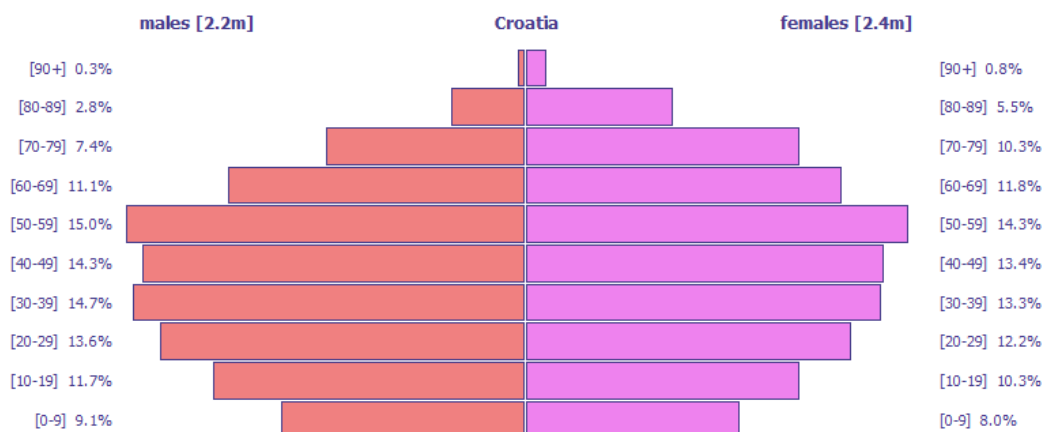
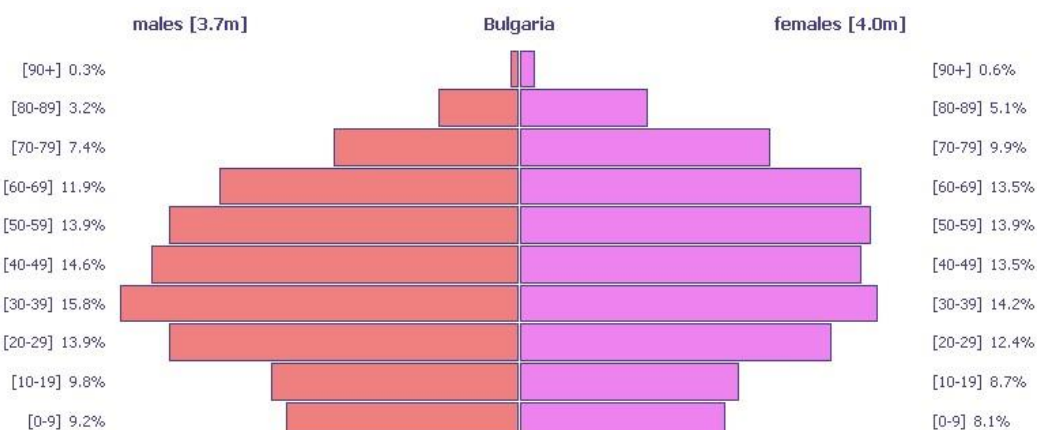


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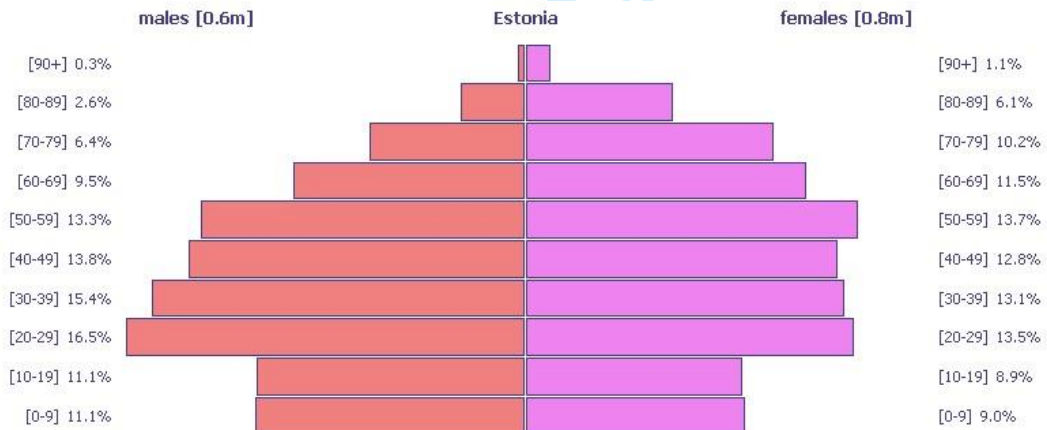
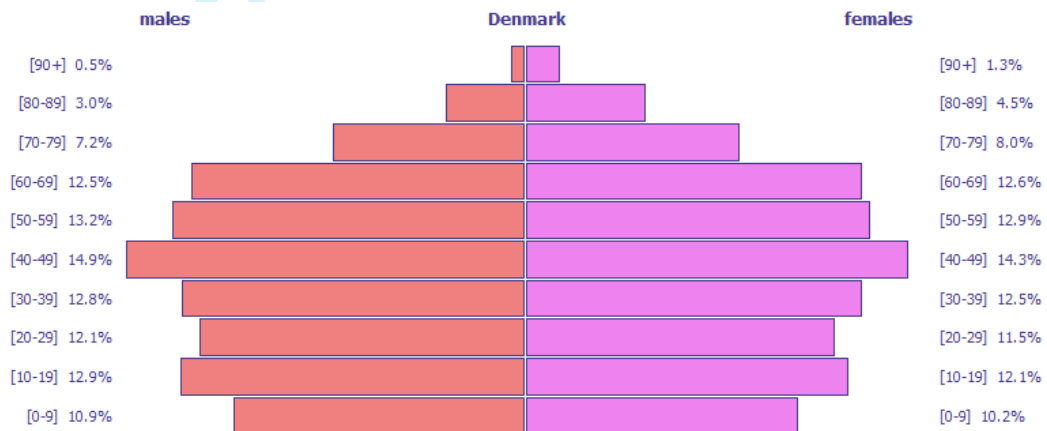
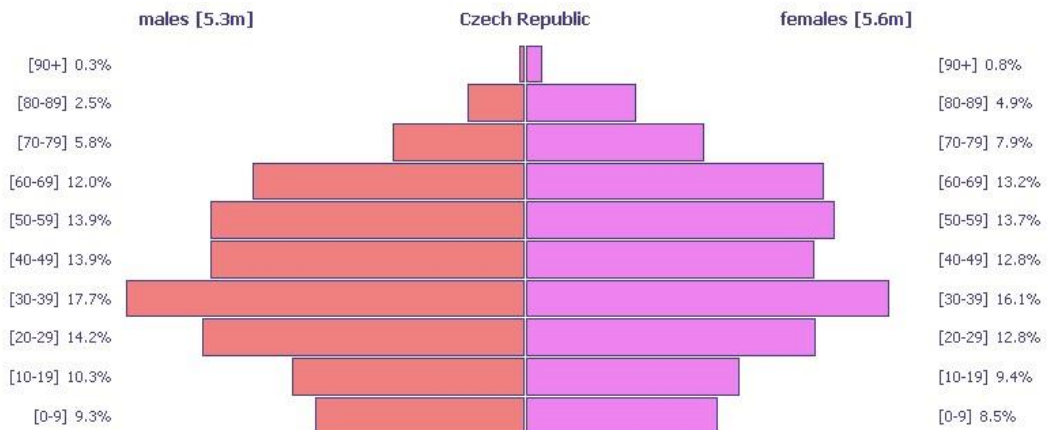
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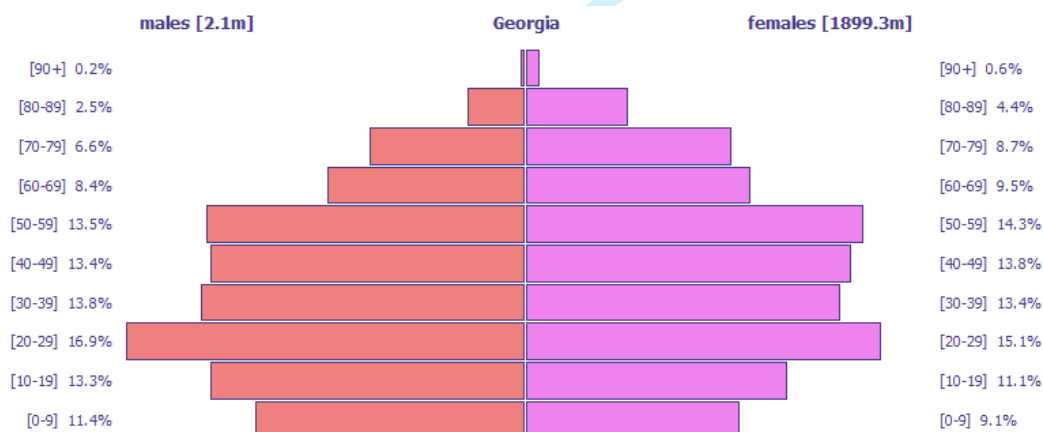
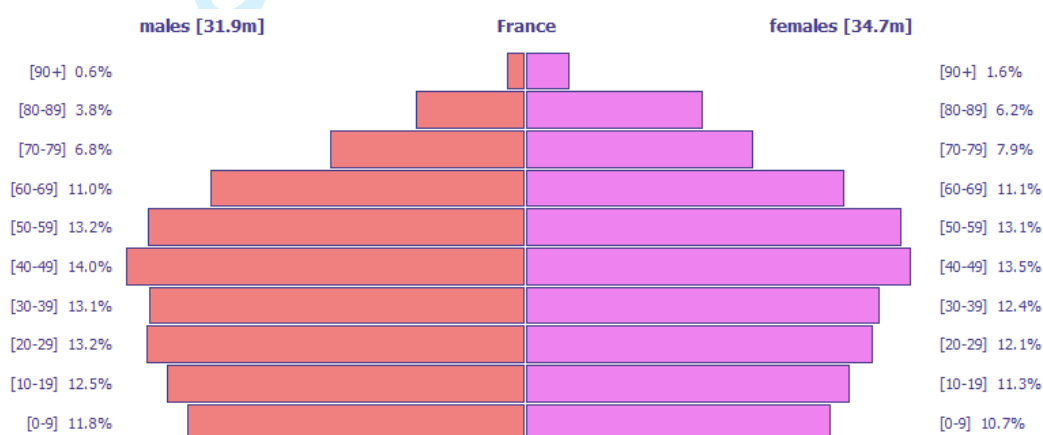
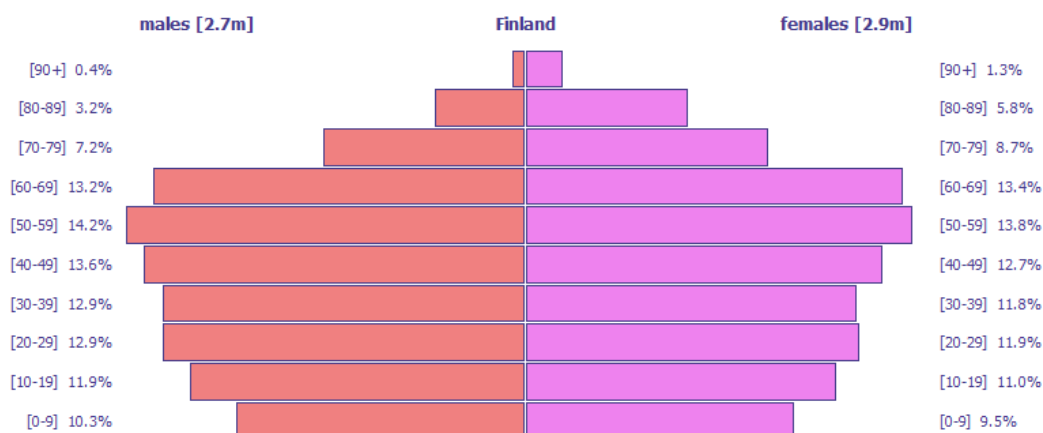


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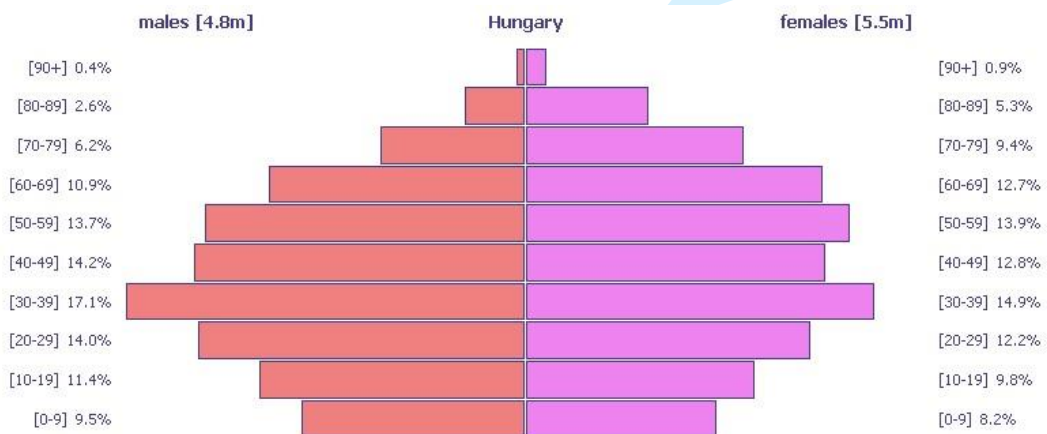
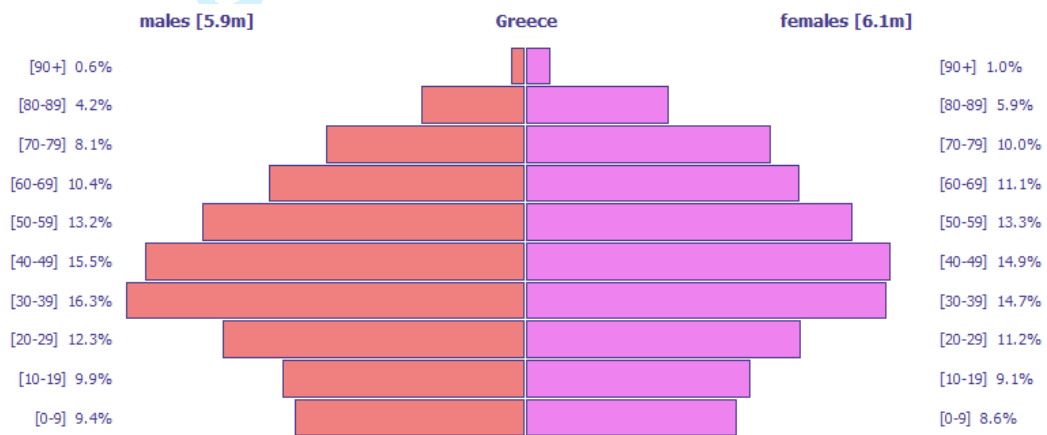
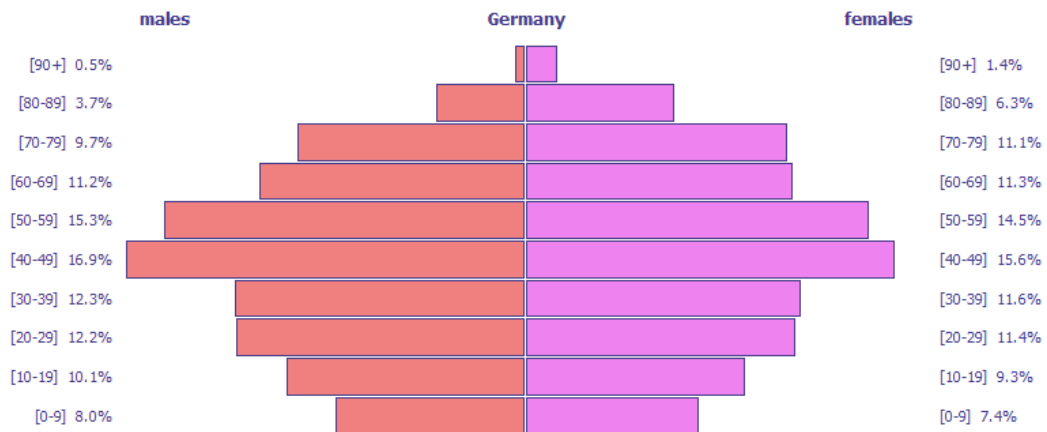
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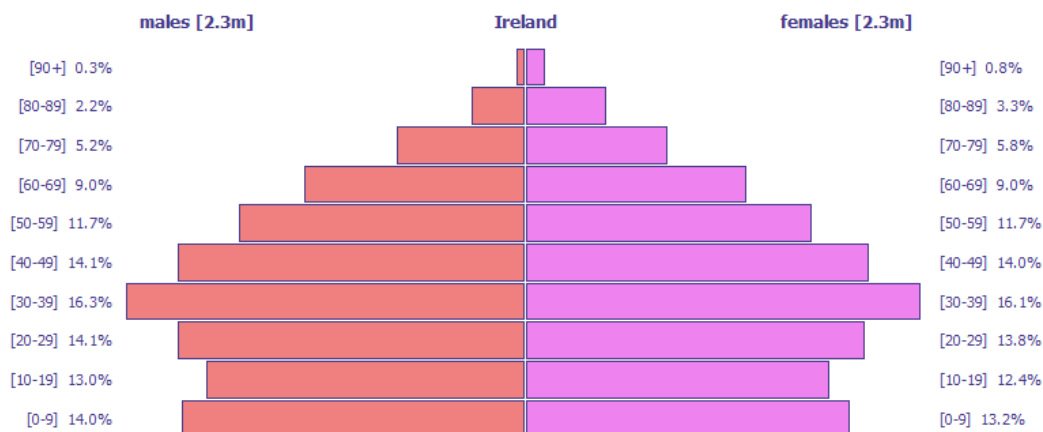
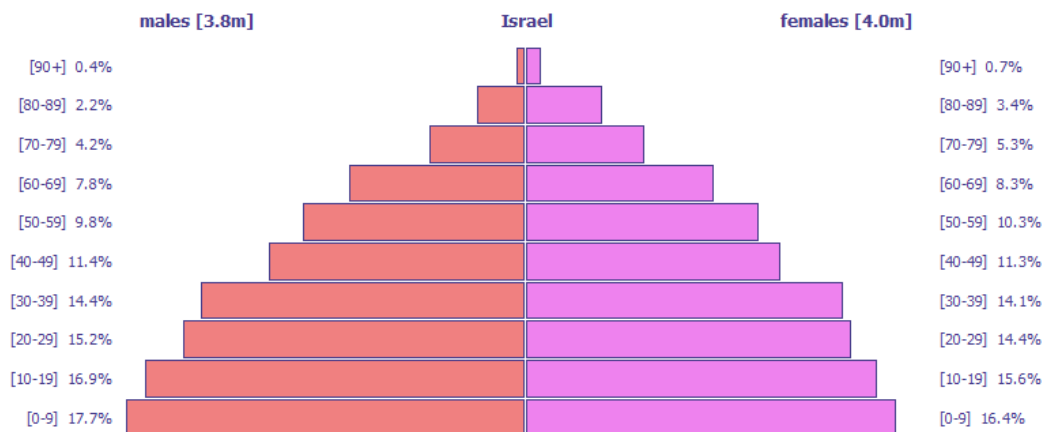
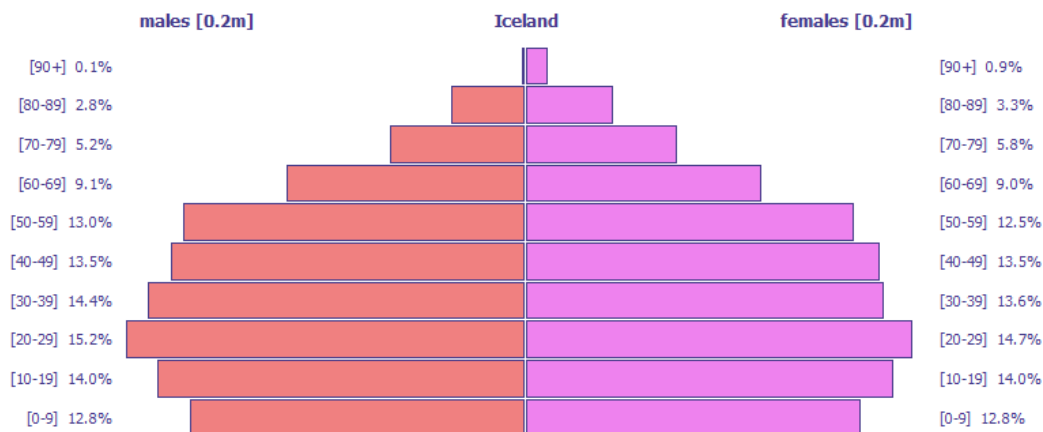
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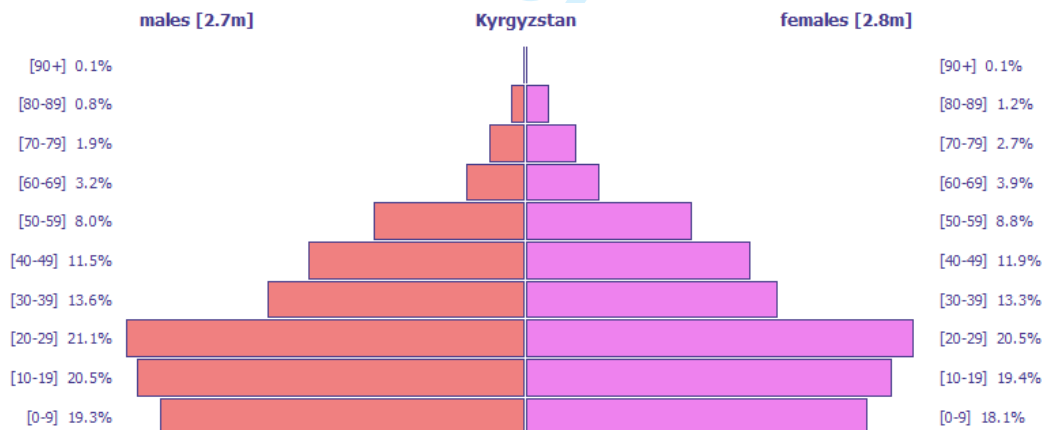
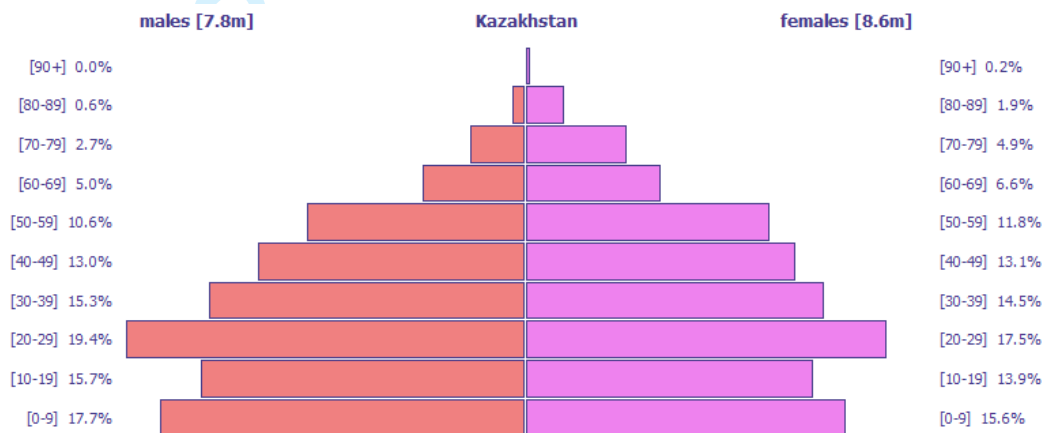
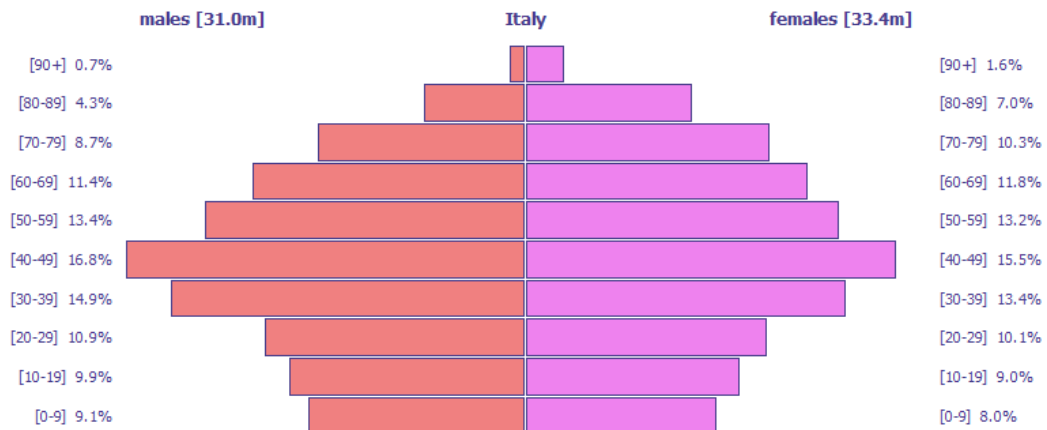
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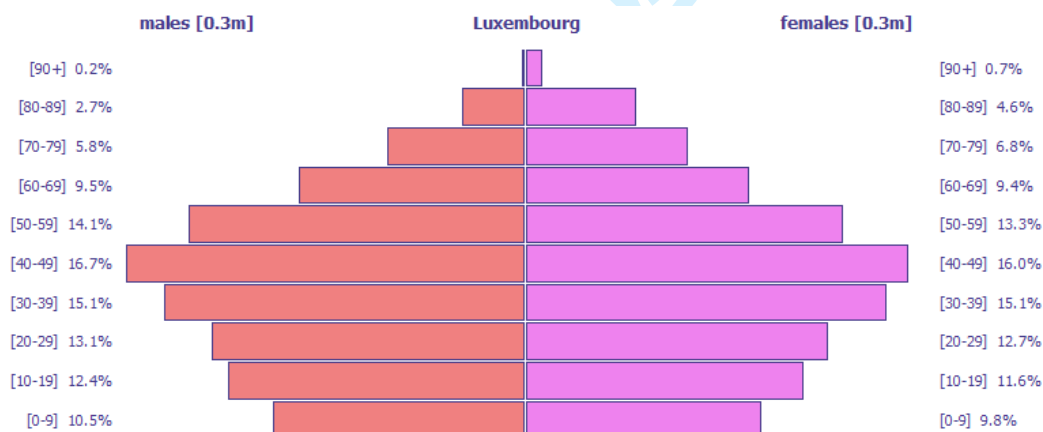
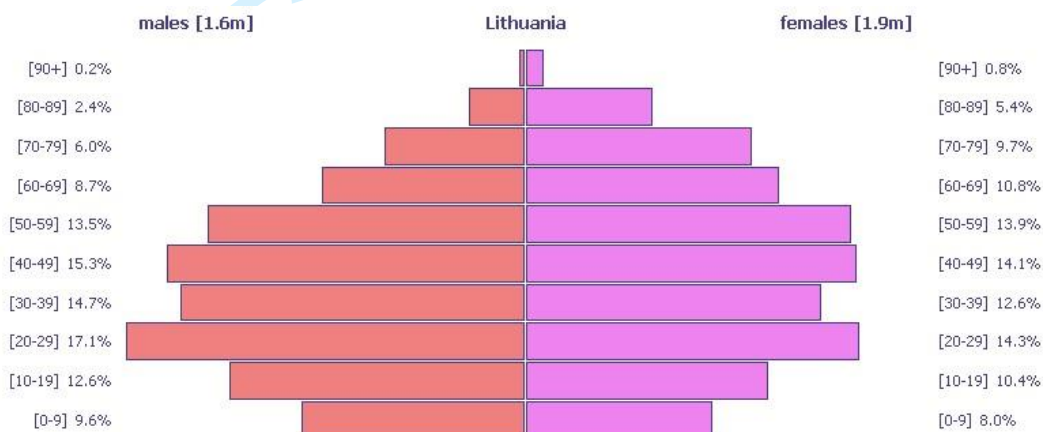
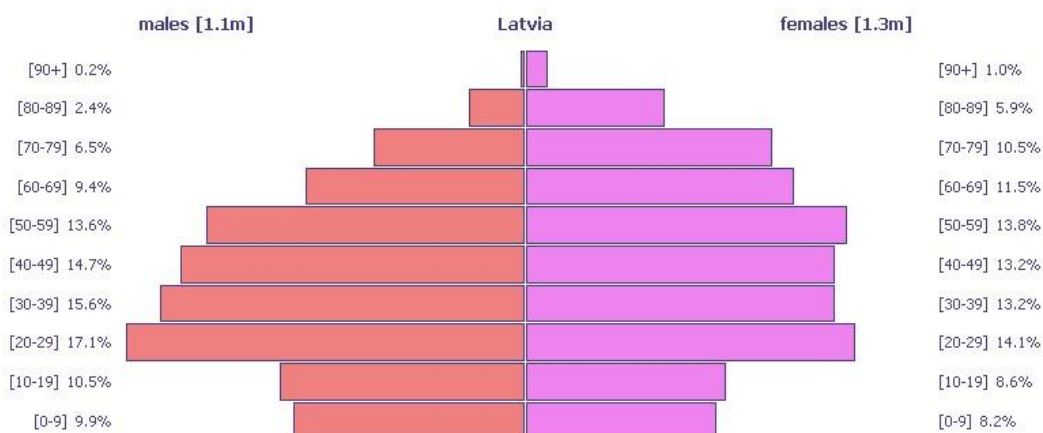


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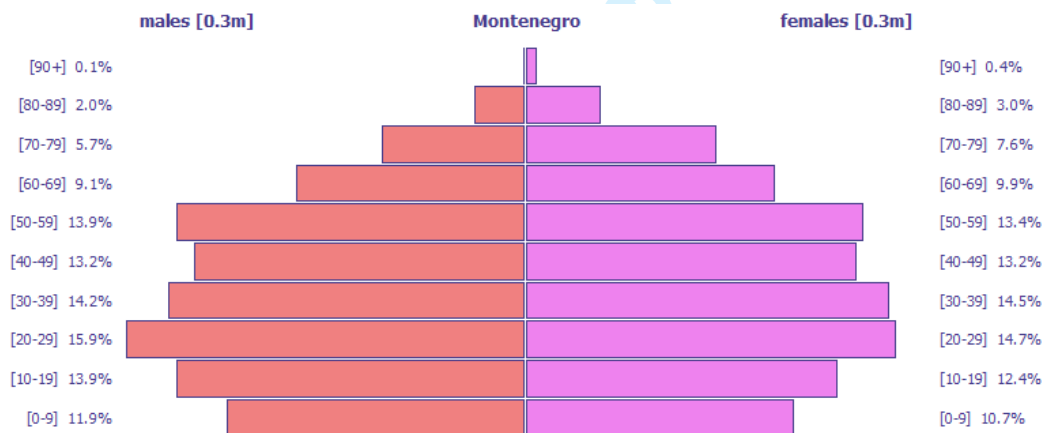
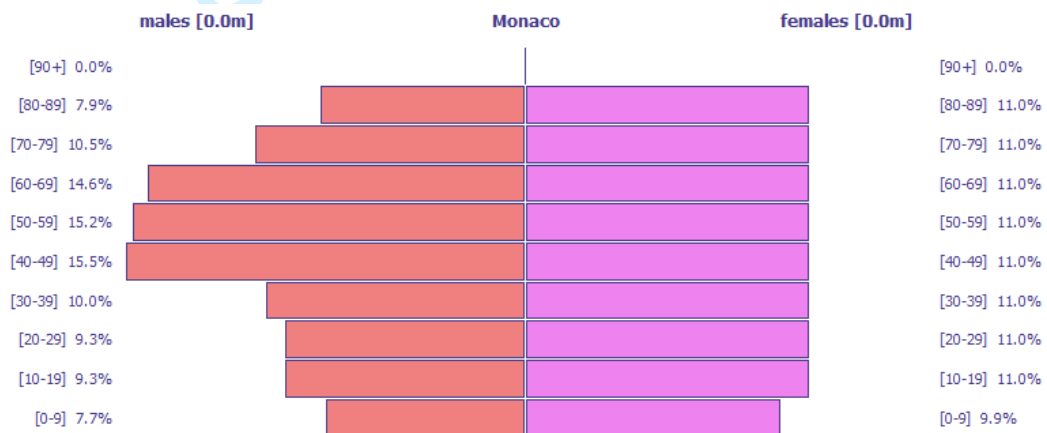
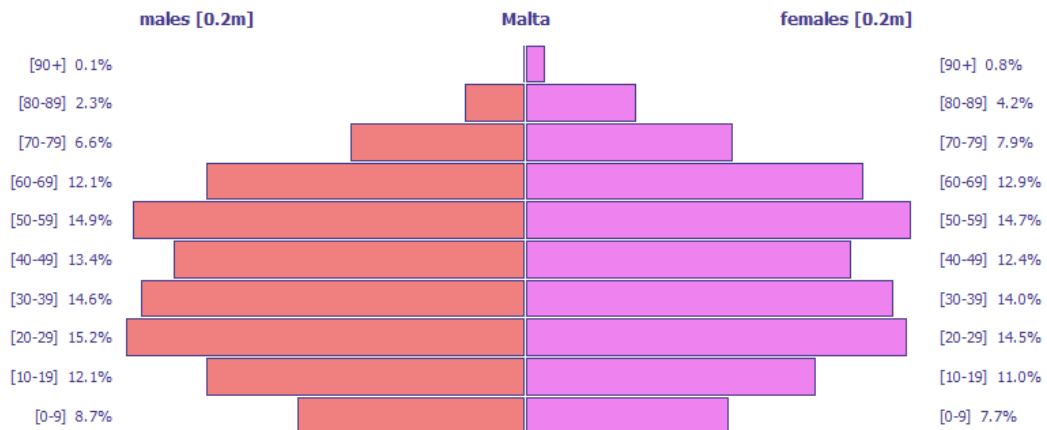
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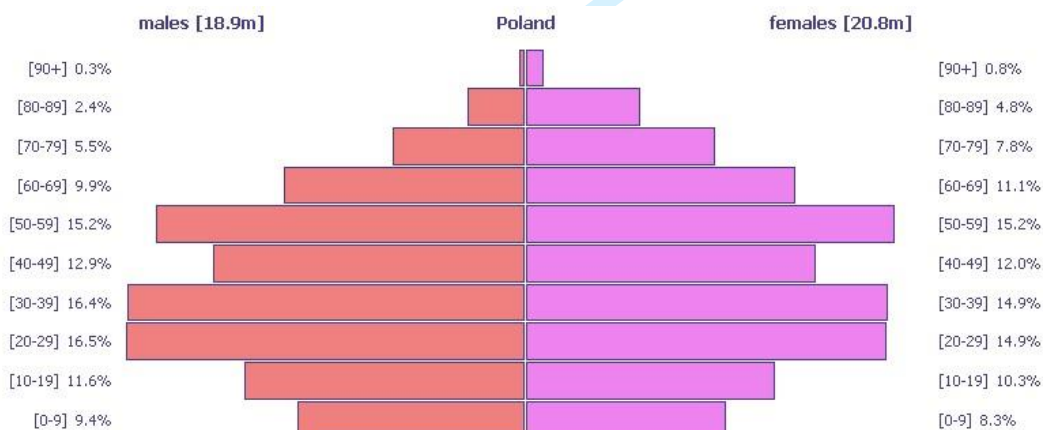
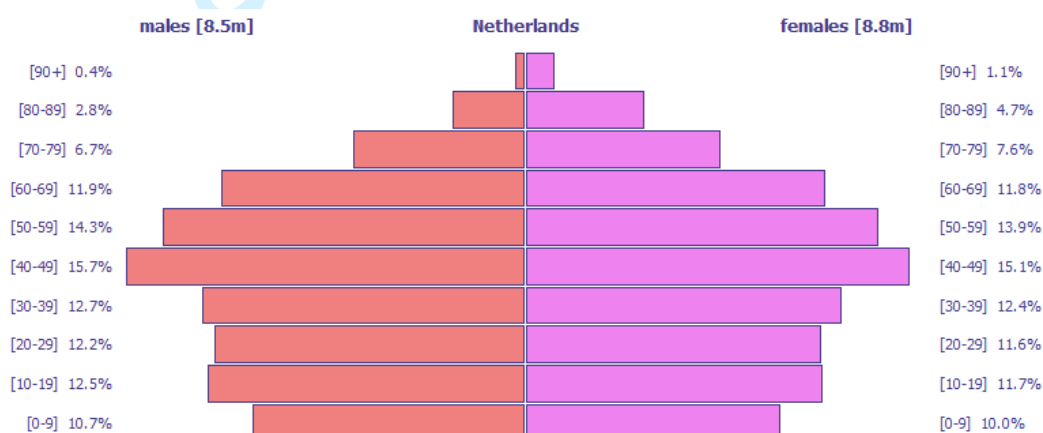
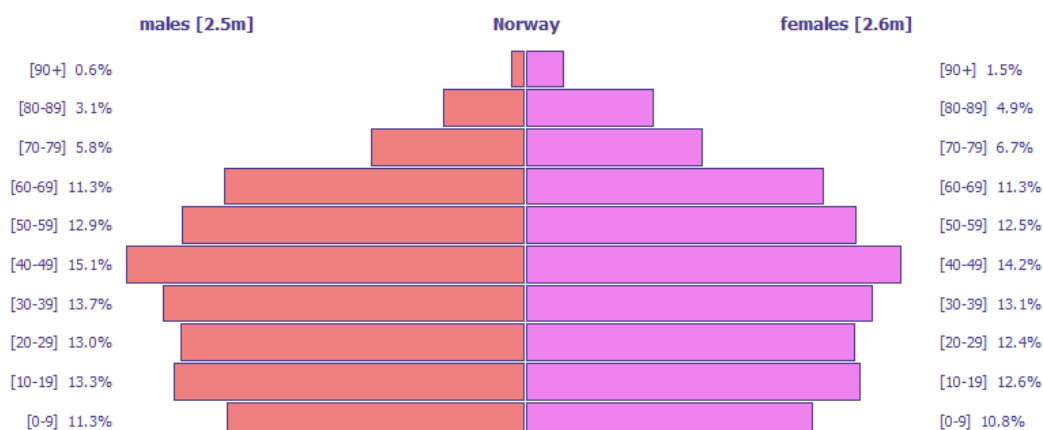


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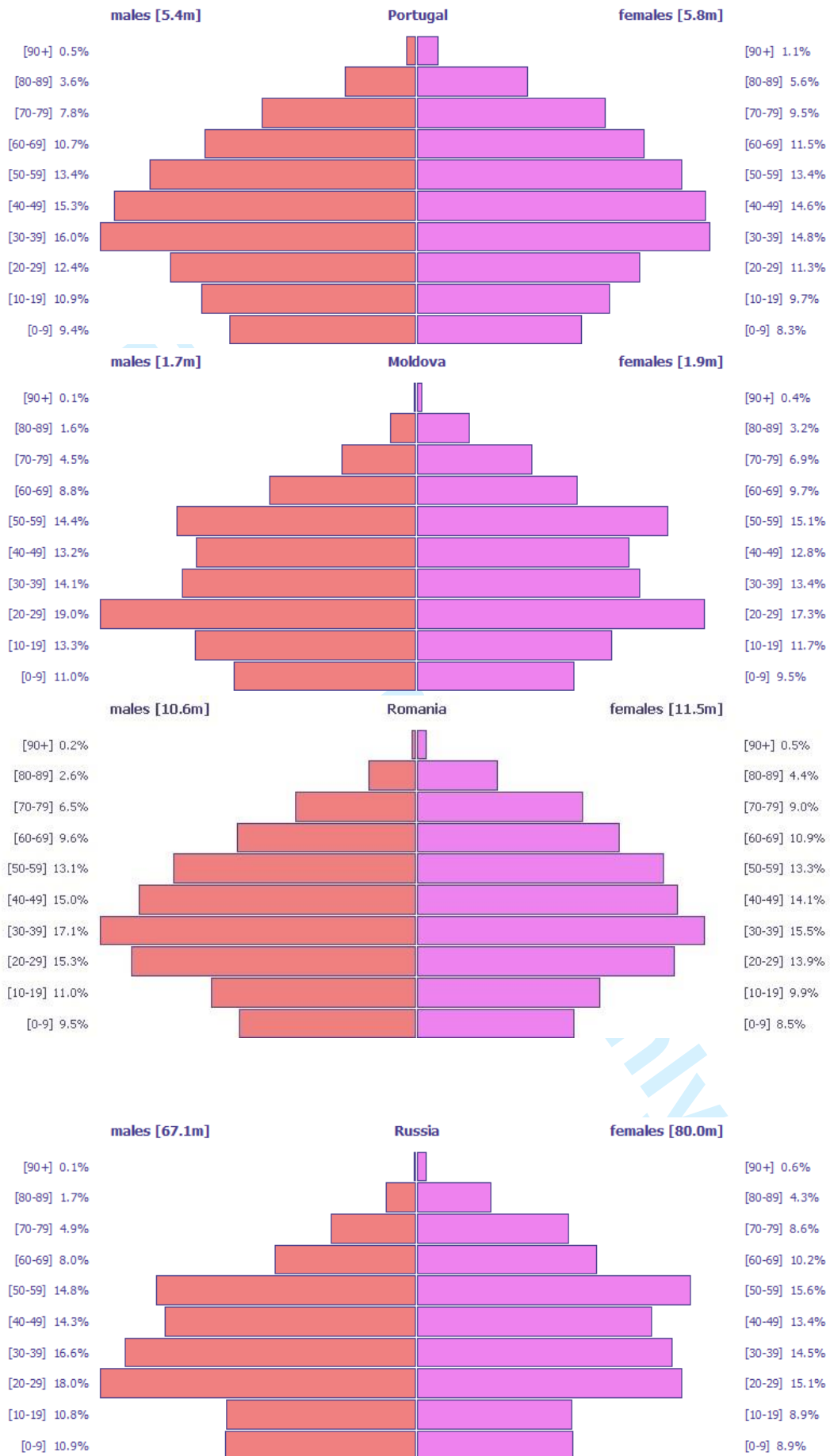
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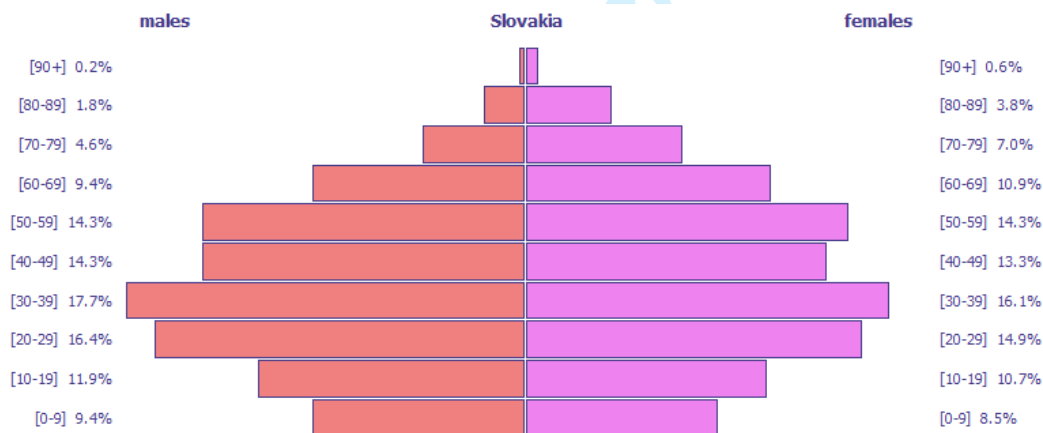
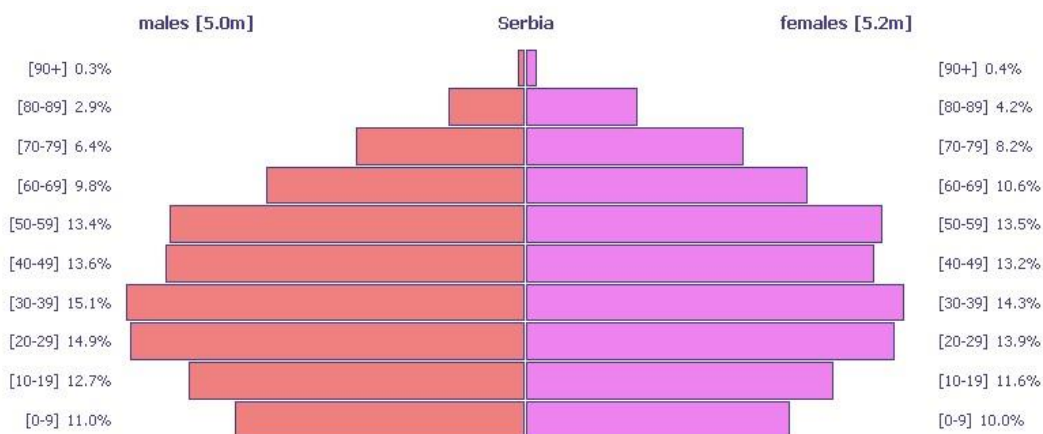
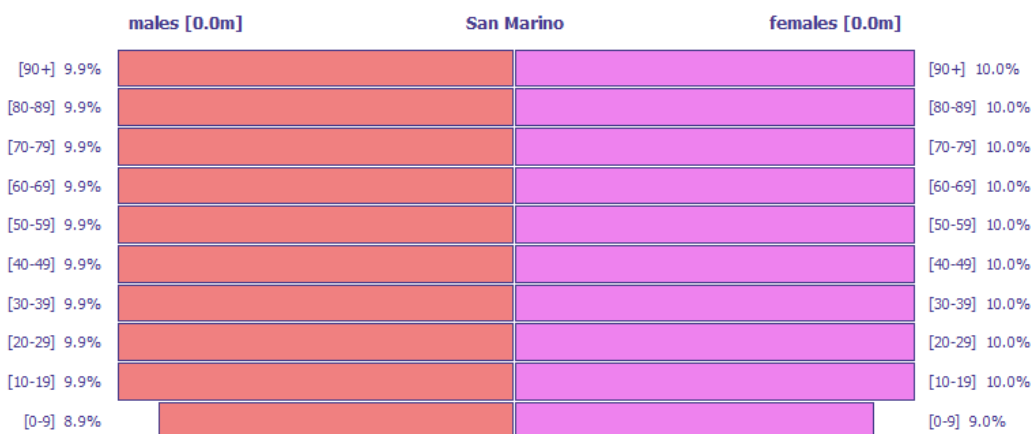
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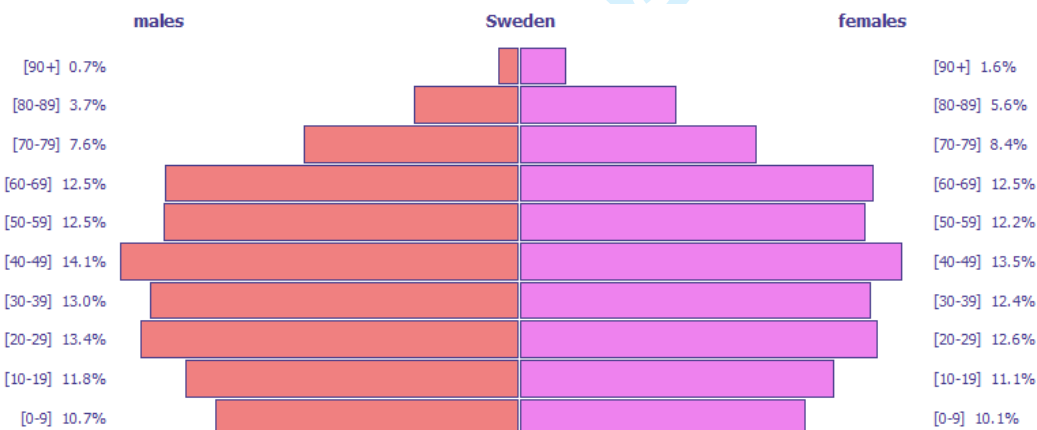
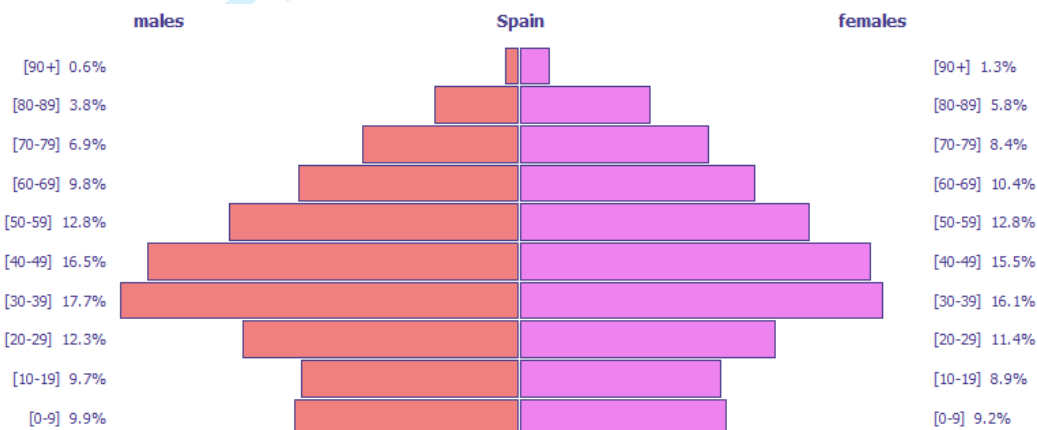
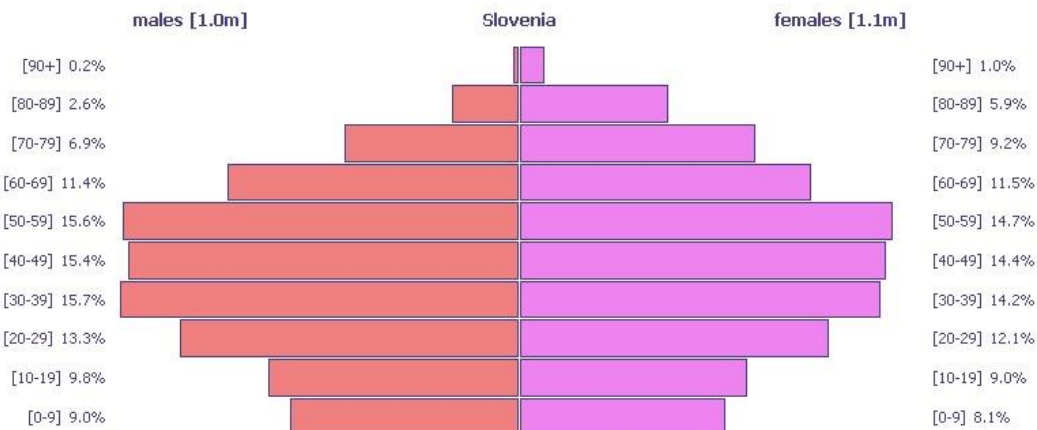
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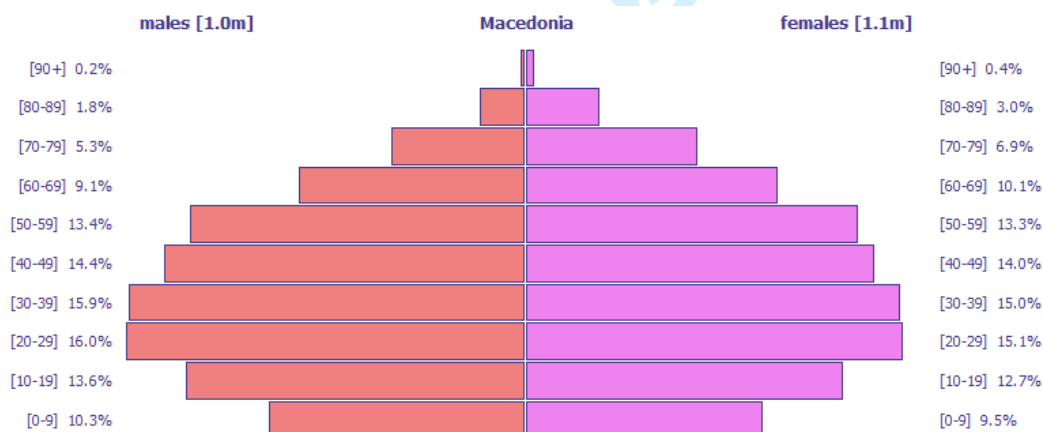
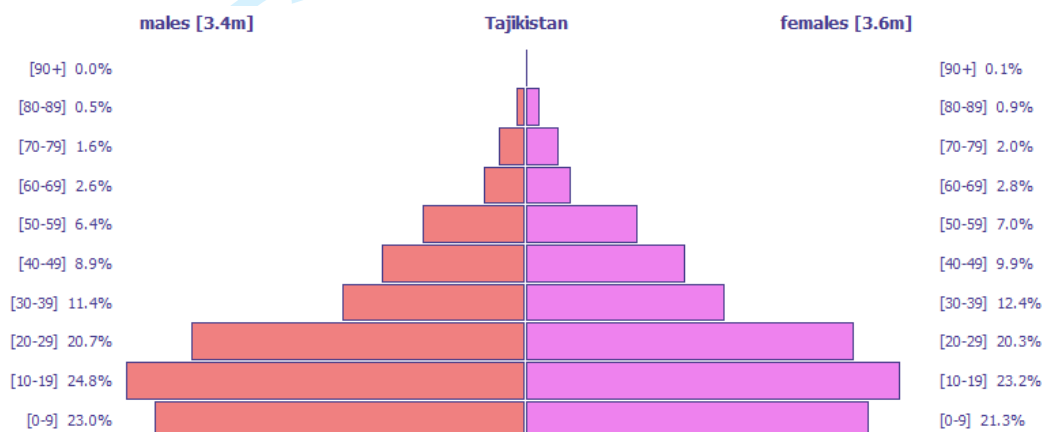
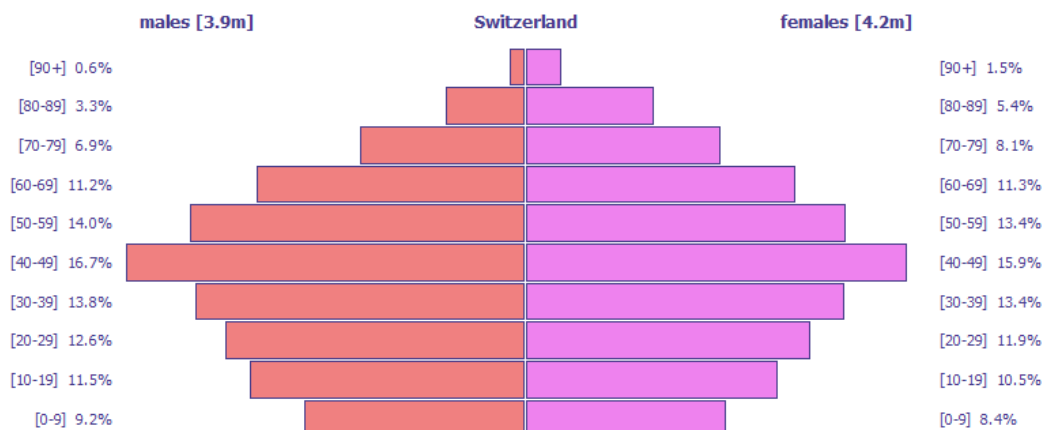
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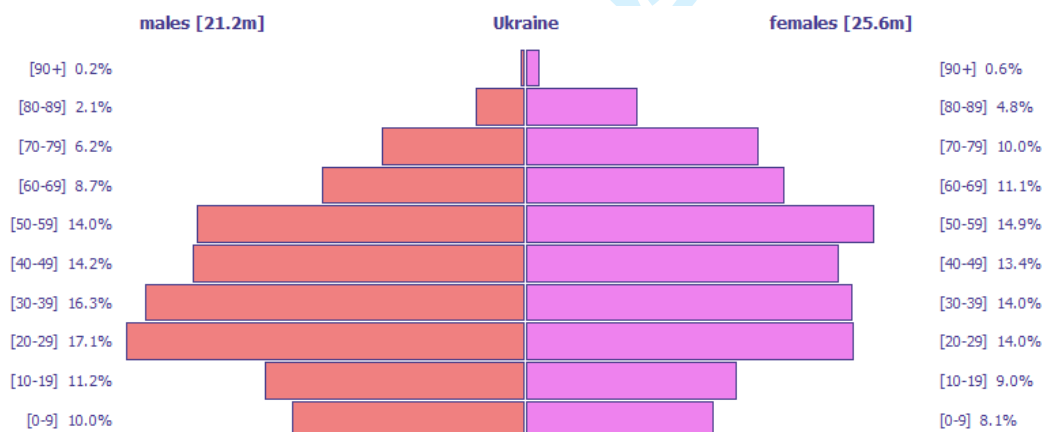
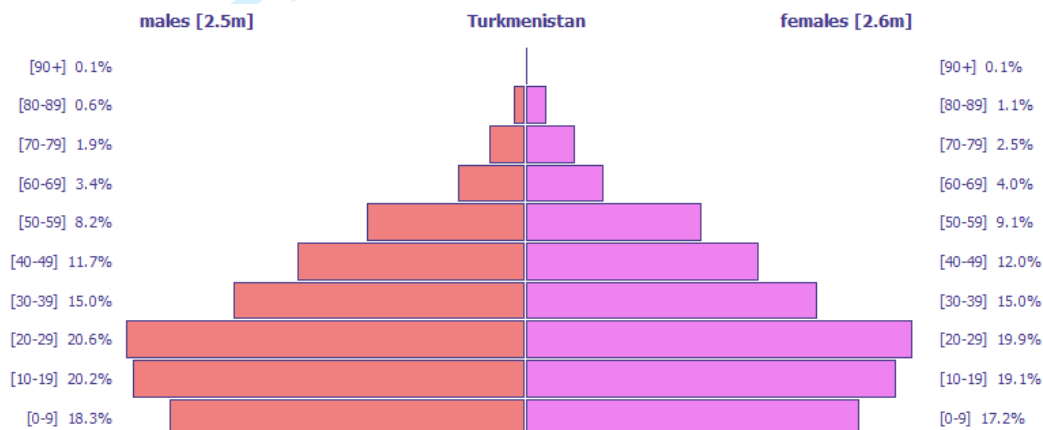
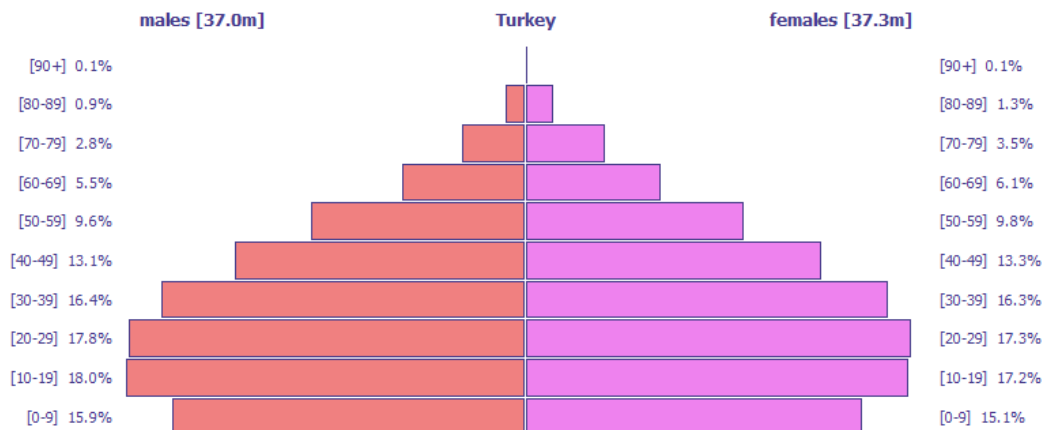
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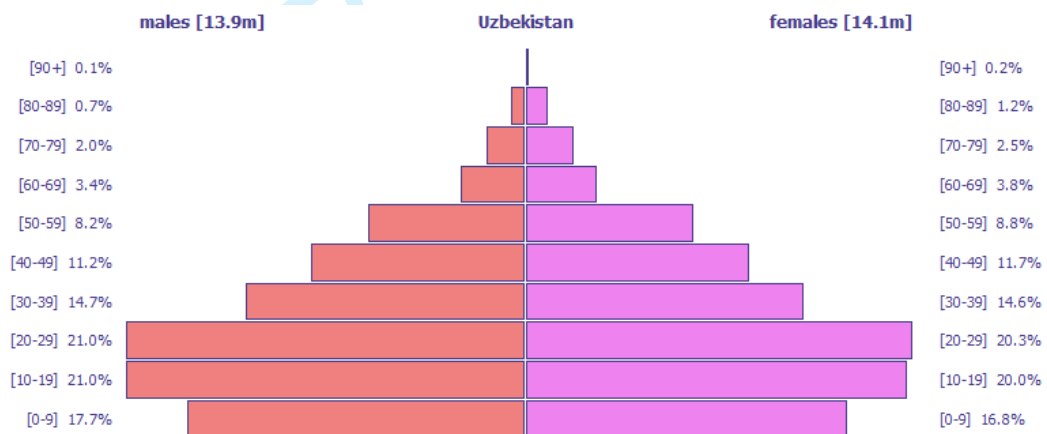
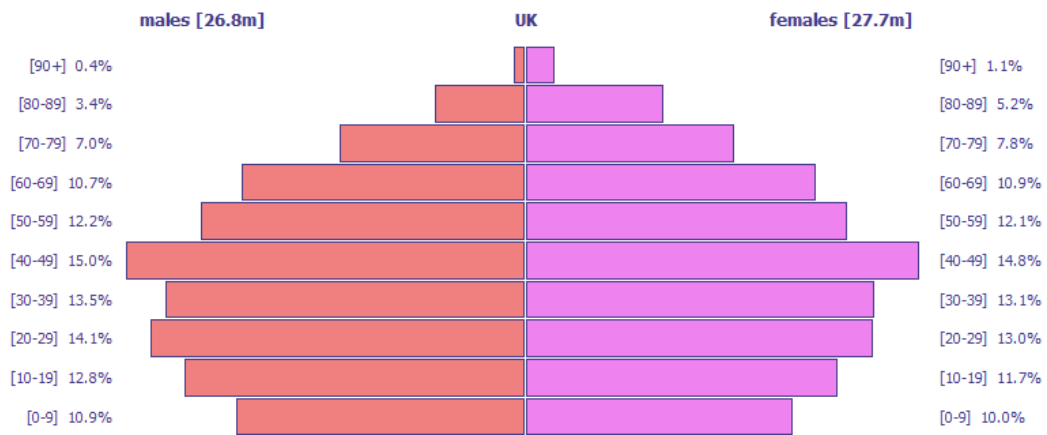
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Appendix 6. Disease tables by country

Albania

Table A1. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	113 [±3]	524 [±6]	13 [±1]	113 [±3]	1555 [±11]
2020	1178 [±9]	5401 [±20]	133 [±3]	988 [±9]	16435 [±35]
2030	2222 [±13]	10237 [±27]	243 [±4]	1588 [±11]	30095 [±47]
Scenario 1					
2010	113 [±3]	525 [±6]	13 [±1]	113 [±3]	1555 [±11]
2020	1169 [±9]	5379 [±20]	135 [±3]	960 [±9]	16392 [±35]
2030	2208 [±13]	10193 [±27]	244 [±4]	1552 [±11]	30012 [±47]
Scenario 2					
2010	110 [±3]	525 [±6]	14 [±1]	114 [±3]	1557 [±11]
2020	1146 [±9]	5235 [±20]	123 [±3]	828 [±8]	16136 [±35]
2030	2165 [±13]	9934 [±27]	228 [±4]	1343 [±10]	29680 [±47]

Table A2. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	-1 [±9]	0 [±1]	0 [±4]	0 [±16]
2020	9 [±14]	22 [±29]	-2 [±5]	28 [±12]	43 [±51]
2030	14 [±19]	44 [±40]	-1 [±6]	36 [±16]	83 [±69]
Scenario 2					
2010	3 [±4]	-1 [±9]	-1 [±1]	-1 [±4]	-2 [±16]
2020	32 [±14]	166 [±29]	10 [±5]	160 [±12]	299 [±51]
2030	57 [±19]	303 [±40]	15 [±6]	245 [±15]	415 [±69]

Table A3. Prevalence cases in year [per 100000] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	829 [±8]	1954 [±13]	262 [±5]	2724 [±15]	42669 [±58]
2020	965 [±9]	2419 [±14]	274 [±5]	2718 [±14]	47159 [±60]
2030	1015 [±9]	2663 [±14]	287 [±5]	2509 [±14]	50524 [±61]
Scenario 1					
2010	840 [±8]	1953 [±12]	261 [±5]	2727 [±15]	42639 [±58]
2020	960 [±9]	2410 [±14]	276 [±5]	2693 [±14]	47089 [±60]
2030	1011 [±9]	2651 [±14]	287 [±5]	2481 [±13]	50428 [±61]
Scenario 2					
2010	833 [±8]	1960 [±13]	263 [±5]	2723 [±15]	42661 [±58]
2020	944 [±8]	2357 [±13]	266 [±4]	2575 [±14]	46904 [±60]
2030	997 [±9]	2586 [±14]	277 [±4]	2320 [±13]	50222 [±61]

Table A4. Prevalence cases avoided in year [per 100000] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-11 [±12]	1 [±18]	1 [±6]	-3 [±21]	30 [±83]
2020	5 [±12]	9 [±20]	-2 [±7]	25 [±21]	70 [±87]
2030	4 [±13]	12 [±21]	0 [±7]	28 [±20]	96 [±90]
Scenario 2					
2010	-4 [±12]	-6 [±18]	-1 [±6]	1 [±21]	8 [±83]
2020	21 [±12]	62 [±20]	8 [±7]	143 [±21]	255 [±87]
2030	18 [±13]	77 [±20]	10 [±7]	189 [±20]	302 [±90]

Andorra

Table A5. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	174 [±4]	897 [±8]	15 [±1]	218 [±4]	575 [±7]
2020	2068 [±13]	7668 [±25]	184 [±4]	2573 [±15]	7148 [±25]
2030	4426 [±20]	15278 [±37]	384 [±6]	5328 [±22]	14869 [±36]
Scenario 1					
2010	169 [±4]	897 [±8]	14 [±1]	218 [±4]	581 [±7]
2020	2043 [±13]	7551 [±25]	179 [±4]	2435 [±14]	6994 [±24]
2030	4358 [±20]	14994 [±37]	372 [±6]	5022 [±21]	14493 [±36]
Scenario 2					
2010	169 [±4]	896 [±8]	16 [±1]	216 [±4]	580 [±7]
2020	1970 [±13]	7178 [±25]	168 [±4]	2003 [±13]	6464 [±23]
2030	4188 [±19]	14180 [±35]	349 [±6]	4138 [±19]	13324 [±34]

Table A6. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [±5]	0 [±12]	1 [±2]	0 [±6]	-6 [±10]
2020	25 [±18]	117 [±35]	5 [±5]	138 [±20]	154 [±34]
2030	68 [±27]	284 [±49]	12 [±8]	306 [±29]	376 [±48]
Scenario 2					
2010	5 [±5]	1 [±12]	-1 [±2]	2 [±6]	-5 [±10]
2020	98 [±18]	490 [±34]	16 [±5]	570 [±19]	684 [±33]
2030	238 [±26]	1098 [±49]	35 [±8]	1190 [±28]	1545 [±47]

Table A7. Prevalence cases in year [per 100000] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1587 [±11]	2299 [±14]	403 [±6]	4303 [±19]	13720 [±33]
2020	1888 [±13]	2441 [±14]	396 [±6]	4183 [±19]	14817 [±35]
2030	2278 [±14]	3145 [±17]	473 [±6]	4857 [±21]	17775 [±40]
Scenario 1					
2010	1589 [±11]	2300 [±14]	402 [±6]	4311 [±19]	13724 [±33]
2020	1876 [±13]	2420 [±14]	390 [±6]	4088 [±19]	14683 [±35]
2030	2248 [±14]	3085 [±17]	463 [±6]	4666 [±20]	17498 [±39]
Scenario 2					
2010	1579 [±11]	2300 [±14]	405 [±6]	4304 [±19]	13720 [±33]
2020	1837 [±12]	2316 [±14]	384 [±6]	3763 [±18]	14282 [±35]
2030	2198 [±14]	2939 [±16]	450 [±6]	4111 [±19]	16696 [±38]

Table A8. Prevalence cases avoided in year [per 100000] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±16]	-1 [±19]	1 [±8]	-8 [±26]	-4 [±47]
2020	12 [±17]	21 [±20]	6 [±8]	95 [±26]	134 [±49]
2030	30 [±19]	60 [±22]	10 [±9]	191 [±28]	277 [±53]
Scenario 2					
2010	8 [±16]	-1 [±19]	-2 [±8]	-1 [±26]	0 [±47]
2020	51 [±17]	125 [±20]	12 [±8]	420 [±25]	535 [±48]
2030	80 [±19]	206 [±22]	23 [±9]	746 [±27]	1079 [±53]

Austria

Table A9. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	183 [±4]	3033 [±16]	17 [±1]	224 [±4]	504 [±6]
2020	2086 [±14]	24761 [±47]	206 [±4]	2678 [±15]	6254 [±24]
2030	4278 [±21]	47804 [±69]	426 [±6]	5662 [±24]	12793 [±35]
Scenario 1					
2010	182 [±4]	3033 [±16]	17 [±1]	225 [±4]	506 [±6]
2020	2046 [±13]	24249 [±46]	195 [±4]	2480 [±15]	6000 [±23]
2030	4199 [±20]	46736 [±68]	411 [±6]	5229 [±23]	12247 [±35]
Scenario 2					
2010	185 [±4]	3023 [±16]	17 [±1]	221 [±4]	500 [±6]
2020	2002 [±13]	23303 [±45]	183 [±4]	2089 [±14]	5566 [±22]
2030	4108 [±20]	44991 [±66]	387 [±6]	4454 [±21]	11286 [±33]

Table A10. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±5]	0 [±22]	0 [±2]	0 [±6]	0 [±9]
2020	40 [±18]	512 [±63]	11 [±6]	198 [±20]	254 [±31]
2030	79 [±26]	1068 [±87]	15 [±8]	433 [±30]	546 [±45]
Scenario 2					
2010	-2 [±5]	10 [±22]	0 [±2]	3 [±6]	4 [±9]
2020	84 [±18]	1458 [±62]	23 [±6]	589 [±20]	688 [±31]
2030	170 [±26]	2813 [±86]	39 [±8]	1208 [±28]	1507 [±44]

Table A11. Prevalence cases in year [per 100000] for Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1559 [±11]	4763 [±20]	414 [±6]	3457 [±17]	13069 [±32]
2020	1683 [±12]	4721 [±20]	408 [±6]	2522 [±15]	13030 [±34]
2030	1801 [±13]	4841 [±22]	438 [±7]	2703 [±16]	13610 [±37]
Scenario 1					
2010	1557 [±11]	4757 [±20]	412 [±6]	3467 [±17]	13048 [±32]
2020	1670 [±12]	4622 [±20]	399 [±6]	2425 [±15]	12857 [±34]
2030	1796 [±13]	4777 [±22]	430 [±6]	2554 [±16]	13352 [±36]
Scenario 2					
2010	1561 [±11]	4757 [±20]	409 [±6]	3459 [±17]	13016 [±32]
2020	1664 [±12]	4503 [±20]	393 [±6]	2250 [±14]	12643 [±33]
2030	1782 [±13]	4639 [±21]	421 [±6]	2314 [±15]	12903 [±35]

Table A12. Prevalence cases avoided in year [per 100000] Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±16]	6 [±28]	2 [±8]	0 [±24]	21 [±46]
2020	13 [±16]	99 [±27]	9 [±8]	97 [±20]	173 [±46]
2030	5 [±17]	64 [±28]	8 [±8]	149 [±21]	258 [±46]
Scenario 2					
2010	0 [±16]	6 [±28]	5 [±8]	0 [±24]	53 [±46]
2020	19 [±16]	218 [±27]	15 [±8]	272 [±20]	387 [±45]
2030	19 [±17]	202 [±28]	17 [±8]	389 [±20]	707 [±46]

Armenia

Table A13. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	115 [±3]	888 [±8]	15 [±1]	247 [±4]	641 [±7]
2020	1266 [±10]	8079 [±25]	162 [±4]	2573 [±14]	6866 [±23]
2030	2522 [±14]	15084 [±34]	316 [±5]	4771 [±19]	14350 [±34]
Scenario 1					
2010	115 [±3]	888 [±8]	16 [±1]	248 [±4]	638 [±7]
2020	1256 [±10]	7961 [±25]	159 [±4]	2419 [±14]	6739 [±23]
2030	2496 [±14]	14847 [±34]	309 [±5]	4490 [±19]	14022 [±33]
Scenario 2					
2010	116 [±3]	885 [±8]	14 [±1]	247 [±4]	639 [±7]
2020	1225 [±10]	7595 [±24]	147 [±3]	2069 [±13]	6461 [±23]
2030	2435 [±14]	14233 [±33]	295 [±5]	3817 [±17]	13408 [±32]

Table A14. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	0 [±12]	-1 [±2]	-1 [±6]	3 [±10]
2020	10 [±14]	118 [±36]	3 [±5]	154 [±20]	127 [±33]
2030	26 [±20]	237 [±49]	7 [±7]	281 [±27]	328 [±48]
Scenario 2					
2010	-1 [±4]	3 [±12]	1 [±2]	0 [±6]	2 [±10]
2020	41 [±14]	484 [±35]	15 [±5]	504 [±19]	405 [±33]
2030	87 [±20]	851 [±48]	21 [±7]	954 [±26]	942 [±47]

Table A15. Prevalence cases in year [per 100000] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	855 [±8]	1423 [±11]	316 [±5]	5933 [±22]	26724 [±46]
2020	952 [±9]	1816 [±12]	301 [±5]	5456 [±21]	26337 [±46]
2030	1046 [±9]	1887 [±12]	328 [±5]	5542 [±21]	28023 [±47]
Scenario 1					
2010	859 [±8]	1424 [±11]	320 [±5]	5926 [±22]	26711 [±46]
2020	944 [±9]	1799 [±12]	301 [±5]	5331 [±20]	26234 [±45]
2030	1029 [±9]	1864 [±12]	327 [±5]	5356 [±21]	27758 [±47]
Scenario 2					
2010	853 [±8]	1425 [±11]	318 [±5]	5917 [±22]	26705 [±46]
2020	930 [±9]	1737 [±12]	292 [±5]	5092 [±20]	26056 [±45]
2030	1025 [±9]	1809 [±12]	318 [±5]	4917 [±20]	27326 [±46]

Table A16. Prevalence cases avoided in year [per 100000] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±12]	-1 [±15]	-4 [±7]	7 [±31]	13 [±65]
2020	8 [±12]	17 [±17]	0 [±7]	125 [±29]	103 [±65]
2030	17 [±13]	23 [±17]	1 [±7]	186 [±30]	265 [±67]
Scenario 2					
2010	2 [±12]	-2 [±15]	-2 [±7]	16 [±31]	19 [±65]
2020	22 [±12]	79 [±17]	9 [±7]	364 [±29]	281 [±65]
2030	21 [±13]	78 [±17]	10 [±7]	625 [±29]	697 [±67]

Azerbaijan

Table A17. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	61 [±2]	2232 [±13]	13 [±1]	105 [±3]	449 [±6]
2020	669 [±7]	17162 [±37]	133 [±3]	1126 [±9]	4965 [±20]
2030	1307 [±10]	30683 [±49]	251 [±4]	2148 [±13]	9870 [±28]
Scenario 1					
2010	62 [±2]	2220 [±13]	12 [±1]	107 [±3]	445 [±6]
2020	665 [±7]	17008 [±37]	129 [±3]	1065 [±9]	4823 [±19]
2030	1300 [±10]	30437 [±49]	247 [±4]	1999 [±12]	9522 [±27]
Scenario 2					
2010	60 [±2]	2231 [±13]	13 [±1]	110 [±3]	444 [±6]
2020	641 [±7]	16616 [±36]	123 [±3]	895 [±8]	4573 [±19]
2030	1257 [±10]	29810 [±48]	234 [±4]	1690 [±11]	9029 [±27]

Table A18. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	0 [±12]	-1 [±2]	-1 [±6]	3 [±10]
2020	10 [±14]	118 [±36]	3 [±5]	154 [±20]	127 [±33]
2030	26 [±20]	237 [±49]	7 [±7]	281 [±27]	328 [±48]
Scenario 2					
2010	-1 [±4]	3 [±12]	1 [±2]	0 [±6]	2 [±10]
2020	41 [±14]	484 [±35]	15 [±5]	504 [±19]	405 [±33]
2030	87 [±20]	851 [±48]	21 [±7]	954 [±26]	942 [±47]

Table A19. Prevalence cases in year [per 100000] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	855 [±8]	1423 [±11]	316 [±5]	5933 [±22]	26724 [±46]
2020	952 [±9]	1816 [±12]	301 [±5]	5456 [±21]	26337 [±46]
2030	1046 [±9]	1887 [±12]	328 [±5]	5542 [±21]	28023 [±47]
Scenario 1					
2010	859 [±8]	1424 [±11]	320 [±5]	5926 [±22]	26711 [±46]
2020	944 [±9]	1799 [±12]	301 [±5]	5331 [±20]	26234 [±45]
2030	1029 [±9]	1864 [±12]	327 [±5]	5356 [±21]	27758 [±47]
Scenario 2					
2010	853 [±8]	1425 [±11]	318 [±5]	5917 [±22]	26705 [±46]
2020	930 [±9]	1737 [±12]	292 [±5]	5092 [±20]	26056 [±45]
2030	1025 [±9]	1809 [±12]	318 [±5]	4917 [±20]	27326 [±46]

Table A20. Prevalence cases avoided in year [per 100000] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±12]	-1 [±15]	-4 [±7]	7 [±31]	13 [±65]
2020	8 [±12]	17 [±17]	0 [±7]	125 [±29]	103 [±65]
2030	17 [±13]	23 [±17]	1 [±7]	186 [±30]	265 [±67]
Scenario 2					
2010	2 [±12]	-2 [±15]	-2 [±7]	16 [±31]	19 [±65]
2020	22 [±12]	79 [±17]	9 [±7]	364 [±29]	281 [±65]
2030	21 [±13]	78 [±17]	10 [±7]	625 [±29]	697 [±67]

Belarus

Table A21. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	148 [±3]	714 [±8]	17 [±1]	276 [±5]	1003 [±9]
2020	1780 [±12]	8396 [±26]	195 [±4]	3204 [±16]	11195 [±31]
2030	3815 [±19]	18167 [±40]	422 [±6]	6810 [±25]	22512 [±45]
Scenario 1					
2010	146 [±3]	715 [±8]	17 [±1]	277 [±5]	1004 [±9]
2020	1739 [±12]	8255 [±26]	195 [±4]	2955 [±16]	10860 [±30]
2030	3737 [±18]	17785 [±40]	418 [±6]	6312 [±24]	21991 [±44]
Scenario 2					
2010	147 [±3]	717 [±8]	17 [±1]	276 [±5]	1002 [±9]
2020	1697 [±12]	7936 [±26]	183 [±4]	2501 [±14]	10323 [±29]
2030	3598 [±18]	17067 [±39]	396 [±6]	5340 [±22]	20872 [±43]

Table A22. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±5]	-1 [±11]	0 [±2]	-1 [±7]	-1 [±13]
2020	41 [±17]	141 [±36]	0 [±6]	249 [±22]	335 [±42]
2030	78 [±25]	382 [±54]	4 [±8]	498 [±32]	521 [±60]
Scenario 2					
2010	1 [±5]	-3 [±11]	0 [±2]	0 [±7]	1 [±13]
2020	83 [±17]	460 [±36]	12 [±5]	703 [±21]	872 [±41]
2030	217 [±24]	1100 [±53]	26 [±8]	1470 [±31]	1640 [±59]

Table A23. Prevalence cases in year [per 100000] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1436 [±11]	3046 [±16]	388 [±6]	6321 [±22]	34492 [±53]
2020	1742 [±12]	4279 [±19]	420 [±6]	7155 [±24]	38390 [±56]
2030	2011 [±13]	5267 [±22]	481 [±7]	7989 [±27]	41598 [±61]
Scenario 1					
2010	1428 [±11]	3051 [±16]	388 [±6]	6318 [±22]	34490 [±53]
2020	1715 [±12]	4207 [±19]	422 [±6]	6950 [±24]	38115 [±56]
2030	1980 [±13]	5166 [±22]	479 [±7]	7664 [±26]	41245 [±61]
Scenario 2					
2010	1436 [±11]	3044 [±16]	384 [±6]	6306 [±22]	34446 [±52]
2020	1691 [±12]	4092 [±18]	408 [±6]	6570 [±23]	37605 [±56]
2030	1923 [±13]	4984 [±21]	461 [±6]	6987 [±25]	40353 [±60]

Table A24. Prevalence cases avoided in year [per 100000] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	8 [±15]	-5 [±22]	0 [±8]	3 [±32]	2 [±74]
2020	27 [±17]	72 [±26]	-2 [±8]	205 [±34]	275 [±78]
2030	31 [±18]	101 [±29]	2 [±9]	325 [±35]	353 [±81]
Scenario 2					
2010	0 [±15]	2 [±22]	4 [±8]	15 [±32]	46 [±74]
2020	51 [±17]	187 [±26]	12 [±8]	585 [±33]	785 [±78]
2030	88 [±18]	283 [±29]	20 [±9]	1002 [±35]	1245 [±81]

Belgium

Table A25. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	245 [±4]	940 [±9]	853 [±8]	266 [±5]	785 [±8]
2020	2764 [±15]	9773 [±28]	9921 [±29]	2942 [±16]	8756 [±27]
2030	5488 [±22]	19130 [±41]	20051 [±41]	6007 [±23]	17459 [±39]
Scenario 1					
2010	245 [±4]	939 [±9]	857 [±8]	262 [±5]	774 [±8]
2020	2742 [±15]	9627 [±28]	9781 [±28]	2794 [±15]	8536 [±27]
2030	5434 [±22]	18771 [±40]	19744 [±41]	5728 [±22]	16973 [±38]
Scenario 2					
2010	245 [±4]	932 [±9]	854 [±8]	263 [±5]	773 [±8]
2020	2681 [±15]	9156 [±27]	9310 [±28]	2413 [±14]	7993 [±26]
2030	5300 [±21]	17848 [±39]	18953 [±40]	4952 [±21]	15931 [±37]

Table A26. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	1 [±12]	0 [±12]	4 [±6]	11 [±11]
2020	22 [±21]	146 [±39]	140 [±40]	148 [±21]	220 [±37]
2030	54 [±30]	359 [±55]	307 [±56]	279 [±31]	486 [±52]
Scenario 2					
2010	0 [±6]	8 [±12]	0 [±12]	3 [±7]	12 [±11]
2020	83 [±21]	617 [±39]	611 [±39]	529 [±21]	763 [±37]
2030	188 [±29]	1282 [±54]	1098 [±56]	1055 [±30]	1528 [±52]

Table A27. Prevalence cases in year [per 100000] for Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2285 [±14]	2052 [±13]	18497 [±38]	3900 [±18]	16167 [±36]
2020	2502 [±14]	2557 [±15]	18697 [±39]	3415 [±17]	16692 [±37]
2030	2655 [±15]	2770 [±15]	19770 [±41]	3580 [±18]	17569 [±39]
Scenario 1					
2010	2291 [±14]	2054 [±13]	18497 [±38]	3890 [±18]	16189 [±36]
2020	2496 [±14]	2521 [±14]	18600 [±39]	3333 [±17]	16552 [±37]
2030	2635 [±15]	2709 [±15]	19613 [±41]	3460 [±17]	17278 [±38]
Scenario 2					
2010	2280 [±14]	2045 [±13]	18461 [±38]	3889 [±18]	16172 [±36]
2020	2468 [±14]	2418 [±14]	18296 [±39]	3135 [±16]	16215 [±37]
2030	2616 [±15]	2613 [±15]	19275 [±41]	3154 [±16]	16760 [±38]

Table A28. Prevalence cases avoided in year [per 100000] Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±19]	0 [±18]	0 [±54]	10 [±25]	0 [±51]
2020	6 [±20]	36 [±20]	97 [±55]	82 [±23]	140 [±52]
2030	20 [±21]	61 [±21]	157 [±56]	120 [±24]	291 [±53]
Scenario 2					
2010	5 [±19]	7 [±18]	36 [±54]	11 [±25]	-5 [±51]
2020	34 [±20]	139 [±20]	401 [±54]	280 [±23]	477 [±51]
2030	39 [±21]	157 [±21]	495 [±56]	426 [±23]	809 [±52]

Bosnia & Herzegovina

Table A29. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	114 [±3]	631 [±7]	17 [±1]	251 [±4]	855 [±8]
2020	1339 [±11]	7268 [±25]	191 [±4]	2828 [±15]	9452 [±28]
2030	2751 [±16]	15132 [±37]	380 [±6]	5493 [±22]	18477 [±40]
Scenario 1					
2010	113 [±3]	625 [±7]	16 [±1]	249 [±4]	858 [±8]
2020	1323 [±10]	7228 [±24]	184 [±4]	2627 [±15]	9151 [±28]
2030	2714 [±15]	15024 [±36]	366 [±6]	5124 [±21]	17847 [±40]
Scenario 2					
2010	114 [±3]	630 [±7]	17 [±1]	253 [±4]	857 [±8]
2020	1281 [±10]	7165 [±24]	175 [±4]	2204 [±14]	8507 [±27]
2030	2620 [±15]	14843 [±36]	346 [±6]	4288 [±19]	16661 [±38]

Table A30. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±4]	6 [±10]	1 [±2]	2 [±6]	-3 [±12]
2020	16 [±15]	40 [±34]	7 [±5]	201 [±21]	301 [±39]
2030	37 [±21]	108 [±49]	14 [±8]	369 [±29]	630 [±54]
Scenario 2					
2010	0 [±4]	1 [±10]	0 [±2]	-2 [±6]	-2 [±12]
2020	58 [±14]	103 [±34]	16 [±5]	624 [±20]	945 [±38]
2030	131 [±21]	289 [±49]	34 [±8]	1205 [±28]	1816 [±53]

Table A31. Prevalence cases in year [per 100000] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	845 [±8]	2351 [±14]	378 [±6]	6659 [±23]	25035 [±45]
2020	1039 [±9]	3216 [±16]	422 [±6]	7371 [±25]	28209 [±48]
2030	1141 [±10]	3742 [±18]	459 [±6]	7847 [±26]	30438 [±52]
Scenario 1					
2010	841 [±8]	2342 [±14]	373 [±5]	6659 [±23]	25046 [±45]
2020	1031 [±9]	3202 [±16]	416 [±6]	7181 [±24]	27921 [±48]
2030	1132 [±10]	3718 [±18]	450 [±6]	7532 [±26]	29882 [±51]
Scenario 2					
2010	843 [±8]	2348 [±14]	375 [±5]	6651 [±23]	25033 [±45]
2020	1011 [±9]	3181 [±16]	409 [±6]	6799 [±24]	27314 [±48]
2030	1100 [±10]	3670 [±18]	434 [±6]	6868 [±25]	28862 [±51]

Table A32. Prevalence cases avoided in year [per 100000] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [±12]	9 [±19]	5 [±8]	0 [±33]	-11 [±63]
2020	8 [±13]	14 [±23]	6 [±8]	190 [±34]	288 [±67]
2030	9 [±13]	24 [±24]	9 [±9]	315 [±35]	556 [±69]
Scenario 2					
2010	2 [±12]	3 [±19]	3 [±8]	8 [±33]	2 [±63]
2020	28 [±13]	35 [±23]	13 [±8]	572 [±34]	895 [±67]
2030	41 [±13]	72 [±24]	25 [±8]	979 [±34]	1576 [±69]

Bulgaria

Table A33. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	171 [± 4]	1406 [± 11]	18 [± 1]	233 [± 4]	705 [± 8]
2020	1933 [± 13]	12944 [± 34]	215 [± 4]	2856 [± 16]	8520 [± 27]
2030	3974 [± 20]	25378 [± 50]	445 [± 7]	5957 [± 24]	17732 [± 42]
Scenario 1					
2010	170 [± 4]	1410 [± 11]	19 [± 1]	234 [± 4]	696 [± 7]
2020	1910 [± 13]	12760 [± 34]	215 [± 4]	2645 [± 15]	8225 [± 27]
2030	3914 [± 20]	24915 [± 49]	439 [± 7]	5521 [± 23]	17183 [± 41]
Scenario 2					
2010	171 [± 4]	1407 [± 11]	18 [± 1]	231 [± 4]	706 [± 8]
2020	1842 [± 13]	12113 [± 33]	202 [± 4]	2173 [± 14]	7602 [± 26]
2030	3779 [± 19]	23702 [± 48]	414 [± 6]	4569 [± 21]	15927 [± 39]

Table A34. Cumulative incidence cases avoided from year 2010 [per 100000] Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 5]	-4 [± 15]	-1 [± 2]	-1 [± 6]	9 [± 11]
2020	23 [± 18]	184 [± 45]	0 [± 6]	211 [± 21]	295 [± 37]
2030	60 [± 25]	463 [± 63]	6 [± 8]	436 [± 30]	549 [± 53]
Scenario 2					
2010	0 [± 5]	-1 [± 15]	0 [± 2]	2 [± 6]	-1 [± 11]
2020	91 [± 17]	831 [± 45]	13 [± 6]	683 [± 20]	918 [± 36]
2030	195 [± 25]	1676 [± 63]	31 [± 8]	1388 [± 29]	1805 [± 52]

Table A35. Prevalence cases in year [per 100000] for Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1047 [± 9]	2342 [± 14]	406 [± 6]	6690 [± 23]	17721 [± 38]
2020	1152 [± 10]	2431 [± 15]	383 [± 6]	5910 [± 23]	17794 [± 40]
2030	1250 [± 11]	2576 [± 16]	404 [± 6]	6227 [± 25]	19104 [± 43]
Scenario 1					
2010	1049 [± 9]	2345 [± 14]	402 [± 6]	6691 [± 23]	17718 [± 38]
2020	1149 [± 10]	2416 [± 15]	380 [± 6]	5759 [± 23]	17587 [± 39]
2030	1227 [± 11]	2509 [± 16]	399 [± 6]	5936 [± 24]	18773 [± 43]
Scenario 2					
2010	1047 [± 9]	2341 [± 14]	406 [± 6]	6696 [± 23]	17749 [± 38]
2020	1122 [± 10]	2320 [± 14]	380 [± 6]	5467 [± 22]	17227 [± 39]
2030	1201 [± 11]	2413 [± 15]	391 [± 6]	5381 [± 23]	18096 [± 42]

Table A36. Prevalence cases avoided in year [per 100000] Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 13]	-3 [± 19]	4 [± 8]	-1 [± 33]	3 [± 53]
2020	3 [± 14]	15 [± 20]	3 [± 8]	151 [± 31]	207 [± 53]
2030	23 [± 14]	67 [± 20]	5 [± 8]	291 [± 31]	331 [± 55]
Scenario 2					
2010	0 [± 13]	1 [± 19]	0 [± 8]	-6 [± 33]	-28 [± 53]
2020	30 [± 13]	111 [± 19]	3 [± 8]	443 [± 30]	567 [± 53]
2030	49 [± 14]	163 [± 20]	13 [± 8]	846 [± 30]	1008 [± 55]

Croatia

Table A37. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	191 [± 4]	1638 [± 11]	21 [± 1]	245 [± 4]	725 [± 8]
2020	2110 [± 13]	15814 [± 37]	237 [± 4]	2727 [± 15]	8294 [± 27]
2030	4246 [± 20]	30803 [± 53]	473 [± 7]	5463 [± 22]	16797 [± 39]
Scenario 1					
2010	190 [± 4]	1636 [± 11]	22 [± 1]	241 [± 4]	722 [± 8]
2020	2083 [± 13]	15586 [± 36]	230 [± 4]	2546 [± 15]	8035 [± 26]
2030	4209 [± 20]	30390 [± 53]	465 [± 7]	5067 [± 22]	16327 [± 39]
Scenario 2					
2010	189 [± 4]	1634 [± 11]	21 [± 1]	239 [± 4]	725 [± 8]
2020	2015 [± 13]	14946 [± 36]	216 [± 4]	2033 [± 13]	7402 [± 25]
2030	4061 [± 19]	29012 [± 51]	434 [± 6]	4036 [± 19]	14990 [± 37]

Table A38. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 6]	2 [± 16]	-1 [± 2]	4 [± 6]	3 [± 11]
2020	27 [± 18]	228 [± 50]	7 [± 6]	181 [± 21]	259 [± 36]
2030	37 [± 26]	413 [± 70]	8 [± 9]	396 [± 29]	470 [± 51]
Scenario 2					
2010	2 [± 6]	4 [± 16]	0 [± 2]	6 [± 6]	0 [± 11]
2020	95 [± 18]	868 [± 50]	21 [± 6]	694 [± 20]	892 [± 35]
2030	185 [± 26]	1791 [± 69]	39 [± 9]	1427 [± 28]	1807 [± 50]

Table A39. Prevalence cases in year [per 100000] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1169 [±10]	5254 [±21]	449 [±6]	5814 [±22]	16856 [±37]
2020	1276 [±10]	5750 [±22]	426 [±6]	5615 [±22]	17878 [±39]
2030	1364 [±11]	6116 [±24]	442 [±6]	5941 [±23]	19300 [±42]
Scenario 1					
2010	1162 [±10]	5250 [±20]	448 [±6]	5812 [±22]	16881 [±37]
2020	1264 [±10]	5717 [±22]	422 [±6]	5498 [±22]	17720 [±39]
2030	1368 [±11]	6073 [±24]	440 [±6]	5681 [±23]	19020 [±42]
Scenario 2					
2010	1159 [±10]	5241 [±20]	446 [±6]	5800 [±22]	16845 [±37]
2020	1245 [±10]	5571 [±22]	416 [±6]	5145 [±21]	17264 [±38]
2030	1336 [±11]	5853 [±23]	426 [±6]	5034 [±21]	18195 [±41]

Table A40. Prevalence cases avoided in year [per 100000] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	7 [±14]	4 [±29]	1 [±8]	2 [±30]	-25 [±52]
2020	12 [±14]	33 [±30]	4 [±8]	117 [±30]	158 [±53]
2030	-4 [±15]	43 [±31]	2 [±8]	260 [±30]	280 [±55]
Scenario 2					
2010	10 [±14]	13 [±29]	3 [±8]	14 [±30]	11 [±52]
2020	31 [±14]	179 [±30]	10 [±8]	470 [±29]	614 [±53]
2030	28 [±15]	263 [±31]	16 [±8]	907 [±30]	1105 [±55]

Cyprus

Table A41. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	105 [± 3]	924 [± 9]	181 [± 4]	121 [± 3]	573 [± 7]
2020	1196 [± 10]	9939 [± 28]	2095 [± 13]	1395 [± 10]	6471 [± 23]
2030	2395 [± 14]	20261 [± 40]	4192 [± 18]	2923 [± 15]	13220 [± 32]
Scenario 1					
2010	106 [± 3]	917 [± 9]	183 [± 4]	124 [± 3]	568 [± 7]
2020	1186 [± 10]	9778 [± 28]	2050 [± 13]	1316 [± 10]	6277 [± 22]
2030	2367 [± 14]	19843 [± 40]	4102 [± 18]	2722 [± 15]	12814 [± 32]
Scenario 2					
2010	104 [± 3]	915 [± 9]	183 [± 4]	124 [± 3]	574 [± 7]
2020	1160 [± 10]	9283 [± 27]	1944 [± 12]	1092 [± 9]	5810 [± 21]
2030	2312 [± 14]	18881 [± 39]	3896 [± 18]	2266 [± 13]	11882 [± 31]

Table A42. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 4]	7 [± 12]	0 [± 5]	0 [± 4]	5 [± 10]
2020	10 [± 14]	161 [± 40]	45 [± 18]	79 [± 15]	194 [± 32]
2030	28 [± 20]	418 [± 57]	90 [± 26]	201 [± 21]	406 [± 46]
Scenario 2					
2010	1 [± 4]	9 [± 12]	-2 [± 5]	-3 [± 4]	-1 [± 10]
2020	36 [± 14]	656 [± 39]	151 [± 18]	303 [± 14]	661 [± 31]
2030	83 [± 19]	1380 [± 56]	296 [± 25]	657 [± 20]	1338 [± 45]

Table A43. Prevalence cases in year [per 100000] for Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1114 [±9]	4253 [±18]	3496 [±17]	1762 [±12]	8899 [±27]
2020	1299 [±10]	5098 [±20]	3837 [±17]	2017 [±13]	10616 [±29]
2030	1454 [±11]	5973 [±22]	4334 [±19]	2348 [±14]	12448 [±32]
Scenario 1					
2010	1121 [±9]	4258 [±18]	3491 [±17]	1755 [±12]	8899 [±27]
2020	1301 [±10]	5013 [±20]	3787 [±17]	1954 [±12]	10462 [±29]
2030	1437 [±11]	5814 [±22]	4258 [±18]	2226 [±13]	12171 [±31]
Scenario 2					
2010	1122 [±9]	4264 [±18]	3494 [±17]	1764 [±12]	8918 [±27]
2020	1287 [±10]	4791 [±19]	3721 [±17]	1804 [±12]	10126 [±28]
2030	1422 [±11]	5517 [±21]	4144 [±18]	1983 [±13]	11614 [±30]

Table A44. Prevalence cases avoided in year [per 100000] Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±13]	0 [±26]	5 [±24]	7 [±17]	0 [±38]
2020	0 [±14]	85 [±28]	50 [±25]	63 [±18]	154 [±41]
2030	17 [±15]	159 [±31]	76 [±26]	122 [±19]	277 [±44]
Scenario 2					
2010	0 [±13]	-11 [±26]	2 [±24]	-2 [±17]	-19 [±38]
2020	12 [±14]	307 [±28]	116 [±25]	213 [±17]	490 [±41]
2030	32 [±15]	456 [±30]	190 [±26]	365 [±19]	834 [±44]

Czech Republic

Table A45. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	217 [± 4]	1886 [± 12]	19 [± 1]	275 [± 5]	758 [± 8]
2020	2666 [± 16]	17906 [± 41]	255 [± 5]	3272 [± 18]	9443 [± 30]
2030	6015 [± 27]	38310 [± 67]	571 [± 8]	7363 [± 29]	21071 [± 50]
Scenario 1					
2010	219 [± 4]	1882 [± 12]	21 [± 1]	273 [± 5]	757 [± 8]
2020	2663 [± 16]	17749 [± 41]	251 [± 5]	3065 [± 17]	9196 [± 30]
2030	5980 [± 26]	37856 [± 67]	557 [± 8]	6867 [± 28]	20504 [± 49]
Scenario 2					
2010	221 [± 4]	1894 [± 12]	21 [± 1]	276 [± 5]	759 [± 8]
2020	2596 [± 16]	17007 [± 40]	239 [± 5]	2502 [± 15]	8488 [± 29]
2030	5836 [± 26]	36230 [± 65]	532 [± 8]	5523 [± 25]	18756 [± 47]

Table A46. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 6]	4 [± 17]	-2 [± 2]	2 [± 7]	1 [± 11]
2020	3 [± 21]	157 [± 53]	4 [± 6]	207 [± 23]	247 [± 39]
2030	35 [± 31]	454 [± 78]	14 [± 9]	496 [± 34]	567 [± 58]
Scenario 2					
2010	-4 [± 6]	-8 [± 17]	-2 [± 2]	-1 [± 7]	-1 [± 11]
2020	70 [± 21]	899 [± 53]	16 [± 6]	770 [± 21]	955 [± 38]
2030	179 [± 31]	2080 [± 77]	39 [± 9]	1840 [± 32]	2315 [± 56]

Table A47. Prevalence cases in year [per 100000] for Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1291 [±10]	3494 [±17]	451 [±6]	6790 [±23]	17597 [±38]
2020	1555 [±12]	3740 [±19]	471 [±7]	6346 [±25]	19800 [±44]
2030	1849 [±15]	4363 [±23]	553 [±8]	7185 [±29]	23371 [±52]
Scenario 1					
2010	1296 [±10]	3486 [±17]	452 [±6]	6791 [±23]	17621 [±38]
2020	1551 [±12]	3707 [±19]	467 [±7]	6188 [±24]	19640 [±43]
2030	1837 [±15]	4318 [±22]	544 [±8]	6879 [±28]	23017 [±52]
Scenario 2					
2010	1298 [±10]	3500 [±17]	452 [±6]	6781 [±23]	17639 [±38]
2020	1526 [±12]	3607 [±19]	461 [±7]	5859 [±24]	19226 [±43]
2030	1823 [±15]	4187 [±22]	536 [±8]	6131 [±27]	21972 [±51]

Table A48. Prevalence cases avoided in year [per 100000] Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-5 [±14]	8 [±24]	-1 [±8]	-1 [±33]	-24 [±53]
2020	4 [±16]	33 [±24]	4 [±9]	158 [±32]	160 [±56]
2030	12 [±17]	45 [±26]	9 [±9]	306 [±34]	354 [±61]
Scenario 2					
2010	-7 [±14]	-6 [±24]	-1 [±8]	9 [±33]	-42 [±53]
2020	29 [±16]	133 [±24]	10 [±9]	487 [±31]	574 [±56]
2030	26 [±17]	176 [±26]	17 [±9]	1054 [±33]	1399 [±60]

Denmark

Table A49. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	250 [±4]	1330 [±10]	976 [±9]	296 [±5]	776 [±8]
2020	2844 [±16]	12949 [±33]	11993 [±32]	3536 [±17]	8810 [±27]
2030	5572 [±22]	24645 [±47]	24016 [±47]	7348 [±26]	17692 [±40]
Scenario 1					
2010	249 [±4]	1323 [±10]	981 [±9]	298 [±5]	779 [±8]
2020	2820 [±16]	12694 [±33]	11789 [±32]	3323 [±17]	8544 [±27]
2030	5510 [±22]	24079 [±47]	23661 [±46]	6888 [±25]	17139 [±39]
Scenario 2					
2010	248 [±4]	1317 [±10]	974 [±9]	300 [±5]	776 [±8]
2020	2744 [±15]	12060 [±32]	11305 [±31]	2851 [±16]	8023 [±26]
2030	5377 [±22]	22831 [±45]	22825 [±45]	5958 [±23]	16059 [±38]

Table A50. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±6]	7 [±15]	0 [±13]	0 [±7]	0 [±11]
2020	24 [±21]	255 [±45]	204 [±44]	213 [±23]	266 [±37]
2030	62 [±30]	566 [±62]	355 [±62]	460 [±34]	553 [±53]
Scenario 2					
2010	2 [±6]	13 [±15]	2 [±12]	-4 [±7]	0 [±11]
2020	100 [±21]	889 [±45]	688 [±43]	685 [±23]	787 [±37]
2030	195 [±30]	1814 [±62]	1191 [±61]	1390 [±33]	1633 [±52]

Table A51. Prevalence cases in year [per 100000] for Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1918 [±12]	2748 [±15]	21670 [±42]	5352 [±21]	15920 [±36]
2020	1962 [±13]	3063 [±16]	21199 [±43]	4344 [±19]	15558 [±36]
2030	1974 [±13]	3099 [±17]	21325 [±44]	4504 [±20]	15810 [±38]
Scenario 1					
2010	1919 [±12]	2733 [±15]	21624 [±42]	5371 [±21]	15909 [±36]
2020	1971 [±13]	3025 [±16]	21056 [±42]	4237 [±19]	15365 [±36]
2030	1971 [±13]	3031 [±17]	21166 [±44]	4319 [±20]	15531 [±37]
Scenario 2					
2010	1903 [±12]	2730 [±15]	21616 [±42]	5375 [±21]	15891 [±36]
2020	1932 [±13]	2916 [±16]	20809 [±42]	4005 [±18]	15090 [±36]
2030	1957 [±13]	2911 [±16]	20881 [±43]	3959 [±19]	15031 [±37]

Table A52. Prevalence cases avoided in year [per 100000] Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±18]	15 [±21]	46 [±59]	0 [±29]	11 [±50]
2020	0 [±18]	38 [±22]	143 [±58]	107 [±26]	193 [±50]
2030	3 [±18]	68 [±22]	159 [±58]	185 [±27]	279 [±50]
Scenario 2					
2010	15 [±17]	18 [±21]	54 [±59]	-23 [±29]	29 [±50]
2020	30 [±18]	147 [±22]	390 [±58]	339 [±26]	468 [±50]
2030	17 [±18]	188 [±22]	444 [±58]	545 [±26]	779 [±50]

Estonia

Table A53. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	180 [± 4]	1705 [± 12]	18 [± 1]	209 [± 4]	677 [± 7]
2020	1827 [± 12]	14510 [± 35]	187 [± 4]	2350 [± 14]	7690 [± 26]
2030	3521 [± 18]	26422 [± 49]	366 [± 6]	4536 [± 20]	15207 [± 37]
Scenario 1					
2010	171 [± 4]	1701 [± 12]	16 [± 1]	209 [± 4]	682 [± 7]
2020	1795 [± 12]	14341 [± 35]	183 [± 4]	2208 [± 14]	7487 [± 25]
2030	3469 [± 18]	26092 [± 49]	352 [± 6]	4230 [± 20]	14766 [± 37]
Scenario 2					
2010	174 [± 4]	1701 [± 12]	17 [± 1]	212 [± 4]	682 [± 7]
2020	1735 [± 12]	13723 [± 34]	169 [± 4]	1808 [± 12]	6901 [± 24]
2030	3365 [± 17]	24959 [± 47]	328 [± 5]	3455 [± 18]	13492 [± 35]

Table A54. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	9 [± 5]	4 [± 17]	2 [± 2]	0 [± 6]	-5 [± 10]
2020	32 [± 17]	169 [± 48]	4 [± 5]	142 [± 19]	203 [± 35]
2030	52 [± 24]	330 [± 65]	14 [± 8]	306 [± 26]	441 [± 49]
Scenario 2					
2010	6 [± 5]	4 [± 17]	1 [± 2]	-3 [± 6]	-5 [± 10]
2020	92 [± 17]	787 [± 48]	18 [± 5]	542 [± 18]	789 [± 34]
2030	156 [± 23]	1463 [± 64]	38 [± 7]	1081 [± 25]	1715 [± 48]

Table A55. Prevalence cases in year [per 100000] for Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	976 [±9]	3099 [±16]	392 [±6]	5422 [±21]	16964 [±37]
2020	988 [±9]	2872 [±16]	343 [±5]	4494 [±20]	15972 [±37]
2030	1003 [±10]	2837 [±16]	340 [±6]	4515 [±20]	16313 [±39]
Scenario 1					
2010	976 [±9]	3092 [±16]	392 [±6]	5415 [±21]	16973 [±37]
2020	977 [±9]	2842 [±16]	340 [±5]	4388 [±19]	15850 [±37]
2030	989 [±9]	2817 [±16]	333 [±5]	4301 [±20]	16050 [±38]
Scenario 2					
2010	977 [±9]	3096 [±16]	390 [±6]	5418 [±21]	16948 [±37]
2020	954 [±9]	2766 [±15]	331 [±5]	4127 [±19]	15473 [±36]
2030	978 [±9]	2729 [±16]	322 [±5]	3865 [±19]	15271 [±37]

Table A56. Prevalence cases avoided in year [per 100000] Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±12]	7 [±22]	0 [±8]	7 [±29]	-9 [±52]
2020	11 [±13]	30 [±21]	3 [±7]	106 [±27]	122 [±50]
2030	14 [±13]	20 [±21]	7 [±7]	214 [±27]	263 [±51]
Scenario 2					
2010	-1 [±12]	3 [±22]	2 [±8]	4 [±29]	16 [±52]
2020	34 [±12]	106 [±21]	12 [±7]	367 [±26]	499 [±50]
2030	25 [±13]	108 [±21]	18 [±7]	650 [±26]	1042 [±50]

Finland

Table A57. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	294 [±5]	973 [±9]	392 [±6]	190 [±4]	635 [±7]
2020	3324 [±17]	10028 [±29]	4243 [±19]	2174 [±13]	7066 [±24]
2030	6460 [±24]	19723 [±41]	8033 [±26]	4420 [±20]	14024 [±35]
Scenario 1					
2010	294 [±5]	965 [±9]	395 [±6]	190 [±4]	634 [±7]
2020	3290 [±16]	9913 [±29]	4165 [±19]	2026 [±13]	6801 [±24]
2030	6405 [±23]	19451 [±41]	7885 [±26]	4100 [±19]	13480 [±34]
Scenario 2					
2010	296 [±5]	964 [±9]	399 [±6]	191 [±4]	632 [±7]
2020	3251 [±16]	9623 [±28]	3946 [±18]	1698 [±12]	6308 [±23]
2030	6325 [±23]	18858 [±40]	7462 [±25]	3450 [±17]	12471 [±33]

Table A58. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±7]	8 [±12]	0 [±8]	0 [±6]	1 [±10]
2020	34 [±23]	115 [±40]	78 [±26]	148 [±18]	265 [±33]
2030	55 [±32]	272 [±56]	148 [±36]	320 [±26]	544 [±47]
Scenario 2					
2010	0 [±7]	9 [±12]	0 [±8]	0 [±6]	3 [±10]
2020	73 [±23]	405 [±40]	297 [±26]	476 [±18]	758 [±33]
2030	135 [±32]	865 [±56]	571 [±35]	970 [±25]	1553 [±46]

Table A59. Prevalence cases in year [per 100000] for Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	6668 [±23]	2578 [±14]	7456 [±24]	3441 [±17]	15870 [±36]
2020	6013 [±22]	3230 [±16]	7630 [±25]	3279 [±16]	16644 [±37]
2030	5615 [±22]	3402 [±17]	7651 [±26]	3449 [±17]	17250 [±39]
Scenario 1					
2010	6652 [±23]	2558 [±14]	7438 [±24]	3432 [±17]	15847 [±36]
2020	5983 [±22]	3204 [±16]	7564 [±25]	3166 [±16]	16417 [±37]
2030	5590 [±22]	3375 [±17]	7565 [±26]	3244 [±17]	16847 [±38]
Scenario 2					
2010	6652 [±23]	2565 [±14]	7456 [±24]	3439 [±17]	15893 [±36]
2020	5968 [±22]	3165 [±16]	7436 [±25]	2951 [±16]	16104 [±36]
2030	5595 [±22]	3308 [±17]	7340 [±25]	2889 [±16]	16228 [±37]

Table A60. Prevalence cases avoided in year [per 100000] Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±20]	0 [±29]	0 [±35]	2 [±20]	0 [±69]
2020	21 [±22]	74 [±33]	24 [±37]	109 [±22]	215 [±76]
2030	0 [±23]	194 [±36]	93 [±40]	221 [±24]	474 [±81]
Scenario 2					
2010	0 [±20]	0 [±29]	0 [±35]	0 [±20]	0 [±69]
2020	46 [±22]	380 [±33]	224 [±37]	371 [±22]	697 [±75]
2030	55 [±23]	641 [±35]	362 [±39]	610 [±23]	1375 [±81]

France

Table A61. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	213 [± 4]	897 [± 8]	16 [± 1]	199 [± 4]	1353 [± 10]
2020	2481 [± 14]	9407 [± 28]	183 [± 4]	2426 [± 14]	14376 [± 34]
2030	4897 [± 20]	18475 [± 39]	371 [± 6]	5114 [± 21]	27688 [± 48]
Scenario 1					
2010	214 [± 4]	907 [± 9]	17 [± 1]	201 [± 4]	1357 [± 10]
2020	2446 [± 14]	9289 [± 27]	181 [± 4]	2252 [± 14]	14067 [± 34]
2030	4835 [± 20]	18148 [± 39]	362 [± 5]	4756 [± 20]	27196 [± 47]
Scenario 2					
2010	214 [± 4]	898 [± 8]	17 [± 1]	194 [± 4]	1359 [± 10]
2020	2398 [± 14]	8870 [± 27]	173 [± 4]	1901 [± 12]	13496 [± 33]
2030	4733 [± 20]	17347 [± 38]	344 [± 5]	4060 [± 18]	26199 [± 47]

Table A62. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 6]	0 [± 12]	0 [± 2]	0 [± 6]	0 [± 15]
2020	35 [± 20]	118 [± 39]	2 [± 5]	174 [± 19]	309 [± 48]
2030	62 [± 28]	327 [± 54]	9 [± 8]	358 [± 28]	492 [± 66]
Scenario 2					
2010	0 [± 6]	-1 [± 12]	-1 [± 2]	5 [± 6]	-6 [± 15]
2020	83 [± 20]	537 [± 38]	10 [± 5]	525 [± 19]	880 [± 47]
2030	164 [± 28]	1128 [± 54]	27 [± 8]	1054 [± 27]	1489 [± 66]

Table A63. Prevalence cases in year [per 100000] for France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	3932 [±18]	2481 [±14]	404 [±6]	3798 [±17]	51131 [±64]
2020	4111 [±18]	3091 [±16]	402 [±6]	3632 [±17]	53004 [±66]
2030	4267 [±19]	3386 [±17]	424 [±6]	4006 [±18]	54421 [±67]
Scenario 1					
2010	3948 [±18]	2489 [±14]	406 [±6]	3821 [±17]	51165 [±64]
2020	4116 [±18]	3063 [±16]	402 [±6]	3514 [±17]	52787 [±65]
2030	4260 [±19]	3333 [±17]	420 [±6]	3807 [±18]	54116 [±67]
Scenario 2					
2010	3942 [±18]	2470 [±14]	406 [±6]	3808 [±17]	51163 [±64]
2020	4091 [±18]	2951 [±15]	401 [±6]	3286 [±16]	52363 [±65]
2030	4252 [±19]	3216 [±16]	414 [±6]	3437 [±17]	53481 [±66]

Table A64. Prevalence cases avoided in year [per 100000] France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±25]	0 [±20]	0 [±8]	0 [±25]	0 [±90]
2020	0 [±26]	28 [±22]	0 [±8]	118 [±24]	217 [±92]
2030	7 [±26]	53 [±23]	4 [±8]	199 [±25]	305 [±93]
Scenario 2					
2010	0 [±25]	11 [±20]	0 [±8]	0 [±25]	0 [±90]
2020	20 [±26]	140 [±22]	1 [±8]	346 [±24]	641 [±92]
2030	15 [±26]	170 [±23]	10 [±8]	569 [±24]	940 [±93]

Georgia

Table A65. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	153 [±3]	1097 [±9]	23 [±1]	271 [±5]	751 [±8]
2020	1636 [±11]	9618 [±27]	254 [±4]	3489 [±16]	8603 [±25]
2030	3151 [±15]	17714 [±36]	490 [±6]	7336 [±23]	16531 [±35]
Scenario 1					
2010	151 [±3]	1109 [±9]	23 [±1]	269 [±5]	742 [±8]
2020	1593 [±11]	9340 [±26]	245 [±4]	3076 [±15]	8183 [±25]
2030	3066 [±15]	17136 [±35]	474 [±6]	6680 [±22]	15890 [±34]
Scenario 2					
2010	154 [±4]	1103 [±9]	24 [±1]	267 [±5]	747 [±8]
2020	1551 [±11]	8802 [±26]	235 [±4]	2585 [±14]	7632 [±24]
2030	2965 [±15]	16146 [±34]	456 [±6]	5652 [±20]	14868 [±33]

Table A66. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±5]	-12 [±13]	0 [±2]	2 [±7]	9 [±11]
2020	43 [±16]	278 [±39]	9 [±6]	413 [±23]	420 [±37]
2030	85 [±22]	578 [±53]	16 [±9]	656 [±33]	641 [±51]
Scenario 2					
2010	-1 [±5]	-6 [±13]	-1 [±2]	4 [±7]	4 [±11]
2020	85 [±16]	816 [±38]	19 [±6]	904 [±22]	971 [±36]
2030	186 [±22]	1568 [±52]	34 [±9]	1684 [±32]	1663 [±50]

Table A67. Prevalence cases in year [per 100000] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1102 [±9]	1589 [±11]	580 [±7]	7073 [±24]	18900 [±39]
2020	1203 [±9]	1905 [±12]	526 [±6]	6279 [±22]	18204 [±37]
2030	1275 [±10]	2042 [±12]	528 [±6]	7123 [±23]	18758 [±37]
Scenario 1					
2010	1099 [±9]	1601 [±11]	580 [±7]	7097 [±24]	18902 [±39]
2020	1178 [±9]	1844 [±12]	519 [±6]	5976 [±21]	17893 [±37]
2030	1235 [±9]	1958 [±12]	519 [±6]	6727 [±22]	18396 [±36]
Scenario 2					
2010	1107 [±9]	1596 [±11]	573 [±7]	7064 [±24]	18899 [±39]
2020	1163 [±9]	1746 [±11]	510 [±6]	5652 [±21]	17547 [±36]
2030	1207 [±9]	1860 [±12]	508 [±6]	6064 [±21]	17840 [±36]

Table A68. Prevalence cases avoided in year [per 100000] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±13]	-12 [±16]	0 [±10]	-24 [±34]	-2 [±55]
2020	25 [±14]	61 [±17]	7 [±9]	303 [±31]	311 [±54]
2030	40 [±14]	84 [±18]	9 [±9]	396 [±33]	362 [±55]
Scenario 2					
2010	-5 [±13]	-7 [±16]	7 [±10]	9 [±34]	1 [±55]
2020	40 [±14]	159 [±17]	16 [±9]	627 [±31]	657 [±53]
2030	68 [±14]	182 [±18]	20 [±9]	1059 [±32]	918 [±54]

Germany

Table A69. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 0					
2010	254 [±5]	916 [±9]	735 [±8]	231 [±4]	17 [±1]
2020	3231 [±17]	11095 [±32]	9247 [±29]	3227 [±17]	223 [±5]
2030	7460 [±29]	25401 [±53]	20832 [±48]	7816 [±30]	508 [±8]
Scenario 1					
2010	255 [±5]	911 [±9]	732 [±8]	234 [±4]	18 [±1]
2020	3191 [±17]	10956 [±32]	8919 [±29]	3022 [±17]	221 [±5]
2030	7353 [±29]	25011 [±53]	20191 [±48]	7361 [±29]	500 [±7]
Scenario 2					
2010	256 [±5]	911 [±9]	735 [±8]	236 [±4]	18 [±1]
2020	3098 [±17]	10563 [±31]	8341 [±28]	2568 [±15]	212 [±4]
2030	7129 [±28]	24034 [±52]	18736 [±46]	6285 [±26]	479 [±7]

Table A70. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 1					
2010	0 [±6]	5 [±12]	3 [±11]	0 [±6]	0 [±2]
2020	40 [±23]	139 [±42]	328 [±38]	205 [±22]	2 [±6]
2030	107 [±34]	390 [±64]	641 [±57]	455 [±35]	8 [±9]
Scenario 2					
2010	-2 [±6]	5 [±12]	0 [±11]	-5 [±6]	-1 [±2]
2020	133 [±23]	532 [±42]	906 [±38]	659 [±22]	11 [±6]
2030	331 [±34]	1367 [±63]	2096 [±56]	1531 [±34]	29 [±9]

Table A71. Prevalence cases in year [per 100000] for Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 0					
2010	2470 [±14]	2000 [±13]	18474 [±38]	3470 [±17]	448 [±6]
2020	3075 [±17]	2910 [±16]	22003 [±45]	3698 [±19]	497 [±7]
2030	3715 [±20]	3678 [±20]	25940 [±54]	4599 [±23]	581 [±8]
Scenario 1					
2010	2456 [±14]	2000 [±13]	18501 [±38]	3483 [±17]	449 [±6]
2020	3039 [±17]	2884 [±16]	21756 [±45]	3574 [±18]	494 [±7]
2030	3677 [±20]	3637 [±20]	25526 [±54]	4395 [±22]	576 [±8]
Scenario 2					
2010	2471 [±14]	1994 [±13]	18482 [±38]	3486 [±17]	449 [±6]
2020	3000 [±17]	2834 [±16]	21322 [±45]	3313 [±18]	492 [±7]
2030	3616 [±20]	3551 [±20]	24573 [±52]	3922 [±21]	568 [±8]

Table A72. Prevalence cases avoided in year [per 100000] Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 1					
2010	14 [±20]	0 [±18]	0 [±54]	0 [±24]	0 [±8]
2020	36 [±22]	26 [±22]	247 [±59]	124 [±24]	3 [±9]
2030	38 [±24]	41 [±24]	414 [±64]	204 [±27]	5 [±10]
Scenario 2					
2010	0 [±20]	6 [±18]	0 [±54]	-16 [±24]	0 [±8]
2020	75 [±22]	76 [±21]	681 [±59]	385 [±24]	5 [±9]
2030	99 [±24]	127 [±24]	1367 [±64]	677 [±26]	13 [±10]

Greece

Table A73. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	126 [± 3]	949 [± 9]	299 [± 5]	19 [± 1]	717 [± 8]
2020	1428 [± 11]	10931 [± 30]	3280 [± 16]	195 [± 4]	7819 [± 25]
2030	2963 [± 16]	22627 [± 45]	6463 [± 24]	388 [± 6]	15138 [± 36]
Scenario 1					
2010	126 [± 3]	950 [± 9]	297 [± 5]	18 [± 1]	719 [± 8]
2020	1414 [± 11]	10745 [± 30]	3095 [± 16]	191 [± 4]	7632 [± 25]
2030	2939 [± 16]	22276 [± 44]	6093 [± 23]	382 [± 6]	14756 [± 36]
Scenario 2					
2010	126 [± 3]	959 [± 9]	297 [± 5]	17 [± 1]	707 [± 8]
2020	1372 [± 11]	10273 [± 29]	2562 [± 15]	181 [± 4]	7048 [± 24]
2030	2849 [± 16]	21221 [± 43]	5040 [± 21]	362 [± 6]	13537 [± 34]

Table A74. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [± 4]	-1 [± 12]	2 [± 7]	1 [± 2]	-2 [± 11]
2020	14 [± 15]	186 [± 42]	185 [± 23]	4 [± 6]	187 [± 35]
2030	24 [± 22]	351 [± 60]	370 [± 32]	6 [± 8]	382 [± 49]
Scenario 2					
2010	0 [± 4]	-10 [± 12]	2 [± 7]	2 [± 2]	10 [± 11]
2020	56 [± 15]	658 [± 41]	718 [± 22]	14 [± 5]	771 [± 34]
2030	114 [± 22]	1406 [± 59]	1423 [± 30]	26 [± 8]	1601 [± 48]

Table A75. Prevalence cases in year [per 100000] for Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	1190 [±10]	9256 [±27]	6262 [±22]	422 [±6]	17636 [±38]
2020	1350 [±11]	9998 [±29]	6913 [±24]	449 [±6]	19669 [±40]
2030	1499 [±11]	11292 [±31]	7373 [±25]	482 [±7]	21197 [±43]
Scenario 1					
2010	1192 [±10]	9263 [±27]	6250 [±22]	418 [±6]	17646 [±38]
2020	1348 [±11]	9930 [±29]	6763 [±24]	443 [±6]	19531 [±40]
2030	1491 [±11]	11169 [±31]	7112 [±25]	476 [±6]	20904 [±43]
Scenario 2					
2010	1201 [±10]	9255 [±27]	6237 [±22]	413 [±6]	17635 [±38]
2020	1331 [±10]	9656 [±28]	6326 [±23]	437 [±6]	19038 [±40]
2030	1475 [±11]	10751 [±31]	6404 [±24]	469 [±6]	19972 [±42]

Table A76. Prevalence cases avoided in year [per 100000] Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	-2 [±14]	-7 [±38]	12 [±32]	4 [±8]	-10 [±53]
2020	2 [±15]	68 [±40]	150 [±33]	6 [±8]	138 [±56]
2030	8 [±15]	123 [±42]	261 [±34]	6 [±9]	293 [±58]
Scenario 2					
2010	-11 [±14]	1 [±38]	25 [±32]	9 [±8]	1 [±53]
2020	19 [±15]	342 [±40]	587 [±33]	12 [±8]	631 [±56]
2030	24 [±15]	541 [±42]	969 [±33]	13 [±9]	1225 [±57]

Hungary

Table A77. Cumulative Incidence cases in year [per 100,000 of population in 2010] for Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [± 4]	1685 [± 12]	18 [± 1]	225 [± 4]	706 [± 8]
2020	2573 [± 15]	15174 [± 37]	205 [± 4]	2519 [± 15]	8023 [± 27]
2030	5126 [± 22]	28877 [± 53]	407 [± 6]	5011 [± 22]	16029 [± 40]
Scenario 1					
2010	236 [± 4]	1698 [± 12]	18 [± 1]	228 [± 4]	707 [± 8]
2020	2543 [± 15]	15035 [± 36]	200 [± 4]	2389 [± 15]	7817 [± 26]
2030	5056 [± 22]	28528 [± 53]	398 [± 6]	4690 [± 21]	15616 [± 39]
Scenario 2					
2010	235 [± 4]	1684 [± 12]	18 [± 1]	230 [± 4]	714 [± 8]
2020	2460 [± 15]	14355 [± 36]	186 [± 4]	1961 [± 13]	7235 [± 25]
2030	4917 [± 22]	27265 [± 51]	368 [± 6]	3842 [± 19]	14358 [± 37]

Table A78. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 6]	-13 [± 16]	0 [± 2]	-3 [± 6]	-1 [± 11]
2020	30 [± 20]	139 [± 49]	5 [± 6]	130 [± 20]	206 [± 36]
2030	70 [± 29]	349 [± 68]	9 [± 8]	321 [± 28]	413 [± 50]
Scenario 2					
2010	2 [± 6]	1 [± 16]	0 [± 2]	-5 [± 6]	-8 [± 11]
2020	113 [± 20]	819 [± 49]	19 [± 6]	558 [± 19]	788 [± 35]
2030	209 [± 28]	1612 [± 67]	39 [± 8]	1169 [± 27]	1671 [± 49]

Table A79. Prevalence cases from year 2010 [per 100,000] for Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1417 [±11]	3477 [±17]	401 [±6]	6077 [±22]	16584 [±36]
2020	1465 [±11]	3433 [±17]	361 [±6]	5182 [±21]	16272 [±38]
2030	1517 [±12]	3453 [±18]	366 [±6]	5187 [±23]	16708 [±40]
Scenario 1					
2010	1406 [±11]	3483 [±17]	399 [±6]	6076 [±22]	16594 [±36]
2020	1447 [±11]	3406 [±17]	357 [±6]	5099 [±21]	16131 [±38]
2030	1497 [±12]	3414 [±18]	361 [±6]	4982 [±22]	16466 [±40]
Scenario 2					
2010	1411 [±11]	3474 [±17]	392 [±6]	6074 [±22]	16610 [±36]
2020	1425 [±11]	3307 [±17]	345 [±6]	4833 [±21]	15803 [±37]
2030	1473 [±12]	3319 [±18]	343 [±6]	4503 [±21]	15757 [±39]

Table A80. Prevalence cases avoided in year [per 100,000] Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	11 [±15]	-6 [±24]	2 [±8]	1 [±31]	-10 [±52]
2020	18 [±15]	27 [±23]	4 [±8]	83 [±29]	141 [±51]
2030	20 [±16]	39 [±23]	5 [±8]	205 [±29]	242 [±52]
Scenario 2					
2010	6 [±15]	3 [±24]	9 [±8]	3 [±31]	-26 [±52]
2020	40 [±15]	126 [±23]	16 [±8]	349 [±28]	469 [±51]
2030	44 [±15]	134 [±23]	23 [±8]	684 [±28]	951 [±51]

Iceland

Table A81. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	188 [±4]	477 [±6]	221 [±4]	247 [±4]	642 [±7]
2020	2179 [±13]	5779 [±21]	2606 [±14]	2958 [±15]	7255 [±23]
2030	4365 [±18]	12239 [±30]	5240 [±19]	6155 [±21]	14491 [±32]
Scenario 1					
2010	185 [±4]	473 [±6]	214 [±4]	251 [±4]	645 [±7]
2020	2147 [±13]	5656 [±21]	2545 [±14]	2722 [±14]	6961 [±23]
2030	4292 [±18]	11964 [±29]	5126 [±19]	5647 [±20]	13905 [±32]
Scenario 2					
2010	188 [±4]	484 [±6]	220 [±4]	250 [±4]	651 [±7]
2020	2090 [±12]	5384 [±20]	2392 [±13]	2268 [±13]	6446 [±22]
2030	4143 [±17]	11306 [±28]	4858 [±19]	4771 [±18]	12925 [±30]

Table A82. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±5]	4 [±9]	7 [±6]	-4 [±6]	-3 [±10]
2020	32 [±19]	123 [±30]	61 [±20]	236 [±21]	294 [±34]
2030	73 [±26]	275 [±44]	114 [±29]	508 [±31]	586 [±48]
Scenario 2					
2010	0 [±5]	-7 [±9]	1 [±6]	-3 [±6]	-9 [±10]
2020	89 [±18]	395 [±30]	214 [±20]	690 [±20]	809 [±33]
2030	222 [±26]	933 [±43]	382 [±28]	1384 [±30]	1566 [±47]

Table A83. Prevalence cases in year [per 100000] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2301 [±14]	3481 [±17]	4478 [±19]	4954 [±20]	13289 [±33]
2020	2628 [±14]	4620 [±19]	5201 [±20]	6395 [±22]	16250 [±35]
2030	2873 [±14]	5770 [±20]	5992 [±21]	7794 [±24]	18871 [±37]
Scenario 1					
2010	2292 [±14]	3487 [±17]	4505 [±19]	4950 [±20]	13279 [±33]
2020	2599 [±14]	4538 [±18]	5174 [±20]	6177 [±21]	15967 [±35]
2030	2842 [±14]	5636 [±20]	5934 [±21]	7361 [±23]	18382 [±36]
Scenario 2					
2010	2293 [±14]	3482 [±17]	4484 [±19]	4975 [±20]	13299 [±33]
2020	2578 [±14]	4337 [±18]	5026 [±19]	5787 [±21]	15525 [±34]
2030	2795 [±14]	5279 [±19]	5735 [±20]	6658 [±22]	17618 [±35]

Table A84. Prevalence cases avoided in year [per 100000] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	9 [±19]	-6 [±24]	-27 [±27]	4 [±28]	10 [±46]
2020	29 [±20]	82 [±27]	27 [±29]	218 [±32]	283 [±51]
2030	31 [±21]	134 [±30]	58 [±31]	433 [±35]	489 [±55]
Scenario 2					
2010	8 [±19]	-1 [±24]	-6 [±27]	-21 [±28]	-10 [±46]
2020	50 [±20]	283 [±27]	175 [±29]	608 [±31]	725 [±50]
2030	78 [±21]	491 [±30]	257 [±31]	1136 [±34]	1253 [±54]

Ireland

Table A85. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	252 [± 4]	525 [± 6]	42 [± 2]	137 [± 3]	913 [± 9]
2020	3038 [± 15]	5913 [± 21]	508 [± 6]	1650 [± 11]	10638 [± 29]
2030	6450 [± 22]	12134 [± 31]	1041 [± 9]	3568 [± 17]	21499 [± 41]
Scenario 1					
2010	254 [± 5]	521 [± 6]	43 [± 2]	134 [± 3]	916 [± 9]
2020	2948 [± 15]	5801 [± 21]	499 [± 6]	1535 [± 11]	10199 [± 28]
2030	6291 [± 22]	11893 [± 30]	1021 [± 9]	3324 [± 16]	20675 [± 40]
Scenario 2					
2010	249 [± 4]	524 [± 6]	44 [± 2]	139 [± 3]	916 [± 9]
2020	2803 [± 15]	5534 [± 21]	466 [± 6]	1268 [± 10]	9499 [± 27]
2030	5997 [± 21]	11329 [± 29]	957 [± 9]	2745 [± 14]	19360 [± 38]

Table A86. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 6]	4 [± 9]	-1 [± 3]	3 [± 5]	-3 [± 12]
2020	90 [± 22]	112 [± 31]	9 [± 9]	115 [± 16]	439 [± 41]
2030	159 [± 32]	241 [± 44]	20 [± 13]	244 [± 23]	824 [± 58]
Scenario 2					
2010	3 [± 6]	1 [± 9]	-2 [± 3]	-2 [± 5]	-3 [± 12]
2020	235 [± 22]	379 [± 30]	42 [± 9]	382 [± 15]	1139 [± 40]
2030	453 [± 32]	805 [± 43]	84 [± 13]	823 [± 22]	2139 [± 57]

Table A87. Prevalence cases in year [per 100000] for Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1346 [±10]	770 [±8]	873 [±8]	2742 [±15]	21728 [±42]
2020	1798 [±12]	1300 [±10]	962 [±9]	2845 [±15]	24392 [±43]
2030	2173 [±13]	1519 [±11]	1083 [±9]	3327 [±16]	27156 [±46]
Scenario 1					
2010	1356 [±10]	765 [±8]	874 [±8]	2738 [±15]	21742 [±42]
2020	1767 [±12]	1280 [±10]	958 [±9]	2752 [±15]	24048 [±43]
2030	2142 [±13]	1495 [±11]	1076 [±9]	3150 [±16]	26566 [±45]
Scenario 2					
2010	1350 [±10]	763 [±8]	873 [±8]	2752 [±15]	21740 [±42]
2020	1705 [±11]	1220 [±10]	932 [±8]	2547 [±14]	23511 [±42]
2030	2079 [±13]	1428 [±10]	1035 [±9]	2744 [±14]	25706 [±44]

Table A88. Prevalence cases avoided in year [per 100000] Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-10 [±15]	5 [±11]	-1 [±12]	4 [±21]	-14 [±59]
2020	31 [±17]	20 [±14]	4 [±12]	93 [±21]	344 [±62]
2030	31 [±19]	24 [±16]	7 [±13]	177 [±23]	590 [±66]
Scenario 2					
2010	-4 [±15]	7 [±11]	0 [±12]	-10 [±21]	-12 [±59]
2020	93 [±17]	80 [±14]	30 [±12]	298 [±21]	881 [±62]
2030	94 [±18]	91 [±15]	48 [±13]	583 [±22]	1450 [±65]

Israel

Table A89. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Israel

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	191 [±4]	668 [±7]	12 [±1]	214 [±4]	547 [±7]
2020	2013 [±12]	6272 [±21]	127 [±3]	2017 [±12]	5508 [±20]
2030	3668 [±16]	10879 [±27]	229 [±4]	3600 [±16]	10131 [±26]
Scenario 1					
2010	192 [±4]	670 [±7]	11 [±1]	213 [±4]	547 [±7]
2020	1997 [±12]	6223 [±21]	126 [±3]	1912 [±12]	5463 [±20]
2030	3643 [±16]	10737 [±27]	225 [±4]	3395 [±15]	10032 [±26]
Scenario 2					
2010	190 [±4]	666 [±7]	12 [±1]	214 [±4]	544 [±7]
2020	1950 [±12]	5887 [±21]	120 [±3]	1627 [±11]	5314 [±20]
2030	3553 [±15]	10174 [±26]	214 [±4]	2890 [±14]	9769 [±26]

Table A90. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Israel

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-1 [±6]	-2 [±10]	1 [±6]	0 [±9]	1 [±1]
2020	16 [±18]	49 [±32]	105 [±18]	45 [±30]	1 [±4]
2030	25 [±24]	142 [±42]	205 [±24]	99 [±40]	4 [±6]
Scenario 2					
2010	1 [±6]	2 [±10]	0 [±6]	3 [±9]	0 [±1]
2020	63 [±18]	385 [±31]	390 [±17]	194 [±29]	7 [±4]
2030	115 [±24]	705 [±41]	710 [±23]	362 [±40]	15 [±6]

Table A91. Prevalence cases in year [per 100000] for Israel

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1597 [±11]	1900 [±12]	278 [±5]	4189 [±18]	11908 [±31]
2020	1728 [±11]	2143 [±13]	261 [±4]	3601 [±16]	11767 [±29]
2030	1751 [±11]	2085 [±12]	260 [±4]	3410 [±15]	11832 [±28]
Scenario 1					
2010	1602 [±11]	1903 [±12]	278 [±5]	4205 [±18]	11902 [±31]
2020	1725 [±11]	2136 [±13]	259 [±4]	3536 [±16]	11719 [±29]
2030	1744 [±11]	2049 [±12]	256 [±4]	3275 [±15]	11774 [±28]
Scenario 2					
2010	1607 [±11]	1894 [±12]	275 [±5]	4183 [±18]	11855 [±31]
2020	1706 [±11]	2044 [±12]	254 [±4]	3335 [±16]	11655 [±29]
2030	1733 [±11]	1971 [±11]	252 [±4]	2984 [±14]	11699 [±28]

Table A92. Prevalence cases avoided in year [per 100000] for Israel

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	5 [±16]	-1 [±11]	-9 [±27]	-5 [±44]	-4 [±7]
2020	14 [±17]	8 [±13]	67 [±24]	54 [±44]	-2 [±6]
2030	11 [±17]	18 [±12]	139 [±24]	68 [±44]	1 [±7]
Scenario 2					
2010	7 [±16]	-6 [±11]	-10 [±27]	40 [±44]	-3 [±7]
2020	29 [±17]	68 [±12]	262 [±24]	139 [±44]	6 [±6]
2030	19 [±17]	78 [±12]	442 [±23]	155 [±44]	13 [±6]

Italy

Table A93. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	246 [±4]	1095 [±9]	236 [±4]	17 [±1]	746 [±8]
2020	2869 [±16]	11269 [±31]	2733 [±15]	202 [±4]	8253 [±27]
2030	5919 [±24]	22213 [±46]	5518 [±23]	410 [±6]	16310 [±39]
Scenario 1					
2010	246 [±4]	1097 [±9]	237 [±4]	18 [±1]	748 [±8]
2020	2845 [±16]	11119 [±31]	2550 [±15]	196 [±4]	8047 [±26]
2030	5861 [±23]	21865 [±45]	5142 [±22]	398 [±6]	15836 [±38]
Scenario 2					
2010	245 [±4]	1091 [±9]	235 [±4]	18 [±1]	743 [±8]
2020	2748 [±15]	10644 [±30]	2099 [±13]	187 [±4]	7405 [±25]
2030	5651 [±23]	20873 [±44]	4222 [±20]	376 [±6]	14479 [±37]

Table A94. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [±6]	-2 [±13]	-1 [±6]	-1 [±2]	-2 [±11]
2020	24 [±21]	150 [±42]	183 [±21]	6 [±6]	206 [±36]
2030	58 [±31]	348 [±59]	376 [±29]	12 [±8]	474 [±51]
Scenario 2					
2010	1 [±6]	4 [±13]	1 [±6]	-1 [±2]	3 [±11]
2020	121 [±21]	625 [±42]	634 [±20]	15 [±6]	848 [±35]
2030	268 [±30]	1340 [±59]	1296 [±28]	34 [±8]	1831 [±50]

Table A95. Prevalence cases in year [per 100000] for Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	2560 [±14]	2885 [±15]	5845 [±22]	447 [±6]	18448 [±38]
2020	2830 [±16]	3417 [±17]	5791 [±22]	450 [±6]	19563 [±41]
2030	3043 [±17]	3728 [±19]	6040 [±24]	472 [±7]	20547 [±44]
Scenario 1					
2010	2569 [±14]	2877 [±15]	5828 [±22]	450 [±6]	18441 [±38]
2020	2806 [±16]	3372 [±17]	5640 [±22]	442 [±6]	19409 [±41]
2030	3011 [±17]	3663 [±18]	5772 [±23]	462 [±7]	20218 [±43]
Scenario 2					
2010	2560 [±14]	2877 [±15]	5853 [±22]	455 [±6]	18432 [±38]
2020	2767 [±15]	3286 [±17]	5343 [±21]	438 [±6]	18960 [±40]
2030	2966 [±17]	3529 [±18]	5211 [±22]	453 [±6]	19354 [±42]

Table A96. Prevalence cases avoided in year [per 100000] Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	-9 [±20]	8 [±21]	17 [±31]	-3 [±8]	7 [±54]
2020	24 [±21]	45 [±23]	151 [±30]	8 [±8]	154 [±56]
2030	32 [±22]	65 [±24]	268 [±31]	10 [±9]	329 [±57]
Scenario 2					
2010	0 [±20]	8 [±21]	-8 [±31]	-8 [±8]	16 [±54]
2020	63 [±21]	131 [±23]	448 [±30]	12 [±8]	603 [±56]
2030	77 [±22]	199 [±24]	829 [±30]	19 [±9]	1193 [±56]

Kazakhstan

Table A97. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	101 [± 3]	2532 [± 14]	12 [± 1]	257 [± 5]	667 [± 7]
2020	1044 [± 9]	18107 [± 38]	132 [± 3]	2965 [± 15]	6710 [± 23]
2030	1986 [± 13]	31143 [± 50]	246 [± 4]	6231 [± 22]	13355 [± 33]
Scenario 1					
2010	99 [± 3]	2527 [± 14]	11 [± 1]	261 [± 5]	675 [± 7]
2020	1039 [± 9]	17899 [± 38]	128 [± 3]	2782 [± 15]	6503 [± 23]
2030	1972 [± 13]	30782 [± 50]	242 [± 4]	5910 [± 22]	12847 [± 32]
Scenario 2					
2010	100 [± 3]	2528 [± 14]	13 [± 1]	257 [± 5]	670 [± 7]
2020	998 [± 9]	17434 [± 37]	121 [± 3]	2409 [± 14]	5827 [± 22]
2030	1896 [± 12]	29971 [± 49]	232 [± 4]	5057 [± 20]	11505 [± 30]

Table A98. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [± 4]	5 [± 20]	1 [± 1]	-4 [± 6]	-8 [± 10]
2020	5 [± 13]	208 [± 54]	4 [± 5]	183 [± 21]	207 [± 33]
2030	14 [± 18]	361 [± 70]	4 [± 6]	321 [± 31]	508 [± 46]
Scenario 2					
2010	1 [± 4]	4 [± 20]	-1 [± 1]	0 [± 6]	-3 [± 10]
2020	46 [± 13]	673 [± 53]	11 [± 4]	556 [± 21]	883 [± 32]
2030	90 [± 18]	1172 [± 70]	14 [± 6]	1174 [± 30]	1850 [± 45]

Table A99. Prevalence cases in year [per 100000] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	402 [±6]	6484 [±23]	243 [±4]	4527 [±19]	11972 [±31]
2020	437 [±6]	6014 [±22]	199 [±4]	4820 [±20]	12084 [±31]
2030	462 [±6]	6021 [±22]	201 [±4]	5810 [±22]	13681 [±33]
Scenario 1					
2010	397 [±6]	6469 [±23]	247 [±4]	4535 [±19]	11947 [±31]
2020	437 [±6]	5970 [±22]	197 [±4]	4687 [±19]	11924 [±31]
2030	463 [±6]	5987 [±22]	200 [±4]	5643 [±21]	13384 [±33]
Scenario 2					
2010	404 [±6]	6476 [±23]	244 [±4]	4538 [±19]	12007 [±31]
2020	425 [±6]	5859 [±22]	193 [±4]	4423 [±19]	11525 [±30]
2030	448 [±6]	5877 [±22]	194 [±4]	5069 [±20]	12606 [±32]

Table A100. Prevalence cases avoided in year [per 100000] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [±8]	15 [±32]	-4 [±6]	-8 [±27]	25 [±44]
2020	0 [±8]	44 [±31]	2 [±6]	133 [±28]	160 [±44]
2030	-1 [±9]	34 [±31]	1 [±6]	167 [±30]	297 [±47]
Scenario 2					
2010	-2 [±8]	8 [±32]	-1 [±6]	-11 [±27]	-35 [±44]
2020	12 [±8]	155 [±31]	6 [±6]	397 [±27]	559 [±43]
2030	14 [±9]	144 [±31]	7 [±6]	741 [±30]	1075 [±46]

Kyrgyzstan

Table A101. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	66 [±2]	1637 [±11]	9 [±1]	212 [±4]	411 [±6]
2020	656 [±7]	12239 [±30]	101 [±3]	2258 [±13]	4426 [±18]
2030	1214 [±9]	20914 [±38]	190 [±4]	4037 [±17]	8387 [±24]
Scenario 1					
2010	62 [±2]	1640 [±11]	9 [±1]	209 [±4]	409 [±6]
2020	644 [±7]	12117 [±30]	98 [±3]	2148 [±13]	4331 [±18]
2030	1194 [±9]	20708 [±37]	186 [±4]	3867 [±16]	8252 [±24]
Scenario 2					
2010	64 [±2]	1643 [±11]	9 [±1]	209 [±4]	413 [±6]
2020	636 [±7]	11863 [±30]	95 [±3]	1910 [±12]	4141 [±17]
2030	1175 [±9]	20300 [±37]	176 [±3]	3409 [±15]	7855 [±23]

Table A102. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±3]	5 [±16]	0 [±1]	1 [±6]	-4 [±8]
2020	4 [±10]	227 [±45]	2 [±4]	130 [±20]	116 [±27]
2030	13 [±14]	280 [±59]	3 [±6]	222 [±28]	168 [±38]
Scenario 2					
2010	-1 [±3]	12 [±16]	0 [±1]	1 [±6]	-5 [±8]
2020	25 [±10]	602 [±44]	7 [±4]	470 [±19]	365 [±27]
2030	53 [±14]	859 [±59]	13 [±6]	865 [±27]	644 [±37]

Table A103. Prevalence cases in year [per 100000] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	304 [±5]	4239 [±18]	175 [±4]	3479 [±17]	9006 [±27]
2020	334 [±5]	4522 [±18]	155 [±3]	3782 [±17]	9483 [±26]
2030	353 [±5]	4676 [±18]	166 [±3]	4029 [±17]	10217 [±26]
Scenario 1					
2010	302 [±5]	4255 [±18]	174 [±4]	3494 [±17]	9005 [±27]
2020	333 [±5]	4487 [±18]	153 [±3]	3705 [±17]	9409 [±26]
2030	350 [±5]	4656 [±18]	164 [±3]	3942 [±16]	10145 [±26]
Scenario 2					
2010	298 [±5]	4251 [±18]	169 [±4]	3504 [±17]	9024 [±27]
2020	326 [±5]	4427 [±18]	150 [±3]	3531 [±16]	9290 [±26]
2030	349 [±5]	4572 [±18]	155 [±3]	3647 [±16]	9876 [±26]

Table A104. Prevalence cases avoided in year [per 100000] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±7]	-16 [±26]	1 [±5]	-15 [±24]	1 [±38]
2020	1 [±7]	35 [±27]	2 [±5]	77 [±24]	74 [±39]
2030	3 [±7]	20 [±27]	2 [±5]	87 [±25]	72 [±40]
Scenario 2					
2010	6 [±7]	-12 [±26]	6 [±5]	-25 [±24]	-18 [±38]
2020	8 [±7]	95 [±27]	5 [±5]	251 [±24]	193 [±39]
2030	4 [±7]	104 [±27]	11 [±5]	382 [±25]	341 [±40]

Latvia

Table A105. Cumulative incidence cases from year 2010 [per 100,000 of population in 2010] for Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	143 [± 3]	1918 [± 12]	16 [± 1]	242 [± 4]	656 [± 7]
2020	1738 [± 13]	19994 [± 45]	199 [± 4]	3349 [± 18]	8959 [± 30]
2030	3976 [± 23]	44170 [± 76]	460 [± 8]	7977 [± 32]	21728 [± 53]
Scenario 1					
2010	142 [± 3]	1917 [± 12]	15 [± 1]	243 [± 4]	646 [± 7]
2020	1703 [± 13]	19665 [± 45]	194 [± 4]	3084 [± 18]	8697 [± 30]
2030	3900 [± 23]	43389 [± 75]	447 [± 8]	7355 [± 31]	21082 [± 52]
Scenario 2					
2010	141 [± 3]	1920 [± 12]	15 [± 1]	241 [± 4]	649 [± 7]
2020	1632 [± 13]	18814 [± 43]	178 [± 4]	2522 [± 16]	7987 [± 28]
2030	3772 [± 22]	41434 [± 73]	413 [± 7]	6013 [± 28]	19291 [± 50]

Table A106. Cumulative incidence cases avoided from year 2010 [per 100,000 of population in 2010] Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 5]	1 [± 18]	1 [± 2]	-1 [± 6]	10 [± 10]
2020	35 [± 17]	329 [± 56]	5 [± 6]	265 [± 23]	262 [± 38]
2030	76 [± 25]	781 [± 84]	13 [± 9]	622 [± 35]	646 [± 59]
Scenario 2					
2010	2 [± 5]	-2 [± 18]	1 [± 2]	1 [± 6]	7 [± 10]
2020	106 [± 16]	1180 [± 56]	21 [± 5]	827 [± 22]	972 [± 37]
2030	204 [± 25]	2736 [± 83]	47 [± 8]	1964 [± 33]	2437 [± 57]

Table A107. Prevalence cases in year [per 100,000] for Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	817 [±8]	3989 [±18]	310 [±5]	5910 [±22]	14809 [±34]
2020	909 [±10]	4440 [±21]	306 [±6]	5858 [±24]	16043 [±40]
2030	1064 [±12]	5192 [±26]	354 [±7]	7129 [±31]	19764 [±51]
Scenario 1					
2010	818 [±8]	3984 [±18]	313 [±5]	5909 [±22]	14791 [±34]
2020	893 [±9]	4368 [±21]	304 [±6]	5670 [±24]	15861 [±40]
2030	1054 [±12]	5107 [±26]	350 [±7]	6729 [±30]	19420 [±50]
Scenario 2					
2010	813 [±8]	3989 [±18]	309 [±5]	5910 [±22]	14788 [±34]
2020	877 [±9]	4270 [±21]	293 [±5]	5305 [±23]	15472 [±39]
2030	1041 [±12]	4947 [±25]	336 [±7]	5954 [±28]	18447 [±49]

Table A108. Prevalence cases avoided in year [per 100,000] Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±11]	5 [±25]	-3 [±7]	1 [±31]	18 [±49]
2020	16 [±12]	72 [±27]	2 [±7]	188 [±30]	182 [±51]
2030	10 [±13]	85 [±29]	4 [±8]	400 [±33]	344 [±56]
Scenario 2					
2010	4 [±11]	0 [±25]	1 [±7]	0 [±31]	21 [±49]
2020	32 [±12]	170 [±26]	13 [±7]	553 [±30]	571 [±50]
2030	23 [±13]	245 [±28]	18 [±7]	1175 [±32]	1317 [±55]

Lithuania

Table A109. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	147 [± 3]	588 [± 7]	17 [± 1]	239 [± 4]	665 [± 7]
2020	1718 [± 12]	6465 [± 23]	196 [± 4]	2635 [± 15]	7481 [± 25]
2030	3498 [± 18]	12873 [± 34]	394 [± 6]	4912 [± 21]	15020 [± 37]
Scenario 1					
2010	151 [± 3]	593 [± 7]	16 [± 1]	239 [± 4]	657 [± 7]
2020	1707 [± 12]	6420 [± 23]	191 [± 4]	2489 [± 14]	7304 [± 25]
2030	3469 [± 18]	12739 [± 34]	387 [± 6]	4625 [± 20]	14656 [± 36]
Scenario 2					
2010	153 [± 3]	585 [± 7]	17 [± 1]	244 [± 4]	666 [± 7]
2020	1655 [± 12]	6174 [± 23]	177 [± 4]	2057 [± 13]	6770 [± 24]
2030	3364 [± 17]	12217 [± 33]	361 [± 6]	3807 [± 19]	13481 [± 35]

Table A110. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [± 5]	-5 [± 10]	1 [± 2]	0 [± 6]	8 [± 10]
2020	11 [± 17]	45 [± 32]	5 [± 6]	146 [± 20]	177 [± 34]
2030	29 [± 24]	134 [± 45]	7 [± 8]	287 [± 28]	364 [± 49]
Scenario 2					
2010	-6 [± 5]	3 [± 10]	0 [± 2]	-5 [± 6]	-1 [± 10]
2020	63 [± 16]	291 [± 32]	19 [± 5]	578 [± 19]	711 [± 34]
2030	134 [± 23]	656 [± 45]	33 [± 8]	1105 [± 26]	1539 [± 48]

Table A111. Prevalence cases in year [per 100000] for Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	929 [±9]	1881 [±12]	374 [±5]	6588 [±23]	16489 [±36]
2020	1108 [±10]	2338 [±14]	389 [±6]	6692 [±24]	17528 [±38]
2030	1195 [±10]	2516 [±15]	406 [±6]	6530 [±24]	18358 [±41]
Scenario 1					
2010	923 [±9]	1889 [±12]	374 [±5]	6591 [±23]	16479 [±36]
2020	1093 [±10]	2319 [±14]	382 [±6]	6579 [±24]	17377 [±38]
2030	1177 [±10]	2471 [±15]	401 [±6]	6328 [±24]	18095 [±41]
Scenario 2					
2010	929 [±9]	1870 [±12]	374 [±5]	6560 [±23]	16513 [±36]
2020	1076 [±10]	2244 [±14]	374 [±6]	6213 [±23]	16986 [±38]
2030	1152 [±10]	2363 [±15]	389 [±6]	5751 [±23]	17266 [±40]

Table A112. Prevalence cases avoided in year [per 100000] Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	6 [±12]	-8 [±17]	0 [±8]	-3 [±32]	10 [±51]
2020	15 [±13]	19 [±19]	7 [±8]	113 [±33]	151 [±53]
2030	18 [±14]	45 [±20]	5 [±8]	202 [±32]	263 [±54]
Scenario 2					
2010	0 [±12]	11 [±17]	0 [±8]	28 [±32]	-24 [±51]
2020	32 [±13]	94 [±19]	15 [±8]	479 [±32]	542 [±53]
2030	43 [±14]	153 [±20]	17 [±8]	779 [±31]	1092 [±53]

Luxembourg

Table A113. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	216 [± 4]	687 [± 7]	15 [± 1]	130 [± 3]	1166 [± 10]
2020	2498 [± 14]	7826 [± 25]	180 [± 4]	1578 [± 11]	12432 [± 32]
2030	5223 [± 21]	16397 [± 37]	368 [± 5]	3344 [± 17]	24431 [± 45]
Scenario 1					
2010	211 [± 4]	682 [± 7]	16 [± 1]	134 [± 3]	1165 [± 10]
2020	2452 [± 14]	7655 [± 25]	178 [± 4]	1473 [± 11]	12066 [± 31]
2030	5129 [± 20]	16013 [± 36]	366 [± 5]	3118 [± 16]	23747 [± 44]
Scenario 2					
2010	214 [± 4]	686 [± 7]	15 [± 1]	131 [± 3]	1155 [± 10]
2020	2388 [± 14]	7308 [± 24]	168 [± 4]	1211 [± 10]	11300 [± 30]
2030	4978 [± 20]	15270 [± 35]	344 [± 5]	2601 [± 15]	22311 [± 43]

Table A114. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [± 6]	5 [± 10]	0 [± 2]	0 [± 5]	1 [± 14]
2020	46 [± 20]	171 [± 35]	2 [± 5]	105 [± 16]	366 [± 44]
2030	94 [± 29]	384 [± 51]	2 [± 8]	226 [± 23]	684 [± 62]
Scenario 2					
2010	2 [± 6]	1 [± 10]	0 [± 2]	0 [± 5]	11 [± 14]
2020	110 [± 20]	518 [± 35]	12 [± 5]	367 [± 15]	1132 [± 44]
2030	245 [± 29]	1127 [± 50]	24 [± 8]	743 [± 22]	2120 [± 61]

Table A115. Prevalence cases in year [per 100000] for Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1996 [±13]	2750 [±15]	353 [±5]	1773 [±12]	28536 [±48]
2020	2345 [±14]	3492 [±17]	386 [±6]	2091 [±13]	31884 [±50]
2030	2648 [±15]	4267 [±19]	429 [±6]	2492 [±14]	34618 [±53]
Scenario 1					
2010	1999 [±13]	2755 [±15]	350 [±5]	1777 [±12]	28530 [±48]
2020	2315 [±14]	3433 [±17]	378 [±5]	2012 [±13]	31561 [±50]
2030	2619 [±15]	4153 [±18]	428 [±6]	2348 [±14]	34098 [±53]
Scenario 2					
2010	2005 [±13]	2765 [±15]	347 [±5]	1778 [±12]	28530 [±48]
2020	2286 [±14]	3296 [±16]	371 [±5]	1823 [±12]	30960 [±50]
2030	2582 [±15]	3962 [±18]	413 [±6]	2059 [±13]	33109 [±52]

Table A116. Prevalence cases avoided in year [per 100000] Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±18]	0 [±21]	3 [±7]	0 [±17]	6 [±68]
2020	30 [±19]	59 [±24]	8 [±8]	79 [±18]	323 [±71]
2030	29 [±21]	114 [±26]	1 [±8]	144 [±20]	520 [±74]
Scenario 2					
2010	0 [±18]	0 [±21]	6 [±7]	0 [±17]	6 [±68]
2020	59 [±19]	196 [±23]	15 [±8]	268 [±18]	924 [±71]
2030	66 [±20]	305 [±26]	16 [±8]	433 [±19]	1509 [±74]

Malta

Table A117. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	183 [± 4]	726 [± 8]	227 [± 4]	17 [± 1]	682 [± 7]
2020	2157 [± 13]	8884 [± 27]	2521 [± 14]	194 [± 4]	8078 [± 26]
2030	4447 [± 20]	19356 [± 41]	5243 [± 21]	404 [± 6]	16937 [± 38]
Scenario 1					
2010	180 [± 4]	724 [± 8]	225 [± 4]	17 [± 1]	691 [± 7]
2020	2133 [± 13]	8696 [± 27]	2369 [± 14]	191 [± 4]	7829 [± 25]
2030	4401 [± 20]	19017 [± 41]	4929 [± 21]	397 [± 6]	16469 [± 38]
Scenario 2					
2010	187 [± 4]	729 [± 8]	230 [± 4]	17 [± 1]	688 [± 7]
2020	2066 [± 13]	8289 [± 26]	1967 [± 13]	176 [± 4]	7192 [± 24]
2030	4258 [± 19]	18103 [± 40]	4099 [± 19]	369 [± 6]	15208 [± 36]

Table A118. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	3 [± 5]	2 [± 11]	2 [± 6]	0 [± 2]	-9 [± 10]
2020	24 [± 19]	188 [± 38]	152 [± 20]	3 [± 6]	249 [± 36]
2030	46 [± 27]	339 [± 55]	314 [± 29]	7 [± 8]	468 [± 52]
Scenario 2					
2010	-4 [± 5]	-3 [± 11]	-3 [± 6]	0 [± 2]	-6 [± 10]
2020	91 [± 18]	595 [± 37]	554 [± 19]	18 [± 5]	886 [± 35]
2030	189 [± 26]	1253 [± 55]	1144 [± 27]	35 [± 8]	1729 [± 51]

Table A119. Prevalence cases in year [per 100000] for Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	1490 [±11]	3077 [±16]	6691 [±23]	380 [±6]	15627 [±35]
2020	1831 [±12]	4189 [±19]	7386 [±25]	417 [±6]	18245 [±39]
2030	2000 [±13]	4945 [±21]	7964 [±26]	462 [±6]	20580 [±42]
Scenario 1					
2010	1490 [±11]	3071 [±16]	6683 [±23]	378 [±5]	15648 [±35]
2020	1820 [±12]	4105 [±18]	7255 [±24]	415 [±6]	18067 [±38]
2030	1977 [±13]	4854 [±21]	7712 [±26]	460 [±6]	20274 [±42]
Scenario 2					
2010	1496 [±11]	3075 [±16]	6703 [±23]	386 [±6]	15646 [±35]
2020	1783 [±12]	3948 [±18]	6921 [±24]	409 [±6]	17541 [±38]
2030	1925 [±13]	4616 [±20]	7057 [±25]	444 [±6]	19388 [±41]

Table A120. Prevalence cases avoided in year [per 100000] Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [±15]	6 [±22]	8 [±33]	2 [±8]	-21 [±50]
2020	11 [±17]	84 [±26]	131 [±34]	2 [±8]	178 [±54]
2030	23 [±18]	91 [±28]	252 [±35]	2 [±9]	306 [±57]
Scenario 2					
2010	-6 [±15]	2 [±22]	-12 [±33]	-6 [±8]	-19 [±50]
2020	48 [±17]	241 [±26]	465 [±34]	8 [±8]	704 [±54]
2030	75 [±18]	329 [±28]	907 [±35]	18 [±9]	1192 [±57]

Monaco

Table A121. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [± 4]	1305 [± 10]	18 [± 1]	230 [± 4]	1237 [± 10]
2020	2797 [± 16]	13904 [± 35]	220 [± 4]	2894 [± 16]	13547 [± 35]
2030	5670 [± 24]	26778 [± 51]	452 [± 7]	6144 [± 24]	27373 [± 52]
Scenario 1					
2010	238 [± 4]	1307 [± 10]	19 [± 1]	231 [± 4]	1227 [± 10]
2020	2751 [± 16]	13677 [± 35]	219 [± 4]	2702 [± 15]	13247 [± 34]
2030	5576 [± 23]	26245 [± 51]	451 [± 7]	5724 [± 24]	26825 [± 51]
Scenario 2					
2010	238 [± 4]	1329 [± 10]	18 [± 1]	234 [± 4]	1234 [± 10]
2020	2705 [± 15]	13173 [± 34]	202 [± 4]	2291 [± 14]	12675 [± 34]
2030	5470 [± 23]	25220 [± 49]	416 [± 6]	4904 [± 22]	25828 [± 50]

Table A122. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [± 6]	-2 [± 14]	-1 [± 2]	-1 [± 6]	10 [± 14]
2020	46 [± 21]	227 [± 47]	1 [± 6]	192 [± 21]	300 [± 46]
2030	94 [± 30]	533 [± 65]	1 [± 8]	420 [± 31]	548 [± 66]
Scenario 2					
2010	-1 [± 6]	-24 [± 15]	0 [± 2]	-4 [± 6]	3 [± 14]
2020	92 [± 21]	731 [± 47]	18 [± 6]	603 [± 20]	872 [± 46]
2030	200 [± 30]	1558 [± 64]	36 [± 8]	1240 [± 30]	1545 [± 65]

Table A123. Prevalence cases in year [per 100000] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	4555 [±19]	3402 [±16]	491 [±6]	4987 [±20]	57472 [±68]
2020	4490 [±20]	4007 [±19]	458 [±6]	4358 [±20]	57611 [±72]
2030	4506 [±21]	4048 [±20]	460 [±7]	4560 [±21]	57335 [±75]
Scenario 1					
2010	4557 [±19]	3399 [±16]	495 [±6]	4978 [±20]	57517 [±68]
2020	4475 [±20]	3953 [±19]	461 [±6]	4220 [±19]	57432 [±71]
2030	4496 [±21]	3990 [±20]	467 [±7]	4350 [±21]	57067 [±75]
Scenario 2					
2010	4556 [±19]	3426 [±17]	497 [±6]	4990 [±20]	57512 [±68]
2020	4478 [±20]	3832 [±18]	451 [±6]	3976 [±19]	57024 [±71]
2030	4489 [±21]	3859 [±19]	445 [±7]	3954 [±20]	56475 [±74]

Table A124. Prevalence cases avoided in year [per 100000] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±27]	3 [±23]	-4 [±9]	9 [±28]	-45 [±96]
2020	15 [±27]	54 [±25]	-3 [±9]	138 [±26]	179 [±96]
2030	10 [±27]	58 [±25]	-7 [±9]	210 [±27]	268 [±96]
Scenario 2					
2010	-1 [±27]	-24 [±23]	-6 [±9]	-3 [±28]	-40 [±96]
2020	12 [±27]	175 [±25]	7 [±9]	382 [±26]	587 [±96]
2030	17 [±27]	189 [±25]	15 [±9]	606 [±26]	860 [±95]

Montenegro

Table A125. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	135 [±3]	732 [±8]	17 [±1]	213 [±4]	652 [±7]
2020	1487 [±11]	7603 [±25]	169 [±4]	2356 [±14]	7390 [±24]
2030	2928 [±16]	14574 [±35]	330 [±5]	4541 [±19]	14529 [±35]
Scenario 1					
2010	134 [±3]	733 [±8]	16 [±1]	212 [±4]	653 [±7]
2020	1473 [±11]	7560 [±25]	167 [±4]	2204 [±13]	7183 [±24]
2030	2896 [±16]	14442 [±35]	323 [±5]	4212 [±19]	14026 [±34]
Scenario 2					
2010	132 [±3]	736 [±8]	16 [±1]	214 [±4]	654 [±7]
2020	1427 [±11]	7245 [±24]	158 [±4]	1858 [±12]	6675 [±23]
2030	2809 [±15]	13816 [±34]	305 [±5]	3560 [±17]	13095 [±33]

Table A126. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±5]	-1 [±11]	1 [±2]	1 [±6]	-1 [±10]
2020	14 [±15]	43 [±35]	2 [±5]	152 [±19]	207 [±34]
2030	32 [±22]	132 [±48]	7 [±7]	329 [±26]	503 [±48]
Scenario 2					
2010	3 [±5]	-4 [±11]	1 [±2]	-1 [±6]	-2 [±10]
2020	60 [±15]	358 [±34]	11 [±5]	498 [±18]	715 [±34]
2030	119 [±21]	758 [±48]	25 [±7]	981 [±25]	1434 [±47]

Table A127. Prevalence cases in year [per 100000] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	997 [±9]	2105 [±13]	335 [±5]	5239 [±20]	15121 [±35]
2020	1151 [±10]	2512 [±14]	341 [±5]	5191 [±21]	16059 [±36]
2030	1218 [±10]	2644 [±15]	359 [±5]	5440 [±21]	17175 [±38]
Scenario 1					
2010	998 [±9]	2108 [±13]	331 [±5]	5257 [±21]	15121 [±35]
2020	1147 [±10]	2514 [±14]	338 [±5]	5075 [±20]	15888 [±36]
2030	1202 [±10]	2628 [±15]	356 [±5]	5178 [±21]	16756 [±37]
Scenario 2					
2010	1003 [±9]	2113 [±13]	329 [±5]	5249 [±20]	15107 [±35]
2020	1123 [±10]	2437 [±14]	330 [±5]	4807 [±20]	15490 [±35]
2030	1173 [±10]	2519 [±14]	342 [±5]	4741 [±20]	16128 [±37]

Table A128. Prevalence cases avoided in year [per 100000] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±13]	-3 [±18]	4 [±7]	-18 [±29]	0 [±49]
2020	4 [±14]	-2 [±20]	3 [±7]	116 [±29]	171 [±51]
2030	16 [±14]	16 [±21]	3 [±8]	262 [±29]	419 [±52]
Scenario 2					
2010	-6 [±13]	-8 [±18]	6 [±7]	-10 [±29]	14 [±49]
2020	28 [±13]	75 [±20]	11 [±7]	384 [±28]	569 [±50]
2030	45 [±14]	125 [±20]	17 [±7]	699 [±29]	1047 [±52]

Netherlands

Table A129. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for the Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [±4]	1006 [±9]	219 [±4]	219 [±4]	1055 [±9]
2020	3057 [±17]	12610 [±34]	2820 [±16]	2744 [±16]	12989 [±35]
2030	6953 [±28]	28886 [±57]	6272 [±27]	6204 [±26]	28037 [±56]
Scenario 1					
2010	238 [±4]	1008 [±9]	218 [±4]	217 [±4]	1058 [±9]
2020	3051 [±17]	12398 [±34]	2742 [±16]	2608 [±16]	12677 [±34]
2030	6907 [±28]	28380 [±56]	6113 [±26]	5908 [±26]	27417 [±55]
Scenario 2					
2010	236 [±4]	1006 [±9]	218 [±4]	223 [±4]	1053 [±9]
2020	2962 [±17]	11771 [±33]	2587 [±16]	2217 [±14]	11997 [±33]
2030	6721 [±27]	26894 [±55]	5766 [±25]	5072 [±24]	25886 [±54]

Table A130. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	-2 [±13]	1 [±6]	2 [±6]	-3 [±13]
2020	6 [±22]	212 [±45]	78 [±21]	136 [±21]	312 [±45]
2030	46 [±33]	506 [±68]	159 [±31]	296 [±31]	620 [±67]
Scenario 2					
2010	1 [±6]	0 [±13]	1 [±6]	-4 [±6]	2 [±13]
2020	95 [±22]	839 [±44]	233 [±21]	527 [±20]	992 [±45]
2030	232 [±33]	1992 [±67]	506 [±31]	1132 [±30]	2151 [±66]

Table A131. Prevalence cases in year [per 100000] for The Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2253 [±13]	4904 [±20]	5406 [±21]	2436 [±14]	28935 [±48]
2020	2889 [±16]	6500 [±25]	6336 [±24]	2989 [±17]	35543 [±58]
2030	3450 [±20]	7927 [±30]	7407 [±29]	3542 [±20]	41456 [±68]
Scenario 1					
2010	2266 [±13]	4905 [±20]	5409 [±21]	2437 [±14]	28916 [±48]
2020	2885 [±16]	6400 [±24]	6281 [±24]	2892 [±16]	35285 [±57]
2030	3437 [±20]	7778 [±30]	7307 [±29]	3408 [±20]	41009 [±68]
Scenario 2					
2010	2253 [±13]	4890 [±20]	5408 [±21]	2434 [±14]	28908 [±48]
2020	2850 [±16]	6114 [±24]	6166 [±24]	2634 [±16]	34781 [±57]
2030	3405 [±19]	7385 [±29]	7104 [±28]	3060 [±18]	40045 [±67]

Table A132. Prevalence cases avoided in year [per 100000] for Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-13 [±19]	-1 [±28]	-3 [±29]	-1 [±20]	19 [±68]
2020	4 [±21]	100 [±32]	55 [±32]	97 [±22]	258 [±75]
2030	13 [±23]	149 [±35]	100 [±34]	134 [±24]	447 [±81]
Scenario 2					
2010	0 [±19]	14 [±28]	-2 [±29]	2 [±20]	27 [±68]
2020	39 [±21]	386 [±32]	170 [±32]	355 [±21]	762 [±75]
2030	45 [±23]	542 [±35]	303 [±34]	482 [±23]	1411 [±81]

Norway

Table A133. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	200 [±4]	861 [±8]	493 [±6]	124 [±3]	550 [±7]
2020	2324 [±14]	8686 [±27]	5756 [±22]	1516 [±11]	6430 [±23]
2030	4596 [±19]	16870 [±37]	11407 [±31]	3156 [±16]	12871 [±33]
Scenario 1					
2010	198 [±4]	864 [±8]	493 [±6]	124 [±3]	549 [±7]
2020	2298 [±14]	8597 [±26]	5648 [±21]	1425 [±11]	6269 [±23]
2030	4540 [±19]	16632 [±37]	11177 [±30]	2941 [±16]	12546 [±32]
Scenario 2					
2010	199 [±4]	849 [±8]	488 [±6]	124 [±3]	550 [±7]
2020	2240 [±13]	8224 [±26]	5322 [±21]	1208 [±10]	5874 [±22]
2030	4425 [±19]	15886 [±36]	10589 [±29]	2514 [±14]	11683 [±31]

Table A134. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±6]	-3 [±12]	0 [±9]	0 [±4]	1 [±9]
2020	26 [±19]	89 [±37]	108 [±30]	91 [±15]	161 [±32]
2030	56 [±27]	238 [±52]	230 [±43]	215 [±22]	325 [±45]
Scenario 2					
2010	1 [±6]	12 [±12]	5 [±9]	0 [±4]	0 [±9]
2020	84 [±19]	462 [±37]	434 [±30]	308 [±15]	556 [±31]
2030	171 [±27]	984 [±51]	818 [±42]	642 [±21]	1188 [±44]

Table A135. Prevalence cases in year [per 100000] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2862 [±15]	1361 [±10]	10972 [±30]	2715 [±15]	11631 [±31]
2020	3098 [±16]	1856 [±12]	11508 [±31]	2572 [±14]	12324 [±32]
2030	3265 [±16]	2027 [±13]	12301 [±32]	2777 [±15]	13244 [±33]
Scenario 1					
2010	2871 [±15]	1366 [±10]	10991 [±30]	2723 [±15]	11632 [±31]
2020	3093 [±16]	1832 [±12]	11403 [±30]	2506 [±14]	12178 [±31]
2030	3253 [±16]	1999 [±13]	12138 [±32]	2647 [±15]	13011 [±33]
Scenario 2					
2010	2848 [±15]	1354 [±10]	10963 [±30]	2725 [±15]	11610 [±30]
2020	3054 [±16]	1767 [±12]	11184 [±30]	2373 [±14]	11899 [±31]
2030	3210 [±16]	1913 [±13]	11822 [±31]	2437 [±14]	12487 [±32]

Table A136. Prevalence cases avoided in year [per 100000] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-9 [±21]	-5 [±15]	-19 [±42]	-8 [±21]	-1 [±43]
2020	5 [±22]	24 [±17]	105 [±43]	66 [±20]	146 [±44]
2030	12 [±23]	28 [±18]	163 [±44]	130 [±21]	233 [±46]
Scenario 2					
2010	14 [±21]	7 [±15]	9 [±42]	-10 [±21]	21 [±43]
2020	44 [±22]	89 [±17]	324 [±43]	199 [±20]	425 [±44]
2030	55 [±23]	114 [±18]	479 [±44]	340 [±20]	757 [±45]

Poland

Table A137. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	132 [± 3]	987 [± 9]	19 [± 1]	203 [± 4]	667 [± 7]
2020	1674 [± 12]	10546 [± 31]	250 [± 5]	2426 [± 15]	8627 [± 28]
2030	3857 [± 21]	23564 [± 51]	566 [± 8]	5396 [± 25]	19558 [± 47]
Scenario 1					
2010	133 [± 3]	988 [± 9]	20 [± 1]	203 [± 4]	674 [± 7]
2020	1659 [± 12]	10377 [± 31]	246 [± 5]	2252 [± 14]	8369 [± 28]
2030	3820 [± 21]	23163 [± 51]	556 [± 8]	5011 [± 24]	18954 [± 46]
Scenario 2					
2010	132 [± 3]	988 [± 9]	19 [± 1]	200 [± 4]	663 [± 7]
2020	1613 [± 12]	9866 [± 30]	234 [± 5]	1832 [± 13]	7726 [± 27]
2030	3709 [± 20]	22018 [± 49]	524 [± 8]	4064 [± 21]	17327 [± 44]

Table A138. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [± 5]	-1 [± 13]	-1 [± 2]	0 [± 6]	-7 [± 10]
2020	15 [± 16]	169 [± 41]	4 [± 6]	174 [± 19]	258 [± 37]
2030	37 [± 25]	401 [± 61]	10 [± 9]	385 [± 29]	604 [± 56]
Scenario 2					
2010	0 [± 5]	-1 [± 13]	0 [± 2]	3 [± 6]	4 [± 10]
2020	61 [± 16]	680 [± 40]	16 [± 6]	594 [± 18]	901 [± 36]
2030	148 [± 25]	1546 [± 60]	42 [± 9]	1332 [± 28]	2231 [± 54]

Table A139. Prevalence cases in year [per 100000] for Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	786 [± 8]	1738 [± 12]	434 [± 6]	5080 [± 20]	16306 [± 36]
2020	1050 [± 10]	2187 [± 14]	494 [± 7]	5072 [± 22]	19038 [± 42]
2030	1297 [± 12]	2755 [± 18]	601 [± 8]	5759 [± 25]	22979 [± 51]
Scenario 1					
2010	784 [± 8]	1740 [± 12]	434 [± 6]	5085 [± 20]	16305 [± 36]
2020	1044 [± 10]	2143 [± 14]	496 [± 7]	4937 [± 21]	18824 [± 42]
2030	1292 [± 12]	2725 [± 17]	596 [± 8]	5486 [± 25]	22566 [± 50]
Scenario 2					
2010	781 [± 8]	1735 [± 12]	433 [± 6]	5086 [± 20]	16285 [± 36]
2020	1022 [± 10]	2079 [± 14]	485 [± 7]	4682 [± 21]	18404 [± 41]
2030	1268 [± 12]	2608 [± 17]	579 [± 8]	4923 [± 23]	21503 [± 49]

Table A140. Prevalence cases avoided in year [per 100000] Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [± 11]	-2 [± 17]	0 [± 8]	-5 [± 29]	1 [± 51]
2020	6 [± 13]	44 [± 19]	-2 [± 9]	135 [± 28]	214 [± 55]
2030	5 [± 14]	30 [± 21]	5 [± 10]	273 [± 30]	413 [± 60]
Scenario 2					
2010	5 [± 11]	3 [± 17]	1 [± 8]	-6 [± 29]	21 [± 51]
2020	28 [± 13]	108 [± 18]	9 [± 9]	390 [± 28]	634 [± 55]
2030	29 [± 14]	147 [± 21]	22 [± 10]	836 [± 29]	1476 [± 60]

Portugal

Table A141. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	169 [±4]	1091 [±9]	16 [±1]	166 [±4]	739 [±8]
2020	1950 [±13]	12046 [±31]	192 [±4]	1794 [±12]	8058 [±26]
2030	3998 [±19]	24590 [±46]	391 [±6]	3507 [±17]	15738 [±37]
Scenario 1					
2010	170 [±4]	1087 [±9]	17 [±1]	166 [±4]	741 [±8]
2020	1932 [±13]	11925 [±31]	189 [±4]	1688 [±12]	7877 [±25]
2030	3965 [±19]	24351 [±46]	381 [±6]	3278 [±17]	15353 [±37]
Scenario 2					
2010	168 [±4]	1101 [±9]	16 [±1]	165 [±4]	745 [±8]
2020	1870 [±12]	11493 [±31]	175 [±4]	1360 [±11]	7255 [±24]
2030	3819 [±18]	23379 [±45]	352 [±6]	2655 [±15]	14046 [±35]

Table A142. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±5]	4 [±13]	-1 [±2]	0 [±5]	-2 [±11]
2020	18 [±18]	121 [±44]	3 [±6]	106 [±17]	181 [±36]
2030	33 [±25]	239 [±63]	10 [±8]	229 [±23]	385 [±50]
Scenario 2					
2010	1 [±5]	-10 [±13]	0 [±2]	1 [±5]	-6 [±11]
2020	80 [±17]	553 [±43]	17 [±5]	434 [±16]	803 [±35]
2030	179 [±25]	1211 [±62]	39 [±8]	852 [±22]	1692 [±49]

Table A143. Prevalence cases in year [per 100000] for Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	660 [± 7]	4159 [± 18]	416 [± 6]	4177 [± 18]	17216 [± 37]
2020	810 [± 8]	5118 [± 21]	437 [± 6]	4528 [± 19]	19181 [± 40]
2030	917 [± 9]	5759 [± 22]	470 [± 6]	4791 [± 20]	20435 [± 42]
Scenario 1					
2010	665 [± 7]	4151 [± 18]	422 [± 6]	4181 [± 18]	17223 [± 37]
2020	808 [± 8]	5069 [± 20]	439 [± 6]	4442 [± 19]	19037 [± 40]
2030	914 [± 9]	5655 [± 22]	466 [± 6]	4601 [± 20]	20130 [± 42]
Scenario 2					
2010	667 [± 7]	4189 [± 18]	416 [± 6]	4172 [± 18]	17217 [± 37]
2020	791 [± 8]	4911 [± 20]	426 [± 6]	4157 [± 18]	18545 [± 39]
2030	879 [± 9]	5408 [± 22]	445 [± 6]	4117 [± 19]	19208 [± 41]

Table A144. Prevalence cases avoided in year [per 100000] Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-5 [± 10]	8 [± 26]	-6 [± 8]	-4 [± 26]	-7 [± 52]
2020	2 [± 11]	49 [± 29]	-2 [± 8]	86 [± 27]	144 [± 55]
2030	3 [± 12]	104 [± 30]	4 [± 9]	190 [± 27]	305 [± 57]
Scenario 2					
2010	-7 [± 10]	-30 [± 26]	0 [± 8]	5 [± 26]	-1 [± 52]
2020	19 [± 11]	207 [± 28]	11 [± 8]	371 [± 26]	636 [± 55]
2030	38 [± 12]	351 [± 30]	25 [± 9]	674 [± 27]	1227 [± 56]

Republic of Macedonia

Table A145. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for The Republic of Macedonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	134 [±3]	1238 [±10]	15 [±1]	252 [±4]	1781 [±12]
2020	1572 [±11]	12717 [±32]	175 [±4]	2771 [±15]	17912 [±39]
2030	3198 [±17]	25371 [±47]	354 [±6]	5413 [±22]	34255 [±55]
Scenario 1					
2010	137 [±3]	1230 [±10]	14 [±1]	255 [±5]	1779 [±12]
2020	1572 [±11]	12536 [±32]	165 [±4]	2666 [±15]	17602 [±38]
2030	3182 [±17]	24985 [±47]	341 [±5]	5214 [±21]	33870 [±54]
Scenario 2					
2010	135 [±3]	1233 [±10]	15 [±1]	252 [±4]	1779 [±12]
2020	1511 [±11]	12144 [±32]	157 [±4]	2237 [±14]	16772 [±37]
2030	3079 [±16]	24149 [±46]	325 [±5]	4390 [±20]	32856 [±54]

Table A146. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Macedonia

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-3 [±5]	8 [±14]	-3 [±6]	2 [±17]	1 [±2]
2020	0 [±16]	181 [±45]	105 [±21]	310 [±53]	10 [±5]
2030	16 [±23]	386 [±63]	199 [±29]	385 [±74]	13 [±7]
Scenario 2					
2010	-1 [±5]	5 [±14]	0 [±6]	2 [±17]	0 [±2]
2020	61 [±16]	573 [±45]	534 [±20]	1140 [±53]	18 [±5]
2030	119 [±22]	1222 [±63]	1023 [±28]	1399 [±73]	29 [±7]

Table A147. Prevalence cases in year [per 100000] for The Republic of Macedonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	960 [± 9]	3920 [± 18]	322 [± 5]	5704 [± 21]	48850 [± 63]
2020	1161 [± 10]	4671 [± 20]	340 [± 5]	6219 [± 23]	53661 [± 67]
2030	1271 [± 11]	5133 [± 21]	371 [± 6]	6487 [± 24]	57062 [± 71]
Scenario 1					
2010	962 [± 9]	3921 [± 18]	321 [± 5]	5709 [± 21]	48826 [± 62]
2020	1160 [± 10]	4597 [± 20]	332 [± 5]	6144 [± 23]	53373 [± 67]
2030	1260 [± 10]	5015 [± 21]	364 [± 6]	6368 [± 24]	56800 [± 71]
Scenario 2					
2010	959 [± 9]	3923 [± 18]	325 [± 5]	5710 [± 21]	48916 [± 63]
2020	1131 [± 10]	4433 [± 19]	327 [± 5]	5801 [± 22]	52737 [± 66]
2030	1239 [± 10]	4810 [± 20]	354 [± 6]	5802 [± 23]	56131 [± 70]

Table A148. Prevalence cases avoided in year [per 100000] for Macedonia

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-2 [± 12]	-1 [± 25]	-5 [± 30]	24 [± 88]	1 [± 7]
2020	1 [± 14]	74 [± 27]	75 [± 31]	288 [± 93]	8 [± 7]
2030	11 [± 14]	118 [± 28]	119 [± 32]	262 [± 95]	7 [± 8]
Scenario 2					
2010	1 [± 12]	-3 [± 25]	-6 [± 30]	-66 [± 88]	-3 [± 7]
2020	30 [± 14]	238 [± 27]	418 [± 31]	924 [± 92]	13 [± 7]
2030	32 [± 14]	323 [± 28]	685 [± 31]	931 [± 95]	17 [± 8]

Republic of Moldova

Table A149. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Republic of Moldova

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	136 [±3]	673 [±7]	25 [±1]	223 [±4]	657 [±7]
2020	1594 [±11]	7871 [±25]	286 [±5]	2689 [±15]	6871 [±24]
2030	3223 [±17]	16206 [±38]	590 [±7]	5484 [±22]	13603 [±34]
Scenario 1					
2010	139 [±3]	672 [±7]	26 [±1]	223 [±4]	653 [±7]
2020	1577 [±11]	7784 [±25]	281 [±5]	2478 [±14]	6698 [±23]
2030	3183 [±17]	15966 [±37]	576 [±7]	5060 [±21]	13167 [±34]
Scenario 2					
2010	140 [±3]	685 [±7]	26 [±1]	224 [±4]	657 [±7]
2020	1531 [±11]	7434 [±25]	262 [±5]	2080 [±13]	6274 [±23]
2030	3075 [±16]	15177 [±36]	535 [±7]	4234 [±19]	12310 [±33]

Table A150. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Moldova

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-3 [±5]	1 [±10]	0 [±6]	4 [±10]	-1 [±2]
2020	17 [±16]	87 [±35]	211 [±20]	173 [±33]	5 [±7]
2030	40 [±23]	240 [±51]	424 [±29]	436 [±46]	14 [±10]
Scenario 2					
2010	-4 [±5]	-12 [±10]	-1 [±6]	0 [±10]	-1 [±2]
2020	63 [±16]	437 [±35]	609 [±20]	597 [±32]	24 [±7]
2030	148 [±22]	1029 [±50]	1250 [±28]	1293 [±46]	55 [±9]

Table A151. Prevalence cases in year [per 100000] for Republic of Moldova

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	796 [±8]	4438 [±19]	520 [±6]	4498 [±19]	16552 [±36]
2020	986 [±9]	5303 [±21]	550 [±7]	5504 [±21]	18310 [±39]
2030	1048 [±10]	5850 [±23]	599 [±7]	6308 [±23]	19356 [±41]
Scenario 1					
2010	794 [±8]	4440 [±19]	522 [±6]	4518 [±19]	16553 [±36]
2020	980 [±9]	5249 [±21]	543 [±7]	5331 [±21]	18158 [±39]
2030	1030 [±9]	5738 [±22]	588 [±7]	5976 [±23]	19001 [±41]
Scenario 2					
2010	807 [±8]	4450 [±19]	524 [±6]	4512 [±19]	16543 [±36]
2020	959 [±9]	5045 [±20]	528 [±7]	4985 [±20]	17790 [±38]
2030	1007 [±9]	5447 [±22]	564 [±7]	5368 [±22]	18386 [±40]

Table A152. Prevalence cases avoided in year [per 100000] for Moldova

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	2 [±11]	-2 [±27]	-20 [±27]	-1 [±51]	-2 [±9]
2020	6 [±13]	54 [±29]	173 [±29]	152 [±54]	7 [±9]
2030	18 [±13]	112 [±30]	332 [±31]	355 [±55]	11 [±10]
Scenario 2					
2010	-11 [±11]	-12 [±27]	-14 [±27]	9 [±51]	-4 [±9]
2020	27 [±12]	258 [±29]	519 [±29]	520 [±54]	22 [±9]
2030	41 [±13]	403 [±30]	940 [±31]	970 [±55]	35 [±10]

Romania

Table A153. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	149 [+3]	1814 [+12]	16 [+1]	225 [+4]	738 [+8]
2020	1636 [+12]	16871 [+38]	181 [+4]	2788 [+16]	8843 [+28]
2030	3352 [+18]	32601 [+56]	367 [+6]	5890 [+24]	18285 [+42]
Scenario 1					
2010	145 [+3]	1794 [+12]	16 [+1]	208 [+4]	716 [+8]
2020	1644 [+12]	16730 [+38]	177 [+4]	2576 [+15]	8570 [+27]
2030	3356 [+18]	32217 [+56]	357 [+6]	5403 [+23]	17732 [+41]
Scenario 2					
2010	143 [+3]	1685 [+12]	15 [+1]	162 [+4]	653 [+7]
2020	1632 [+12]	15922 [+37]	166 [+4]	2048 [+13]	7842 [+26]
2030	3346 [+18]	30755 [+54]	343 [+6]	4340 [+20]	16372 [+39]

Table A154. Cumulative incidence cases avoided from year 2010 [per 100,000 of population in 2010] Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [+5]	20 [+17]	0 [+2]	17 [+6]	22 [+11]
2020	-8 [+16]	141 [+52]	4 [+5]	212 [+21]	273 [+37]
2030	-4 [+23]	384 [+72]	10 [+8]	487 [+30]	553 [+54]
Scenario 2					
2010	6 [+5]	129 [+17]	1 [+2]	63 [+6]	85 [+11]
2020	4 [+16]	949 [+51]	15 [+5]	740 [+20]	1001 [+37]
2030	6 [+23]	1846 [+71]	24 [+8]	1550 [+29]	1913 [+53]

Table A155. Prevalence cases in year [per 100,000] for Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	807 [+8]	4603 [+19]	347 [+5]	5446 [+21]	16357 [+36]
2020	916 [+9]	4673 [+20]	328 [+5]	5222 [+21]	17258 [+39]
2030	1012 [+10]	5050 [+22]	351 [+6]	5856 [+24]	19198 [+43]
Scenario 1					
2010	805 [+8]	4586 [+19]	343 [+5]	5439 [+21]	16340 [+36]
2020	924 [+9]	4660 [+20]	321 [+5]	5058 [+21]	17048 [+39]
2030	1012 [+10]	4971 [+22]	343 [+6]	5512 [+23]	18817 [+42]
Scenario 2					
2010	798 [+8]	4481 [+19]	343 [+5]	5384 [+21]	16284 [+36]
2020	924 [+9]	4506 [+20]	319 [+5]	4702 [+20]	16599 [+38]
2030	1026 [+10]	4825 [+21]	343 [+6]	4877 [+22]	18068 [+41]

Table A156. Prevalence cases avoided in year [per 100,000] Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [+11]	17 [+27]	4 [+7]	7 [+30]	17 [+51]
2020	-8 [+12]	13 [+27]	7 [+7]	164 [+29]	210 [+52]
2030	0 [+13]	79 [+28]	8 [+7]	344 [+30]	381 [+55]
Scenario 2					
2010	9 [+11]	122 [+27]	4 [+7]	62 [+29]	73 [+51]
2020	-8 [+12]	167 [+27]	9 [+7]	520 [+28]	659 [+52]
2030	-14 [+13]	225 [+28]	8 [+7]	979 [+29]	1130 [+55]

Russian Federation

Table A157. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Russian Federation

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	234 [±4]	843 [±8]	22 [±1]	56 [±2]	704 [±8]
2020	3042 [±17]	10400 [±32]	288 [±5]	732 [±8]	8437 [±28]
2030	7117 [±29]	23994 [±53]	685 [±9]	1765 [±14]	20107 [±49]
Scenario 1					
2010	235 [±4]	839 [±8]	23 [±1]	58 [±2]	702 [±7]
2020	3015 [±17]	10319 [±31]	286 [±5]	687 [±8]	8239 [±28]
2030	7050 [±29]	23764 [±53]	682 [±9]	1646 [±14]	19560 [±48]
Scenario 2					
2010	236 [±4]	847 [±8]	23 [±1]	56 [±2]	706 [±8]
2020	2906 [±17]	9989 [±31]	274 [±5]	550 [±7]	7645 [±27]
2030	6812 [±28]	22959 [±52]	650 [±9]	1307 [±12]	18009 [±46]

Table A158. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Russia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	4 [±12]	-1 [±2]	-2 [±3]	2 [±11]
2020	27 [±22]	81 [±41]	2 [±7]	45 [±11]	198 [±37]
2030	67 [±34]	230 [±62]	3 [±10]	119 [±17]	547 [±56]
Scenario 2					
2010	-2 [±6]	-4 [±12]	-1 [±2]	0 [±3]	-2 [±11]
2020	136 [±22]	411 [±40]	14 [±7]	182 [±10]	792 [±36]
2030	305 [±33]	1035 [±61]	35 [±10]	458 [±16]	2098 [±55]

Table A159. Prevalence cases in year [per 100000] for Russian Federation

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1313 [±10]	4014 [±18]	319 [±5]	1234 [±10]	17518 [±37]
2020	1785 [±13]	5544 [±23]	350 [±6]	1510 [±12]	20711 [±44]
2030	2208 [±16]	7034 [±29]	430 [±7]	1911 [±15]	24987 [±54]
Scenario 1					
2010	1310 [±10]	4017 [±18]	323 [±5]	1237 [±10]	17527 [±37]
2020	1771 [±13]	5521 [±23]	350 [±6]	1474 [±12]	20566 [±44]
2030	2197 [±16]	6972 [±29]	432 [±7]	1817 [±15]	24579 [±54]
Scenario 2					
2010	1308 [±10]	4002 [±18]	320 [±5]	1233 [±10]	17552 [±37]
2020	1732 [±13]	5363 [±23]	338 [±6]	1351 [±11]	20106 [±44]
2030	2147 [±16]	6722 [±28]	416 [±7]	1553 [±14]	23524 [±53]

Table A160. Prevalence cases avoided in year [per 100000] for Russia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [±59]	-4 [±23]	-4 [±7]	5 [±10]	-3 [±47]
2020	111 [±58]	9 [±24]	-3 [±6]	25 [±12]	147 [±51]
2030	153 [±60]	14 [±24]	4 [±5]	68 [±13]	348 [±55]
Scenario 2					
2010	21 [±59]	10 [±23]	0 [±7]	5 [±10]	6 [±47]
2020	523 [±58]	41 [±23]	3 [±6]	95 [±11]	485 [±51]
2030	624 [±59]	62 [±24]	13 [±5]	201 [±12]	1195 [±55]

San Marino

Table A161. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	241 [± 4]	2104 [± 13]	14 [± 1]	229 [± 4]	659 [± 7]
2020	2921 [± 17]	17245 [± 42]	192 [± 4]	2843 [± 17]	7904 [± 28]
2030	5726 [± 25]	28951 [± 57]	387 [± 7]	5673 [± 25]	15689 [± 42]
Scenario 1					
2010	242 [± 4]	2095 [± 13]	15 [± 1]	225 [± 4]	662 [± 7]
2020	2897 [± 17]	17077 [± 42]	191 [± 4]	2846 [± 17]	7694 [± 28]
2030	5659 [± 25]	28640 [± 56]	382 [± 7]	5672 [± 25]	15224 [± 41]
Scenario 2					
2010	238 [± 4]	2087 [± 13]	15 [± 1]	229 [± 4]	659 [± 7]
2020	2792 [± 17]	16509 [± 41]	180 [± 4]	2850 [± 17]	7108 [± 27]
2030	5461 [± 25]	27686 [± 55]	355 [± 6]	5668 [± 25]	13966 [± 39]

Table A162. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [± 6]	9 [± 18]	-1 [± 2]	4 [± 6]	-3 [± 10]
2020	24 [± 22]	168 [± 52]	1 [± 6]	-3 [± 21]	210 [± 35]
2030	67 [± 30]	311 [± 68]	5 [± 8]	1 [± 30]	465 [± 50]
Scenario 2					
2010	3 [± 6]	17 [± 18]	-1 [± 2]	0 [± 6]	0 [± 10]
2020	129 [± 21]	736 [± 52]	12 [± 5]	-7 [± 21]	796 [± 35]
2030	265 [± 30]	1265 [± 67]	32 [± 8]	5 [± 30]	1723 [± 49]

Table A163. Prevalence cases in year [per 100000] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2798 [±15]	4968 [±20]	604 [±7]	8512 [±26]	22430 [±42]
2020	2704 [±17]	3812 [±20]	437 [±7]	6845 [±26]	18625 [±44]
2030	2733 [±17]	3519 [±20]	427 [±7]	6798 [±27]	18722 [±46]
Scenario 1					
2010	2792 [±15]	4955 [±20]	598 [±7]	8491 [±26]	22446 [±42]
2020	2697 [±17]	3773 [±20]	436 [±7]	6852 [±26]	18483 [±43]
2030	2724 [±17]	3491 [±20]	427 [±7]	6816 [±28]	18406 [±45]
Scenario 2					
2010	2783 [±15]	4948 [±20]	597 [±7]	8503 [±26]	22416 [±42]
2020	2648 [±16]	3678 [±19]	429 [±7]	6904 [±26]	18103 [±43]
2030	2671 [±17]	3402 [±19]	411 [±7]	6892 [±28]	17587 [±44]

Table A164. Prevalence cases avoided in year [per 100000] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	6 [±21]	13 [±28]	6 [±10]	21 [±37]	-16 [±60]
2020	7 [±21]	39 [±25]	1 [±8]	-7 [±33]	142 [±54]
2030	9 [±21]	28 [±24]	0 [±8]	-18 [±33]	316 [±54]
Scenario 2					
2010	15 [±21]	20 [±28]	7 [±10]	9 [±37]	14 [±60]
2020	56 [±21]	134 [±24]	8 [±8]	-59 [±33]	522 [±54]
2030	62 [±21]	117 [±24]	16 [±8]	-94 [±33]	1135 [±54]

Serbia

Table A165. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	133 [± 3]	1183 [± 10]	20 [± 1]	197 [± 4]	685 [± 7]
2020	1510 [± 11]	11709 [± 31]	219 [± 4]	2274 [± 14]	8107 [± 26]
2030	3009 [± 16]	22511 [± 45]	438 [± 6]	4657 [± 20]	16498 [± 38]
Scenario 1					
2010	133 [± 3]	1148 [± 10]	19 [± 1]	180 [± 4]	668 [± 7]
2020	1486 [± 11]	11481 [± 31]	220 [± 4]	2109 [± 13]	7831 [± 26]
2030	2977 [± 16]	22100 [± 44]	439 [± 6]	4357 [± 20]	16001 [± 38]
Scenario 2					
2010	129 [± 3]	1085 [± 9]	17 [± 1]	141 [± 3]	600 [± 7]
2020	1438 [± 11]	10847 [± 30]	205 [± 4]	1678 [± 12]	7122 [± 25]
2030	2884 [± 16]	20946 [± 43]	411 [± 6]	3553 [± 18]	14636 [± 36]

Table A166. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 5]	35 [± 14]	1 [± 2]	17 [± 5]	17 [± 10]
2020	24 [± 15]	228 [± 43]	-1 [± 6]	165 [± 19]	276 [± 36]
2030	32 [± 22]	411 [± 60]	-1 [± 8]	300 [± 27]	497 [± 51]
Scenario 2					
2010	4 [± 5]	98 [± 13]	3 [± 2]	56 [± 5]	85 [± 10]
2020	72 [± 15]	862 [± 42]	14 [± 6]	596 [± 18]	985 [± 35]
2030	125 [± 22]	1565 [± 59]	27 [± 8]	1104 [± 26]	1862 [± 50]

Table A167. Prevalence cases in year [per 100000] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	826 [±8]	3258 [±16]	383 [±6]	2703 [±15]	15734 [±35]
2020	922 [±9]	3525 [±17]	360 [±6]	2304 [±14]	16206 [±37]
2030	998 [±9]	3748 [±18]	377 [±6]	2462 [±15]	17467 [±40]
Scenario 1					
2010	828 [±8]	3217 [±16]	385 [±6]	2690 [±15]	15718 [±35]
2020	915 [±9]	3493 [±17]	362 [±6]	2215 [±14]	16023 [±37]
2030	986 [±9]	3695 [±18]	378 [±6]	2342 [±14]	17152 [±39]
Scenario 2					
2010	822 [±8]	3153 [±16]	382 [±6]	2645 [±15]	15637 [±35]
2020	891 [±9]	3353 [±17]	353 [±5]	1976 [±13]	15528 [±36]
2030	970 [±9]	3564 [±18]	369 [±6]	2016 [±13]	16295 [±38]

Table A168. Prevalence cases avoided in year [per 100000] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±12]	41 [±23]	-2 [±8]	13 [±21]	16 [±50]
2020	7 [±12]	32 [±24]	-2 [±8]	89 [±19]	183 [±51]
2030	12 [±13]	53 [±24]	-1 [±8]	120 [±20]	315 [±53]
Scenario 2					
2010	4 [±11]	105 [±23]	1 [±8]	58 [±21]	97 [±50]
2020	31 [±12]	172 [±23]	7 [±8]	328 [±19]	678 [±50]
2030	28 [±13]	184 [±24]	8 [±8]	446 [±19]	1172 [±52]

Slovakia

Table A169. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	178 [±4]	1431 [±11]	16 [±1]	525 [±6]	708 [±8]
2020	2247 [±15]	15302 [±38]	196 [±4]	6866 [±26]	9193 [±30]
2030	5156 [±25]	33631 [±63]	456 [±7]	16371 [±44]	21156 [±50]
Scenario 1					
2010	177 [±4]	1433 [±11]	16 [±1]	522 [±6]	710 [±8]
2020	2218 [±15]	14950 [±38]	194 [±4]	6425 [±25]	8986 [±29]
2030	5078 [±24]	32704 [±62]	444 [±7]	15274 [±42]	20715 [±49]
Scenario 2					
2010	176 [±4]	1428 [±11]	16 [±1]	521 [±6]	703 [±8]
2020	2157 [±14]	14068 [±36]	182 [±4]	5479 [±23]	8626 [±29]
2030	4911 [±24]	30577 [±59]	419 [±7]	13002 [±39]	19837 [±48]

Table A170. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±5]	-2 [±15]	0 [±2]	3 [±9]	-2 [±11]
2020	29 [±19]	352 [±49]	2 [±6]	441 [±33]	207 [±38]
2030	78 [±29]	927 [±73]	12 [±8]	1097 [±50]	441 [±58]
Scenario 2					
2010	2 [±5]	3 [±15]	0 [±2]	4 [±9]	5 [±11]
2020	90 [±19]	1234 [±48]	14 [±5]	1387 [±31]	567 [±38]
2030	245 [±28]	3054 [±72]	37 [±8]	3369 [±48]	1319 [±57]

Table 171. Prevalence cases in year [per 100000] for Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1175 [±10]	2392 [±14]	351 [±5]	9343 [±27]	15583 [±35]
2020	1502 [±12]	3076 [±17]	380 [±6]	8997 [±29]	17970 [±41]
2030	1811 [±15]	3657 [±21]	469 [±7]	10870 [±36]	22046 [±51]
Scenario 1					
2010	1173 [±10]	2392 [±14]	351 [±5]	9329 [±27]	15567 [±35]
2020	1484 [±12]	3013 [±17]	380 [±6]	8715 [±29]	17859 [±41]
2030	1791 [±14]	3553 [±20]	462 [±7]	10314 [±35]	21904 [±50]
Scenario 2					
2010	1176 [±10]	2393 [±14]	347 [±5]	9327 [±27]	15554 [±35]
2020	1469 [±12]	2866 [±16]	374 [±6]	8209 [±28]	17754 [±41]
2030	1751 [±14]	3386 [±20]	452 [±7]	9338 [±33]	21688 [±50]

Table A172. Prevalence cases avoided in year [per 100000] Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±14]	0 [±20]	0 [±7]	14 [±39]	16 [±50]
2020	18 [±15]	63 [±22]	0 [±8]	282 [±38]	111 [±54]
2030	20 [±17]	104 [±24]	7 [±9]	556 [±41]	142 [±59]
Scenario 2					
2010	-1 [±14]	-1 [±20]	4 [±7]	16 [±39]	29 [±50]
2020	33 [±15]	210 [±22]	6 [±8]	788 [±37]	216 [±53]
2030	60 [±17]	271 [±24]	17 [±9]	1532 [±40]	358 [±59]

Slovenia

Table A173. Cumulative incidence cases in year 2010 [per 100,000 of population in 2010] for Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	192 [+4]	1013 [+9]	18 [+1]	248 [+4]	729 [+8]
2020	2239 [+14]	10422 [+30]	209 [+4]	2742 [+15]	8183 [+26]
2030	4602 [+21]	20833 [+44]	420 [+6]	5444 [+22]	16306 [+39]
Scenario 1					
2010	194 [+4]	993 [+9]	18 [+1]	232 [+4]	703 [+8]
2020	2213 [+14]	10261 [+29]	204 [+4]	2560 [+15]	7953 [+26]
2030	4562 [+20]	20507 [+43]	414 [+6]	5064 [+22]	15870 [+38]
Scenario 2					
2010	188 [+4]	939 [+9]	17 [+1]	183 [+4]	632 [+7]
2020	2171 [+14]	9806 [+29]	191 [+4]	2054 [+13]	7286 [+25]
2030	4485 [+20]	19557 [+42]	386 [+6]	4104 [+19]	14574 [+36]

Table A174. Cumulative incidence cases avoided in year [per 100,000 of population in 2010] Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [+6]	20 [+13]	0 [+2]	16 [+6]	26 [+11]
2020	26 [+19]	161 [+41]	5 [+6]	182 [+21]	230 [+36]
2030	40 [+27]	326 [+58]	6 [+8]	380 [+29]	436 [+51]
Scenario 2					
2010	4 [+6]	74 [+12]	1 [+2]	65 [+6]	97 [+10]
2020	68 [+19]	616 [+40]	18 [+6]	688 [+20]	897 [+35]
2030	117 [+27]	1276 [+57]	34 [+8]	1340 [+28]	1732 [+50]

Table A175. Prevalence cases in year [per 100,000] for Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1407 [+11]	2454 [+14]	385 [+6]	7051 [+24]	17563 [+37]
2020	1585 [+12]	2907 [+16]	383 [+6]	6826 [+24]	18482 [+40]
2030	1743 [+13]	3217 [+17]	406 [+6]	6983 [+25]	19508 [+42]
Scenario 1					
2010	1408 [+11]	2431 [+14]	390 [+6]	7024 [+24]	17561 [+37]
2020	1578 [+12]	2886 [+16]	386 [+6]	6672 [+24]	18338 [+39]
2030	1742 [+13]	3182 [+17]	408 [+6]	6705 [+25]	19221 [+42]
Scenario 2					
2010	1400 [+11]	2374 [+14]	389 [+6]	6978 [+24]	17480 [+37]
2020	1556 [+11]	2792 [+15]	377 [+6]	6286 [+23]	17835 [+39]
2030	1719 [+13]	3041 [+17]	391 [+6]	6052 [+23]	18381 [+41]

Table A176. Prevalence cases avoided in year [per 100,000] Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [+15]	23 [+20]	-5 [+8]	27 [+34]	2 [+53]
2020	7 [+16]	21 [+22]	-3 [+8]	154 [+33]	144 [+54]
2030	1 [+17]	35 [+23]	-2 [+8]	278 [+33]	287 [+56]
Scenario 2					
2010	7 [+15]	80 [+20]	-4 [+8]	73 [+34]	83 [+53]
2020	29 [+16]	115 [+21]	6 [+8]	540 [+32]	647 [+54]
2030	24 [+17]	176 [+22]	15 [+8]	931 [+32]	1127 [+55]

Spain

Table A177. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	180 [±4]	412 [±6]	203 [±4]	599 [±7]	17 [±1]
2020	2103 [±13]	4296 [±19]	2503 [±14]	6873 [±23]	184 [±4]
2030	4399 [±19]	8737 [±27]	5402 [±21]	14107 [±34]	374 [±6]
Scenario 1					
2010	180 [±4]	414 [±6]	203 [±4]	597 [±7]	16 [±1]
2020	2070 [±13]	4179 [±18]	2338 [±14]	6806 [±23]	184 [±4]
2030	4313 [±19]	8483 [±27]	5031 [±20]	13954 [±34]	370 [±6]
Scenario 2					
2010	180 [±4]	414 [±6]	209 [±4]	598 [±7]	16 [±1]
2020	2004 [±13]	3925 [±18]	1957 [±13]	6573 [±23]	180 [±4]
2030	4171 [±19]	7934 [±26]	4250 [±19]	13493 [±33]	364 [±5]

Table A178. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	0 [±5]	0 [±8]	0 [±6]	2 [±10]	1 [±2]
2020	33 [±18]	117 [±26]	165 [±20]	67 [±33]	0 [±5]
2030	86 [±26]	254 [±37]	371 [±29]	153 [±47]	4 [±8]
Scenario 2					
2010	0 [±5]	-2 [±8]	-6 [±6]	1 [±10]	1 [±2]
2020	99 [±18]	371 [±26]	546 [±19]	300 [±33]	4 [±5]
2030	228 [±26]	803 [±37]	1152 [±28]	614 [±47]	10 [±8]

Table A179. Prevalence cases in year [per 100000] for Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	650 [±7]	585 [±7]	4383 [±19]	14819 [±34]	403 [±6]
2020	830 [±8]	880 [±8]	4389 [±19]	15999 [±36]	428 [±6]
2030	995 [±9]	1030 [±9]	5105 [±21]	17950 [±39]	476 [±6]
Scenario 1					
2010	654 [±7]	587 [±7]	4380 [±19]	14811 [±34]	401 [±6]
2020	814 [±8]	842 [±8]	4256 [±18]	15960 [±36]	428 [±6]
2030	968 [±9]	995 [±9]	4842 [±20]	17906 [±39]	474 [±6]
Scenario 2					
2010	648 [±7]	586 [±7]	4393 [±19]	14795 [±34]	403 [±6]
2020	801 [±8]	791 [±8]	3993 [±18]	15807 [±36]	426 [±6]
2030	947 [±9]	924 [±9]	4366 [±19]	17645 [±38]	469 [±6]

Table A180. Prevalence cases avoided in year [per 100000] Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	0 [±10]	0 [±10]	3 [±26]	8 [±49]	2 [±8]
2020	16 [±11]	38 [±12]	133 [±26]	39 [±51]	0 [±8]
2030	27 [±13]	35 [±13]	263 [±28]	44 [±54]	2 [±9]
Scenario 2					
2010	2 [±10]	-1 [±10]	-10 [±26]	24 [±49]	0 [±8]
2020	29 [±11]	89 [±12]	396 [±26]	192 [±50]	2 [±8]
2030	48 [±12]	106 [±13]	739 [±28]	305 [±53]	7 [±9]

Sweden

Table A181. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	190 [±4]	926 [±9]	15 [±1]	90 [±3]	687 [±7]
2020	2437 [±15]	10894 [±32]	216 [±4]	1190 [±10]	8822 [±28]
2030	5512 [±24]	24901 [±52]	495 [±7]	2862 [±18]	20527 [±47]
Scenario 1					
2010	195 [±4]	926 [±9]	16 [±1]	89 [±3]	682 [±7]
2020	2425 [±15]	10742 [±31]	209 [±4]	1103 [±10]	8500 [±28]
2030	5444 [±24]	24514 [±51]	482 [±7]	2660 [±17]	19779 [±46]
Scenario 2					
2010	188 [±4]	916 [±9]	16 [±1]	91 [±3]	692 [±7]
2020	2352 [±15]	10283 [±31]	195 [±4]	934 [±9]	7934 [±27]
2030	5281 [±24]	23450 [±50]	454 [±7]	2252 [±16]	18423 [±44]

Table A182. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	0 [±12]	0 [±2]	1 [±4]	5 [±10]
2020	12 [±20]	152 [±42]	7 [±6]	87 [±14]	322 [±37]
2030	68 [±30]	387 [±63]	13 [±9]	202 [±21]	748 [±57]
Scenario 2					
2010	2 [±5]	10 [±12]	0 [±2]	0 [±4]	0 [±11]
2020	85 [±20]	611 [±41]	21 [±6]	256 [±13]	888 [±37]
2030	231 [±29]	1451 [±62]	41 [±9]	610 [±20]	2104 [±56]

Table A183. Prevalence cases in year [per 100000] for Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2861 [±15]	2569 [±14]	405 [±6]	1195 [±10]	17095 [±37]
2020	3443 [±18]	3741 [±18]	476 [±7]	1380 [±11]	20889 [±44]
2030	4130 [±21]	4738 [±23]	579 [±8]	1784 [±14]	25845 [±53]
Scenario 1					
2010	2874 [±15]	2571 [±14]	407 [±6]	1203 [±10]	17095 [±37]
2020	3441 [±18]	3700 [±18]	472 [±7]	1331 [±11]	20637 [±43]
2030	4092 [±21]	4658 [±22]	570 [±8]	1682 [±13]	25299 [±52]
Scenario 2					
2010	2847 [±15]	2557 [±14]	407 [±6]	1193 [±10]	17097 [±37]
2020	3381 [±18]	3560 [±18]	460 [±6]	1215 [±11]	20202 [±43]
2030	4045 [±21]	4497 [±22]	553 [±8]	1486 [±13]	24377 [±51]

Table A184. Prevalence cases avoided in year [per 100000] Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±21]	02 [±20]	0 [±8]	0 [±14]	0 [±52]
2020	2 [±23]	41 [±24]	4 [±9]	49 [±15]	252 [±58]
2030	38 [±26]	80 [±27]	9 [±10]	102 [±17]	546 [±64]
Scenario 2					
2010	14 [±21]	12 [±20]	0 [±8]	2 [±14]	0 [±52]
2020	62 [±23]	181 [±24]	16 [±9]	165 [±14]	687 [±57]
2030	85 [±26]	241 [±27]	26 [±10]	298 [±16]	1468 [±63]

Switzerland

Table A185. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Switzerland

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	202 [±4]	542 [±7]	59 [±2]	628 [±7]	22 [±1]
2020	2435 [±14]	6484 [±23]	679 [±7]	7207 [±24]	257 [±5]
2030	5023 [±21]	13941 [±34]	1376 [±11]	14429 [±35]	526 [±7]
Scenario 1					
2010	204 [±4]	541 [±7]	59 [±2]	629 [±7]	22 [±1]
2020	2404 [±14]	6418 [±23]	627 [±7]	6983 [±24]	253 [±5]
2030	4953 [±20]	13745 [±34]	1264 [±10]	13997 [±34]	522 [±7]
Scenario 2					
2010	204 [±4]	544 [±7]	57 [±2]	628 [±7]	21 [±1]
2020	2348 [±14]	6152 [±22]	519 [±6]	6548 [±23]	237 [±4]
2030	4819 [±20]	13183 [±33]	1054 [±9]	13119 [±33]	490 [±6]

Table A186. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Switzerland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±6]	1 [±9]	0 [±3]	-1 [±10]	0 [±2]
2020	31 [±20]	66 [±32]	52 [±10]	224 [±34]	4 [±6]
2030	70 [±28]	196 [±47]	112 [±15]	432 [±48]	4 [±9]
Scenario 2					
2010	-2 [±6]	-2 [±9]	2 [±3]	0 [±10]	1 [±2]
2020	87 [±20]	332 [±32]	160 [±10]	659 [±33]	20 [±6]
2030	204 [±28]	758 [±47]	322 [±14]	1310 [±47]	36 [±9]

Table A187. Prevalence cases in year [per 100000] for Switzerland

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	1560 [±11]	3217 [±16]	1066 [±9]	13580 [±33]	520 [±6]
2020	1998 [±13]	4180 [±18]	1422 [±11]	16507 [±36]	584 [±7]
2030	2273 [±14]	5088 [±21]	1672 [±12]	18714 [±40]	661 [±7]
Scenario 1					
2010	1566 [±11]	3220 [±16]	1064 [±9]	13564 [±33]	520 [±6]
2020	1977 [±13]	4145 [±18]	1373 [±11]	16299 [±36]	580 [±7]
2030	2241 [±14]	5000 [±20]	1578 [±12]	18370 [±39]	658 [±7]
Scenario 2					
2010	1567 [±11]	3209 [±16]	1068 [±9]	13600 [±33]	519 [±6]
2020	1945 [±13]	3975 [±18]	1281 [±10]	15935 [±36]	568 [±7]
2030	2198 [±14]	4771 [±20]	1419 [±11]	17708 [±38]	635 [±7]

Table A188. Prevalence cases avoided in year [per 100000] for Switzerland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-6 [±16]	-3 [±23]	2 [±13]	16 [±47]	0 [±9]
2020	21 [±18]	35 [±26]	49 [±15]	208 [±51]	4 [±10]
2030	32 [±19]	88 [±28]	94 [±16]	344 [±54]	3 [±10]
Scenario 2					
2010	-7 [±16]	8 [±23]	-2 [±13]	-20 [±47]	1 [±9]
2020	53 [±18]	205 [±26]	141 [±15]	572 [±51]	16 [±10]
2030	75 [±19]	317 [±28]	253 [±16]	1006 [±54]	26 [±10]

Tajikistan

Table A189. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	47 [±2]	2137 [±13]	8 [±1]	615 [±7]	2171 [±13]
2020	460 [±6]	12097 [±29]	81 [±2]	5290 [±19]	19237 [±37]
2030	807 [±7]	19104 [±34]	146 [±3]	9953 [±24]	33320 [±44]
Scenario 1					
2010	46 [±2]	2151 [±13]	8 [±1]	621 [±7]	2171 [±13]
2020	456 [±6]	12019 [±29]	81 [±2]	5135 [±19]	19133 [±37]
2030	798 [±7]	18922 [±33]	145 [±3]	9648 [±24]	33078 [±44]
Scenario 2					
2010	43 [±2]	2136 [±13]	8 [±1]	620 [±7]	2174 [±13]
2020	447 [±6]	11732 [±29]	79 [±2]	4721 [±18]	18786 [±36]
2030	783 [±7]	18457 [±33]	144 [±3]	8839 [±23]	32583 [±44]

Table A190. Prevalence cases avoided in year [per 100000] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±6]	1 [±30]	10 [±35]	-12 [±80]	4 [±5]
2020	3 [±6]	32 [±28]	124 [±35]	69 [±83]	3 [±4]
2030	2 [±7]	35 [±28]	201 [±37]	152 [±85]	2 [±4]
Scenario 2					
2010	1 [±6]	1 [±30]	5 [±35]	-19 [±80]	4 [±5]
2020	2 [±6]	96 [±28]	423 [±34]	297 [±83]	2 [±4]
2030	6 [±7]	125 [±28]	770 [±37]	450 [±85]	1 [±4]

Table A191. Prevalence cases in year [per 100000] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	244 [±4]	5726 [±21]	141 [±3]	7630 [±25]	40074 [±57]
2020	257 [±4]	4814 [±18]	112 [±3]	7537 [±23]	43011 [±55]
2030	271 [±4]	4872 [±17]	121 [±3]	8724 [±23]	45533 [±52]
Scenario 1					
2010	241 [±4]	5725 [±21]	137 [±3]	7620 [±25]	40086 [±57]
2020	254 [±4]	4782 [±18]	109 [±3]	7413 [±23]	42942 [±55]
2030	269 [±4]	4837 [±17]	119 [±3]	8523 [±22]	45381 [±52]
Scenario 2					
2010	243 [±4]	5725 [±21]	137 [±3]	7625 [±25]	40093 [±57]
2020	255 [±4]	4718 [±18]	110 [±3]	7114 [±22]	42714 [±55]
2030	265 [±4]	4747 [±17]	120 [±3]	7954 [±22]	45083 [±52]

Table A192. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±3]	-14 [±19]	-6 [±10]	0 [±19]	0 [±1]
2020	4 [±9]	78 [±44]	155 [±29]	104 [±55]	0 [±4]
2030	9 [±11]	182 [±55]	305 [±40]	242 [±73]	1 [±5]
Scenario 2					
2010	4 [±3]	1 [±18]	-5 [±10]	-3 [±19]	0 [±1]
2020	13 [±9]	365 [±44]	569 [±28]	451 [±55]	2 [±4]
2030	24 [±11]	647 [±55]	1114 [±39]	737 [±73]	2 [±5]

Turkey

Table A193. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	38 [±2]	2602 [±14]	12 [±1]	179 [±4]	1353 [±10]
2020	396 [±6]	19989 [±40]	129 [±3]	2042 [±13]	14697 [±35]
2030	719 [±8]	35917 [±54]	237 [±4]	4138 [±18]	28836 [±49]
Scenario 1					
2010	38 [±2]	2582 [±14]	12 [±1]	176 [±4]	1346 [±10]
2020	391 [±6]	19611 [±40]	127 [±3]	1893 [±12]	14343 [±34]
2030	716 [±8]	35202 [±54]	235 [±4]	3836 [±18]	28157 [±48]
Scenario 2					
2010	39 [±2]	2573 [±14]	12 [±1]	178 [±4]	1345 [±10]
2020	379 [±6]	18604 [±39]	119 [±3]	1558 [±11]	13340 [±33]
2030	698 [±8]	33357 [±52]	222 [±4]	3195 [±16]	26218 [±46]

Table A194. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±2]	20 [±20]	0 [±1]	3 [±5]	7 [±15]
2020	5 [±8]	378 [±56]	2 [±5]	149 [±18]	354 [±48]
2030	3 [±11]	715 [±75]	2 [±6]	302 [±25]	679 [±68]
Scenario 2					
2010	-1 [±2]	29 [±20]	0 [±1]	1 [±5]	8 [±15]
2020	17 [±8]	1385 [±56]	10 [±4]	484 [±17]	1357 [±47]
2030	21 [±11]	2560 [±74]	15 [±6]	943 [±24]	2618 [±66]

Table A195. Prevalence cases in year [per 100000] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	221 [±4]	3632 [±17]	212 [±4]	3060 [±16]	28282 [±48]
2020	210 [±4]	3422 [±17]	172 [±4]	1664 [±12]	26775 [±47]
2030	209 [±4]	3473 [±17]	167 [±4]	1772 [±12]	27525 [±48]
Scenario 1					
2010	218 [±4]	3608 [±17]	211 [±4]	3063 [±16]	28250 [±48]
2020	211 [±4]	3372 [±17]	172 [±4]	1604 [±11]	26594 [±46]
2030	211 [±4]	3408 [±17]	171 [±4]	1681 [±12]	27252 [±47]
Scenario 2					
2010	220 [±4]	3592 [±17]	213 [±4]	3078 [±16]	28255 [±48]
2020	210 [±4]	3227 [±16]	169 [±4]	1457 [±11]	26139 [±46]
2030	210 [±4]	3261 [±16]	165 [±4]	1498 [±11]	26409 [±46]

Table A196. Prevalence cases avoided in year [per 100000] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±6]	24 [±24]	1 [±6]	-3 [±22]	32 [±67]
2020	-1 [±6]	50 [±23]	0 [±5]	60 [±16]	181 [±65]
2030	-2 [±6]	65 [±23]	-4 [±5]	91 [±17]	273 [±66]
Scenario 2					
2010	1 [±6]	40 [±24]	-1 [±6]	-18 [±22]	27 [±67]
2020	0 [±6]	195 [±23]	3 [±5]	207 [±16]	636 [±65]
2030	-1 [±6]	212 [±23]	2 [±5]	274 [±16]	1116 [±66]

Turkmenistan

Table A197. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±3]	-2 [±16]	0 [±1]	4 [±6]	-6 [±9]
2020	8 [±11]	160 [±45]	4 [±4]	163 [±20]	127 [±29]
2030	16 [±15]	301 [±60]	4 [±6]	343 [±28]	283 [±41]
Scenario 2					
2010	-2 [±3]	1 [±16]	0 [±1]	1 [±6]	-6 [±9]
2020	16 [±11]	457 [±45]	9 [±4]	490 [±20]	397 [±29]
2030	47 [±15]	864 [±60]	14 [±6]	1025 [±27]	897 [±41]

Table A198. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	66 [±2]	1622 [±11]	10 [±1]	229 [±4]	490 [±6]
2020	726 [±7]	12865 [±31]	111 [±3]	2626 [±14]	5498 [±20]
2030	1387 [±10]	22975 [±40]	215 [±4]	5203 [±19]	10810 [±28]
Scenario 1					
2010	66 [±2]	1624 [±11]	10 [±1]	225 [±4]	496 [±6]
2020	718 [±7]	12705 [±31]	107 [±3]	2463 [±14]	5371 [±20]
2030	1371 [±10]	22674 [±40]	211 [±4]	4860 [±19]	10527 [±27]
Scenario 2					
2010	68 [±2]	1621 [±11]	10 [±1]	228 [±4]	496 [±6]
2020	710 [±7]	12408 [±31]	102 [±3]	2136 [±13]	5101 [±20]
2030	1340 [±10]	22111 [±40]	201 [±4]	4178 [±17]	9913 [±26]

Table A199. Prevalence cases in year [per 100000] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	252 [±4]	4424 [±19]	174 [±4]	3807 [±17]	11857 [±31]
2020	328 [±5]	4863 [±19]	164 [±4]	4333 [±18]	13101 [±31]
2030	357 [±5]	5309 [±19]	182 [±4]	5020 [±19]	14446 [±32]
Scenario 1					
2010	252 [±4]	4419 [±19]	170 [±4]	3808 [±17]	11868 [±31]
2020	324 [±5]	4825 [±19]	161 [±3]	4210 [±18]	13005 [±31]
2030	349 [±5]	5239 [±19]	180 [±4]	4785 [±18]	14236 [±32]
Scenario 2					
2010	254 [±5]	4414 [±19]	176 [±4]	3808 [±17]	11861 [±31]
2020	323 [±5]	4751 [±19]	159 [±3]	3948 [±17]	12770 [±31]
2030	344 [±5]	5131 [±19]	175 [±4]	4313 [±17]	13747 [±31]

Table A200. Prevalence cases avoided in year [per 100000] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	5 [±27]	4 [±5]	-1 [±25]	-11 [±44]
2020	4 [±7]	38 [±28]	3 [±5]	123 [±26]	96 [±46]
2030	8 [±8]	70 [±29]	2 [±5]	235 [±28]	210 [±48]
Scenario 2					
2010	-2 [±6]	10 [±27]	-2 [±5]	-1 [±25]	-4 [±44]
2020	5 [±7]	112 [±28]	5 [±5]	385 [±26]	331 [±45]
2030	13 [±7]	178 [±29]	7 [±5]	707 [±27]	699 [±47]

Ukraine

Table A201. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	147 [±3]	1126 [±9]	529 [±7]	244 [±4]	824 [±8]
2020	1783 [±12]	12672 [±33]	6748 [±24]	2789 [±16]	8735 [±27]
2030	3899 [±20]	27074 [±52]	15184 [±39]	5838 [±24]	17390 [±42]
Scenario 1					
2010	149 [±3]	1127 [±9]	537 [±7]	237 [±4]	814 [±8]
2020	1773 [±12]	12548 [±33]	6596 [±24]	2582 [±15]	8335 [±27]
2030	3850 [±20]	26792 [±51]	14823 [±38]	5427 [±23]	16636 [±41]
Scenario 2					
2010	145 [±3]	1125 [±9]	535 [±7]	245 [±4]	819 [±8]
2020	1700 [±12]	12299 [±33]	6199 [±23]	2172 [±14]	7571 [±26]
2030	3706 [±19]	26166 [±51]	13941 [±37]	4597 [±21]	15195 [±39]

Table A202. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±5]	-1 [±13]	7 [±6]	10 [±11]	-8 [±9]
2020	10 [±17]	124 [±45]	207 [±21]	400 [±37]	152 [±33]
2030	49 [±25]	282 [±66]	411 [±30]	754 [±52]	361 [±49]
Scenario 2					
2010	2 [±5]	1 [±13]	-1 [±6]	5 [±11]	-6 [±9]
2020	83 [±17]	373 [±45]	617 [±20]	1164 [±36]	549 [±32]
2030	193 [±25]	908 [±65]	1241 [±29]	2195 [±51]	1243 [±48]

Table A203. Prevalence cases in year [per 100000] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	736 [±8]	4382 [±19]	16571 [±36]	5822 [±22]	29854 [±49]
2020	967 [±9]	5757 [±22]	18053 [±40]	6619 [±24]	32922 [±53]
2030	1106 [±10]	6780 [±26]	20729 [±45]	7355 [±27]	35361 [±59]
Scenario 1					
2010	740 [±8]	4379 [±19]	16573 [±36]	5807 [±22]	29859 [±49]
2020	967 [±9]	5710 [±22]	17942 [±39]	6428 [±24]	32585 [±53]
2030	1093 [±10]	6682 [±26]	20495 [±45]	7045 [±26]	34786 [±59]
Scenario 2					
2010	742 [±8]	4383 [±19]	16560 [±36]	5825 [±22]	29822 [±49]
2020	938 [±9]	5598 [±22]	17591 [±39]	6096 [±23]	31894 [±52]
2030	1063 [±10]	6479 [±25]	19842 [±44]	6457 [±25]	33643 [±58]

Table A204. Prevalence cases avoided in year [per 100000] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±11]	3 [±26]	15 [±31]	-5 [±69]	-2 [±51]
2020	0 [±12]	47 [±30]	191 [±32]	337 [±72]	111 [±54]
2030	13 [±13]	98 [±33]	310 [±34]	575 [±75]	234 [±57]
Scenario 2					
2010	-6 [±11]	-1 [±26]	-3 [±31]	32 [±69]	11 [±51]
2020	29 [±12]	159 [±30]	523 [±32]	1028 [±72]	462 [±53]
2030	43 [±13]	301 [±33]	898 [±33]	1718 [±74]	887 [±57]

United Kingdom

Table A205. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] UK

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	223 [±4]	519 [±6]	17 [±1]	168 [±4]	247 [±4]
2020	2577 [±14]	5938 [±22]	187 [±4]	1923 [±12]	2794 [±15]
2030	5164 [±20]	12164 [±31]	370 [±5]	3919 [±17]	5539 [±21]
Scenario 1					
2010	226 [±4]	521 [±6]	17 [±1]	166 [±4]	247 [±4]
2020	2541 [±14]	5869 [±21]	182 [±4]	1802 [±12]	2717 [±15]
2030	5092 [±20]	11960 [±31]	360 [±5]	3656 [±17]	5354 [±20]
Scenario 2					
2010	229 [±4]	526 [±6]	17 [±1]	165 [±4]	247 [±4]
2020	2458 [±14]	5589 [±21]	172 [±4]	1474 [±11]	2481 [±14]
2030	4925 [±20]	11348 [±30]	339 [±5]	3021 [±15]	4888 [±19]

Table A206. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] United Kingdom

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	0 [±9]	0 [±2]	2 [±5]	0 [±6]
2020	36 [±20]	69 [±31]	5 [±5]	121 [±17]	77 [±21]
2030	72 [±29]	204 [±44]	10 [±8]	263 [±25]	185 [±30]
Scenario 2					
2010	0 [±6]	0 [±9]	0 [±2]	3 [±5]	0 [±6]
2020	119 [±20]	349 [±30]	15 [±5]	449 [±16]	313 [±21]
2030	239 [±28]	816 [±43]	31 [±8]	898 [±24]	651 [±29]

Table A207. Prevalence cases in year [per 100000] UK

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1202 [±10]	2657 [±15]	381 [±6]	2747 [±15]	5190 [±20]
2020	1478 [±11]	3229 [±16]	405 [±6]	3372 [±16]	5910 [±21]
2030	1631 [±11]	3730 [±17]	434 [±6]	3850 [±17]	6422 [±22]
Scenario 1					
2010	1203 [±10]	2656 [±15]	382 [±6]	2754 [±15]	5204 [±20]
2020	1459 [±11]	3198 [±16]	402 [±6]	3275 [±16]	5867 [±21]
2030	1621 [±11]	3652 [±17]	431 [±6]	3656 [±17]	6296 [±22]
Scenario 2					
2010	1221 [±10]	2660 [±15]	386 [±6]	2752 [±15]	5194 [±20]
2020	1431 [±11]	3047 [±15]	396 [±6]	2999 [±15]	5663 [±21]
2030	1583 [±11]	3457 [±16]	419 [±6]	3220 [±16]	5983 [±22]

Table A208. Prevalence cases avoided in year [per 100000] United Kingdom

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±14]	1 [±21]	0 [±8]	0 [±21]	0 [±29]
2020	19 [±15]	31 [±23]	3 [±8]	97 [±23]	43 [±31]
2030	10 [±16]	78 [±24]	3 [±8]	194 [±25]	126 [±32]
Scenario 2					
2010	0 [±14]	0 [±21]	0 [±8]	0 [±21]	0 [±29]
2020	47 [±15]	182 [±22]	9 [±8]	373 [±23]	247 [±30]
2030	48 [±16]	273 [±24]	15 [±8]	630 [±24]	439 [±32]

Uzbekistan

Table A209. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	33 [±2]	1302 [±10]	8 [±1]	68 [±2]	239 [±4]
2020	345 [±5]	10832 [±28]	91 [±3]	811 [±8]	2664 [±14]
2030	665 [±7]	19682 [±37]	182 [±4]	1742 [±11]	5435 [±19]
Scenario 1					
2010	33 [±2]	1308 [±10]	8 [±1]	68 [±2]	236 [±4]
2020	342 [±5]	10721 [±28]	88 [±3]	735 [±7]	2533 [±14]
2030	658 [±7]	19405 [±36]	175 [±3]	1568 [±10]	5172 [±19]
Scenario 2					
2010	31 [±2]	1300 [±10]	8 [±1]	68 [±2]	239 [±4]
2020	327 [±5]	10413 [±28]	83 [±2]	616 [±7]	2399 [±13]
2030	634 [±7]	18838 [±36]	166 [±3]	1295 [±9]	4847 [±18]

Table A210. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Hypertension	Diabetes
Scenario 1					
2010	0 [±2]	-6 [±14]	0 [±1]	3 [±6]	0 [±3]
2020	3 [±7]	111 [±42]	3 [±4]	131 [±20]	76 [±11]
2030	7 [±10]	277 [±56]	7 [±5]	263 [±29]	174 [±16]
Scenario 2					
2010	2 [±2]	2 [±14]	0 [±1]	0 [±6]	0 [±3]
2020	18 [±7]	419 [±41]	8 [±4]	265 [±20]	195 [±11]
2030	31 [±10]	844 [±56]	16 [±5]	588 [±29]	447 [±16]

Table A211. Prevalence cases in year [per 100000] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	196 [±4]	3374 [±16]	139 [±3]	1228 [±10]	5113 [±20]
2020	218 [±4]	4097 [±17]	136 [±3]	1390 [±10]	5665 [±20]
2030	242 [±4]	4654 [±18]	156 [±3]	1733 [±11]	6565 [±21]
Scenario 1					
2010	197 [±4]	3389 [±16]	138 [±3]	1223 [±10]	5100 [±20]
2020	221 [±4]	4051 [±17]	133 [±3]	1321 [±10]	5536 [±20]
2030	241 [±4]	4574 [±18]	153 [±3]	1604 [±10]	6346 [±21]
Scenario 2					
2010	196 [±4]	3384 [±16]	140 [±3]	1228 [±10]	5094 [±20]
2020	215 [±4]	3951 [±17]	131 [±3]	1226 [±10]	5427 [±20]
2030	235 [±4]	4443 [±17]	147 [±3]	1398 [±10]	6109 [±20]

Table A212. Prevalence cases avoided in year [per 100000] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	-15 [±23]	1 [±5]	5 [±14]	13 [±29]
2020	-3 [±6]	46 [±26]	3 [±5]	69 [±15]	129 [±30]
2030	1 [±6]	80 [±27]	3 [±5]	129 [±16]	219 [±32]
Scenario 2					
2010	0 [±6]	-10 [±23]	-1 [±5]	0 [±14]	19 [±29]
2020	3 [±6]	146 [±25]	5 [±5]	164 [±14]	238 [±30]
2030	7 [±6]	211 [±27]	9 [±5]	335 [±16]	456 [±32]

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The future burden of obesity-related diseases in the 53 WHO European Region countries and the impact of effective interventions: A modelling study

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10 2 **The future burden of obesity-related diseases in the 53 WHO**
11 3 **European-Region countries and the impact of effective interventions:**
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48 25 Running head: obesity and related diseases in 53 WHO/Europe countries

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51 27 Disclaimer

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Abstract

Objective: Non-communicable diseases (NCDs) are the biggest cause of death in Europe putting unsustainable burden on already struggling health systems. Increases in obesity are a major cause of NCDs. This paper projects the future burden of coronary heart disease (CHD), stroke, type 2 diabetes and seven cancers to 2030 in 53 WHO European Region countries based on current and past body mass index (BMI) trends. It also tests the impact of obesity interventions upon the future disease burden.

Setting and participants: Secondary data analysis of country-specific epidemiological data using a microsimulation modelling process.

Interventions: The effect of three hypothetical scenarios on the future burden of disease in 2030 was tested: baseline scenario, BMI trends go unchecked; intervention 1, population BMI decreases by 1%; intervention 2, BMI decreases by 5%.

Primary and secondary outcome measures: Quantifying the future burden major NCDs and the impact of interventions on this future disease burden.

Results: By 2030 in the whole of the European region the prevalence of diabetes, CHD & stroke and cancers was projected to reach an average of 3990, 4672 and 2046 cases per 100,000 respectively. The highest prevalence of diabetes was predicted in Slovakia (10,870), CHD & stroke – in Greece (11,292) and cancers – in Finland (5615 cases per 100,000). A 5% fall in population BMI was projected to significantly reduce cumulative incidence of diseases. The largest reduction in diabetes and CHD & stroke was observed in Slovakia (3054 and 3369 cases per 100,000 respectively) and in cancers was predicted in Germany (331 per 100,000).

Conclusions: Modelling future disease trends is important for policy makers in realistically allocating resources and implementing policies that prevent NCDs. Future research will allow real policy interventions to be tested, however better surveillance data on NCDs and their risk factors are essential for research and policy.

Strengths and limitations

Strengths

- This study projects the future burden of obesity-related diseases using sophisticated microsimulation modelling software

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- 1 - It quantifies the impact on major chronic diseases (CHD, stroke, Type 2 diabetes, cancers)
2 given a 1 or 5% reduction in population BMI
 - 3 - It highlights the need for good quality surveillance data for diseases and their risk factors so
4 that accurate estimates can be made
5

6 *Limitations*

- 7 - The model does not take account of future changes in circumstances such as fluctuations in
8 food prices or new medical technologies.
- 9 - The model is only as good as the data that are entered into it, with good quality data more
10 accurate predictions can be made
11

Background

Noncommunicable diseases (NCD) such as cardiovascular and respiratory disease are the highest cause of death globally (1). In 2008 the World Health Organization (WHO) estimated that mortality from heart disease, stroke, chronic lung disease, cancer and diabetes totalled 36.1 million (2). The growing burden of NCDs warranted urgent political action. In September 2011 during the UN High Level Meeting on NCDs global leaders made a political declaration to provide a coordinated response for preventing and controlling NCDs (3). As a result nine global voluntary targets aiming at combatting global mortality from the four main NCDs, accelerating action against the leading risk factors for NCDs and strengthening national health system responses were set out (4).

In Europe NCDs are high on the European parliament's agenda as they account for 86% of deaths and 77% of disease burden (2). This burden is unequally distributed both within and between the European countries: individuals from the most disadvantaged groups often have poorer access to health care and fewer resources such as education, employment, and housing – all of which reduce the opportunities for healthy lifestyle choices. The new European health policy framework, Health 2020, highlights these inequalities and offers a roadmap for the policy makers and public health professionals (5). The WHO European Region is determined to take forward the UN political declaration to reduce avoidable deaths from NCDs turning the declaration into action and the WHO is working to provide public health tools that help all countries across the broader European region to implement more effective programmes based on an extensive reflection process (5).

The causes of NCDs may be genetic, behavioural and environmental (6). Rapid changes in health related behaviours in recent decades have seen an upsurge in NCD prevalence (7) through modifiable lifestyle factors such as diet and exercise. Market forces driving down costs of high calorie fatty, salty and sugary foods have made them cheap and readily available resulting in increased consumption and expanding waistlines. In addition, advances in technology such as motorised transport, labour mechanisation and television have promoted sedentary lifestyles and reduced physical activity (8). Interventions that are able to tackle important risk factors such as obesity are likely to have a positive impact upon NCD prevalence and premature mortality caused by NCDs.

Projections from the UK show that behavioural interventions can be effective in reducing future incidence of diseases such as coronary heart disease, stroke, type 2 diabetes and some cancers. For example, reducing body mass index (BMI) by 1% across the population (equivalent to 1kg weight loss) was estimated to substantially reduce health burden, saving 179,000-202,000 incident cases of

1 type 2 diabetes, 122,000 cases of cardiovascular diseases and 32,000-33,000 incident cases of cancer
2 over 20 years (9). Data from Russia show that obesity rates are predicted to increase to as high as
3 76% in males by 2050, and rates of CHD and stroke will reach 12,723 cases per 100,000 of the
4 population (10). Similar projections have been implemented in other European countries (11),
5 though to our knowledge estimates of the future burden of obesity-related diseases in all European
6 countries have not been carried out.

7 There is, therefore a new threat menacing recent progress in NCD mortality and morbidity which
8 needs to be quantified and the current study ignites this discussion within the context of health
9 impact models. This study also hypothesises that while reduction in the burden of NCDs has been
10 sustained, obesity is actually threatening those gains. As such this study updates and extends this
11 work by using a microsimulation model to project NCD trends to 2030 in all 53 Euro-region countries
12 and assesses the impact of two hypothetical interventions, intervention 1: a 1% reduction in
13 population BMI and intervention 2: a 5% reduction in population BMI, upon the future incidence of
14 CHD and stroke, type 2 diabetes and obesity-related cancers.

16 **Methods**

18 *BMI data extraction*

20 Online databases (Global database on Body Mass Index (12), EU members' statistical office
21 databases, Pubmed (13) and Science Direct (14)) were searched for published data on age and sex-
22 specific country obesity prevalence data presented according WHO definitions of normal weight,
23 overweight and obesity (12). In addition, article references were probed and individual researchers
24 and public health officers were contacted for further data. A table of BMI references is presented in
25 Appendix 1 and methods of BMI data manipulation are explained in Appendix 2a-b of the
26 supplementary information.

28 *Disease data sources*

30 A second review of statistical databases and literature was carried out to locate country-specific
31 incidence, prevalence, survival and mortality data for CHD, stroke and obesity-related cancers

1 (colorectal, pancreas, breast, kidney, liver, corpus uteri and oesophageal) as well as incidence and/or prevalence data of type 2 diabetes.

Where prevalence, but not incidence, data were available by age and sex the prevalence was converted to incidence using equations devised for DISMOD II software (15). Briefly, incidence is calculated from prevalence using a Downhill Simplex Method (16), where the algorithm determines the incidence iteratively using a best fit to the known prevalence.

Where neither incidence nor prevalence data were available data from a proxy country were used. CHD incidence was often rare, so UK, Georgia, Spain, Russia, Uzbekistan incidence data were used as proxies for countries in a similar geographical location or countries which had comparable average prevalence rates. For example, for CHD data Russian data were used as a proxy for Belarus; and Uzbekistan data were used for Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan. Only Belarus, Denmark, Finland, Ireland, Norway, Russian Federation and the UK had full sets of disease data. Furthermore, many countries required a proxy for survival data. Greater detail of which countries were used as proxies is presented in Appendix 3. For fatal diseases the ratio of the target-to-proxy countries' mortality rates was used to scale the proxy country's incidence rates. For type 2 diabetes proxy country data were adjusted for the different population BMI-distributions. For example, if country x had diabetes data and these were used a proxy for country y where no data exist, then country y's BMI distribution would determine the future burden of type 2 diabetes via the relative risk.

For survival data, the probability of survival, p , for a number of years, T , after acquiring a fatal disease was modelled in one of two ways depending on the disease. Either as a simple exponential distribution $p=e^{-RT}$, or as an exponential distribution allowing for different probability, p_1 , of survival in the first year, $p=p_1e^{-R(T-1)}$. Stroke used the latter model; other fatal diseases the former. Disease survival statistics consist of the rate R or the rate R together with the first year survival probability p_1 . These statistics can be further classified by age group and gender. The rate R was usually inferred from quoted 5-year survival statistics.

The relative risks of contracting each disease according to pre-obesity (BMI 25-29.9 kg/m²) and obesity (BMI 30≥ kg/m²) relative to normal weight (BMI 18.5-24.9 kg/m²) with age and sex as covariates were taken from the International Association for the Study of Obesity (17). A table of disease references for each country is presented in Appendix 3.

Statistical analysis

1 Detailed statistical analysis is described in Appendix 4, Foresight: Tackling Obesities (18) and Wang
2 and colleagues (9). Briefly, a dual-module modelling process was carried out: module one fits cross-
3 sectional BMI data from each country using a non-linear multivariate, categorical regression model.
4 Module two creates virtual country cohorts of 5,000,000 individuals using a microsimulation method
5 to produce longitudinal projections to 2030 based on module one BMI distributions.
6 Microsimulation is a computer modelling technique that works at the level of the individual; it
7 generates individual life-histories of a specified population and this population reflects the age
8 profile, birth, death and health statistics to make future projections. A BMI value is probabilistically
9 assigned as a function of age, sex and calendar year and an individuals' BMI percentile in the same
10 age cohort assumed to stay the same over time. Population size, births and deaths were also
11 simulated in a large number of individuals as they age using data from the United Nations population
12 statistics (19). Population pyramids are presented in Appendix 5. Within the simulation, individuals
13 are at greater risk of getting a particular disease each year if he or she did not have the disease at
14 the beginning of the year. Individuals can continue living with the disease or die from it if it is fatal.
15 The software for this program was written in C++ (20).

16 To estimate the disease burden associated with the trends in overweight and obesity, as well as the
17 effect of possible interventions, future increases in obesity-related diseases were projected from
18 2010 to 2030, using three different trend interventions: baseline scenario: BMI trends go unchecked;
19 intervention 1: mean population BMI decreases by 1% and intervention 2: mean population BMI
20 decreases by 5%. The cumulative incidence cases avoided for the whole of Europe was analysed by
21 summing the weighted average of incidence for each country.

22 Results

23
24 Only 36 countries had three or more years of BMI data. Less than or equal to two points of BMI data
25 were available for the remaining 17 countries (Albania, Andorra, Belarus, Bosnia, Croatia, Cyprus,
26 Georgia, Hungary, Macedonia, Monaco, Montenegro, Romania, San Marino, Serbia, Slovenia,
27 Tajikistan and Turkmenistan) so results in this instance are interpreted with caution.

28 Alongside obesity, obesity-related diseases are projected to increase in almost all countries. Figure 1
29 presents the average projected prevalence rates for Europe (weighted for total population) by
30 intervention. Relative to the baseline scenario (no intervention to reduce population BMI) a 1%
31 reduction in BMI would result in an average of 3990 and 3807 type 2 diabetes prevalence cases per
32 100,000 of the population in Europe respectively. This is a prevalence gain of 183 cases per 100,000,
33 equating to a 4.6% reduction in prevalence. A 5% reduction in population BMI would result in an

1 average of 3411 cases of type 2 diabetes by 2030 per 100,000 of the population in 2010. This is a
2 reduction in prevalence of 579 cases per 100,000, equating to a 14.5% reduction across Europe.

3 Figure 2 shows the projected prevalence to 2030 of each disease by country per 100,000 of the
4 population in 2010. There was a wide variability between countries. The highest projected
5 prevalence of cancers was observed in Finland with 5615 cases per 100,000 of the population in
6 2010. The highest projected prevalence of CHD and stroke was observed in Greece with 11,292 cases
7 and the highest projected prevalence of type 2 diabetes was in Slovakia with 10,870 cases per
8 100,000 of the population in 2010.

9 Figure 3 presents the European average cumulative incidence gains by 2030 for each disease given a
10 1% or 5% reduction in population BMI relative to the baseline scenario. As expected, higher
11 reductions of population BMI would result in a number of obesity-related disease cases being
12 avoided by 2030. A 1% reduction in BMI would result in an average reduction of 365 cases of CHD
13 and stroke per 100,000 of the population by 2030. A 5% reduction in population BMI would result
14 in the avoidance of 1317 cumulative incidence cases of CHD and stroke per 100,000 of the
15 population.

16 Figure 4 presents cumulative incidence cases avoided in each of the 53 WHO European region
17 countries if population BMI is reduced by 5%. The highest reduction in CHD and stroke and type 2
18 diabetes was predicted in Slovakia with 3054 and 3369 cumulative incidence cases per 100,000
19 population avoided by 2030 respectively. The highest reduction in cumulative incidence of obesity-
20 related cancers was projected in Germany with 331 cases per 100,000 avoided by 2030.

21 Data tables for each country displaying cumulative incidence cases, cumulative incidence cases
22 avoided, prevalence cases and prevalence cases avoided per 100,000 of the population are
23 presented in Appendix 6.

24

25 Conclusions

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27 This study used a microsimulation model to test the impact of effective interventions that reduce
28 population BMI upon the future burden of disease. With only a few exceptions, obesity rates across
29 the 53 countries were projected to increase by 2030. This is worrying given the extent of the related
30 disease burden associated with obesity. There appeared to be very little pattern to the projected
31 disease trends regionally across Europe.

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4 1 Because of increasing obesity trends our findings suggest that in 20 years an increasing number of
5 2 people will be living with an obesity-related chronic disease in almost every county in Europe. Birth
6 3 rates are low across Europe with most total fertility rates (TFR) below 2. This means that the
7 4 population is ageing with fewer young people. Only Azerbaijan (2.12), Israel (2.62), Tajikistan (3.13)
8 5 and Uzbekistan (2.19) have TFRs above 2. Projecting further we may observe a dip in prevalence
9 6 rates as those with the disease die while there are fewer younger people to contract the disease.
10 7 Differences in the population profiles across countries may therefore result in different estimates
11 8 even if current disease incidence is comparable. Population profiles for each country are illustrated
12 9 in Appendix 5 of the supplementary information.

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19 10 Obesity-related cancers are rare and have relatively low rates compared with the other diseases.
20 11 However, rates are projected to increase. Recent trends in cancer survival across Europe between
21 12 2000 and 2004 reported that the survival of breast cancer was lower in Eastern Europe (Poland,
22 13 Estonia, and Slovenia) than elsewhere in Europe (21). Screening and medical advances and varied
23 14 access to effective treatment are likely to account for differences between Eastern and Western
24 15 regions in Europe.

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30 16 Obesity is closely linked with insulin resistance and recent years have seen an epidemic of type 2
31 17 diabetes evolve alongside rapid increases in obesity. In the UK alone, a continued increase in obesity
32 18 is projected to add 6-8.5 million incidence cases of type 2 diabetes by 2030, at a substantial cost to
33 19 the UK health system (9). Rates of CHD and stroke too were projected to increase across most
34 20 countries. Highest prevalence rates were seen in Greece (11,292 per 100,000 population) and the
35 21 lowest in Spain (1030 per 100,000 population). However, since very little CHD data were available,
36 22 UK data was often used as a proxy, possibly underestimating the rates of CHD in Europe. Where
37 23 data were available (e.g. Ireland, Finland) much higher rates were predicted suggesting that rates
38 24 may be underestimated when using UK data and interpretation of proxy data should be made with
39 25 caution. Data for stroke incidence was mostly taken from estimates by Truelson and colleagues (22).
40 26 These data were compared with Estonia from the 2007 Tartu stroke registry (23) and appear to be
41 27 slightly inflated. Similarly, rates were higher in the Truelson estimates compared with Polish data
42 28 from 2005-2006 so rates of stroke incidence maybe slightly overestimated.

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51 29 Quantification of the burden of NCDs is important both to patients and public health professionals
52 30 because of the long-term consequences to patients' functioning and demand for health care (24).
53 31 However, quantification via microsimulation is dependent upon good quality surveillance data. The
54 32 present study highlights the lack of up-to-date surveillance data – especially annual measured BMI
55 33 from the same survey and disease incidence data. These data are necessary if national policies to

1 control NCDs are to be appraised objectively. For some countries no satisfactory BMI data were
2 available so proxy country data were used (in the case of Member States with very small
3 populations) or extrapolated from mean data (in the case of other countries). Some of the trends
4 shown by the analysis have large confidence intervals due to the small number of data points used
5 as well as the small sample sizes of some of the studies, and therefore the observed trends can only
6 be indicative. Ideally the data should be measured, but for most countries the only studies available
7 were the ones in which anthropometry had been self-reported. This weakens the analysis,
8 particularly if used in combination with measured data, because people tend to underreport their
9 weight in interviews or surveys (25).

10 Relative risk data may also be limited in the extent to which they estimate the true impact of BMI on
11 disease. Relative risks were taken from the International Association for the Study of Obesity (16) as
12 these were deemed the best available at the time of development of the country models. However,
13 there are limitations to these risks due to the lack of suitable meta-analyses used to calculate them. .
14 They are also based on both measured and self-reported data and do not account for ethnic
15 differences in body composition since they are based on largely white populations. In the present
16 study we included the same relative risk for each Member State; however given the paucity of
17 epidemiological data on both BMI and disease within many of the countries of interest it is unknown
18 whether this assumption is valid.

19 Increased surveillance and monitoring of NCDs is one of the six key objectives of the WHO 2008-
20 2013 Global strategy for the Prevention and Control of Non-communicable Diseases (26). This
21 strategy aims to target governments in making policies that control and abate the increasing
22 prevalence of NCDs across Europe and our results provide further evidence for raising the priority of
23 NCD prevention. In particular, this study promotes the need for interventions that are effective in
24 reducing major NCD risk factors (objective 3 of the strategy). In addition to this, in early 2013 the
25 WHO formed a global monitoring framework which aims to track the progress of prevention of
26 major non-communicable diseases and their key risk factors and consists of nine global targets and
27 25 indicators adopted by the WHO Member States during the 66th World Health Assembly in May
28 2013.

29 The microsimulation models are easily adaptable to include new data when it becomes available
30 from such strategies. For example, we were not able to include data on children because of the
31 limited amount of standardised data but with initiatives such as the WHO Childhood Obesity
32 Surveillance Initiative (27) assessment of future childhood obesity trends will be possible.

1 This study tested hypothetical, and largely aspirational scenarios. However, it serves to demonstrate
2 the value of modelling to quantify the estimated future health burden of risk factors. If data are
3 available the model can test the long term effectiveness of real policy interventions and future work
4 aims to do this (28).

6 A key assumption of the model is that people do not reverse in the BMI categories. At a population
7 level this generally reflects reality, where weight loss is often only temporary. However this
8 assumption does not take into account future changes in circumstances, such as fluctuations in food
9 prices. It relies on our best estimate based on previous trends. That said, this approach allows for
10 future trends to be forecast so that policy makers can plan interventions and allocate resources
11 appropriately.

12 It is clear that tackling NCDs is a major challenge across Europe placing unsustainable burden on
13 struggling health systems. This study provides a picture of the future with projections, and observes
14 a worsening situation with increasing incidence of obesity-related disease. As a result, these findings
15 call for governments to plan ahead and initiate change that effectively reduces key risk factors like
16 obesity through preventative measures such as food tax, industry pledges and reduced junk food
17 marketing. . Primary prevention is crucial if increasing trends are to be averted (29).

19 **Panel: Research in context**

21 Noncommunicable diseases (NCD) are the biggest cause of death in Europe. Health impact models
22 are a useful and important policy tool enabling measurement of the future burden of NCDs. Obesity
23 is a major modifiable risk factor for NCDs, which makes it necessary to quantify this threat. The
24 current study explored the future impact of changing trends in BMI on the future burden of NCDs to
25 2030. Effective interventions that successfully reduce population BMI by 1% or 5% would have a
26 significant impact upon obesity-related diseases such as cardiovascular disease, type 2 diabetes and
27 some cancers.

29 Microsimulation modelling should be utilised by policy makers so they can plan for the future
30 provision of health care resources and instigate and maintain interventions that prevent the onset of
31 debilitating NCDs at both an individual and national level.

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1 **Author contribution**

2 LW and DD carried out the acquisition, analysis and interpretation of data for the work in this study
3 and drafted the manuscript. TM, JB, KM, GG contributed to the conception and design of this study.
4 JB, GG, TM, MB, KM revised the document for important intellectual content.
5 All authors edited and approved the final version of this manuscript and agree to be accountable for
6 all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of
7 the work are appropriately investigated and resolved.

8 **Competing interests**

9 All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf
10 and declare: no support from any organisation for the submitted work; no financial relationships
11 with any organisations that might have an interest in the submitted work in the previous three
12 years; no other relationships or activities that could appear to have influenced the submitted work.

13 **Data sharing**

14 Data used in these analyses are from published sources and can be accessed upon request
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16 **Transparency declaration**

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Figure legends

Figure 1: Total projected prevalence by 2030 per 100,000 of the population for 53 Euro region countries

Figure 2: Projected prevalence of diabetes, CHD & Stroke, cancers per 100,000 of the population by 2030 by country

Figure 3: Cumulative incidence gains by 2030 by disease given a 1% or 5% reduction in population BMI relative to the baseline scenario.

Figure 4: Projected cumulative incidence cases avoided by 2030 per 100,000 of the population by country given a 5% reduction in population BMI

Appendices

Appendix 1: A table of BMI references

Appendix 2: BMI manipulation methods

Appendix 3: Disease references

Appendix 4: Detailed statistical methods

Appendix 5: Population pyramids

Appendix 6: Data tables presenting prevalence rate, prevalence gains, cumulative incidence cases and incidence cases avoided by 2030 for each country.

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2 **The future burden of obesity-related diseases in the 53 WHO**

3 **European-Region countries and the impact of effective interventions:**

4 **A modelling study.**

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24 Key words: obesity, Europe, modelling, micro-simulation

25 Running head: obesity and related diseases in 53 WHO/Europe countries

27 Disclaimer

28 Gauden Galea and João Breda are staff members of the World Health Organization. The authors alone are
29 responsible for the content and writing of this paper, which does not necessarily represent the decisions,
30 policy or views of the World Health Organization.

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15 9 the above.

16 10 17 18 11 **Competing interests**

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34 27 (laura.webber@ukhealthforum.org.uk).
35 28

36 29 **Author contribution**

37 30
38 31 LW and DD carried out the acquisition, analysis and interpretation of data for the work in this study
39 32 and drafted the manuscript. TM, JB, KM, GG contributed to the conception and design of this study.
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1 JB, GG, TM, MB, KM revised the document for important intellectual content.
2 All authors edited and approved the final version of this manuscript and agree to be accountable for
3 all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of
4 the work are appropriately investigated and resolved.
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For peer review only

Abstract

ObjectiveBackground: Non-communicable diseases (NCDs) are the biggest cause of death in Europe putting unsustainable burden on already struggling health systems. Increases in obesity are a major cause of NCDs. This paper projects the future burden of Coronary Heart Disease (CHD), stroke, type 2 diabetes and seven cancers to 2030 in all 53 WHO European Region countries based on current and past obesity body mass index (BMI) trends. It also tests the eventual impact of effective obesity interventions upon the future disease burden.

Setting and participants: Secondary data analysis of country-specific epidemiological data using a microsimulation modelling process.

Interventions: The effect of three hypothetical scenarios on the future burden of disease in 2030 were tested: baseline scenario, BMI trends go unchecked; intervention 1, population BMI trends decreases by 1%; intervention 2, BMI levels decreases by 5%.

Primary and secondary outcome measures: Quantifying the future burden major NCDs and the impact of interventions on this future disease burden.

Results: By 2030 in the whole of the European region the prevalence rates of diabetes, CHD & stroke and cancers are projected to reach an average of 3990, 4672 and 2046 cases per 100,000 respectively. The highest prevalence of diabetes was predicted in Slovakia (10,870 cases per 100,000); CHD & stroke – in Greece (11,292) and cancers – in Finland (5615 cases per 100,000). A 5% fall in population BMI was projected to significantly reduce cumulative incidence of diseases. The largest reduction in diabetes and CHD & stroke was observed in Slovakia (3054 and 3369 cases per 100,000 respectively) and in cancers was predicted in Germany (331 per 100,000).

Conclusions: Modelling future disease trends is important for policy makers in realistically allocating resources and implementing policies that prevent disease incidence NCDs. Future research will allow real policy interventions to be tested, however better surveillance data on NCDs and their risk factors are essential for research and policy.

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Strengths and limitations

Strengths

- This study projects the future burden of obesity-related diseases using sophisticated microsimulation modelling software
- It quantifies the impact on major chronic diseases (CHD, stroke, Type 2 diabetes, cancers) given a 1 or 5% reduction in population BMI
- It highlights the need for good quality surveillance data for diseases and their risk factors so that accurate estimates can be made

Limitations

- The model does not take account of future changes in circumstances such as fluctuations in food prices or new medical technologies.
- The model is only as good as the data that are entered into it, with good quality data more accurate predictions can be made

Background

Noncommunicable diseases (NCD) such as cardiovascular and respiratory disease are the highest cause of death globally (1). In 2008 the World Health Organization (WHO) estimated that mortality from ~~diseases such as~~ heart disease, stroke, chronic lung disease, cancer and diabetes totalled 36.1 million (2). [The growing burden of NCDs warranted urgent political action. In September 2011 during the UN High Level Meeting on NCDs As a result,](#) global leaders made a political declaration to provide a coordinated response ~~to for~~ preventing and controlling NCDs ~~at the UN High Level Meeting on NCDs in September 2011~~ (3). ~~NAs a result~~ nine global voluntary targets ~~aiming at combatting global mortality from the four main NCDs, accelerating action against the leading risk factors for NCDs and strengthening national health system responses were set out were set that aimed to reduce NCDs. The 25 by 25 mortality goal pledges to reduce premature mortality from NCD by 25% by 2025~~ (4).

[In Europe NCDs are high on the European parliament's agenda as they account for 86% of deaths and 77% of disease burden \(2\).](#) ~~since they account for 86% of deaths and 77% of disease burden (2),~~ [This burden is unequally distributed both within and between the European countries: individuals from the most disadvantaged groups often have poorer access to health care and fewer resources such as education, employment, and housing – all of which reduce the opportunities for healthy lifestyle choices. The new European health policy framework, and this burden is addressed in Health 2020, the new European Policy \(5\).](#) Health 2020, highlights [these inequalities and offers a roadmap for the policy makers and public health professionals \(5\).](#) ~~the stark inequality in across Europe,~~

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7 1 where the risk of NCDs is higher in individuals from the most disadvantaged groups since they have
8 2 poorer access to health care and fewer resources such as education, employment, and housing
9 3 making choosing healthy lifestyles more difficult. The WHO European Region is determined to take
10 4 forward the UN political declaration to reduce avoidable deaths from NCDs turning the declaration
11 5 into action and the WHO is working to provide public health tools that help all countries across the
12 6 broader European region to implement more effective programmes based on an extensive reflection
13 7 process (5).

14 8 The causes of NCDs are may be genetic, behavioural and environmental (6). Rapid changes in health
15 9 related behaviours in recent decades have seen an upsurge in NCD prevalence (7) through
16 10 modifiable lifestyle factors such as diet and exercise. Market forces driving down costs of high
17 11 calorie fatty, salty and sugary foods have made them cheap and readily available resulting in
18 12 increased consumption and expanding waistlines. In addition, advances in technology such as
19 13 motorised transport, labour mechanisation and television have promoted sedentary lifestyles and
20 14 reduced physical activity (8). Interventions that are able to tackle important risk factors such as
21 15 obesity are likely to have a positive impact upon NCD prevalence and premature mortality caused by
22 16 NCDs.

23 17 Projections from the UK show that behavioural interventions can be effective in reducing future
24 18 incidence of diseases such as coronary heart disease, stroke, type 2 diabetes and some cancers. For
25 19 example, reducing body mass index (BMI) by 1% across the population (equivalent to 1kg weight
26 20 loss) was estimated to substantially reduce health burden, saving 179,000-202,000 incident cases of
27 21 type 2 diabetes, 122,000 cases of cardiovascular diseases and 32,000-33,000 incident cases of cancer
28 22 over 20 years (9). Data from Russia showed that obesity rates are predicted to increase to as high as
29 23 76% in males by 2050, and rates of CHD and stroke will reach 12,723 cases per 100,000 of the
30 24 population (10). Similar projections have been carried out implemented in other European countries
31 25 (11); though to our knowledge estimates of the future burden of obesity-related diseases in all
32 26 European countries have not been carried out.

33 27 There is, therefore a new threat menacing recent progress in NCD mortality and morbidity which
34 28 needs to be quantified and the current study ignites this discussion within the context of health
35 29 impact models. This study also hypothesises that while reduction in the burden of NCDs has been
36 30 sustained, obesity is actually threatening those gains. As such this study updates and extends this
37 31 work by using a microsimulation model to project NCD trends to 2030 in all 53 Euro-region countries
38 32 and assesses the impact of two hypothetical interventions, intervention 1: a 1% reduction in

1 population BMI and intervention 2: a 5% reduction in population BMI, upon the future incidence of
2 CHD and stroke, type 2 diabetes and obesity-related cancers.

3 4 **Methods**

5 6 *BMI data extraction*

7
8 Online databases (Global database on Body Mass Index (12), EU members' statistical office
9 databases, Pubmed (13) and Science Direct (14)) were searched for published data on age and sex-
10 specific country obesity prevalence data presented according WHO definitions of normal weight,
11 overweight and obesity (12). ~~In addition, A~~ article references were ~~also searched~~ probed and
12 individual researchers and public health officers were contacted for further data ~~(see Webber et al,~~
13 ~~in prep)~~. A table of BMI references is presented in A appendix 1 and methods of BMI data
14 manipulation are explained in A appendix 2a-b of the supplementary information.

15 16 *Disease data sources*

17
18 A second review of statistical databases and literature was carried out to locate country-specific
19 incidence, prevalence, survival and mortality data for CHD, stroke and obesity-related cancers
20 (colorectal, pancreas, breast, kidney, liver, corpus uteri and oesophageal) as well as incidence and/or
21 prevalence data of type 2 diabetes.

22 Where prevalence, but not incidence, data were available by age and sex the prevalence was
23 converted to incidence using equations devised for DISMOD II software (15). Briefly, Incidence is
24 calculated from prevalence using a Downhill Simplex Method (16), where the algorithm determines
25 the incidence iteratively using a best fit to the known prevalence.

26
27 Where neither incidence nor prevalence data were available data from a proxy country were used.
28 CHD incidence was often rare, so UK, Georgia, Spain, Russia, Uzbekistan incidence data were used as
29 proxies for countries ins a similar geographical location or countries which had comparable average
30 prevalence rates. For example, for CHD data Russian data were used as a proxy for Belarus; and
31 Uzbekistan data were used for Kazakhstan, Kyrgyzstan, Tajikistan, ~~Turkmenistan~~ and Turkmenistan.

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7 [Only Belarus, Denmark, Finland, Ireland, Norway, Russian Federation and the UK had full sets of](#)
8 [disease data. Furthermore, many countries required a proxy for survival data.](#) Greater detail of
9
10 which countries were used as proxies is presented in Appendix 3. For fatal diseases the ratio of the
11
12 target-to-proxy countries' mortality rates was used to scale the proxy country's incidence rates. For
13
14 type 2 diabetes proxy country data were adjusted for the different population BMI-distributions. [For](#)
15 [example, if country x had diabetes data and these were used a proxy for country y where no data](#)
16 [exist, then country y's BMI distribution would determine the future burden of type 2 diabetes via the](#)
17 [relative risk.](#)

18
19 For survival data, the probability of survival, p , for a number of years, T , after acquiring a fatal
20
21 disease was modelled in one of two ways depending on the disease. Either as a simple exponential
22
23 distribution $p=e^{-RT}$, or as an exponential distribution allowing for different probability, p_1 , of survival
24
25 in the first year, $p=p_1e^{-R(T-1)}$. Stroke used the latter model; other fatal diseases the former. Disease
26
27 survival statistics consist of the rate R or the rate R together with the first year survival probability
28
29 p_1 . These statistics [are can be](#) further classified by age group and gender. The rate R was usually
30
31 inferred from quoted 5-year survival statistics.

32
33 The relative risks of contracting each disease according to pre-obesity (BMI 25-29.9 kg/m²) and
34
35 obesity (BMI 30≥ kg/m²) relative to normal weight (BMI 18.5-24.9 kg/m²) [with age and sex as](#)
36
37 [covariates](#) were taken from the International Association for the Study of Obesity ([1617](#)).

38
39 A table of disease references for each country is presented in [Appendix 3](#).

40 [Statistical analysis](#)

41
42 Detailed statistical analysis is described in [Appendix 4](#), Foresight: Tackling Obesities ([1718](#)) and
43
44 Wang and colleagues (9). [Briefly, A](#) dual-module modelling process was carried out: [m](#)Module one
45
46 fits cross-sectional BMI data from each country using a non-linear multivariate, categorical
47
48 regression model. Module two creates virtual country cohorts of 5,000,000 individuals using a
49
50 microsimulation method to produce longitudinal projections to 2030 based on module one BMI
51
52 distributions. Microsimulation is a computer modelling technique that works at the level of the
53
54 individual; it generates individual life-histories of a specified population and this population reflects
55
56 the age profile, birth, death and health statistics to make future projections. [A](#) BMI value is
57
58 probabilistically assigned as a function of age, sex and calendar year and an individuals' BMI
59
60 percentile in the same age cohort assumed to stay the same over time. Population size, births and
deaths were also simulated in a large number of individuals as they age using data from the United

1 Nations population statistics (4819). Population pyramids are presented in [Appendix 5](#). Within the
2 simulation, individuals are at greater risk of getting a particular disease each year if he or she did not
3 have the disease at the beginning of the year. Individuals can continue living with the disease or die
4 from it (if it is fatal). The software for this program was written in C++ (4920).

5 To estimate the disease burden associated with the trends in overweight and obesity, as well as the
6 effect of possible interventions, future increases in obesity-related diseases were projected from
7 2010 to 2030, using three different trend interventions: ~~intervention 0~~ baseline scenario: obesity-BMI
8 trends- go unchecked; intervention 1: ~~obesity levels~~ mean population BMI decreases by 1% and
9 intervention 2: ~~mean population BMI~~ obesity levels decreases by 5%. The cumulative incidence cases
10 avoided for the whole of Europe was analysed by summing the weighted average of incidence for
11 each country.

12 Results

13
14 Only 36 countries had three or more years of BMI data. Less than or equal to two points of BMI data
15 were available for the remaining 17 countries (Albania, Andorra, Belarus, Bosnia, Croatia, Cyprus,
16 Georgia, Hungary, Macedonia, Monaco, Montenegro, Romania, San Marino, Serbia, Slovenia,
17 Tajikistan and Turkmenistan) so results in this instance are interpreted with caution.

18 Alongside obesity, obesity-related diseases are projected to increase in almost all countries. Figure 1
19 presents the average projected prevalence rates for Europe (weighted for total population) by
20 intervention. A 1% reduction in population BMI would result in an average of 1575 CHD & stroke
21 prevalence cases per 100,000 of the population in Europe. This is a prevalence gain of 29 cases per
22 100,000, equating to a 1.8% reduction. A 5% reduction in population BMI would result in an average
23 of 2021 cases of type 2 diabetes by 2030 per 100,000 of the population in 2010. This is a reduction in
24 prevalence of 333 cases per 100,000, equating to a 16% reduction across Europe relative to
25 intervention 0 (rates continue unabated). Relative to the baseline scenario (no intervention to
26 reduce population BMI) a 1% reduction in BMI would result in an average of 3990 and 3807 type 2
27 diabetes prevalence cases per 100,000 of the population in Europe respectively. This is a prevalence
28 gain of 183 cases per 100,000, equating to a 4.6% reduction in prevalence. A 5% reduction in
29 population BMI would result in an average of 3411 cases of type 2 diabetes by 2030 per 100,000 of
30 the population in 2010. This is a reduction in prevalence of 579 cases per 100,000, equating to a
31 14.5% reduction across Europe. There was wide variability between countries.

Figure 2 shows the projected prevalence to 2030 of each disease by country per 100,000 of the population in 2010. [There was a wide variability between countries.](#) The highest projected prevalence of cancers was observed in Finland with 5615 cases per 100,000 of the population in 2010. The highest projected prevalence of CHD and stroke was observed in Greece with 11,292 cases and the highest projected prevalence of type 2 diabetes was in Slovakia with 10,870 cases per 100,000 of the population in 2010.

Figure 3 presents the European average cumulative incidence gains by 2030 for each disease given a 1% or 5% reduction in population BMI relative to ~~intervention 0 the baseline scenario (rates continue unabated)~~. [As expected, higher reductions of population BMI would result in a number of obesity-related disease cases being avoided by 2030.](#) A 1% reduction in BMI would result in an average [reduction of 56 365 cases of cancer, CHD and stroke per 100,000 of the population in 2010 being gained](#) by 2030. A 5% reduction in population BMI would result in the avoidance of [4453-1317](#) cumulative incidence cases of CHD and stroke per 100,000 of the population ~~by 2030~~.

[Figure 4 presents cumulative incidence cases avoided in each of the 53 WHO European region countries if population BMI is reduced by 5%. The highest reduction in CHD and stroke and type 2 diabetes was predicted in Slovakia with 3054 and 3369 cumulative incidence cases per 100,000 population avoided by 2030 respectively. The highest reduction in cumulative incidence of obesity-related cancers was projected in Germany with 331 cases per 100,000 avoided by 2030.](#)

Data tables for each country displaying cumulative incidence cases, cumulative incidence cases avoided, prevalence cases and prevalence cases avoided per 100,000 of the population are presented in [Appendix 6](#).

Conclusions

This study used a microsimulation model to test the impact of effective interventions that reduce population BMI upon the future burden of disease. With only a few exceptions, obesity rates across the 53 countries were projected to increase by 2030. This is worrying given the extent of the related disease burden associated with obesity. There appeared to be very little pattern to the projected disease trends regionally across Europe.

Because of increasing obesity trends our findings suggest that in 20 years an increasing number of people will be living with an obesity-related chronic disease in almost every county in Europe.

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7 Interestingly, there was sometimes a rapid increase from 2010 to 2020 then a steadier increase to
8 2030. Birth rates are low across Europe with most total fertility rates (TFR) below 2. This means that
9 the population is ageing with fewer young people. Only Azerbaijan (2.12), Israel (2.62), Tajikistan
10 (3.13) and Uzbekistan (2.19) have TFRs above 2. Projecting further we may observe a dip in
11 prevalence rates as those with the disease die while there are fewer younger people to contract the
12 disease. Differences in the population profiles across countries may therefore result in different
13 estimates even if current disease incidence is comparable. Population profiles for each country are
14 illustrated in [Appendix 5](#) of the supplementary information.

15 Obesity-related cancers are rare and have relatively low rates compared with the other diseases.
16 However, rates are projected to increase. Recent trends in cancer survival across Europe between
17 2000 and 2004 reported that the survival of breast cancer was lower in Eastern Europe (Poland,
18 Estonia, ~~Slovenia~~ and Slovenia) than elsewhere in Europe (2021). Screening and medical advances
19 and less varied access to effective treatment are likely to account for differences with-between
20 Eastern Western and Western regions in Europe.

21 Obesity is closely linked with insulin resistance and recent years has recent years have seen an
22 epidemic of type 2 diabetes evolve alongside rapid increases in obesity. In the UK alone, a continued
23 increase in obesity is projected to add 6-8.5 million incidence cases of type 2 diabetes by 2030, at a
24 substantial cost to the UK health system (9). Rates of ~~Coronary Heart Disease~~ CHD and ~~S~~stroke too
25 were projected to increase across most countries. Highest prevalence rates were seen in Greece
26 (11,292 per 100,000 population) and the lowest in Spain (1030 per 100,000 population). However,
27 since very little CHD data were available, UK data was often used as a proxy, possibly
28 underestimating the rates of CHD in Europe. Where data were available (e.g. Ireland, Finland) much
29 higher rates were predicted suggesting that rates may be underestimated when using UK data and
30 interpretation of proxy data should be made with caution. Data for stroke incidence was mostly
31 taken from estimates by Truelson and colleagues (2122). These data were compared with Estonia
32 from the 2007 Tartu ~~s~~stroke registry (2223) and appear to be slightly inflated. Similarly, rates were
33 higher in the Truelson estimates compared with Polish data from 2005-2006 so rates of stroke
34 incidence maybe slightly overestimated.

35 Quantification of the burden of NCDs is important both to patients and public health professionals
36 because of the long-term consequences to patients' functioning and demand for health care (2324).
37 However, quantification via microsimulation is dependent upon good quality surveillance data. ~~yet~~
38 ~~the~~ present study highlights the lack of up-to-date surveillance data – especially annual measured
39 BMI from the same survey and disease incidence data. These data are necessary if national policies

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7 1 to control NCDs are to be appraised objectively. For some countries no satisfactory BMI data were
8 2 available so proxy country data were used (in the case of Member States with very small
9 3 populations) or extrapolated from mean data (in the case of other countries). Some of the trends
10 4 shown by the analysis have large confidence intervals due to the small number of data points used
11 5 as well as the small sample sizes of some of the studies, and therefore the observed trends can only
12 6 be indicative. Ideally the data should be measured, but for most countries ~~we had to use the only~~
13 7 studies ~~available were the ones~~ in which anthropometry had been self-reported. This weakens the
14 8 analysis, particularly if used in combination with measured data, because people tend to
15 9 underreport their weight in interviews or surveys (2425).

16 10 Relative risk data may also be limited in the extent to which they estimate the true impact of BMI on
17 11 disease. Relative risks were taken from the International Association for the Study of Obesity (16) as
18 12 these were deemed the best available at the time of development of the country models. However,
19 13 there are limitations to these risks due to the lack of suitable meta-analyses used to calculate them.
20 14 ~~It was assumed that the relative risk estimates are the same for all age groups since data were not~~
21 15 ~~always available by ag.~~ They are also based on both measured and self-reported data and do not
22 16 account for ethnic differences in body composition ~~since they are based on largely wWhite~~
23 17 ~~populations.~~ In the present study we included the same relative risk for each Member State;
24 18 however given the paucity of epidemiological data on both BMI and disease within many of the
25 19 countries of interest it is unknown whether this assumption is valid.

26 20 Increased surveillance and monitoring of NCDs is one of the six key objectives of the WHO 2008-
27 21 2013 Global strategy for the Prevention and Control of Non-communicable Diseases (2526)(24). This
28 22 strategy aims to target governments in making policies that control and abate the increasing
29 23 prevalence of NCDs across Europe and our results provide further evidence for raising the priority of
30 24 NCD prevention. In particular, this study promotes the need for interventions that are effective in
31 25 reducing major NCD risk factors (objective 3 of the strategy). In addition to this, in early 2013 the
32 26 WHO formed a global monitoring framework which aims to track the progress of prevention of
33 27 major non-communicable diseases and their key risk factors and consists of nine global targets and
34 28 25 indicators adopted by the WHO Member States during the 66th World Health Assembly in May
35 29 2013.

36 30 The microsimulation models are easily adaptable to include new data when it becomes available
37 31 from such strategies. For example, we were not able to include data on children because of the
38 32 limited amount of standardised data but with initiatives such as the WHO Childhood Obesity
39 33 Surveillance Initiative (2627)(25) assessment of future childhood obesity trends will be possible.

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7 ~~This study tested hypothetical, and largely aspirational scenarios. However, it serves to demonstrate~~
8 ~~the value of modelling to quantify the estimated future health burden of risk factors. If data are~~
9 ~~available the model can test the long term effectiveness of real policy interventions and future work~~
10 aims to do this (ecodapproject.eu28).

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14 ~~The models can also forecast future healthcare costs and the cost-effectiveness of specific~~
15 ~~interventions since our model incorporates our sophisticated economic module. Withrow and Alter~~
16 ~~(26) carried out a systematic review of the direct costs of obesity and found that obesity accounted~~
17 ~~for 0.7-2.8% of a countries total healthcare cost. Further, obese individuals have 30% higher~~
18 ~~healthcare costs than non-obese individuals though little published data on healthcare costs exists.~~
19 ~~Another important point of future work is to explore joint risk factors such as tobacco, physical~~
20 ~~activity and alcohol. Integration of these would be a valuable next step in quantifying the total life-~~
21 ~~style related disease burden.~~

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13 A key assumption of the model is that people do not reverse in the BMI categories. At a population
14 level this generally reflects reality, where weight loss is often only temporary. However this
15 assumption does not take into account future changes in circumstances, such as fluctuations in
16 food prices. It relies on our best estimate based on previous trends. That said, this approach allows
17 for future trends to be forecast so that policy makers can plan interventions and allocate resources
18 appropriately.

19 It is clear that tackling NCDs ~~and obesity~~ is a major challenge across Europe placing unsustainable
20 burden on struggling health systems. ~~This study provides a picture of the future with projections,~~
21 ~~and observes a worsening situation with increasing incidence of obesity-related disease. As a result,~~
22 ~~these findings call for Ggovernments need to plan ahead and~~ initiate change that effectively
23 reduces key risk factors ~~such as like~~ obesity through preventative measures such as food tax, industry
24 pledges and reduced junk food marketing. ~~that may go some way into reducing obesity-related~~
25 ~~mortality. Examples of which may include taxing and regulating unhealthy products and reducing~~
26 ~~junk food advertising.~~ Primary prevention is crucial if increasing trends are to be averted ([2729](#))(27).

Panel: Research in context

30 Noncommunicable diseases (NCD) are the biggest cause of death in Europe. Health impact models
31 are a useful and important policy tool enabling ~~to measurement of~~ the future burden of NCDs ~~to be~~

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7 1 quantified. Obesity is a major modifiable risk factor ~~of for~~ NCDs, which makes it necessary to
8 2 quantify and this threat ~~is necessary to be quantified~~. The current study explored the future impact
9 3 of changing trends in ~~obesity BMI~~ on the future burden of NCDs to 2030. Effective interventions that
10 4 successfully reduced population BMI by 1% or 5% would have a significant impact upon obesity-
11 5 related diseases such as cardiovascular disease, type 2 diabetes and some cancers.

12 6
13 7 Microsimulation modelling should be utilised by policy makers so they can plan for the future
14 8 provision of health care resources and instigate and maintain interventions that prevent the onset of
15 9 debilitating NCDs at both an individual and national level.

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10 11 **Appendices**

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13 Appendix 1: A table of BMI references

14 Appendix 2: BMI manipulation methods

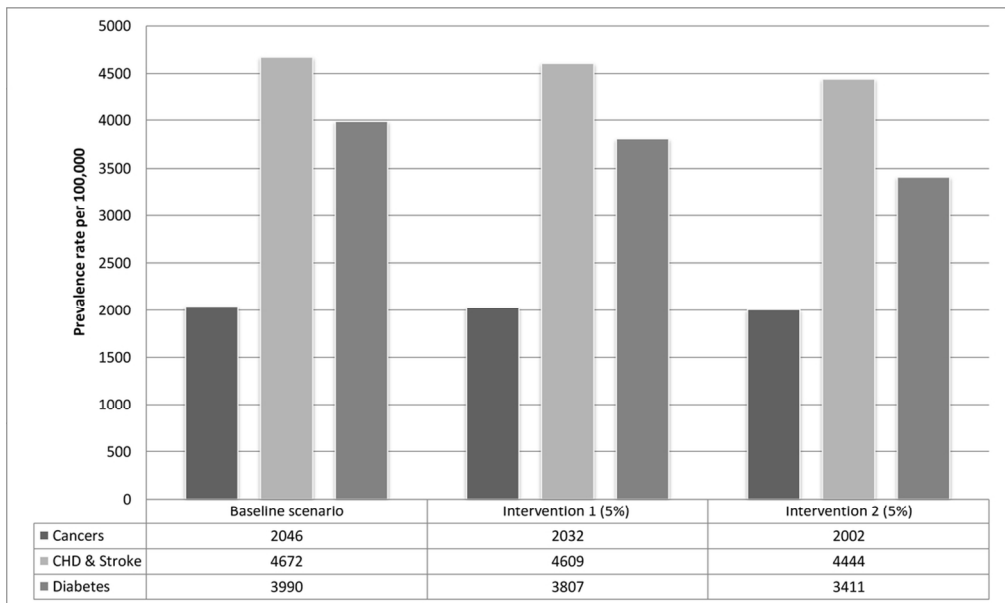
15 Appendix 3: Disease references

16 Appendix 4: Detailed statistical methods

17 Appendix 5: Population pyramids

18 Appendix 6: Data tables presenting prevalence rate, prevalence gains, cumulative incidence cases
19 and incidence cases avoided by 2030 for each country.

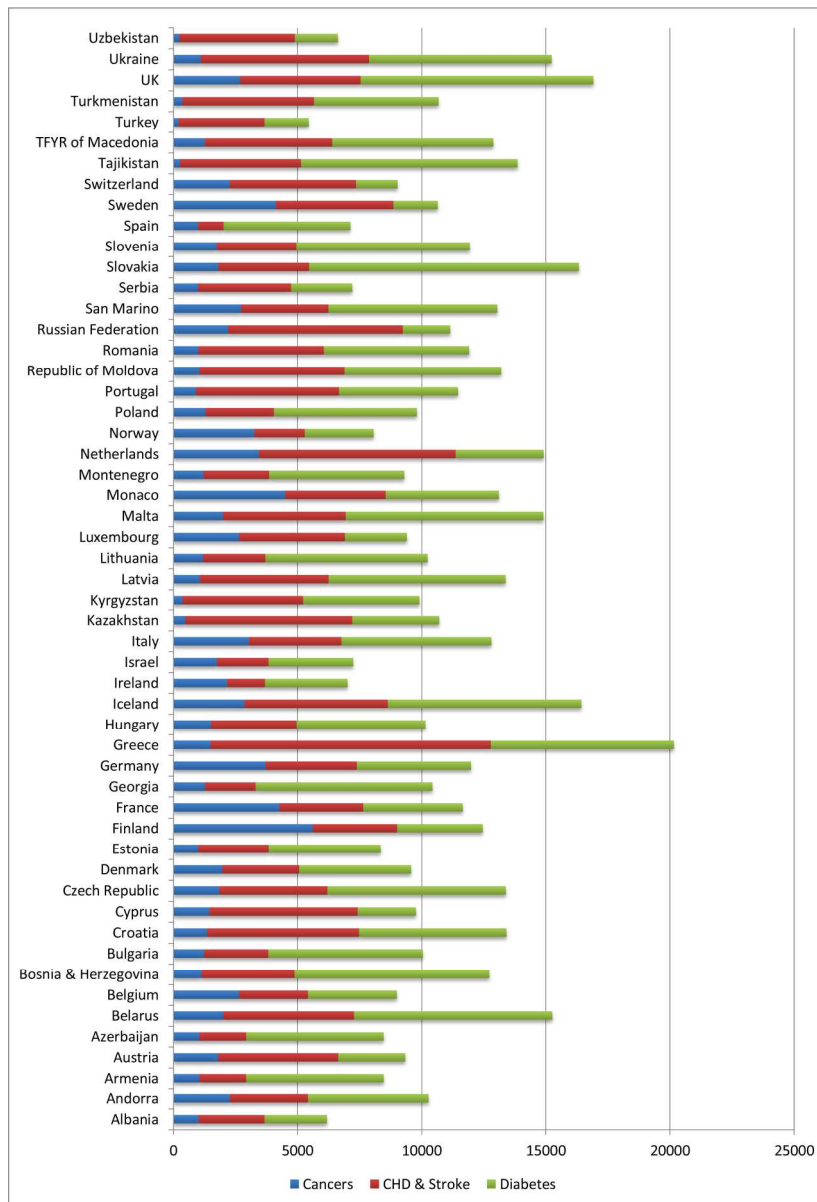
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Total projected prevalence by 2030 per 100,000 of the population for 53 Euro region countries
104x62mm (300 x 300 DPI)

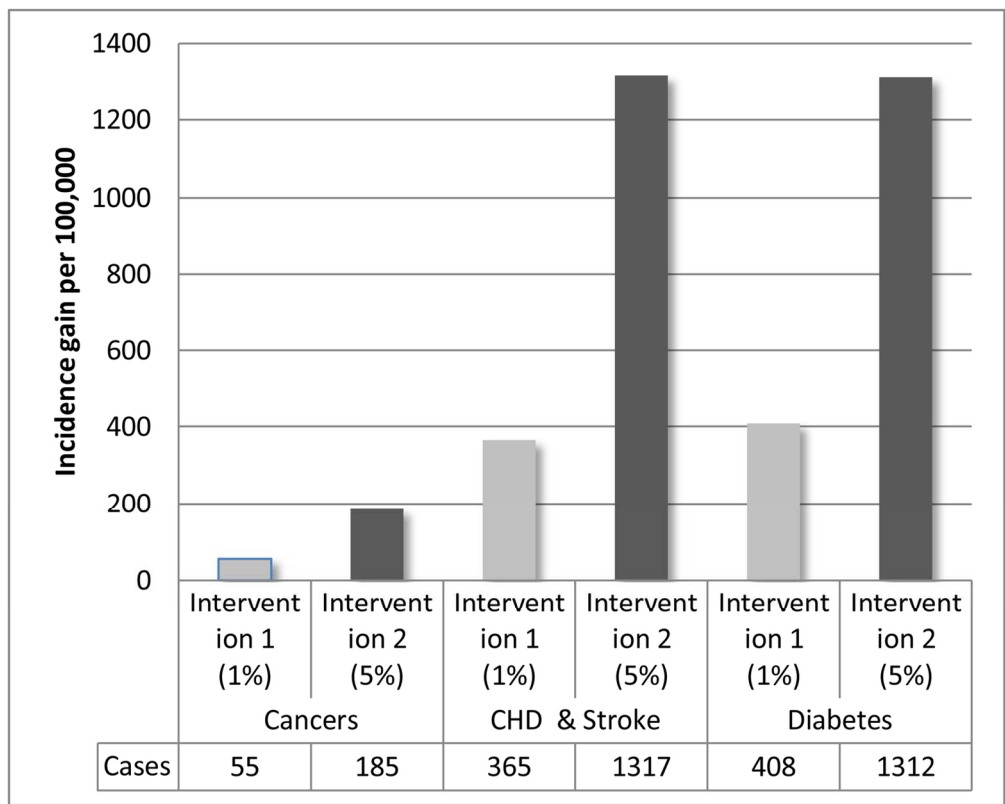
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Projected prevalence of diabetes, CHD & Stroke, cancers per 100,000 of the population by 2030 by country
233x340mm (300 x 300 DPI)

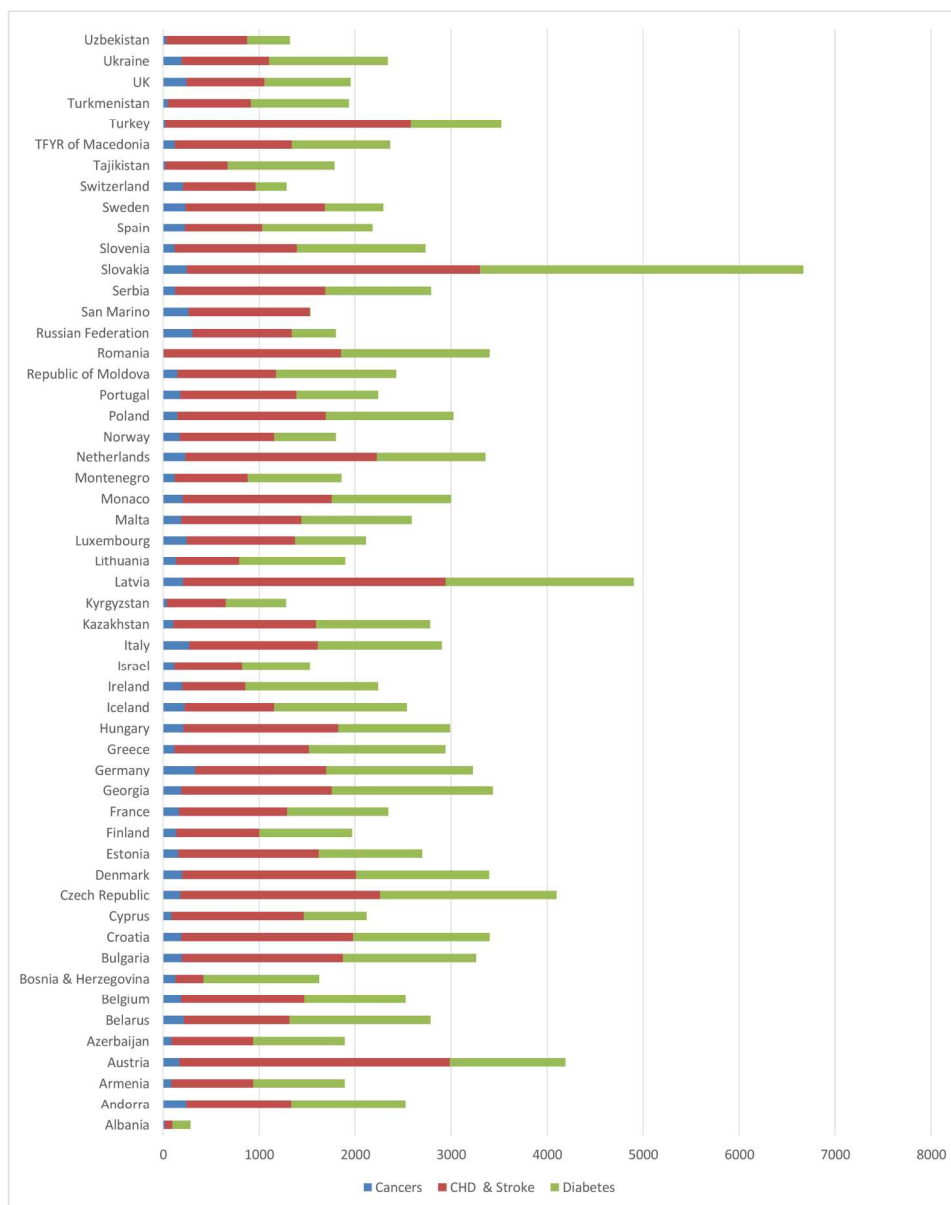
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Cumulative incidence gains by 2030 by disease given a 1% or 5% reduction in population BMI relative to the baseline scenario.
138x111mm (300 x 300 DPI)

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Projected cumulative incidence cases avoided by 2030 per 100,000 of the population by country given a 5% reduction in population BMI
217x273mm (300 x 300 DPI)

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Appendix 1 Table of BMI references for each country

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Albania	Shapo et al, 2003 Demographic and Health Survey	2001	535	585	24-65+	Measured	Regional
		2009	2972	7330	15-49	Measured	National
Andorra	No BMI data, Spain proxy adjusted for Monaco population size and structure						
Armenia	Demographic and Health Survey	2000	-	5962	15-49	Measured	National
	Personal communication B. Roberts	2001	745	1049	18-60+	Self-reported	National
	Demographic and Health Survey	2005	-	6016	15-49	Measured	National
	Personal communication B. Roberts	2010	789	932	18-60+	Self-reported	National
Austria	Health Statistics Austria, 2002	1999	3368	3624	15-100	Self-reported	National
	Schwarz, Abdominal Obesity and Cardiometabolic Risk Factors in Austria, 2007	2006	528	526	30-74	Self-reported	National
	Klimont et al, Österreichische Gesundheitsbefragung, 2006/2007	2007	2914	3203	20-100	Self-reported	National
Azerbaijan	WHO ¹ : Reproductive Health Survey	2001	-	1772	20-44	Measured	National
	Demographic and Health Survey	2006	2382	7793	15-49	Measured	National
	Personal communication B. Roberts	2010	789	821	18-60+	Self-reported	National
	Azerbaijan Statistical yearbook 2012	2011	2056	2194	15-65+	Unknown	National
Belarus	Personal communication B. Roberts	2001	758	925	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	764	991	18-60+	Self-reported	National
Belgium	Belgian Health Interview Survey, 1997	1997	3934	4137	15-100	Self-reported	National
	Belgian Health Interview Survey, 2001	2001	4582	4809	15-100	Self-reported	National
	Belgian Health Interview Survey, 2004	2004	4836	5483	15-100	Self-reported	National
	Belgian Health Interview Survey, 2008	2008	4093	4738	15-100	Self-reported	National
Bosnia and Herzegovina	WHO: Laatikainen T et al, 2002	2002	1118	1613	25-64	Measured	National
	Estimated from Global Burden of Disease mean data ²	2008					
Bulgaria	WHO; Survey of the Health Status of the Population	2001	8008		25-74	Self-reported	National
	WHO; Petrova et al 2006	2004	515	516	25-74	Self-reported	National
	Eurostat database: Health Interview Survey 2008 Bulgaria	2008	5664		25-84	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Croatia	WHO; Budak, 2003	97-99	1967	2982	0-100	Measured	National
	WHO; Croatian Adult Health Survey	2003	2878	6162	18+	Measured	National
Cyprus	Statistical Service Cyprus, personal communication	2003	267866	284397	15-100	Self-reported	National
	Statistical Service Cyprus, personal communication	2008	277077	300761	15-100	Self-reported	National
Czech Republic	WHO; Sample Survey of the Health Status of the Czech Population HIS CR 1993	1993	734	833	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population 1996	1996	1031	1123	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population HIS 1999	1999	1603	1760	20-74	Self-reported	National
	WHO; Sample Survey of the Health Status of the Czech Population HIS 2002	2002	1142	1284	20-74	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Czech Republic	2008	940	1015	20-74	Self-reported	National
Denmark	SUSY 2000, National Institute of Public Health	2000	8126	8275	16-100	Self-reported	National
	Ekholm et al, Health and mortality survey Denmark, 2005	2006	7046	7441	16-100	Self-reported	National
	SUSY 2010, National Institute of Public Health	2010	79347	92873	16-100	Self-reported	National
Estonia	Unpublished data obtained from Mare Tekkel	1998	561	743	16-64	Self-reported	National
	Kasmel et al. Health behaviour among Estonian adult population, spring 2000	2000	547	790	16-64	Self-reported	National
	Kasmel et al. Health behaviour among Estonian adult population, spring 2002	2002	542	779	16-64	Self-reported	National
	Tervise Arengu Instituut, Health behaviour among Estonian adult population	2004	1299	1743	16-64	Self-reported	National
	Tekkel et al. Health Behavior among Estonian Adult Population, 2006	2006	1112	1706	16-64	Self-reported	National
	Tekkel et al. Health Behavior among Estonian Adult Population, 2008	2008	1248	1702	16-64	Self-reported	National
	Tekkel and Veideman, Health Behaviour among Estonian Adult Population 2010	2010	1227	1760	16-64	Self-reported	National
Finland	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 1998	1998	1689	1816	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 1999	1999	1523	1801	15-64	Self-reported	National
	WHO; Raitarki et al, Distribution and determinants of serum high-sensitive C-reactive protein	2001	1026	1193	20-39	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2002	2002	1462	1757	15-64	Self-reported	National
	WHO ; Helakorpi et al, Health behaviour among Finnish adult population, 2003	2003	1516	1819	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2004	2004	1520	1805	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2005	2005	1500	1727	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2006	2006	1450	1761	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2007	2007	1397	1789	15-64	Self-reported	National
	WHO; Helakorpi et al, Health behaviour among Finnish adult population, 2008	2008	1346	1776	15-64	Self-reported	National
	Helakorpi et al, Health behaviour among Finnish adult population, 2009	2009	1240	1620	15-64	Self-reported	National
Helakorpi et al, Health behaviour among Finnish adult population, 2010	2010	1221	1539	15-64	Self-reported	National	
Helakorpi et al, Health behaviour among Finnish adult population, 2011	2011	1181	1565	15-64	Self-reported	National	

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
France	Maillard et al, Trends in the prevalence of obesity in the French adult population, 1999	1992	7250	7856	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	1997	-	-	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2000	-	-	18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2003	25770		18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2006	-	-	18-100	Self-reported	National
	Eurostat database; Health Survey 2008 France	2008	3115		18-100	Self-reported	National
	Enquête épidémiologique nationale sur le surpoids et l'obésité, Roche 2009	2009	-	-	18-100	Self-reported	National
Georgia	Personal communication B. Roberts	2001	874	994	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	728	1134	18-60+	Self-reported	National
Germany	WHO; Hoffmester et al, National trends in risk factors for CVD in Germany, 1994	1991	2556	2715	25-69	Measured	National
	Microcensus 1999, Federal Statistics Office, personal communication	1999	24513	25765	18-100	Self-reported	National
	Microcensus 2003, Federal Statistics Office, personal communication	2003	24222	25235	18-100	Self-reported	National
	Microcensus 2005, Federal Statistics Office, personal communication	2005	25873	26654	18-100	Self-reported	National
	Nationale Verzehrs Studie II 2008, personal communication	2008	6117	7090	18-80	Self-reported	National
	Microcensus 2009, Federal Statistics Office, personal communication	2009	25112	25560	18-100	Self-reported	National
Greece	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	1998	4659710	5133801	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	1999	4428897	4912742	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2000	4398975	4831754	15-100	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2001	4360600	4867626	15-100	Self-reported	National
	WHO; Kapantais et al, 2004	2003	8234	9107	20-69	Self-reported	National
	Survey on Income & Living Conditions, Hellenic Statistical Authority, personal communication	2009	4369422	4618038	15-100	Self-reported	National
Hungary	WHO: Boros et al. National Health Interview Survey 2003	2003	2214	2741	25-64	Self-reported	National
	Eurostat database: Health Interview Survey 2008 Hungary	2009	5051		25-64	Self-reported	National
Iceland	Personal communication E. Gisladdottir	1990	557	577	15-80	Self-reported	National
	Personal communication E. Gisladdottir	2002	591	656	18-79	Self-reported	National
	Personal communication E. Gisladdottir	2007	2670	2995	18-79	Self-reported	National
	Personal communication E. Gisladdottir	2010	621	640	18-79	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Ireland	North/South Ireland Food Consumption Survey (NSIFCS)	1998	2688	3074	18-64	Self-reported	National
	Survey of Lifestyle, Attitudes and Nutrition in Ireland (SLAN)	2002	2164	3149	18-100	Self-reported	National
	Survey of Lifestyle, Attitudes and Nutrition in Ireland (SLAN)	2007	942	1224	18-100	Measured	National
	Growing Up in Ireland (GUI)	2008	6761	7799	18-100	Measured	National
	Combined NANS and GUI data	2009	8389	8415	18-100	Measured	National
	North/South Ireland Food Consumption Survey (NSIFCS)	2010	361	375	18-100	Measured	National
Italy	Calza et al, Obesity and prevalence of chronic diseases, personal communication	2000	55303	59716	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Stili di vita e condizioni di salute, 2004	2002	21851	23738	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Stili di vita e condizioni di salute, 2004	2003	21233	23151	18-100	Self-reported	National
	WHO; Gallus et al, Overweight and obesity in Italian adults, 2004	2004	1407	1525	18-100	Self-reported	National
	WHO; Istituto Nazionale Di Statistica. Health conditions and risk factors, 2007	2005	19384	21165	18-100	Self-reported	National
	Istituto Nazionale Di Statistica . La vita quotidiana nel 2006, personal communication	2006	19378	21169	18-100	Self-reported	National
	Istat database, personal communication	2007	19187	20822	25-100	Self-reported	National
	Istat database, personal communication	2008	23522	25437	18-100	Self-reported	National
	Istat database, personal communication	2009	23689	25592	18-100	Self-reported	National
	Istat database, personal communication	2010	19151	21060	25-100	Self-reported	National
Israel	Keinar-Boken et al, 2005	2000	1371	1410	15-64	Self-reported	National
	Personal communication with A. Ifrah	2002	3029	3287	18-64	Self-reported	National
	Personal communication with A. Ifrah	2004	1455	1910	18-64	Self-reported	National
	Personal communication with A. Ifrah	2008	1987	2199	21-64	Self-reported	National
	Personal communication with N. Goldberger	2009	4880	5451	21-64	Self-reported	National
Kazakhstan	WHO: Demographic and Health Survey	1999	-	2238	15-49	Measured	National
	Personal communication B. Roberts	2001	802	986	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	851	939	18-60+	Self-reported	National
	Personal communication S. Tazhybayev	2012	1299	2430	15-65+	Measured	National
Kyrgyzstan	WHO: Popkin BM and Martinchik AN, 1994	1993	2267	2647	18-100	Measured	National
	WHO: Demographic and Health Survey	1997	-	3518	15-49	Measured	National
	Personal communication B. Roberts	2001	845	988	18-60+	Self-reported	National
	Personal communication B. Roberts	2010	870	930	18-60+	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Latvia	Pudule et al. Health behaviour among Latvian adult population, 2002	2002	856	1091	15-64	Self-reported	National
	Unpublished data obtained from Dace Krievkalne	2003	3189	3647	20-74	Self-reported	National
	Pudule et al. Health behaviour among Latvian adult population, 2004	2004	742	1014	15-74	Self-reported	National
	Pudule et al. Health behaviour among Latvian adult population, 2006	2006	665	873	15-74	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Latvia	2008	2867	3591	18-94	Self-reported	National
Lithuania	WHO; Grabauskas et al, 1998	1998	811	1044	20-64	Self-reported	National
	WHO; Grabauskas et al, 2000	2000	989	1183	20-64	Self-reported	National
	Grabauskas et al. Lithuanian health behaviour monitoring, 2002	2002	1650	1027	20-64	Self-reported	National
	Grabauskas et al. Health Behaviour among Lithuanian adult population, 2004	2004	757	1009	20-64	Self-reported	National
	Unpublished data obtained from Sigita Mačiukienė	2005	3801	5707	15-100	Self-reported	National
	Grabauskas et al. Health Behaviour among Lithuanian Adult Population, 2006	2006	704	1001	20-64	Self-reported	National
	Grabauskas et al, Health Behaviur among Lithuanian Adult Population, 2008	2008	715	994	20-64	Self-reported	National
	Grabauskas et al, Health Behaviur among Lithuanian Adult Population, 2010	2010	578	1359	20-64	Self-reported	National
Luxembourg	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	1995	-	-	16-64	Self-reported	National
	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	2005	-	-	16-64	Self-reported	National
	Tchicaya and Lorentz, Vivre au Luxembourg, 2010	2008	-	-	16-64	Self-reported	National
Malta	WHO; Asciak et al, The first national health interview survey, 2003	2002	1844	2022	16-100	Self-reported	National
	National Health Survey 2007, personal communication	2007	151898	161082	18-65	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Malta	2008	-	-	18-100	Self-reported	National
Monaco	No BMI data, France proxy adjusted for Monaco population size and structure						
Montenegro	WHO: Health status and health needs in Serbia., 2002	2000	4458	4975	20-100	Measured	National
	Estimated from Global Burden of Disease mean data ²	2008					

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Netherlands	Netherlands Central Bureau voor de Statistiek	2000	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2001	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2002	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2003	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2004	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2005	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2006	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2007	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2008	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2009	-	-	16-100	Self-reported	National
	Netherlands Central Bureau voor de Statistiek	2010	-	-	16-100	Self-reported	National
Netherlands Central Bureau voor de Statistiek	2011	-	-	16-100	Self-reported	National	
Norway	WHO: Johansson et al, 1998	1994	1461	1559	16-100	Self-reported	National
	Health Interview Survey	1998	3456	3669	16-100	Self-reported	National
	Health Interview Survey	2002	3410	3417	16-100	Self-reported	National
	WHO: Hougen HC, 2006	2005	3401	3365	16-100	Self-reported	National
	WHO: Wilhelmsen , 2009	2008	3172	3293	16-100	Self-reported	National
Poland	WHO; CINDI 2003	1992	792	904	25-64	Measured	Subnational
	Eurostat database: National Health Interview Survey for Poland	1996	3137	9411	15-100	Self-reported	National
	Szponar et al. Household food consumption and anthropometric survey, 2003	2001	1949		19-100	Both	National
	Statistical Office Poland, personal communication	2004	19335	19446	15-70	Self-reported	National
	Statistical Office Poland, personal communication	2009	11932	14673	15-70	Self-reported	National
Portugal	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	1996	38504		18-75	Self-reported	National
	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	1999	38688		18-75	Self-reported	National
	WHO; Carmo et al, Overweigh and obesity in Portugal, 2008	2004	8116		18-64	Both	National
	Marques-Vidal et al, Ten-year trends in overweight and obesity 1995-2005; 2011	2006	25348		18-75	Self-reported	National
Republic of Moldova	Personal communication B. Roberts	2001	816	973	18-60+	Self-reported	National
	Demographic and Health Survey	2005	-	7062	15-49	Measured	National
	Personal communication B. Roberts	2010	744	967	18-60+	Self-reported	National
Romania	Eurostat database: National Health Interview Survey 2002 Romania	2000		21200	15-100	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Romania	2008		18172	18-100	Self-reported	National

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Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Russian Federation	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1995	3364	4445	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1996	3288	4382	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	1999	3399	4494	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2000	3497	4719	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2001	3859	5328	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2002	4034	5484	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2003	4089	5570	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2004	4113	5593	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2005	3997	5436	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2006	4969	6609	20-80+	Self-reported	National
	Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2007	4950	6587	20-80+	Self-reported	National
Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2008	4693	6402	20-80+	Self-reported	National	
Russia Longitudinal Monitoring Survey, University of North Carolina, 2011	2009	4708	6427	20-80+	Self-reported	National	
San Marino	No BMI data, Italy proxy adjusted for Monaco population size and structure						
Serbia	Grujic et al, 2002	2000	4458	4974	20-100	Measured	National
	Unpublished data obtained from Tatjana Pavlica	2001-07	1865	2382	20-100	Measured	Regional
Slovakia	Eurostat database: National Health Interview Survey 2002 Slovakia	2002	1569		15-64	Self-reported	National
	Annual Health Report, Slovak Public Health Authority, personal communication	2006	1393	1443	15-65	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Slovakia	2009	1457	1423	15-65	Self-reported	National
	Annual Health Report , Slovak Public Health Authority, personal communication	2010	1437	1438	15-65	Self-reported	National
Slovenia	Eurostat database: National Health Interview Survey 2002 Slovenia	2001	1097		15-100	Self-reported	National
	Eurostat database: European Health Interview Survey 2008 Slovenia	2007	2118		18-100	Self-reported	National
Spain	National Statistics Institute online database, National Health Survey 2003	2003	16296	17248	18-100	Self-reported	National
	National Statistics Institute online database, National Health Survey 2006	2006	16911	16478	18-100	Self-reported	National
	National Statistics Institute online database, National Health Survey 2009	2009	17558	17718	18-100	Self-reported	National

Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
Sweden	WHO; Swedish Survey of Living Conditions	1999	5587	5762	16-84	Self-reported	National
	WHO; Swedish Survey of Living Conditions	2001	5515	5838	16-84	Self-reported	National
	Statistics Sweden, personal communication	2004	2742	2849	16-84	Self-reported	National
	Statistics Sweden, personal communication	2008	11118		16-84	Self-reported	National
	WHO; Enkätundersökning 2009, Det nationella urvalet	2009	4570	5604	16-84	Self-reported	National
	Statistics Sweden, personal communication	2011	2633	2914	16-100	Self-reported	National
Switzerland	WHO: Enquete Suisse sur la Sante 2003	1992	6749	8150	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2003	1997	6716	7105	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2003	2002	8843	10629	15-100	Self-reported	National
	WHO: Enquete Suisse sur la Sante 2009	2007	8339	10134	15-100	Self-reported	National
Tajikistan	Estimated from Global Burden of Disease mean data ² 1995 through 2008	1995-2008					
TFYR Macedonia	Estimated from Global Burden of Disease mean data ² 1995 through 2008	1995-2008					
Turkey	Erem et al, 2001	1998/99	1324	1322	20-100	Measured	Subnational
	Turkish Obesity and Hypertension Study, Hatemi et al, 2003	1999-2000	15144	4975	20-100	Measured	Subnational
	Yumuk et al, 2005	2001	5866	7000	20-100	Measured	Subnational
	Erem et al, 2004	2001-2002	2288	2728	20-69	Measured	Subnational
	Oguz et al, 2008	2004-2005	2110	2154	20-100	Measured	National
	Iseri et al, 2008	2007	2263	1942	20-85	Measured	National
Turkmenistan	Estimated from Global Burden of Disease mean data ³ 1995 through 2008	1995-2008					
Ukraine	WHO: CINDI programme, 2003	1995	788	892	25-64	Measured	Subnational
	Personal communication B. Roberts	2001	830	1229	18-60+	Self-reported	National
	WHO: Kravchenko et al, 2005	2002	-	856	15-49	Measured	National
	Personal communication B. Roberts	2010	794	1098	18-60+	Self-reported	National

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Country	Study name citation	Data year(s)	Sample size		Age groups	Measured/ self-reported	National/ regional data
			M	F			
UK	Health Survey for England	2000	3260	3703	16-100	Measured	National
	Health Survey for England	2001	6267	7414	16-100	Measured	National
	Health Survey for England	2002	2969	3509	16-100	Measured	National
	Health Survey for England	2003	6519	6570	16-100	Measured	National
	Health Survey for England	2004	2772	2812	16-100	Measured	National
	Health Survey for England	2005	3144	3184	16-100	Measured	National
	Health Survey for England	2006	6014	6074	16-100	Measured	National
	Health Survey for England	2007	3008	2983	16-100	Measured	National
	Health Survey for England	2008	6385	6450	16-100	Measured	National
	Health Survey for England	2009	2055	2045	16-100	Measured	National
	Health Survey for England	2010	3563	3523	16-100	Measured	National
	Health Survey for England	2011	4852	5765	16-100	Measured	National
Uzbekistan	WHO: Demographic and Health Survey	1996	-	4038	15-49	Measured	National
	Demographic and Health Survey	2002	2058	4967	15-65	Measured	National
	Estimated from Global Burden of Disease mean data ²	2008					

¹ Denotes that data were taken from the WHO BMI database.

² http://www1.imperial.ac.uk/publichealth/departments/ebs/projects/eresh/majidezzati/healthmetrics/metabolicriskfactors/metabolic_risk_factor_maps/

Appendix 2. Methodology of BMI data manipulation

a) Projecting BMI forward using existing BMI prevalence data

An individual's body mass index (BMI) is defined as:

$$BMI = \frac{w}{h^2},$$

where w and h correspond to individual's weight and height, respectively. BMI provides a simple measure of a person's "fatness" or "thinness". Although BMI is measured on a continuous scale, it is grouped in the following five categories:

- 1) BMI : <18.5 (underweight)
- 2) BMI from 18.5 to 24.99: (healthy weight)
- 3) BMI from 25 to 29.99: (overweight)
- 4) BMI from 30 to 39.99: (obese)

Let $g=1,\dots,4$, denote BMI group (lower and larger values of g correspond to groups with lower and larger values of BMI on the continuous scale, respectively). Let $q_g(t)$ be the prevalence of individuals with BMI values that correspond to group g at time t . To ensure that $q_g(t)$ takes values within $[0,1]$, we model $q_g(t)$ by

$$q_g(t) = \frac{1}{2} [1 + \tanh(\beta_0^g + \beta_1^g t)]. \quad (1)$$

An alternative way to estimate $q_g(t)$ is through a logistic regression model with percentage for BMI group g as the outcome, and time, t , as the single explanatory variable:

$$\ln\left(\frac{q_g(t)}{1-q_g(t)}\right) = \beta_0^g + \beta_1^g t. \quad (2)$$

By solving equation (2) for $q_g(t)$ we obtain

$$q_g(t) = \frac{\exp(\beta_0^g + \beta_1^g t)}{1 + \exp(\beta_0^g + \beta_1^g t)}.$$

Equations (1) and (2) are mathematically identical, but (1) provides greater numerical stability. Fitting separate models for the estimation of $q_g(t)$ for each group g , does not guarantee that

$$\sum_{g=1}^5 q_g(t) = 1.$$

Thus, to ensure that the estimates of prevalence of individuals in all BMI groups sum up to 1 for each time t , we estimate the prevalence of individuals with BMI values that correspond to group g at time t by

$$P_g(t) = \frac{q_g(t)}{\sum_{g=1}^5 q_g(t)}. \quad (3)$$

These assumptions are explained further in Foresight: Tackling Obesities, Future Choices (1).

b) Computing BMI from a single data point

Bosnia and Herzegovina, Montenegro and Uzbekistan had only one BMI data point. For these countries 2008 estimates were used based on an analysis by Finucane and colleagues (2). This extrapolates from their estimated mean. The BMI-distribution is assumed to have the form $[p, (1-p)/2, (1-p)/2]$ where p is the prevalence of normal weight, p is then determined from the known mean.

c) Computing BMI distribution from mean data

Where no BMI prevalence data existed for a country data trend data were extrapolated using mean data from the Global Burden of disease study (3) with the following assumptions:

Assumptions

Assumption 1

For each data-year, y , $\log(\text{BMI})$ has a Normal distribution $N(\mu(y), \sigma(y))$.

Assumption 2

The value for $\mu(y)$ is taken as $\ln(\text{mean-BMI}_{\text{GBD}}(y))$

Assumption 3

The value for $\sigma(y)$ is obtained from the review data for that year and age-gender group by fitting a normal distribution to the $\log(\text{bmi})$ data and taking the ML estimate. This is a programmed function in the obesity_distribution program

For each year these assumptions allow the computation of

$$p_{\text{ok}} \equiv P(\text{BMI} < 25) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

$$p_{\text{ow}} \equiv P(25 < \text{BMI} < 30) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{\ln(25)}^{\ln(30)} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

$$p_{\text{ob}} \equiv P(30 < \text{BMI}) = \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{\ln(30)}^{\infty} dt \exp\left(-\frac{(t - \mu(y))^2}{2\sigma^2(y)}\right)$$

Assumption 4

The 95% confidence intervals for the 3 p values above are derived from GBD 95 % confidence intervals for the mean, thus for $p(\text{BMI} < 25)$

$$\frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y) + \text{cl}(y))^2}{2\sigma^2(y)}\right) < P(\text{BMI} < 25) < \frac{1}{\sqrt{2\pi}\sigma(y)} \int_{-\infty}^{\ln(25)} dt \exp\left(-\frac{(t - \mu(y) - \text{cl}(y))^2}{2\sigma^2(y)}\right)$$

The difference between the upper and lower limits is taken as $4\sigma_{ok}$.

Similar relations for pre-obesity and obese give a data point for each year y :

$$\{(p_{ok}, \sigma_{ok}), (p_{ow}, \sigma_{ow}), (p_{ob}, \sigma_{ob})\}$$

Predicting BMI

The data set for the most recent 10 years of GBD data and associated Health Survey for England (HSE) data σ -values are used as described to compile a Text Data Entry file for the obesity_distribution program.

Sample sizes, probabilities and variances

Imagine a population having some uniformly distributed characteristic q . The population is sampled N times resulting in n occurrences of the discrete characteristic q . The posterior distribution of q is the beta distribution

$$p(q|N, n) = \frac{(N+1)!}{(N-n)!n!} q^n (1-q)^{N-n}$$

Equation 1

In line with the common practice, we have approximated beta distribution by a normal distribution (4). When it is valid to do so the best approximation is provided by a normal distribution whose mean is the maximum likelihood estimate for q - the value for which the beta distribution has a

maximum and is easily calculated as $\hat{q} = \frac{n}{N}$. The posterior distribution is approximated as a normal

distribution with this value as its mean, it has the variance $\hat{\sigma}^2 = \frac{1}{N} \hat{q}(1-\hat{q})$. [This approximation is

obtained by writing $q^n(1-q)^{N-n} = \exp(n \ln q + (N-n) \ln(1-q))$ and expanding the argument of the exponential as a Taylor series about \hat{q} as far as terms quadratic in $(q-\hat{q})$.]

This is OK provided that \hat{q} is neither very close to zero or very close to 1, in which case this approximation of q 's beta distribution as a normal distribution with mean \hat{q} is not valid. In these circumstances it is better to approximate the posterior distribution as a normal distribution having mean and variance as given by the actual mean and variance of the beta distribution, namely

$$\hat{q} = \frac{(n+1)}{(N+2)}$$

$$\hat{\sigma}^2 = \frac{(n+1)(N-n+1)}{(N+1)(N+2)(N+3)}$$

Equation 2

Note that, when $N \gg n$, these approximations agree; Equation 2 has the advantage that n can take the value 0.

Means and distributions

Suppose BMI is distributed in the range 15-45 and that it has a mean m . If it is assumed that the distribution, $\rho(\text{bmi})$, is uniform for $15 < \text{bmi} < B$ and for $B < \text{bmi} < 45$ then we have

$$\rho = \begin{cases} \alpha & \text{for } 15 < b < B \\ \beta & \text{for } B < b < 45 \end{cases}$$

The condition that the distribution must integrate to unity is,

$$\int_{15}^{45} \rho db = \alpha(B - 15) + \beta(45 - B) = 1$$

The condition that it has the required mean is,

$$\int_{15}^{45} \rho b db = \frac{1}{2}\alpha(B - 15)(B + 15) + \frac{1}{2}\beta(45 - B)(45 + B) = m$$

These equations can be solved for α and β ,

$$\alpha = \frac{45 + B - 2m}{30(B - 15)}, \quad \beta = \frac{2m - B - 15}{30(45 - B)}$$

The probability that a person has a bmi: $p(\text{bmi} < B) = (45 + B - 2m)/30$; $p(\text{bmi} > B) = (2m - B - 15)/30$

When $B=25$ these values are $(35-m)/15$ and $(m-20)/15$ respectively

OTF-type distributions

Suppose the distribution is

$$p(\text{bmi}) = \begin{cases} p_1, & b_0 < \text{bmi} < b_1 \\ p_2, & b_1 < \text{bmi} < b_2 \\ p_3, & b_2 < \text{bmi} < b_3 \end{cases}$$

Equation 3

Typically $b_0=15$, $b_1=25$, $b_2=30$, $b_3=45$.

Because it is a distribution, the sum of the probabilities $\{p_i\}$ must add to 1:

$$p_1 + p_2 + p_3 = 1$$

Equation 4

The mean, m , is calculated as:

$$p_1(b_0 + b_1) + p_2(b_1 + b_2) + p_3(b_2 + b_3) = 2m$$

Equation 5

If we know the mean and we want to determine the 3 probabilities we need one other equation.

Suppose we know one of the p 's – p_3 say. The other p -values are calculated as

$$p_1 = \frac{(b_1 \pm b_2) \pm p_3(b_3 - b_1) - 2m}{(b_2 - b_0)}, \quad p_2 = 1 - p_3 - p_1$$

If, instead, we knew p_1 then the other values are given as

$$p_2 = \frac{(b_2 \pm b_3) \pm p_1(b_1 - b_2) - 2m}{(b_3 - b_1)}, \quad p_3 = 1 - p_1 - p_2$$

And, finally, if we know p_2 :

$$p_3 = \frac{(b_3 \pm b_1) \pm p_2(b_2 - b_3) - 2m}{(b_1 - b_2)}, \quad p_1 = 1 - p_2 - p_3$$

[These are obtained by cyclically permuting the indices 1,2,3]

Comparison of means

Suppose we have two means m_1, m_2 with variances σ_1^2, σ_2^2 which are supposed to be normally distributed. The test for them being 'the same' is that the ratio, $\frac{m_1 - m_2}{\sqrt{\sigma_1^2 + \sigma_2^2}}$, should be suitably small –

typically it should lie between ± 1.96 (1.96 is approximately 2; it occurs here because 95% of a zero mean, unit variance, normal distribution $N(x;0,1)$ lies in the region $|x| < 1.96$ and the normalised difference of the two means has a zero mean, unit variance, normal distribution).

The mean of a BMI distribution of the form of Equation 3 is given by Equation 5.

For the Imperial College website,

<http://www1.imperial.ac.uk/publichealth/departments/ebs/projects/eresh/majidezzati/healthmetrics/metabolicriskfactors/> the link [Download the numeral results \(by age group\)](#) produces an excel spread sheet for mean BMI values by year with 95% upper and lower UI [Uncertainty intervals].

Denoting the upper and lower UI by UI_{\pm} and UI_{-} , the associated standard deviation σ is given by the equation

$$\sigma = (UI_{\pm} - UI_{-})/3.92$$

So, for any given year for which we have data, the means can be tested. The value of the zero mean, unit variance residual statistic and $\frac{m_1 - m_2}{\sqrt{\sigma_1^2 + \sigma_2^2}}$ should be recorded in order to perform the analyses.

Calculating the variance of the mean

Suppose we have a distribution (Equation 3) in which the variances of p_1 and p_2 are s_1^2 and s_2^2 respectively. The mean of the distribution is given by equation 2, the variance of the mean is given by

$$\sigma^2 = \frac{1}{4}(b_0 \pm b_1 - b_2 - b_3)^2 s_1^2 \pm \frac{1}{4}(b_1 - b_3)^2 s_2^2$$

Equation 6

The optimal inclusion of dissimilar (complementary) data

Suppose we have two measurements $N(p_1, s_1^2)$ and $N(p_2, s_2^2)$ for, say, the percentage obese for two sections of a community – e.g rural and urban, male and female. Suppose that the rural population has n_1 members and the urban population has n_2 members. Thus, a person drawn at random from the whole population has a probability π_1 of being rural and π_2 of being urban where

$$\pi_1 = \frac{n_1}{n_1 + n_2}, \quad \pi_2 = \frac{n_2}{n_1 + n_2}$$

The probability (and variance) the same random person being obese is

$$p(\text{obese}) = p(\text{obese}|\text{rural})p(\text{rural}) + p(\text{obese}|\text{urban})p(\text{urban})$$

$$p_{ob} = p_1 \pi_1 + p_2 \pi_2$$

$$\sigma_{ob}^2 = \pi_1^2 s_1^2 + \pi_2^2 s_2^2$$

The optimal combination of similar data

Suppose we have two independent measurements $N(p_1, s_1^2)$ and $N(p_2, s_2^2)$ of some quantity p . The optimal (Bayesian) combination of the two is given as $N\left(p_1 + \frac{s_1^2}{s_1^2 + s_2^2}(p_2 - p_1), \frac{s_1^2 s_2^2}{s_1^2 + s_2^2}\right)$. The new mean lies between the p_1 and p_2 ; the new variance is less than both s_1^2 and s_2^2 . [$N(x, s^2)$ is a normal distribution with mean x and variance s^2 .]

Variable age grouping

We suppose that the set {a labels age groups} of distributions are $\{p_{a1}(t), p_{a2}(t), p_{a3}(t)\}$. We need consider only the first two values (subscripts 1 and 2 - the third is determined by the condition that the sum is unity). The probabilities, here regarded as random variables, are supposed to grow linearly with time

$$p_{ai}(t) = p_{ai}(t_0) + (t - t_0) \dot{p}_{ai}(t_0)$$

Each of these two equations can be written as the vector equation

$$\begin{pmatrix} p_{ai}(t) \\ \dot{p}_{ai}(t) \end{pmatrix} = \begin{pmatrix} 1 & t - t_0 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} p_{ai}(t_0) \\ \dot{p}_{ai}(t_0) \end{pmatrix} \equiv \Phi(t - t_0) \begin{pmatrix} p_{ai}(t_0) \\ \dot{p}_{ai}(t_0) \end{pmatrix}$$

Equation 7

The quantity $p_a(t)$ and its time derivative are themselves random variables. Supposing they are normally distributed and their mean and covariance are denoted X_{ai} and P_{ai} respectively, then Equation 7 implies the two matrix equations:

$$X_{ai}(t) = \Phi(t - t_0) X_{ai}(t_0)$$

$$P_{ai}(t) = \Phi(t - t_0) P_{ai}(t_0) \Phi^T(t - t_0)$$

Equation 8

It is conventional to drop the explicit time dependence in favour of the more compact notation that relates the predicted values (\hat{X}, \hat{P}) to the previous best estimate (\tilde{X}, \tilde{P})

$$\hat{X}_{ai} = \Phi \tilde{X}_{ai}$$

$$\hat{P}_{ai} = \Phi \tilde{P}_{ai} \Phi^T$$

Equation 9

At a new data point – a measurement z of $p_{ai}(t)$ with variance σ_z^2 say – the predicted values are optimally combined with the measured values via Bayes’ rule to give the well-known Kalman Bucy equations, that here can be written

$$\tilde{X}_{ai} = \hat{X}_{ai} + K(z - H\hat{X}_{ai})$$

$$\tilde{P}_{ai} = (I - KH)P_{ai}$$

$$K = \hat{P}_{ai}H^T(H\hat{P}_{ai}K^T + \sigma_z^2)^{-1}$$

$$H \equiv (1 \ 0)$$

Computing of distribution from one plot and the mean

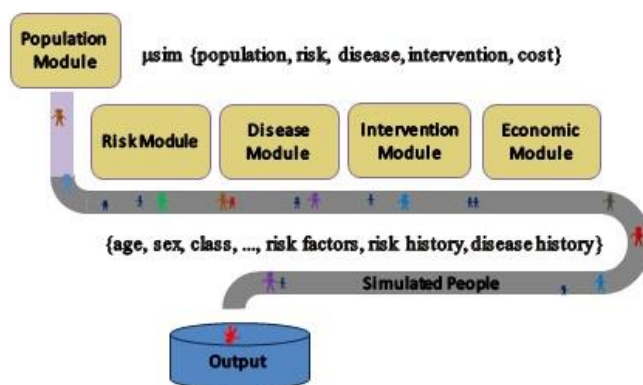
Assuming BMI cuts $B_0=15, B_1=25, B_2=30, B_3=45$ and a 3-dimensional BMI distribution $\{p_1(t), p_2(t), p_3(t)\}$

where, for all times t , the probabilities $\{p_i\}$ must add to 1:

$$p_1 + p_2 + p_3 = 1$$

d) Micro simulation – BMI growth model

The following diagram is a schematic of the microsimulation model:



This illustrates the different modules involved in the microsimulation. A population of individuals are simulated based on known population statistics. An individual can be born and die in the model and

has a specific risk (based on the risk distribution entered) of contracting, surviving and dying from a particular disease. An individual may be subject to a particular intervention in any given year that will change their risk trajectory.

The distribution of BMI in the population is estimated using regression analysis stratified by both sex (S) and age group ($A=0-9, 10-19, 20-29, \dots, 70-79, 80+$). The fitted models are extrapolated to forecast the distribution of BMI groups in the future. For each sex-and-age-group stratum, the set of cross-sectional, time-dependent, discrete distributions of BMI groups, $D = \{P_g(t) | g = 1, \dots, 5; t > 0\}$, is used to manufacture BMI growth models for individual members of the population. This is done in a way that guarantees that the cross-sectional BMI group distributions obtained by simulation under the growth models match the BMI group distributions of the observed data. The details are as follows;

For each such discrete distribution in D , there is a continuous counterpart. Let β denote BMI in the continuous scale and let $f(\beta|A, S, t)$ be the probability density function of β for age group A and sex S at time t . Then

$$P_g(t|A, S) = \int_{\beta \in g} f(\beta|A, S, t) d\beta. \quad (4)$$

Equations (3) and (4) both refer to the same quantity. However, equation (4) uses the definition of a probability density function to express the age-and-sex-specific percentage of individuals in BMI group g at time t . Equation (3) gives an estimate of the this quantity using model (1) for all $g=0, \dots, 5$. The cumulative distribution function of β is

$$F(\beta|A, S, t) = \int_0^\beta f(\beta|A, S, t) d\beta. \quad (5)$$

At a time t , a person with sex S belonging to the age group A is said to be on the p -th percentile of this distribution if $F(\beta|A, S, t) = p/100$. Given the cross-sectional information of D , it is possible to simulate longitudinal trajectories by forming pseudo cohorts within the population. A key requirement for these sets of longitudinal trajectories is that they reproduce the cross-sectional distribution of BMI groups for any year with available data. The method adopted here and in the earlier Foresight report (1) is based on the assumption that people's BMI changes throughout their lives in such a way that they always stay on the same BMI percentile. As they age, individuals move from one age group to another and their BMI changes so that they remain on the same percentile but of a different distribution. This rule is not too far from the truth; and has as a result that relatively fat people stay relatively fat and relatively thin people stay relatively thin. Crucially it meets the important condition that the cross-sectional BMI group distributions obtained by simulation match the BMI group distributions of the observed data. This can be seen as follows:

When the population's BMI distributions by sex and age are known for all years (by extrapolation of fitted model (3)), a person who is in age group A and who grows ten year older will at some time move into the next age group A' and will have a BMI that was described first by the distribution $f(\beta|A, S, t)$ and then at the later time t' by the distribution $f(\beta|A', S, t')$. If the BMI of that individual is on the p^{th} percentile of the BMI distribution, his BMI will change from β to β' so that

$$\beta = F^{-1}\left(\frac{p}{100} \mid A, S, t\right) \quad (6)$$

$$\beta' = F^{-1}\left(\frac{p}{100} \mid A', S, t'\right) \Rightarrow \beta' = F^{-1}(F(\beta \mid A, S, t) \mid A', S, t') \quad (7)$$

Where F^{-1} is the inverse function of the cumulative distribution function of β . (7) guarantees that the transformation taking the random variable β to β' ensures the correct cross-sectional distribution at t' .

The micro simulation both generates individuals from the BMI distributions of the set D and, once generated, grows the individual's BMI in a way that is also determined by the set D . It is possible to implement equation 7 as a suitably fast algorithm.

Micro simulation: Birth, disease and death models.

Simulated people are generated with the correct demographic statistics in the simulation's start-year. In this year women are stochastically allocated the number and years of birth of their children – these are generated from known fertility and mother's age at birth statistics (valid in the start-year). If a woman has children then those children are generated as members of the simulation in the appropriate birth year.

In the course of their lives, simulated people can die from one of the BMI related diseases that they might have acquired or from some other cause. The probabilities that a person of a given age and gender dies from a cause other than a BMI related disease are calculated in terms of known death and disease statistics valid in the start-year and are held constant over the course of the simulation. The death rates from BMI related diseases will change as a consequence of the population's changing BMI distribution.

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Appendix 3. Table of disease reference for each country

Country	Disease	Incidence	Prevalence	Mortality	Survival
Albania	Diabetes	Converted from prevalence	Shapo et al, 2004	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Czech Republic proxy
	Stroke	Hungary proxy		WHO, 2008	Estonia proxy
	Hypertension	Shapo et al, 2004	Shapo et al, 2004	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy	
Andorra	Diabetes	Spain proxy		Non-fatal	Non-fatal
	CHD	Spain proxy		Spain proxy	Spain proxy
	Stroke	Spain proxy		Spain proxy	Spain proxy
	Hypertension	Spain proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Spain proxy		Spain proxy	Spain proxy
	Colorectal	Spain proxy		Spain proxy	Spain proxy
	Corpus uteri	Spain proxy		Spain proxy	Spain proxy
	Kidney	Spain proxy		Spain proxy	Spain proxy
	Liver	Spain proxy		Spain proxy	Spain proxy
	Oesophagus	Spain proxy		Spain proxy	Spain proxy
Pancreas	Spain proxy		Spain proxy	Spain proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Armenia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Georgia proxy		WHO, 2008	Georgia proxy
	Stroke	Georgia proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2005	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008		Globocan, 2008	Belarus proxy	
Austria	Diabetes	Converted from prevalence	Statistics Austria, 2007	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Statistics Austria, 2007	WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence	Statistics Austria, 2007	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Azerbaijan	Diabetes	Converted from prevalence	DHS, 2006	Non-fatal	Non-fatal
	CHD	Georgia proxy		WHO, 2008	Georgia proxy
	Stroke	Aliyev, 2008		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2006	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008		Globocan, 2008	Belarus proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Belarus	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Russia proxy		WHO, 2008	Russia proxy
	Stroke	Kulesh et al, 2010		WHO, 2008	Kulesh et al, 2010
	Hypertension	Converted from prevalence	Balashenko NS, 2011	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Colorectal	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Corpus uteri	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Kidney	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Liver	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
	Oesophagus	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005
Pancreas	Globocan, 2008		Globocan, 2008	Zalutsky et al, 2005	
Belgium	Diabetes	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Institute of Public Health, 2008	WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006	Institute of Public Health, 2008	WHO 2008	UK proxy
	Hypertension	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Institute of Public Health, 2008	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Bosnia and Herzegovina	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Czech proxy
	Stroke	Converted from prevalence	Vasilj et al, 2006	WHO, 2008	Smajlovic at al, 2006
	Hypertension	Converted from prevalence	Pilav, 2006	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Bulgaria	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO, 2008	Non-fatal Czech proxy
	CHD	UK proxy			
	Stroke	Powles et al, 2002			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			
Croatia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO, 2008	Non-fatal Czech proxy
	CHD	UK proxy			
	Stroke	Hungary proxy			
	Hypertension	Uhernick et al, 2009			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			
Cyprus	Diabetes	Converted from prevalence	Cystat, 2008	Non-fatal WHO 2008	Non-fatal Euroheart, 2008
	CHD	Cystat, 2008			
	Stroke	Truelsen et al, 2006			
	Hypertension	Converted from prevalence	Cystat, 2008	Non-fatal WHO 2008	Non-fatal UK proxy
	Osteoarthritis	Converted from prevalence			
	Cancers				
	Breast	Globocan, 2008	Cystat, 2008	Non-fatal WHO 2008	Non-fatal France proxy
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
	Pancreas	Globocan, 2008			

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Czech Republic	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Denmark	Diabetes	Steno 2010	National Health Survey 2010	Non-fatal	Non-fatal
	CHD	Converted from prevalence		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	EU Chronic Disease Report, 2007
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Colorectal	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Corpus uteri	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Kidney	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Estonia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Vibo et al, 2007
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Gondos et al, 2008	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Finland	Diabetes	Finnish Health Survey, 2011	Finnish Health Survey, 2000	Non-fatal	Non-fatal
	CHD	THL/KTL database, 2009		WHO 2008	THL database 2008
	Stroke	Truelsen et al, 2006		WHO 2008	THL database 2008
	Hypertension	Finnish Health Survey, 2011		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
France	Diabetes	Personal comm. INVS, 2006	Personal comm. Entred, 2009	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Radi et al, 2004		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Pancreas	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
Georgia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Iskadze et al, 2011		WHO, 2008	NCDC, 2009
	Stroke	Tsiskaridze et al, 2000-2003	Personal communication B. Roberts	WHO, 2008	Tsiskaridze et al
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	NCDC, 2010
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Belarus proxy
Pancreas	Globocan, 2008	Globocan, 2008	Belarus proxy		

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Germany	Diabetes	Wilke et al 2012 (2008)		Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Greece	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	France proxy
	Colorectal	Globocan, 2008		Globocan, 2008	France proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	France proxy
	Kidney	Globocan, 2008		Globocan, 2008	France proxy
	Liver	Globocan, 2008		Globocan, 2008	France proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	France proxy
	Pancreas	Globocan, 2008		Globocan, 2008	France proxy
Hungary	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
	Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy

Country	Disease	Incidence	Prevalence	Mortality	Survival
Iceland	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Euroheart, 2012
	Stroke	Truelsen et al, 2006		WHO, 2008	Euroheart, 2012
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Ingvarsson et al, 1999	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Ireland	Diabetes	Converted from prevalence	Personal comm. L. Keaver	Non-fatal	Non-fatal
	CHD	Personal comm. L. Keaver		WHO 2008	Personal comm. L. Keaver
	Stroke	Truelsen et al, 2006		WHO 2008	Personal comm. L. Keaver
	Hypertension	Converted from prevalence	Personal comm. L. Keaver	Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Personal comm. L. Keaver	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009
	Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Italy	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	EU chronic disease report, 2007
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Pancreas	Globocan, 2008		Globocan, 2008	Gondos et al, 2008

Country	Disease	Incidence	Prevalence	Mortality	Survival
Israel	Diabetes	Converted from prevalence	Pers. communication N. Goldberger	Non-fatal	Non-fatal
	CHD	Kark et al, 2005		Kark et al, 2005	Ehnheart, 2009
	Stroke	Converted from prevalence	Pers. communication N. Goldberger	WHO, 2008	Ehnheart, 2009
	Hypertension	Converted from prevalence	Pers. communication N. Goldberger	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
	Oesophagus	Globocan, 2008		Globocan, 2008	
Pancreas	Globocan, 2008		Globocan, 2008	Rozen et al, 2009	
Kazakhstan	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	Personal communication B. Roberts	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
	Oesophagus	Globocan, 2008		Globocan, 2008	
Pancreas	Globocan, 2008		Globocan, 2008		
Kyrgyzstan	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	Young et al, 2005	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	
	Colorectal	Globocan, 2008		Globocan, 2008	
	Corpus uteri	Globocan, 2008		Globocan, 2008	
	Kidney	Globocan, 2008		Globocan, 2008	
	Liver	Globocan, 2008		Globocan, 2008	
	Oesophagus	Globocan, 2008		Globocan, 2008	
Pancreas	Globocan, 2008		Globocan, 2008		

Country	Disease	Incidence	Prevalence	Mortality	Survival
Latvia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy
Pancreas	Globocan, 2008	Globocan, 2008	Poland proxy		
Lithuania	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	EU chronic disease report
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Luxembourg	Diabetes	Converted from prevalence	Alkerwi et al, 2010	Non-fatal	Non-fatal
	CHD	UK proxy	Alkerwi et al, 2010	WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	France proxy
	Colorectal	Globocan, 2008		Globocan, 2008	France proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	France proxy
	Kidney	Globocan, 2008		Globocan, 2008	France proxy
	Liver	Globocan, 2008		Globocan, 2008	France proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	France proxy
Pancreas	Globocan, 2008	Globocan, 2008		France proxy	

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Country	Disease	Incidence	Prevalence	Mortality	Survival	
Malta	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal	
	CHD	UK proxy		WHO 2008	UK proxy	
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy	
	Hypertension	UK proxy		Non-fatal	Non-fatal	
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal	
	Cancers					
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007	
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007	
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007	
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007	
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Oesophagus	Globocan, 2008	Globocan, 2008	Sant et al, 2009			
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
Monaco	Diabetes	France proxy		Non-fatal	Non-fatal	
	CHD	UK proxy		WHO, 2008	France proxy	
	Stroke	France proxy		WHO, 2008	France proxy	
	Hypertension	France proxy		Non-fatal	Non-fatal	
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal	
	Cancers					
	Breast	France proxy		France proxy	France proxy	
	Colorectal	France proxy		France proxy	France proxy	
	Corpus uteri	France proxy		France proxy	France proxy	
	Kidney	France proxy		France proxy	France proxy	
	Liver	France proxy		France proxy	France proxy	
Oesophagus	France proxy	France proxy	France proxy			
Pancreas	France proxy	France proxy	France proxy	France proxy		
Montenegro	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal	
	CHD	UK proxy		WHO, 2008	Czech proxy	
	Stroke	Hungary proxy		WHO, 2008	Estonia proxy	
	Hypertension	UK proxy		Non-fatal	Non-fatal	
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal	
	Cancers					
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy	
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy	
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy	
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy	
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy	
Oesophagus	Globocan, 2008	Globocan, 2008	Poland proxy			
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Poland proxy		

Country	Disease	Incidence	Prevalence	Mortality	Survival
Netherlands	Diabetes	Ubink-Veltmaat et al, 2003	Ubink-Veltmaat et al, 2003 (2000)	Non-fatal	Non-fatal
	CHD	Netherlands Morbidity Stats (2007)		WHO 2008	UK proxy
	Stroke	Truelsen et al, 2006	Netherlands Morbidity Statistics Netherlands Morbidity Statistics, 2011 (2007)	WHO 2008	UK proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008	Globocan, 2008	Sant et al, 2009		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Sant et al, 2009	
Norway	Diabetes	Converted from prevalence	Langhammer et al, 2012	Non-fatal	Non-fatal
	CHD	Mannsverk et al, 2011		WHO, 2008	Euroheart, 2012
	Stroke	Truelsen et al, 2006	Langhammer et al, 2012 Langhammer et al, 2012	WHO, 2008	Euroheart, 2012
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Poland	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	UK proxy
	Stroke	Wawrzyńczyk et al, 2011		WHO 2008	EU chronic disease report ,2007
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		
Pancreas	Globocan, 2008	Globocan, 2008	Gondos et al, 2008		

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Portugal	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal	Non-fatal UK proxy UK proxy Non-fatal Non-fatal
	CHD	UK proxy			
	Stroke	Truelsen et al, 2006			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				
Republic of Moldova	Diabetes	Converted from prevalence	Ezzati, 2008 Ukraine proxy Personal communication B. Roberts	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal	Non-fatal UK proxy Ukraine proxy Non-fatal Non-fatal
	CHD	Converted from prevalence			
	Stroke	Ukraine proxy			
	Hypertension	Converted from prevalence			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				
Romania	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal	Non-fatal Czech proxy Estonia proxy Non-fatal Non-fatal
	CHD	UK proxy			
	Stroke	Hungary proxy			
	Hypertension	UK proxy			
	Osteoarthritis	UK proxy			
	Cancers				
	Breast	Globocan, 2008			
	Colorectal	Globocan, 2008			
	Corpus uteri	Globocan, 2008			
	Kidney	Globocan, 2008			
	Liver	Globocan, 2008			
	Oesophagus	Globocan, 2008			
Pancreas	Globocan, 2008				

Country	Disease	Incidence	Prevalence	Mortality	Survival		
Russian Federation	Diabetes	Converted from prevalence	Shishkin NS et al, 2005	Non-fatal Boytsov SA, 2010 WHO, 2008	Non-fatal Tunstall-Pedoe et al, 1999 Feigin et al, 1995		
	CHD	Boytsov SA et al, 2010					
	Stroke	Feigin et al, 1995	Federal State Institute statistics, 2005	Non-fatal Non-fatal	Non-fatal Non-fatal		
	Hypertension	Converted from prevalence					
	Osteoarthritis	www.mednet.ru					
	Cancers						
	Breast	www.oncology.ru/service/statistics				www.oncology.ru	www.mednet.ru
	Colorectal	www.oncology.ru/service/statistics				www.oncology.ru	www.mednet.ru
	Corpus uteri	www.oncology.ru/service/statistics				www.oncology.ru	info.cancerresearchuk.org
	Kidney	www.oncology.ru/service/statistics				www.oncology.ru	info.cancerresearchuk.org
	Liver	www.oncology.ru/service/statistics				www.oncology.ru	info.cancerresearchuk.org
Oesophagus	www.oncology.ru/service/statistics	www.oncology.ru	www.mednet.ru				
Pancreas	www.oncology.ru/service/statistics	www.oncology.ru	info.cancerresearchuk.org				
San Marino	Diabetes	Italy proxy		Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal	Non-fatal Italy proxy Italy proxy Non-fatal Non-fatal		
	CHD	UK proxy					
	Stroke	Italy proxy					
	Hypertension	UK proxy					
	Osteoarthritis	UK proxy					
	Cancers						
	Breast	Personal comm. with Dr F. Masi				Personal comm.	Personal comm.
	Colorectal	Personal comm. with Dr F. Masi				Personal comm.	Personal comm.
	Corpus uteri	Personal comm. with Dr F. Masi				Personal comm.	Italy proxy
	Kidney	Personal comm. with Dr F. Masi				Personal comm.	Italy proxy
	Liver	Personal comm. with Dr F. Masi				Personal comm.	Italy proxy
Oesophagus	Personal comm. with Dr F. Masi	Personal comm.	Italy proxy				
Pancreas	Personal comm. with Dr F. Masi	Personal comm.	Personal comm.				
Serbia	Diabetes	Serbian diabetes registry, 2010		Non-fatal ACS registry, 2010 WHO, 2008 Non-fatal Non-fatal	Non-fatal Czech proxy Estonia proxy Non-fatal Non-fatal		
	CHD	Acute coronary syndrome registry, 2010					
	Stroke	Hungary proxy					
	Hypertension	UK proxy					
	Osteoarthritis	UK proxy					
	Cancers						
	Breast	Globocan, 2008				Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008				Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008				Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008				Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008				Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008	Globocan, 2008	Poland proxy				
Pancreas	Globocan, 2008	Globocan, 2008	Poland proxy				

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Country	Disease	Incidence	Prevalence	Mortality	Survival
Slovakia	Diabetes	Preliminary 2011 data personal communication		Non-fatal	Non-fatal
	CHD	Preliminary 2011 data (IHD), personal communication		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	Preliminary 2011 data personal communication		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Sant et al, 2003
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008		Globocan, 2008	Poland proxy	
Pancreas	Globocan, 2008		Globocan, 2008	Poland proxy	
Slovenia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO 2008	Czech proxy
	Stroke	Truelsen et al, 2006		WHO 2008	Estonia proxy
	Hypertension	UK proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Colorectal	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Corpus uteri	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Kidney	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
	Liver	Globocan, 2008		Globocan, 2008	Gondos et al, 2008
Oesophagus	Globocan, 2008		Globocan, 2008	Gondos et al, 2008	
Pancreas	Globocan, 2008		Globocan, 2008	Gondos et al, 2008	
Spain	Diabetes	Converted from prevalence	Encuesta Europea de Salud en Espana, 2009	Non-fatal	Non-fatal
	CHD	Encuesta Europea de Salud en Espana		WHO 2008	Euroheart, 2008
	Stroke	Truelsen et al, 2006		WHO 2008	UK proxy
	Hypertension	Converted from prevalence	Encuesta Europea de Salud en Espana, 2009	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Colorectal	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Corpus uteri	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Kidney	Globocan, 2008		Globocan, 2008	Verdecchia et al, 2007
	Liver	Globocan, 2008		Globocan, 2008	Sant et al, 2009
Oesophagus	Globocan, 2008		Globocan, 2008	Sant et al, 2009	
Pancreas	Globocan, 2008		Globocan, 2008	Sant et al, 2009	

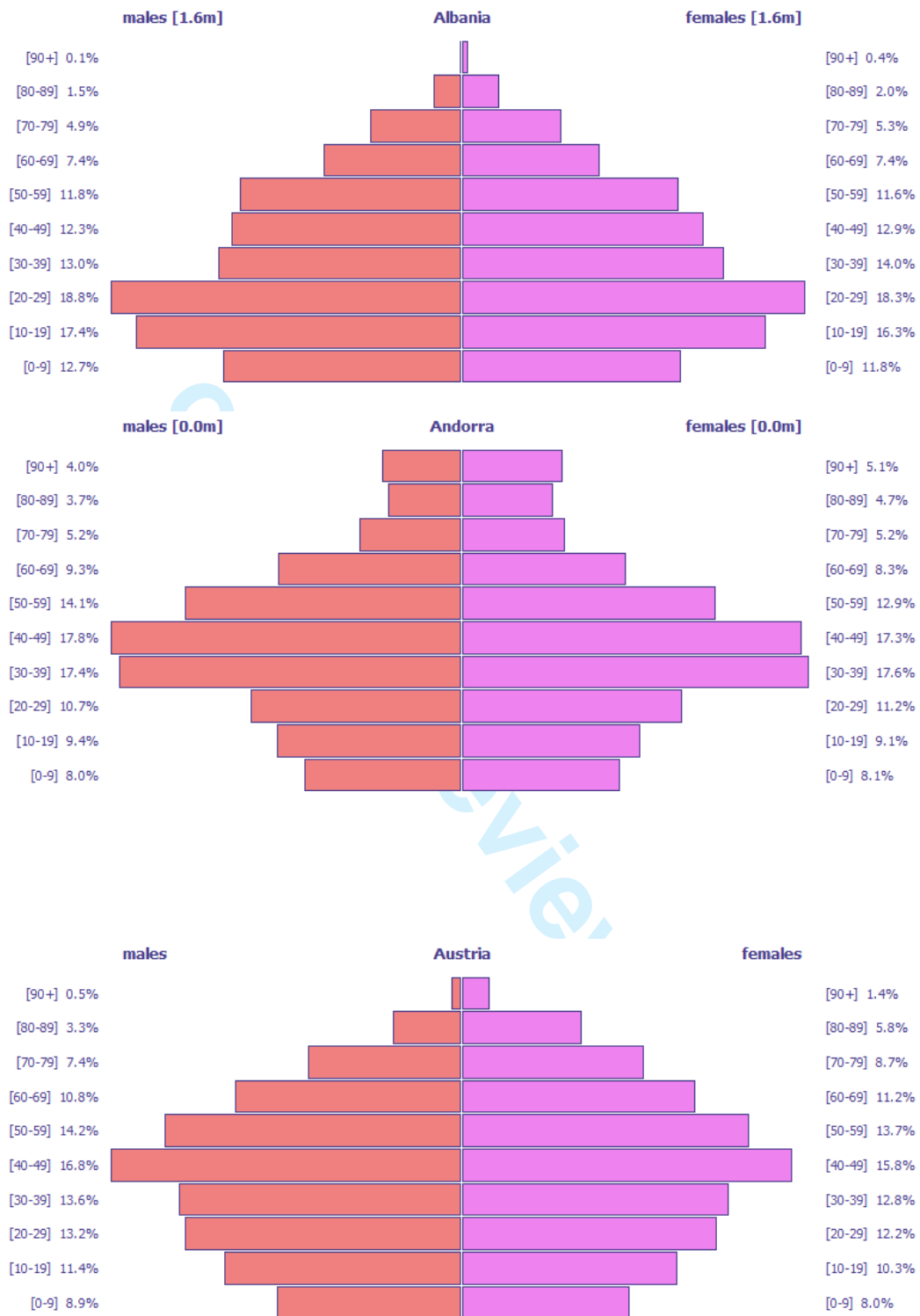
Country	Disease	Incidence	Prevalence	Mortality	Survival
Sweden	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Thunander et al, 2008 Statistics Sweden, 2010 Truelsen et al, 2006 Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Statistics Sweden, 2010	Non-fatal WHO 2008 WHO 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Case fatality 2010 EU chronic disease report 2007 Non-fatal Non-fatal Verdecchia et al, 2007 Verdecchia et al, 2007 Verdecchia et al, 2007 Verdecchia et al, 2007 Sant et al, 2009 Sant et al, 2009 Sant et al, 2009
Switzerland	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Converted from prevalence UK proxy Truelsen et al, 2006 Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Swiss Federal Statistics Office, 2007 Swiss Federal Statistics Office, 2007	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Euroheart, 2012 Euroheart, 2012 Non-fatal Non-fatal Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008 Gondos et al, 2008
Tajikistan	Diabetes CHD Stroke Hypertension Osteoarthritis Cancers Breast Colorectal Corpus uteri Kidney Liver Oesophagus Pancreas	Converted from prevalence Uzbekistan proxy Azerbaijan proxy Converted from prevalence UK proxy Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Ezzati, 2008 Azerbaijan proxy	Non-fatal WHO, 2008 WHO, 2008 Non-fatal Non-fatal Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008 Globocan, 2008	Non-fatal Georgia proxy Georgia proxy Non-fatal Non-fatal Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy Kazakhstan proxy

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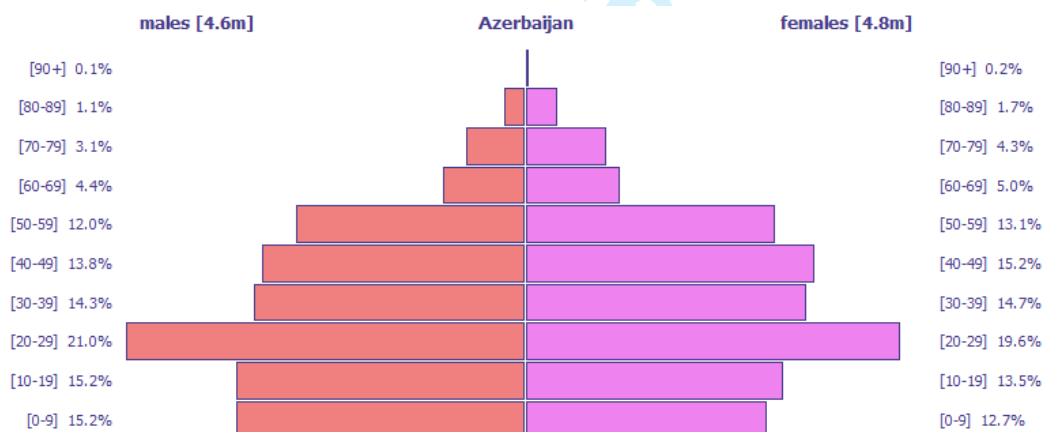
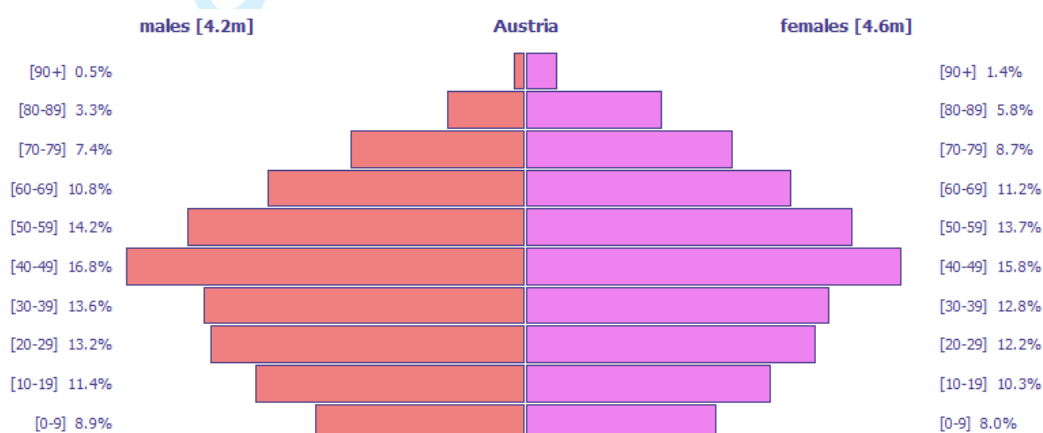
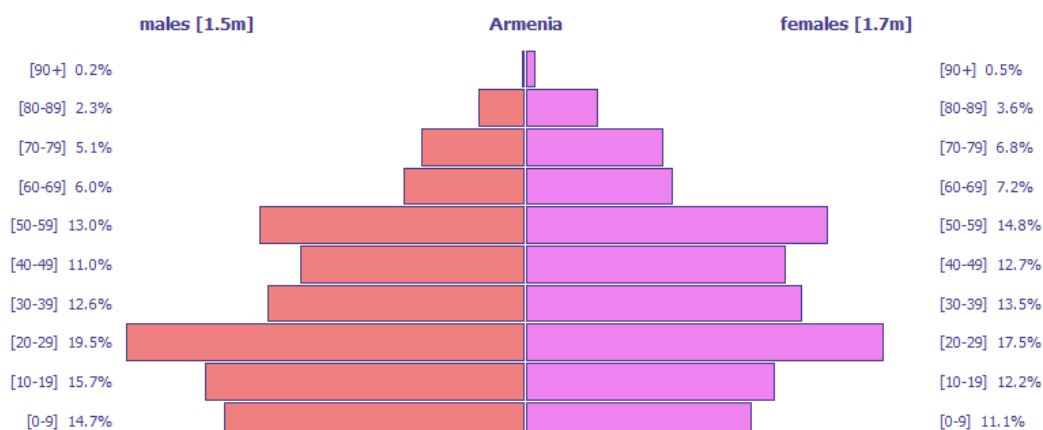
Country	Disease	Incidence	Prevalence	Mortality	Survival
TFYR of Macedonia	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	UK proxy		WHO, 2008	Slovenia proxy
	Stroke	Hungary proxy		WHO, 2008	Slovenia proxy
	Hypertension	Albania proxy		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Slovenia proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Estonia proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Czech proxy
	Kidney	Globocan, 2008		Globocan, 2008	Estonia proxy
	Liver	Globocan, 2008		Globocan, 2008	Lithuania proxy
Oesophagus	Globocan, 2008	Globocan, 2008	Poland proxy		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Poland proxy	
Turkey	Diabetes	Converted from prevalence	Yumuk VD et al, 2005 Onat et al, 1993	Non-fatal	Non-fatal
	CHD	Converted from prevalence		WHO, 2008	Georgia proxy
	Stroke	Greece proxy		WHO, 2008	Kumral et al, 1998
	Hypertension	Arici et al, 2010		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Belarus proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Belarus proxy
	Kidney	Globocan, 2008		Globocan, 2008	Belarus proxy
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
Oesophagus	Globocan, 2008	Globocan, 2008	Belarus proxy		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Belarus proxy	
Turkmenistan	Diabetes	Converted from prevalence	Ezzati, 2008 Azerbaijan proxy	Non-fatal	Non-fatal
	CHD	Uzbekistan proxy		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence		Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Kidney	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Liver	Globocan, 2008		Globocan, 2008	Kyrgyzstan proxy
Oesophagus	Globocan, 2008	Globocan, 2008	Kazakhstan proxy		
Pancreas	Globocan, 2008	Globocan, 2008	Globocan, 2008	Kazakhstan proxy	

Country	Disease	Incidence	Prevalence	Mortality	Survival
Ukraine	Diabetes	Converted from prevalence	Ezzati, 2008	Non-fatal	Non-fatal
	CHD	Converted from prevalence	Gorbas IM, 2009	WHO, 2008	Russia proxy
	Stroke	Mihalka et al, 2001		WHO, 2008	Mihalka et al, 2001
	Hypertension	Converted from prevalence	DHS, 2007	Non-fatal	Non-fatal
	Osteoarthritis	Converted from prevalence	Povorozniuk VV, 2009	Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Korchinskaya A, 2012
	Colorectal	Globocan, 2008		Globocan, 2008	Belarus proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Konanaychin, 2011
	Kidney	Globocan, 2008		Globocan, 2008	Kondratenko, 2009
	Liver	Globocan, 2008		Globocan, 2008	Belarus proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Ganul et al, 2012
Pancreas	Globocan, 2008		Globocan, 2008	Schepotin et al, 2011	
UK	Diabetes	BHF statistics		Non-fatal	Non-fatal
	CHD	EU CVD statistics 2008		BHF statistics	Euroheart, 2008
	Stroke	BHF Stroke statistics, 2009		BHF statistics	BHF statistics
	Hypertension	BHF statistics		Non-fatal	Non-fatal
	Osteoarthritis			Non-fatal	Non-fatal
	Cancers				
	Breast	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Colorectal	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Corpus uteri	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Kidney	UK Cancer Research statistics		UK Cancer Research statistics	Verdecchia et al, 2007
	Liver	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009
	Oesophagus	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009
Pancreas	UK Cancer Research statistics		UK Cancer Research statistics	Sant et al, 2009	
Uzbekistan	Diabetes	Converted from prevalence	Sultanov, 2008	Non-fatal	Non-fatal
	CHD	Mamutov et al, 2012		WHO, 2008	Georgia proxy
	Stroke	Azerbaijan proxy		WHO, 2008	Georgia proxy
	Hypertension	Converted from prevalence	DHS, 2002	Non-fatal	Non-fatal
	Osteoarthritis	UK proxy		Non-fatal	Non-fatal
	Cancers				
	Breast	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Colorectal	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Corpus uteri	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Kidney	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
	Liver	Globocan, 2008		Globocan, 2008	Kyrgyzstan proxy
	Oesophagus	Globocan, 2008		Globocan, 2008	Kazakhstan proxy
Pancreas	Globocan, 2008		Globocan, 2008	Kazakhstan proxy	

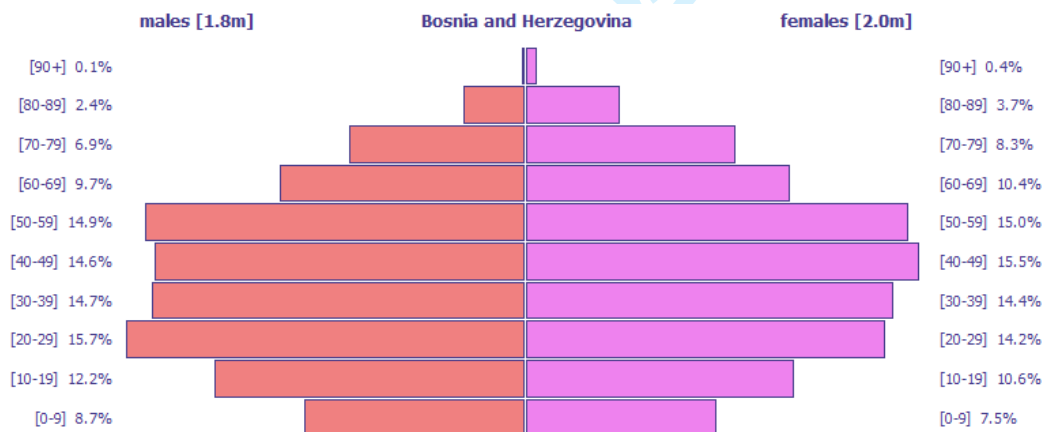
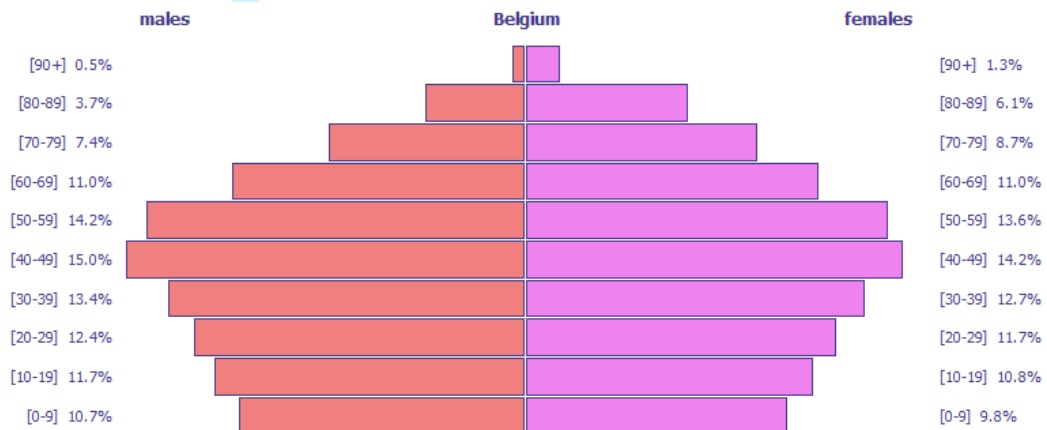
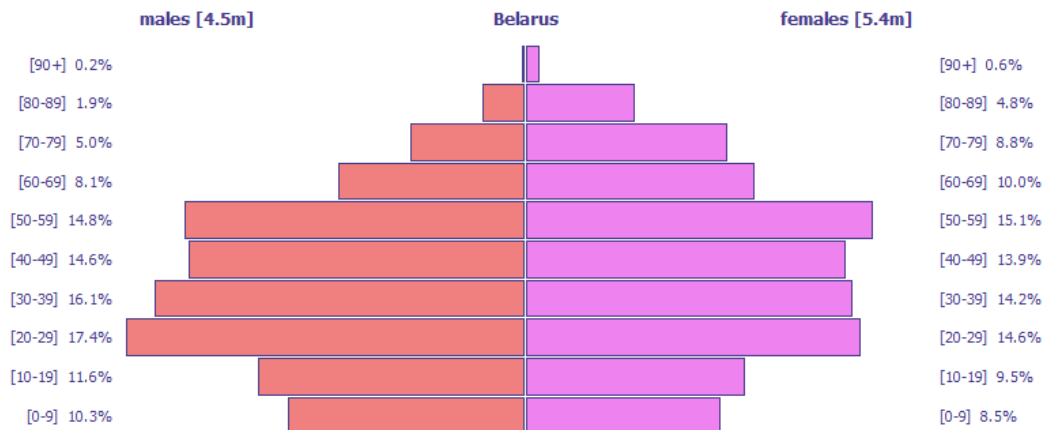
Appendix 4. Population pyramids by country in 2010

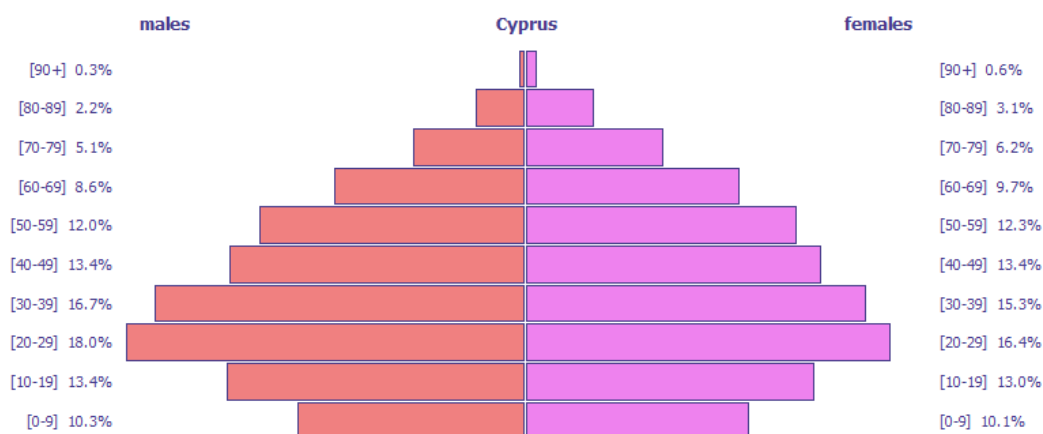
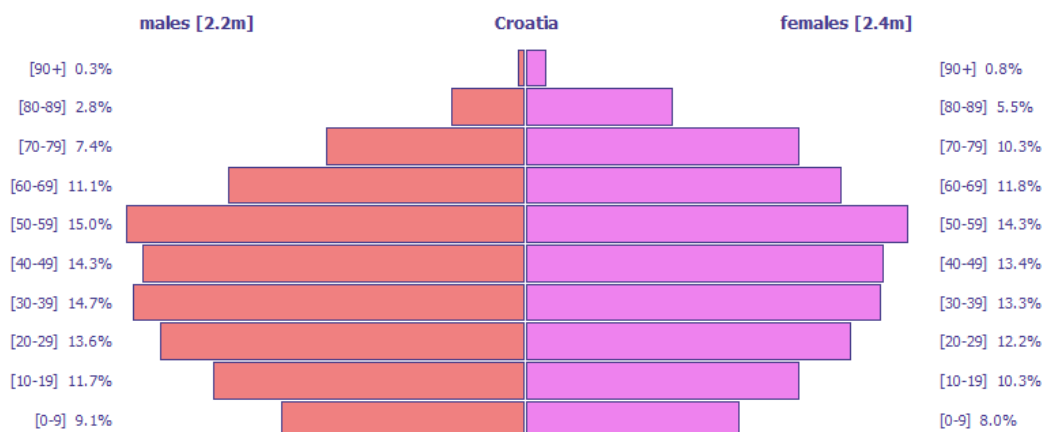
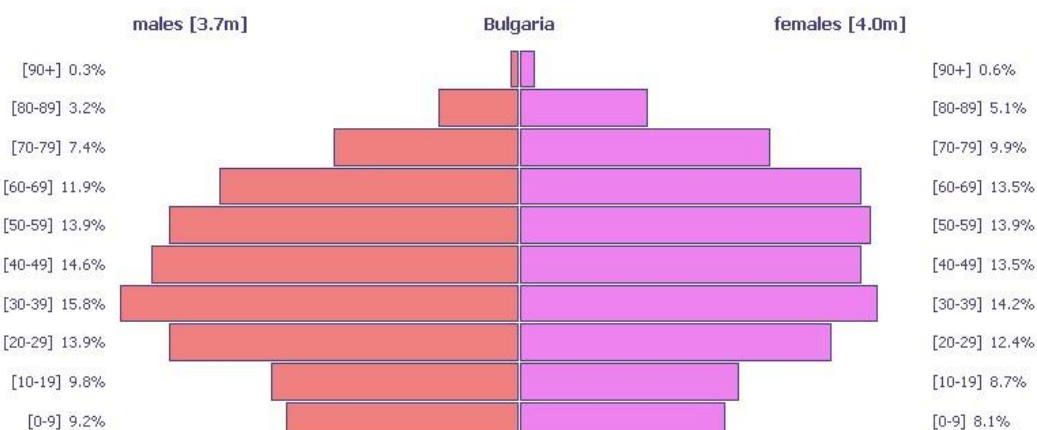


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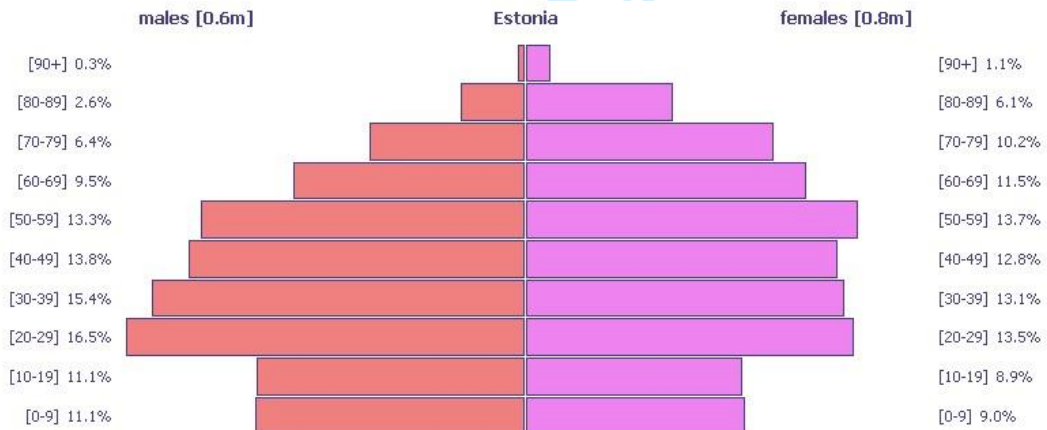
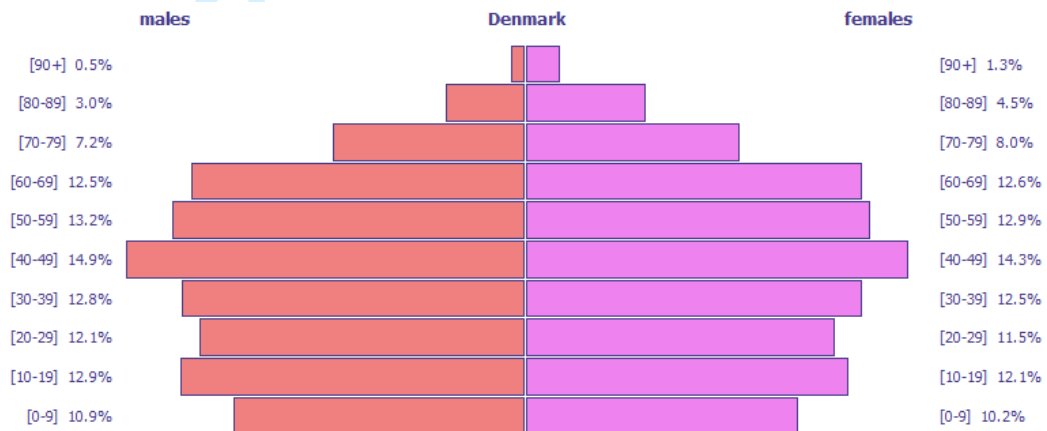
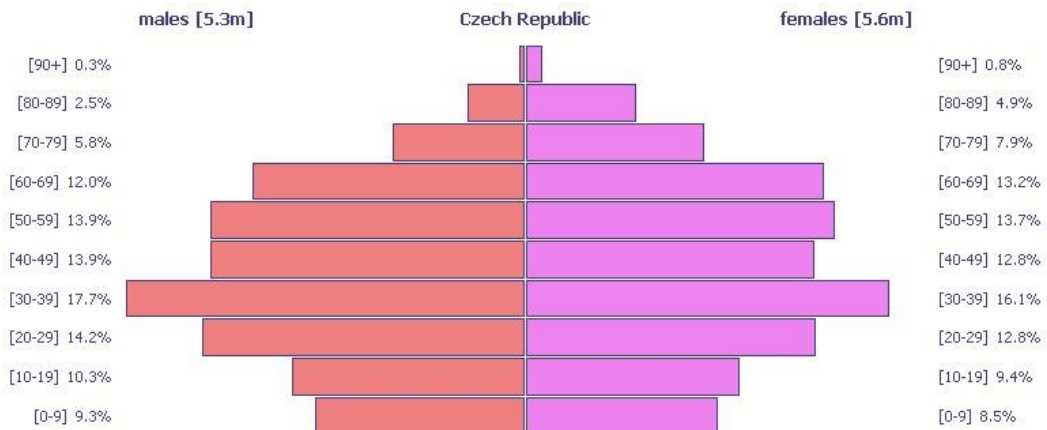
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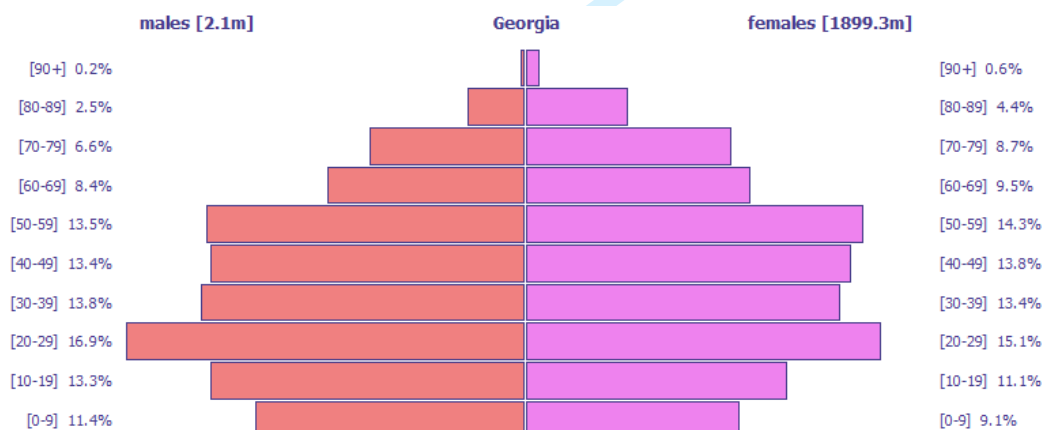
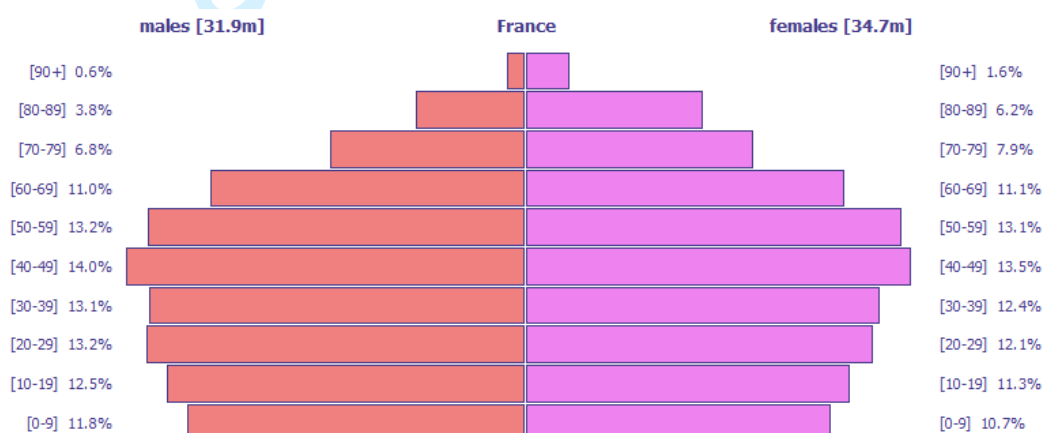
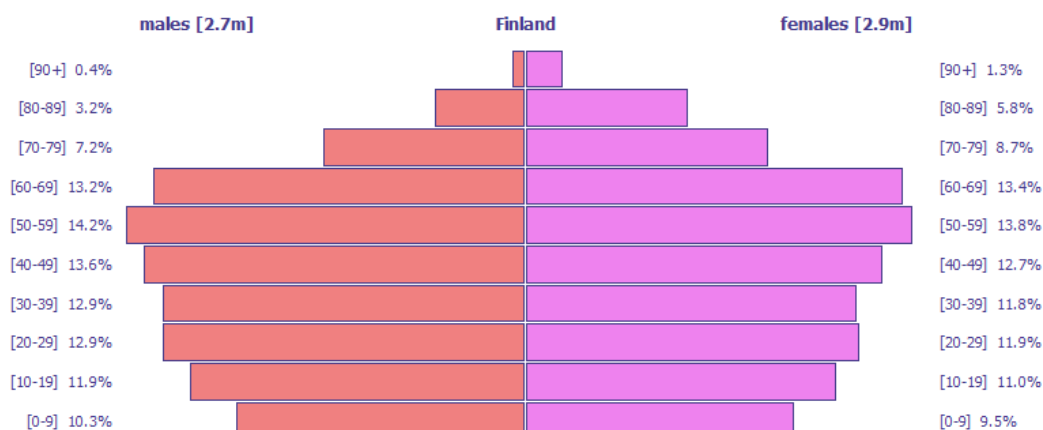


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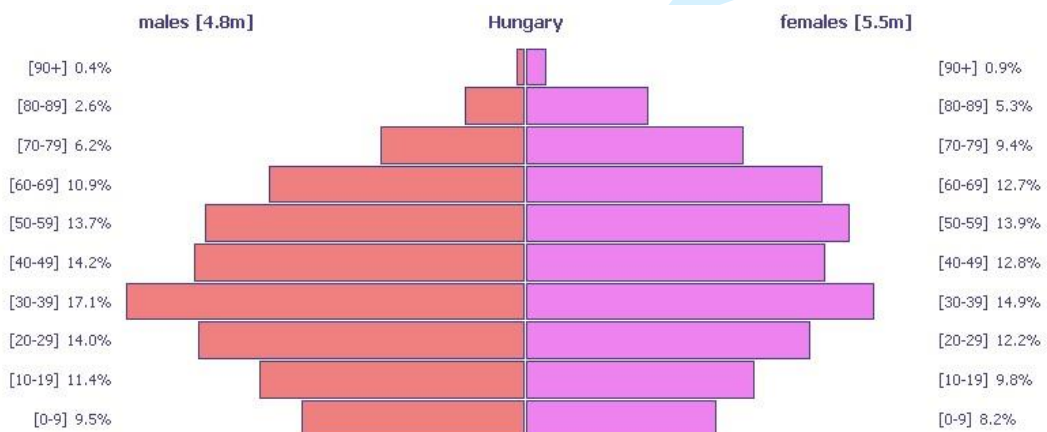
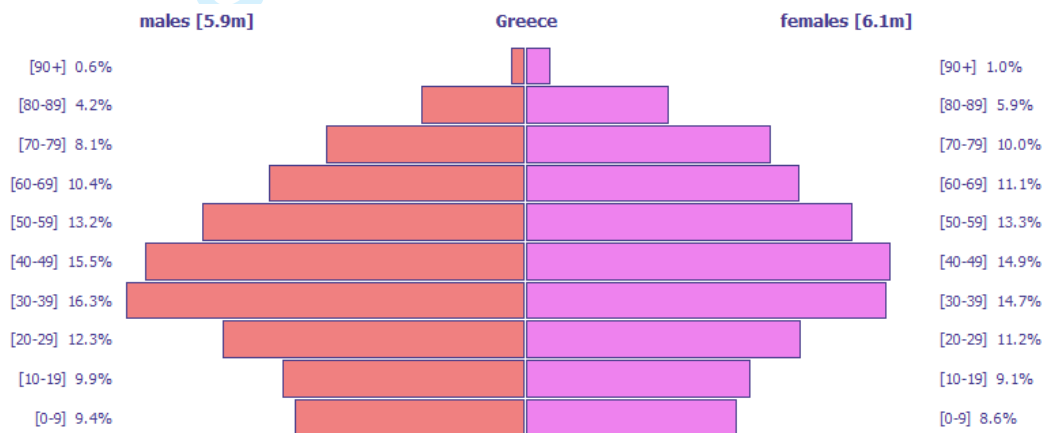
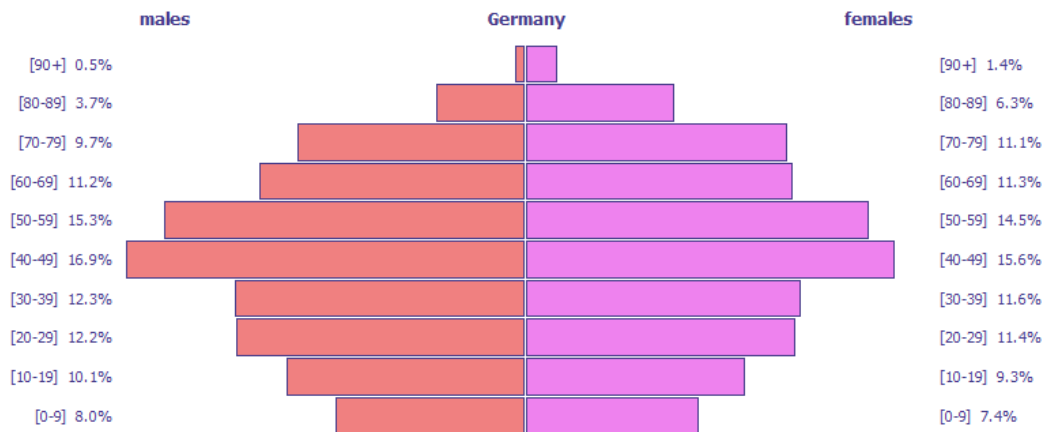
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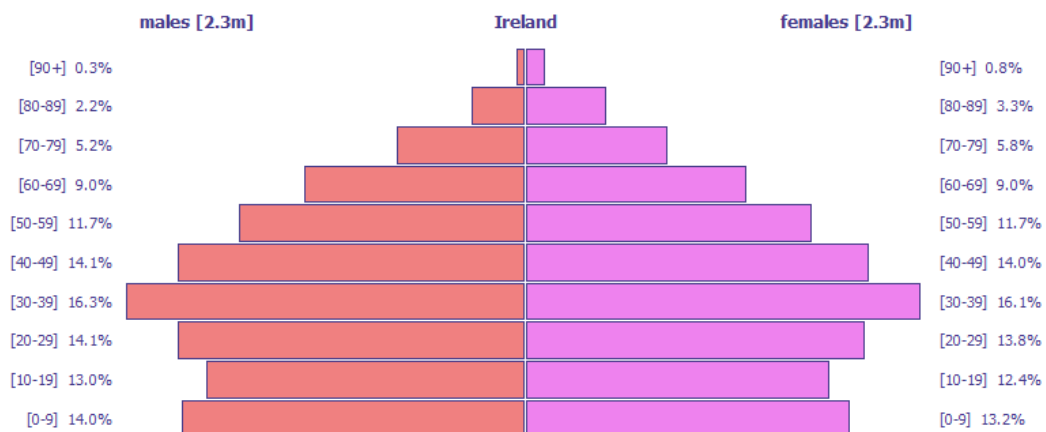
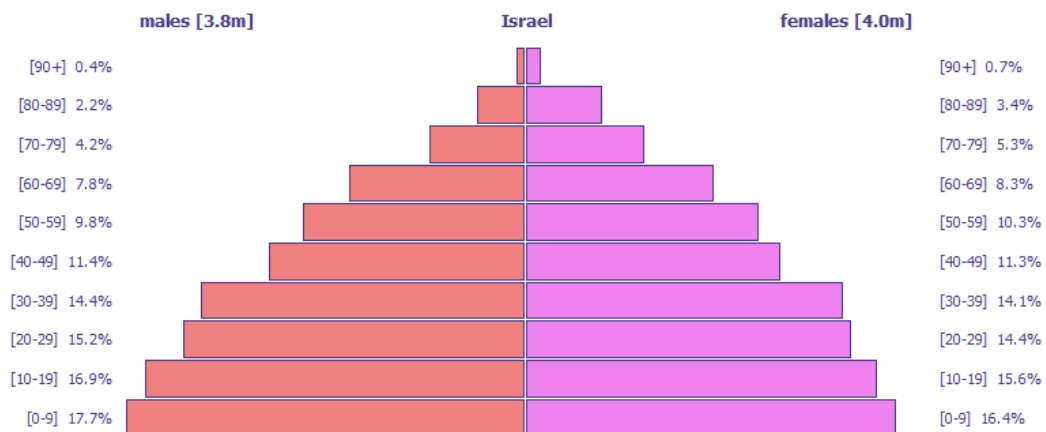
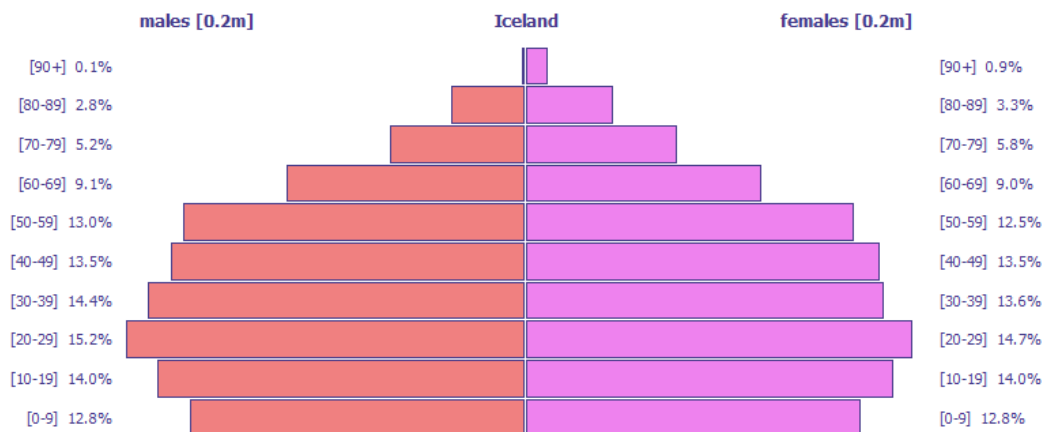
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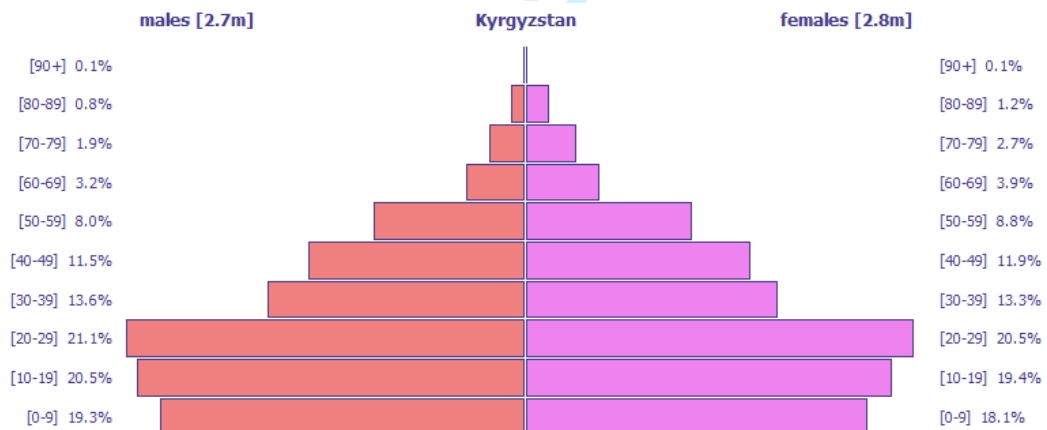
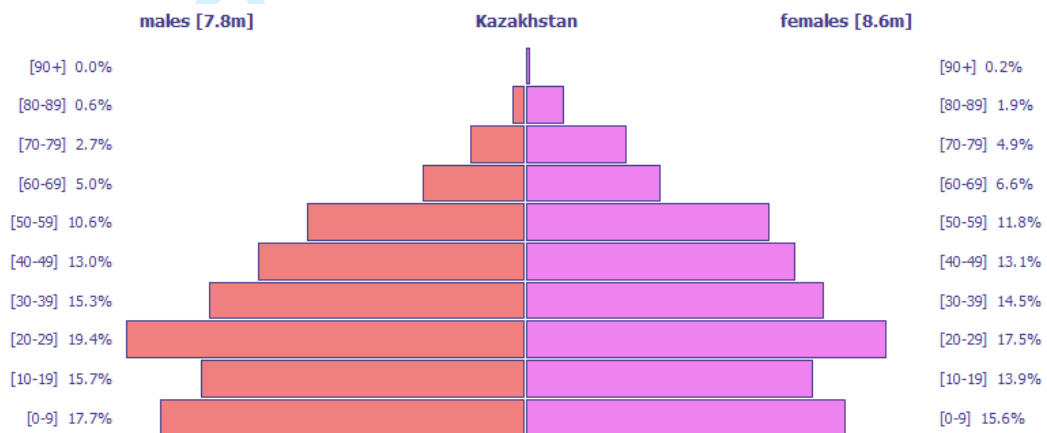
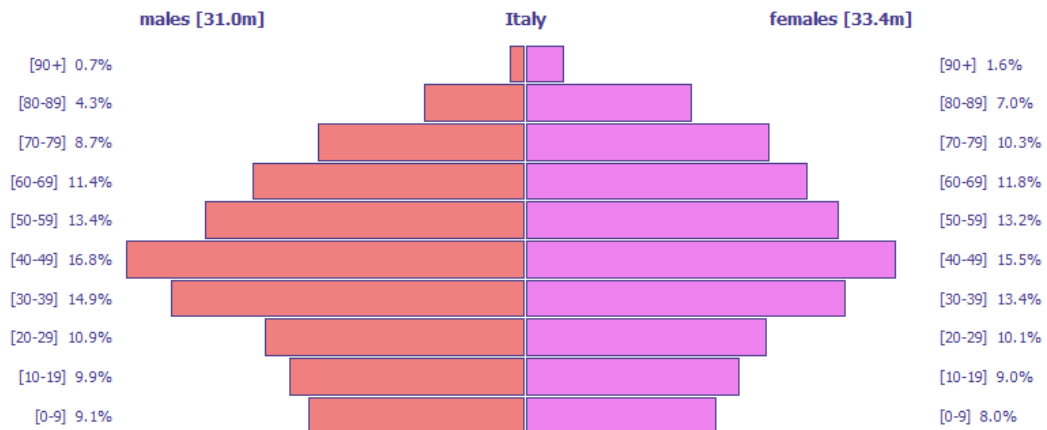
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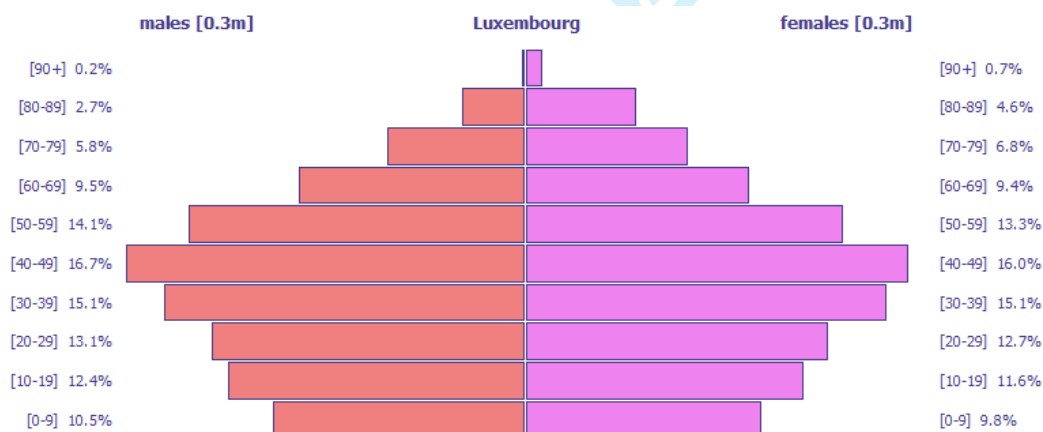
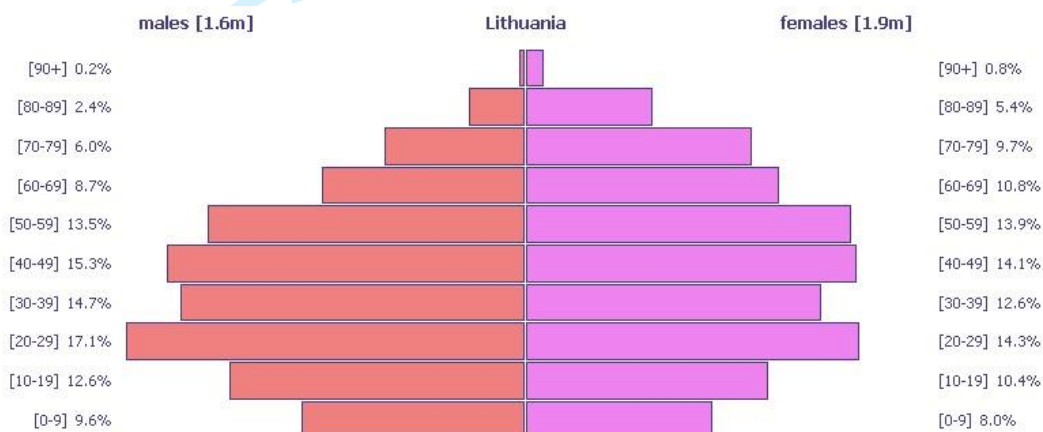
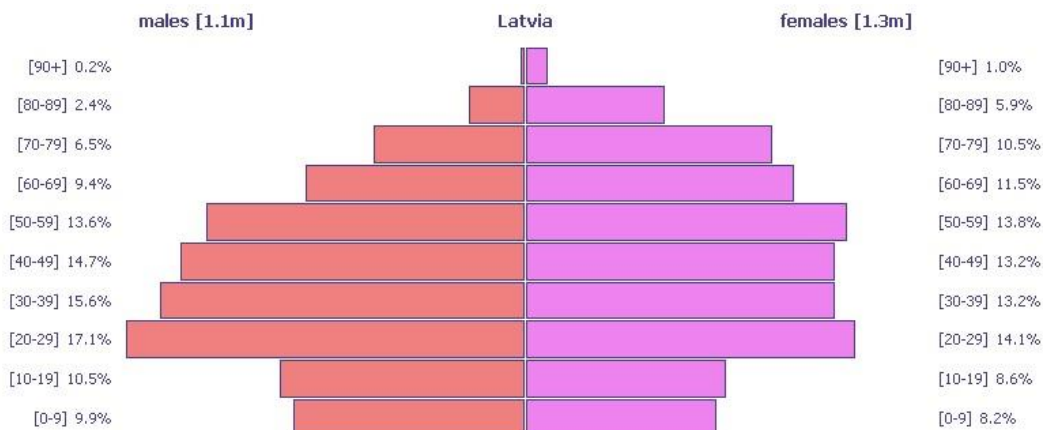
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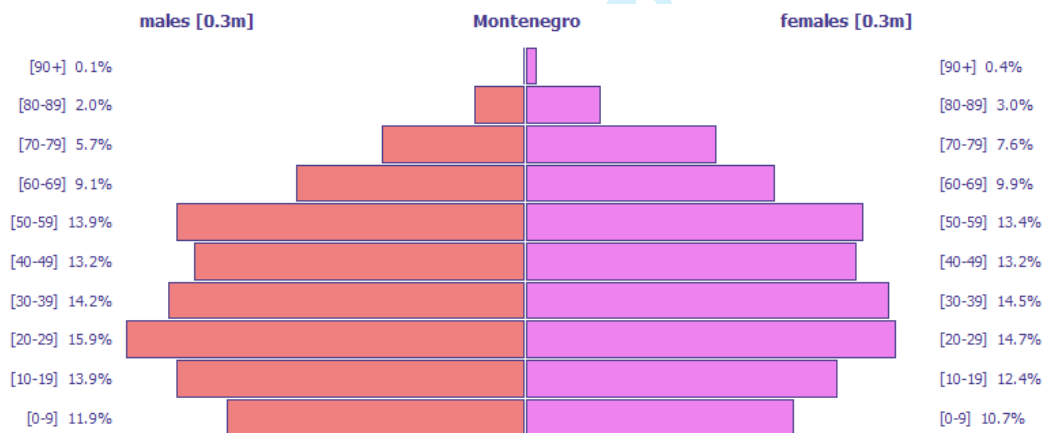
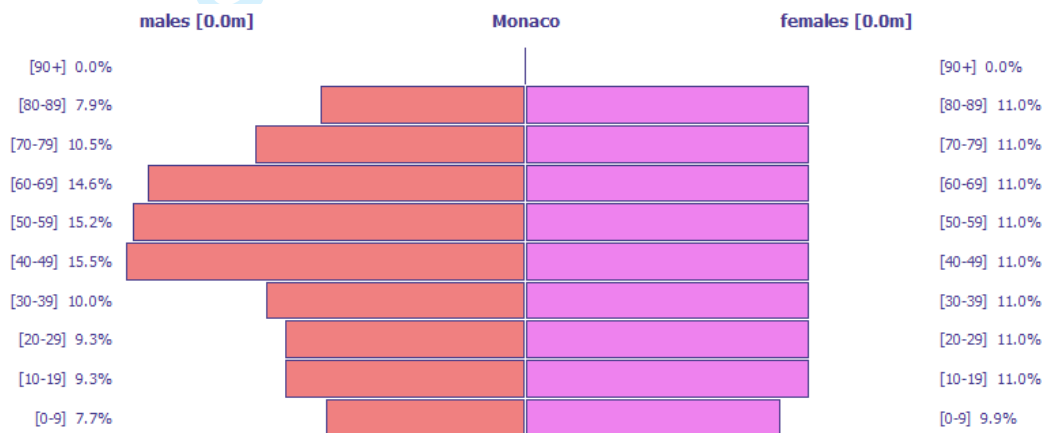
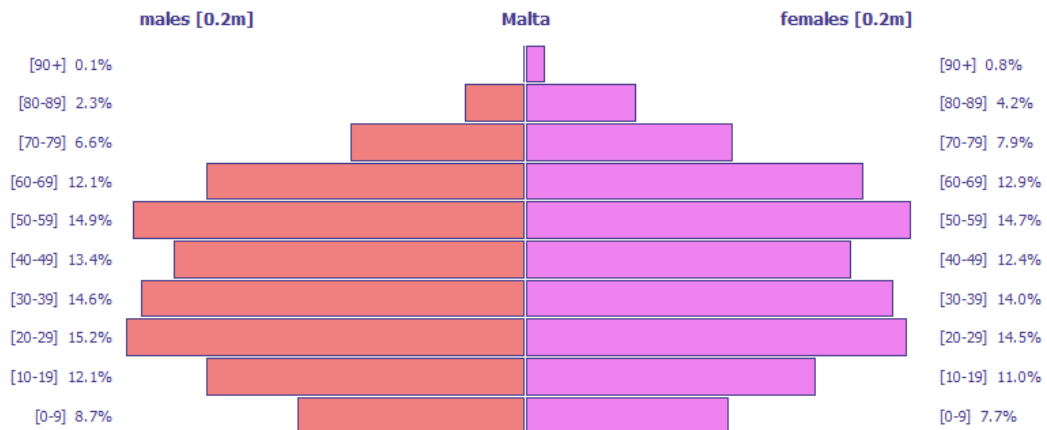
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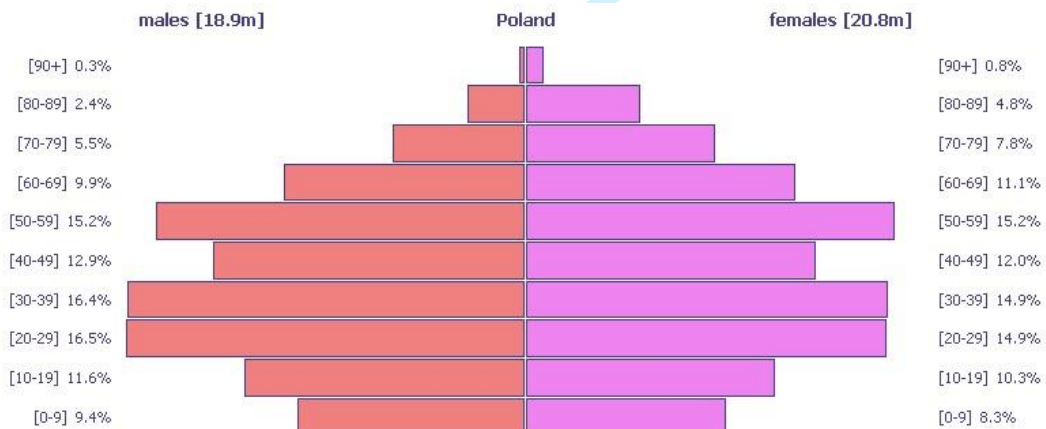
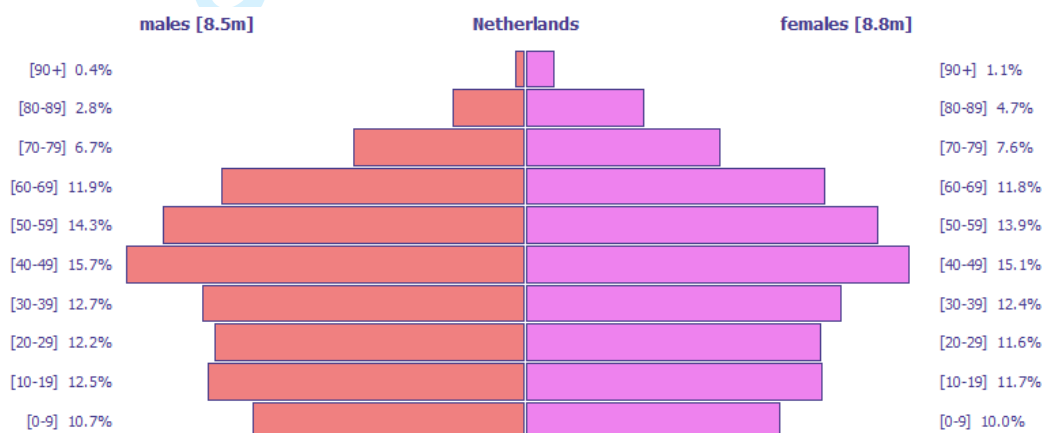
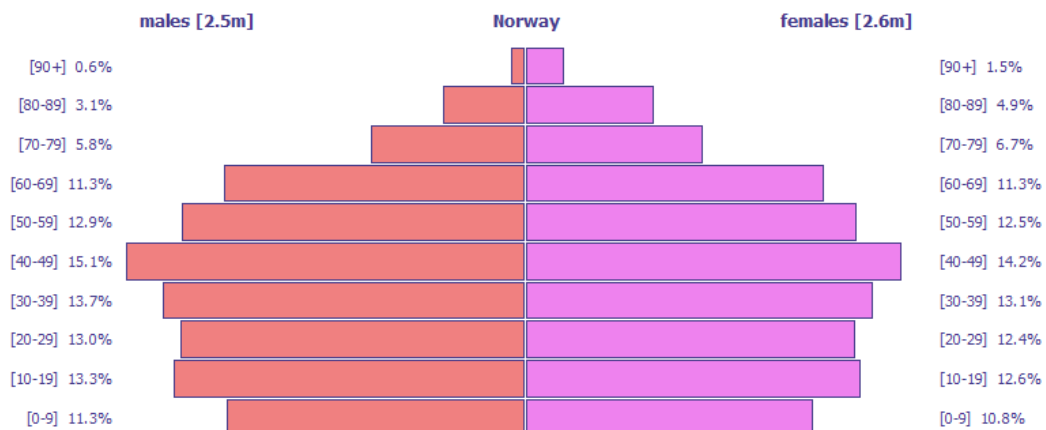
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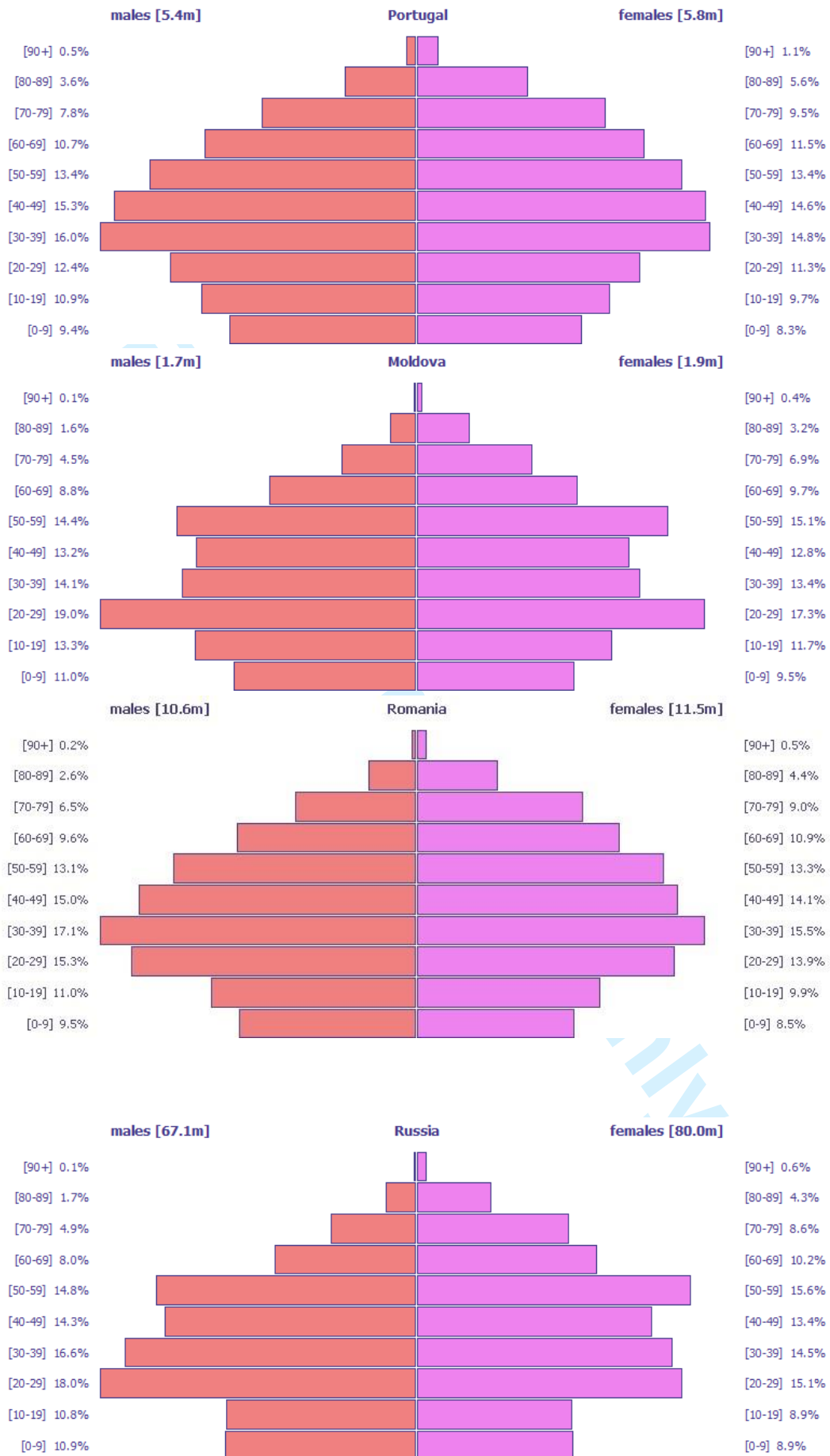
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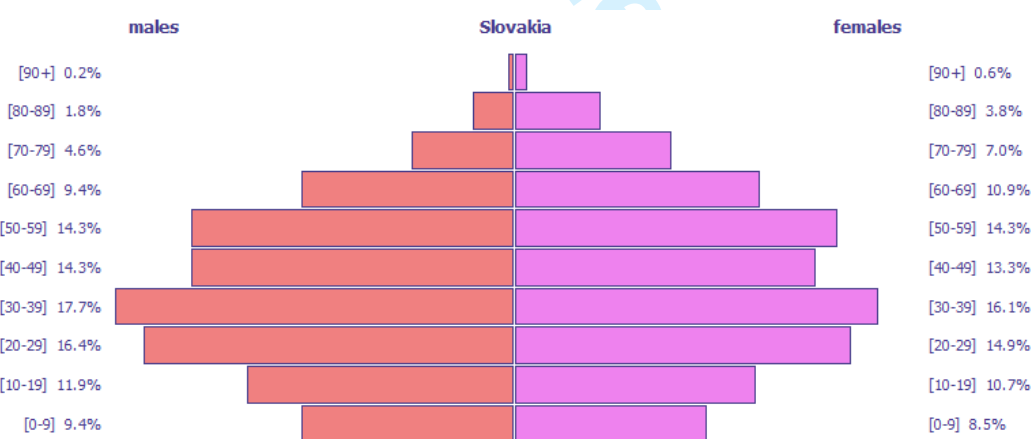
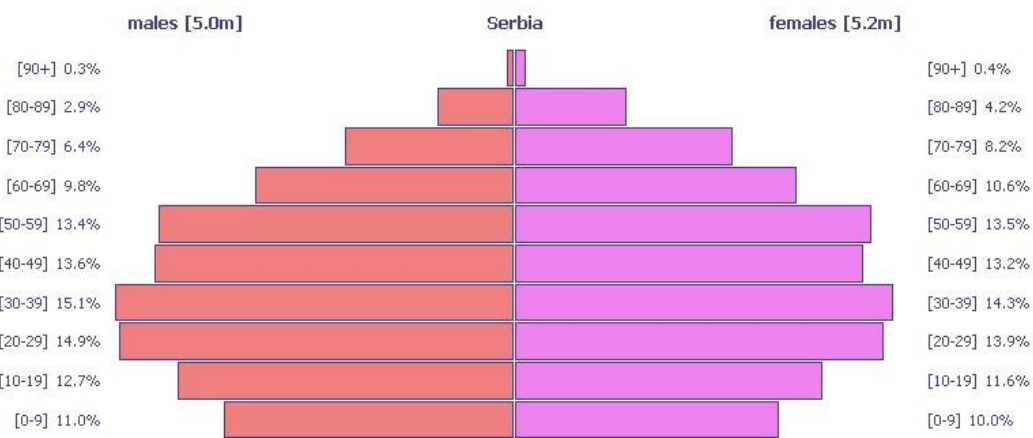
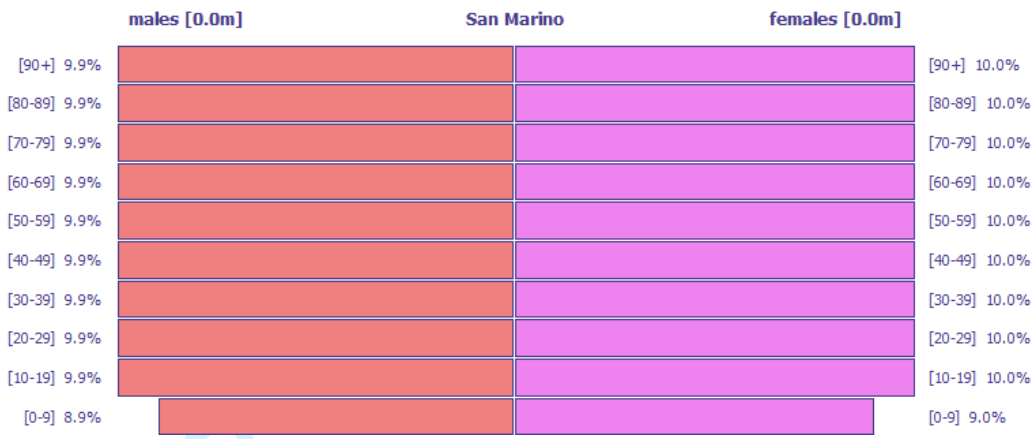
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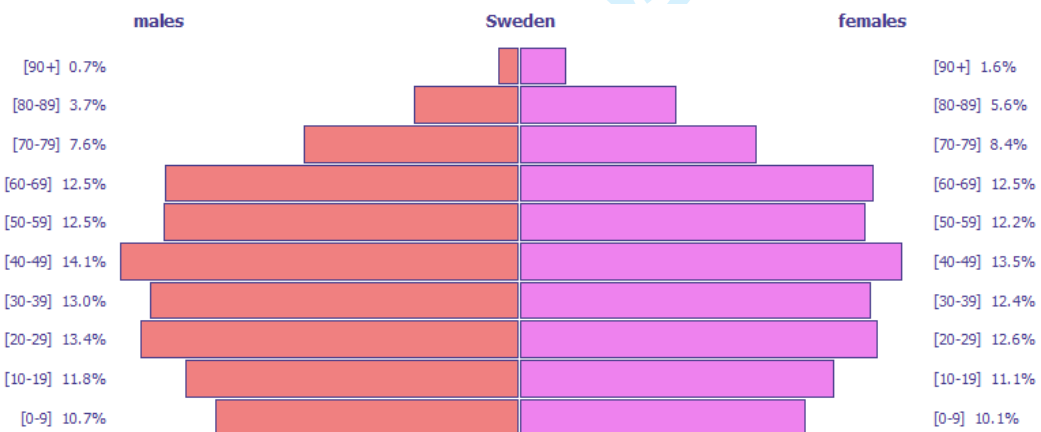
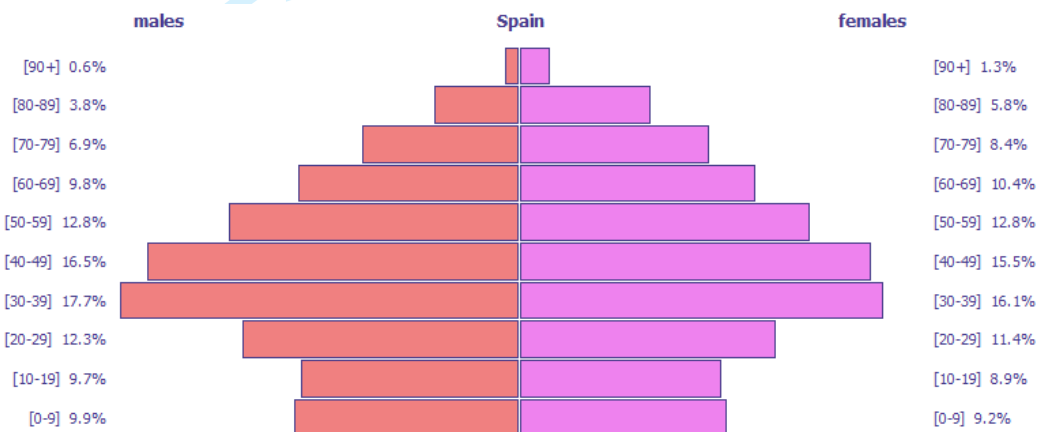
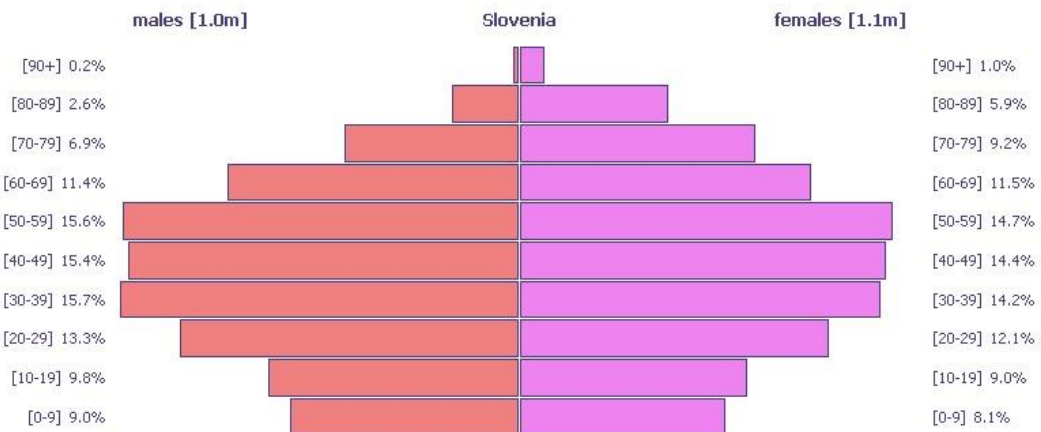
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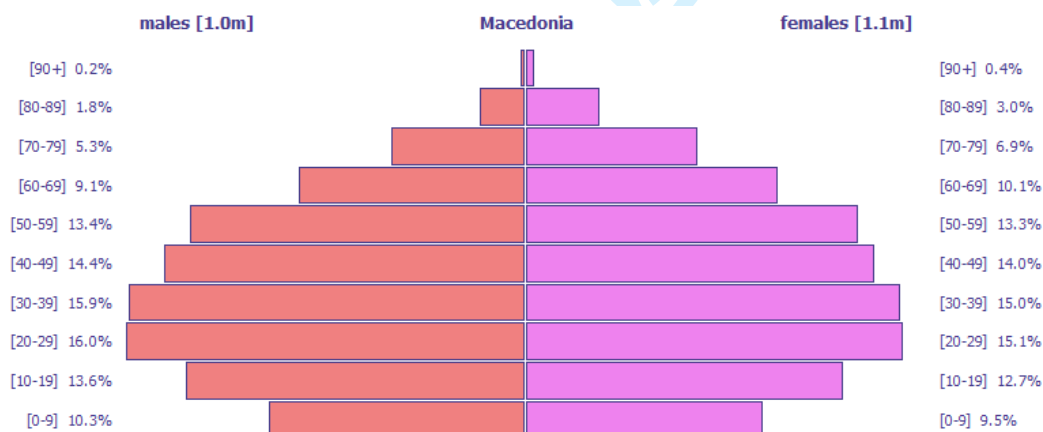
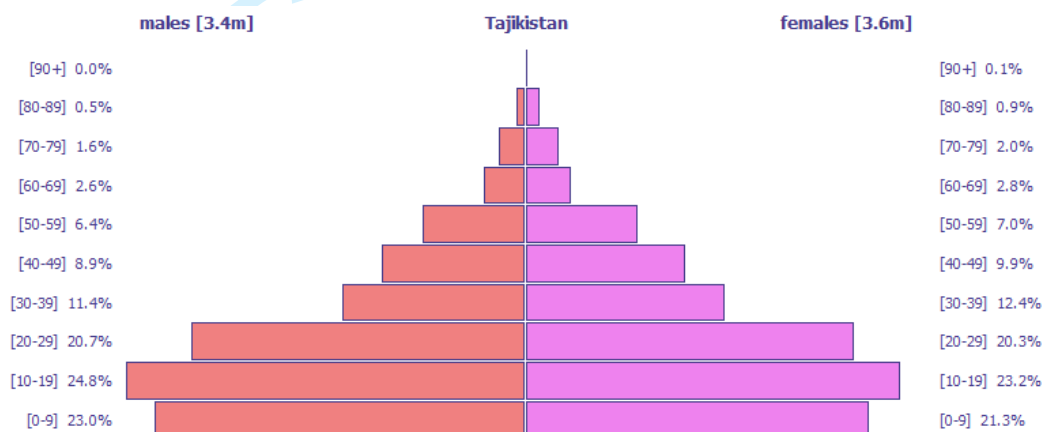
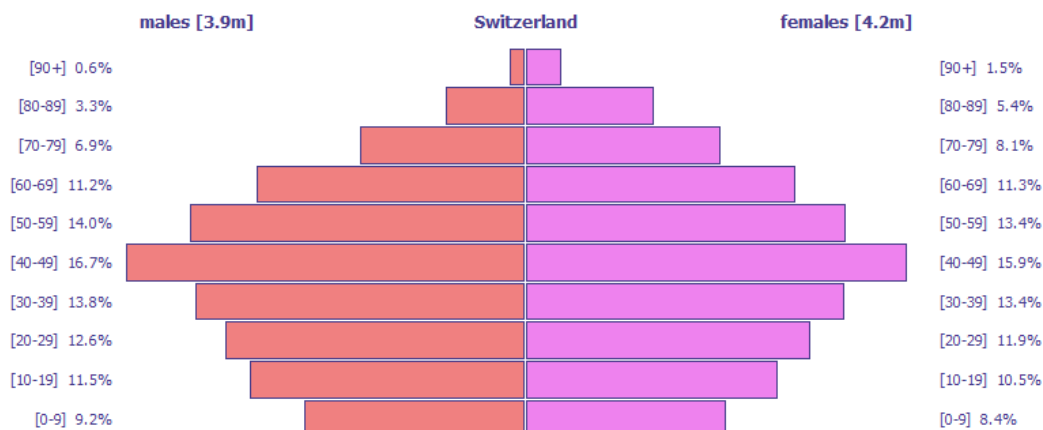
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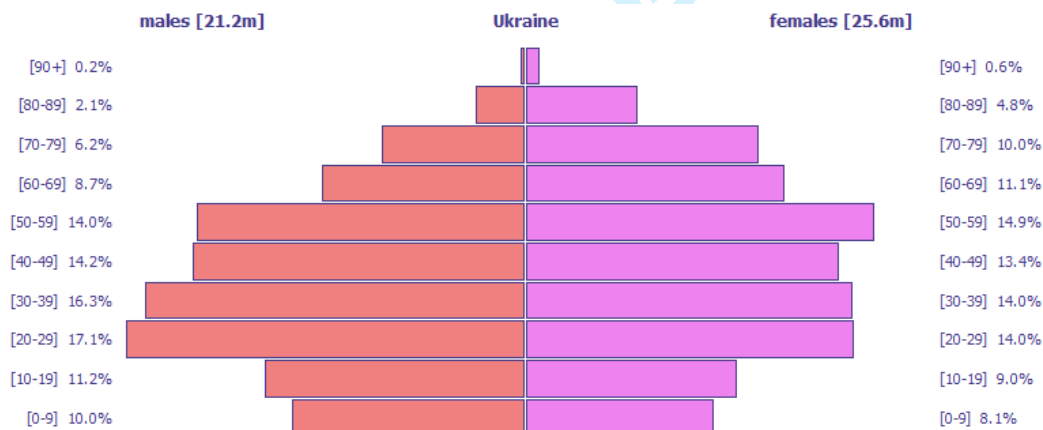
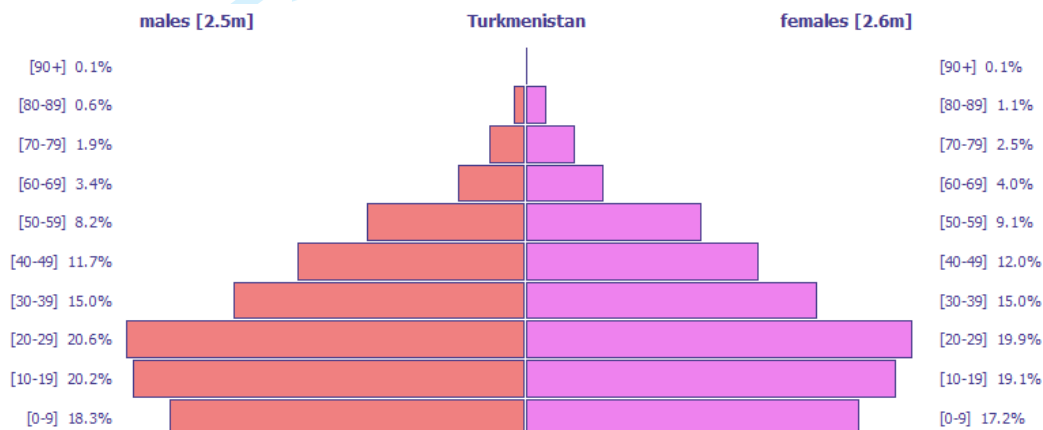
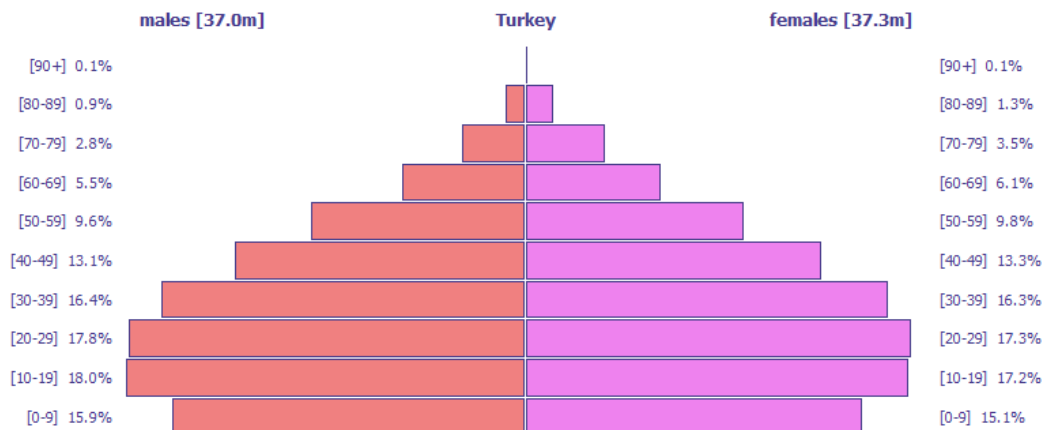
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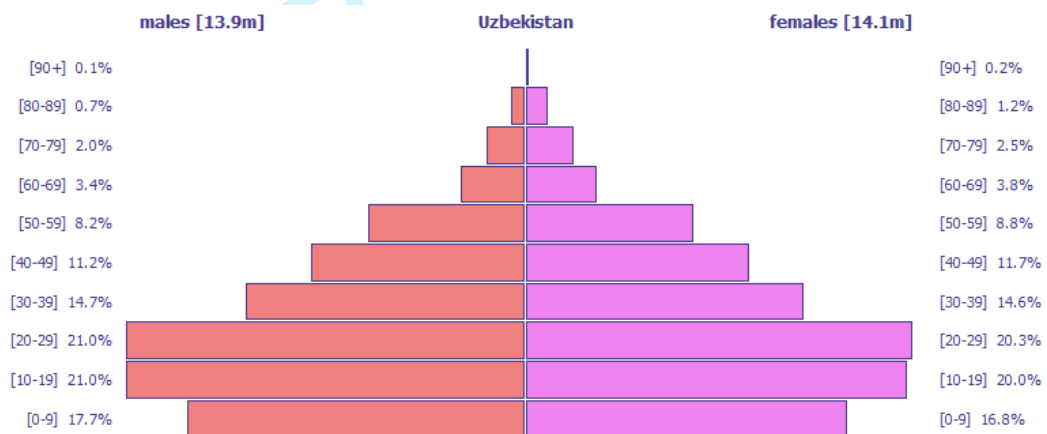
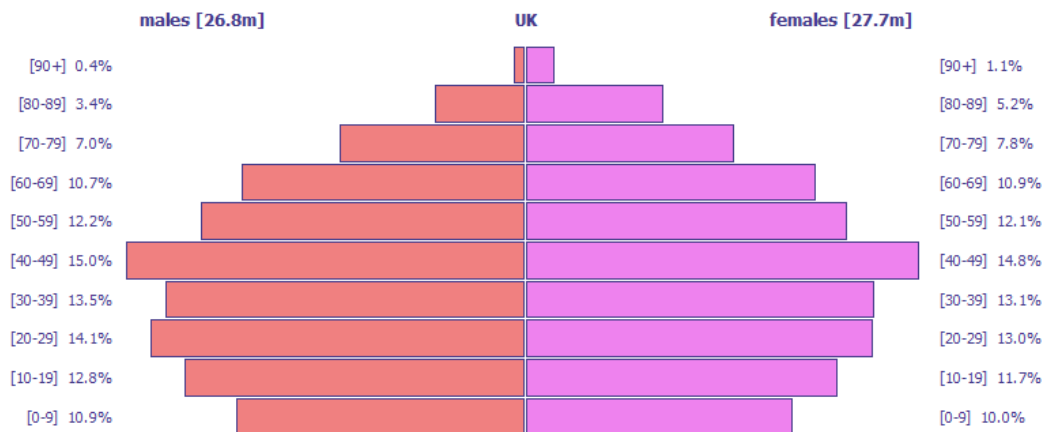
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Appendix 6. Disease tables by country

Albania

Table A1. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	113 [±3]	524 [±6]	13 [±1]	113 [±3]	1555 [±11]
2020	1178 [±9]	5401 [±20]	133 [±3]	988 [±9]	16435 [±35]
2030	2222 [±13]	10237 [±27]	243 [±4]	1588 [±11]	30095 [±47]
Scenario 1					
2010	113 [±3]	525 [±6]	13 [±1]	113 [±3]	1555 [±11]
2020	1169 [±9]	5379 [±20]	135 [±3]	960 [±9]	16392 [±35]
2030	2208 [±13]	10193 [±27]	244 [±4]	1552 [±11]	30012 [±47]
Scenario 2					
2010	110 [±3]	525 [±6]	14 [±1]	114 [±3]	1557 [±11]
2020	1146 [±9]	5235 [±20]	123 [±3]	828 [±8]	16136 [±35]
2030	2165 [±13]	9934 [±27]	228 [±4]	1343 [±10]	29680 [±47]

Table A2. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	-1 [±9]	0 [±1]	0 [±4]	0 [±16]
2020	9 [±14]	22 [±29]	-2 [±5]	28 [±12]	43 [±51]
2030	14 [±19]	44 [±40]	-1 [±6]	36 [±16]	83 [±69]
Scenario 2					
2010	3 [±4]	-1 [±9]	-1 [±1]	-1 [±4]	-2 [±16]
2020	32 [±14]	166 [±29]	10 [±5]	160 [±12]	299 [±51]
2030	57 [±19]	303 [±40]	15 [±6]	245 [±15]	415 [±69]

Table A3. Prevalence cases in year [per 100000] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	829 [±8]	1954 [±13]	262 [±5]	2724 [±15]	42669 [±58]
2020	965 [±9]	2419 [±14]	274 [±5]	2718 [±14]	47159 [±60]
2030	1015 [±9]	2663 [±14]	287 [±5]	2509 [±14]	50524 [±61]
Scenario 1					
2010	840 [±8]	1953 [±12]	261 [±5]	2727 [±15]	42639 [±58]
2020	960 [±9]	2410 [±14]	276 [±5]	2693 [±14]	47089 [±60]
2030	1011 [±9]	2651 [±14]	287 [±5]	2481 [±13]	50428 [±61]
Scenario 2					
2010	833 [±8]	1960 [±13]	263 [±5]	2723 [±15]	42661 [±58]
2020	944 [±8]	2357 [±13]	266 [±4]	2575 [±14]	46904 [±60]
2030	997 [±9]	2586 [±14]	277 [±4]	2320 [±13]	50222 [±61]

Table A4. Prevalence cases avoided in year [per 100000] for Albania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-11 [±12]	1 [±18]	1 [±6]	-3 [±21]	30 [±83]
2020	5 [±12]	9 [±20]	-2 [±7]	25 [±21]	70 [±87]
2030	4 [±13]	12 [±21]	0 [±7]	28 [±20]	96 [±90]
Scenario 2					
2010	-4 [±12]	-6 [±18]	-1 [±6]	1 [±21]	8 [±83]
2020	21 [±12]	62 [±20]	8 [±7]	143 [±21]	255 [±87]
2030	18 [±13]	77 [±20]	10 [±7]	189 [±20]	302 [±90]

Andorra

Table A5. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	174 [±4]	897 [±8]	15 [±1]	218 [±4]	575 [±7]
2020	2068 [±13]	7668 [±25]	184 [±4]	2573 [±15]	7148 [±25]
2030	4426 [±20]	15278 [±37]	384 [±6]	5328 [±22]	14869 [±36]
Scenario 1					
2010	169 [±4]	897 [±8]	14 [±1]	218 [±4]	581 [±7]
2020	2043 [±13]	7551 [±25]	179 [±4]	2435 [±14]	6994 [±24]
2030	4358 [±20]	14994 [±37]	372 [±6]	5022 [±21]	14493 [±36]
Scenario 2					
2010	169 [±4]	896 [±8]	16 [±1]	216 [±4]	580 [±7]
2020	1970 [±13]	7178 [±25]	168 [±4]	2003 [±13]	6464 [±23]
2030	4188 [±19]	14180 [±35]	349 [±6]	4138 [±19]	13324 [±34]

Table A6. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [±5]	0 [±12]	1 [±2]	0 [±6]	-6 [±10]
2020	25 [±18]	117 [±35]	5 [±5]	138 [±20]	154 [±34]
2030	68 [±27]	284 [±49]	12 [±8]	306 [±29]	376 [±48]
Scenario 2					
2010	5 [±5]	1 [±12]	-1 [±2]	2 [±6]	-5 [±10]
2020	98 [±18]	490 [±34]	16 [±5]	570 [±19]	684 [±33]
2030	238 [±26]	1098 [±49]	35 [±8]	1190 [±28]	1545 [±47]

Table A7. Prevalence cases in year [per 100000] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1587 [±11]	2299 [±14]	403 [±6]	4303 [±19]	13720 [±33]
2020	1888 [±13]	2441 [±14]	396 [±6]	4183 [±19]	14817 [±35]
2030	2278 [±14]	3145 [±17]	473 [±6]	4857 [±21]	17775 [±40]
Scenario 1					
2010	1589 [±11]	2300 [±14]	402 [±6]	4311 [±19]	13724 [±33]
2020	1876 [±13]	2420 [±14]	390 [±6]	4088 [±19]	14683 [±35]
2030	2248 [±14]	3085 [±17]	463 [±6]	4666 [±20]	17498 [±39]
Scenario 2					
2010	1579 [±11]	2300 [±14]	405 [±6]	4304 [±19]	13720 [±33]
2020	1837 [±12]	2316 [±14]	384 [±6]	3763 [±18]	14282 [±35]
2030	2198 [±14]	2939 [±16]	450 [±6]	4111 [±19]	16696 [±38]

Table A8. Prevalence cases avoided in year [per 100000] for Andorra

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±16]	-1 [±19]	1 [±8]	-8 [±26]	-4 [±47]
2020	12 [±17]	21 [±20]	6 [±8]	95 [±26]	134 [±49]
2030	30 [±19]	60 [±22]	10 [±9]	191 [±28]	277 [±53]
Scenario 2					
2010	8 [±16]	-1 [±19]	-2 [±8]	-1 [±26]	0 [±47]
2020	51 [±17]	125 [±20]	12 [±8]	420 [±25]	535 [±48]
2030	80 [±19]	206 [±22]	23 [±9]	746 [±27]	1079 [±53]

Austria

Table A9. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	183 [± 4]	3033 [± 16]	17 [± 1]	224 [± 4]	504 [± 6]
2020	2086 [± 14]	24761 [± 47]	206 [± 4]	2678 [± 15]	6254 [± 24]
2030	4278 [± 21]	47804 [± 69]	426 [± 6]	5662 [± 24]	12793 [± 35]
Scenario 1					
2010	182 [± 4]	3033 [± 16]	17 [± 1]	225 [± 4]	506 [± 6]
2020	2046 [± 13]	24249 [± 46]	195 [± 4]	2480 [± 15]	6000 [± 23]
2030	4199 [± 20]	46736 [± 68]	411 [± 6]	5229 [± 23]	12247 [± 35]
Scenario 2					
2010	185 [± 4]	3023 [± 16]	17 [± 1]	221 [± 4]	500 [± 6]
2020	2002 [± 13]	23303 [± 45]	183 [± 4]	2089 [± 14]	5566 [± 22]
2030	4108 [± 20]	44991 [± 66]	387 [± 6]	4454 [± 21]	11286 [± 33]

Table A10. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 5]	0 [± 22]	0 [± 2]	0 [± 6]	0 [± 9]
2020	40 [± 18]	512 [± 63]	11 [± 6]	198 [± 20]	254 [± 31]
2030	79 [± 26]	1068 [± 87]	15 [± 8]	433 [± 30]	546 [± 45]
Scenario 2					
2010	-2 [± 5]	10 [± 22]	0 [± 2]	3 [± 6]	4 [± 9]
2020	84 [± 18]	1458 [± 62]	23 [± 6]	589 [± 20]	688 [± 31]
2030	170 [± 26]	2813 [± 86]	39 [± 8]	1208 [± 28]	1507 [± 44]

Table A11. Prevalence cases in year [per 100000] for Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1559 [±11]	4763 [±20]	414 [±6]	3457 [±17]	13069 [±32]
2020	1683 [±12]	4721 [±20]	408 [±6]	2522 [±15]	13030 [±34]
2030	1801 [±13]	4841 [±22]	438 [±7]	2703 [±16]	13610 [±37]
Scenario 1					
2010	1557 [±11]	4757 [±20]	412 [±6]	3467 [±17]	13048 [±32]
2020	1670 [±12]	4622 [±20]	399 [±6]	2425 [±15]	12857 [±34]
2030	1796 [±13]	4777 [±22]	430 [±6]	2554 [±16]	13352 [±36]
Scenario 2					
2010	1561 [±11]	4757 [±20]	409 [±6]	3459 [±17]	13016 [±32]
2020	1664 [±12]	4503 [±20]	393 [±6]	2250 [±14]	12643 [±33]
2030	1782 [±13]	4639 [±21]	421 [±6]	2314 [±15]	12903 [±35]

Table A12. Prevalence cases avoided in year [per 100000] Austria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±16]	6 [±28]	2 [±8]	0 [±24]	21 [±46]
2020	13 [±16]	99 [±27]	9 [±8]	97 [±20]	173 [±46]
2030	5 [±17]	64 [±28]	8 [±8]	149 [±21]	258 [±46]
Scenario 2					
2010	0 [±16]	6 [±28]	5 [±8]	0 [±24]	53 [±46]
2020	19 [±16]	218 [±27]	15 [±8]	272 [±20]	387 [±45]
2030	19 [±17]	202 [±28]	17 [±8]	389 [±20]	707 [±46]

Armenia

Table A13. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	115 [±3]	888 [±8]	15 [±1]	247 [±4]	641 [±7]
2020	1266 [±10]	8079 [±25]	162 [±4]	2573 [±14]	6866 [±23]
2030	2522 [±14]	15084 [±34]	316 [±5]	4771 [±19]	14350 [±34]
Scenario 1					
2010	115 [±3]	888 [±8]	16 [±1]	248 [±4]	638 [±7]
2020	1256 [±10]	7961 [±25]	159 [±4]	2419 [±14]	6739 [±23]
2030	2496 [±14]	14847 [±34]	309 [±5]	4490 [±19]	14022 [±33]
Scenario 2					
2010	116 [±3]	885 [±8]	14 [±1]	247 [±4]	639 [±7]
2020	1225 [±10]	7595 [±24]	147 [±3]	2069 [±13]	6461 [±23]
2030	2435 [±14]	14233 [±33]	295 [±5]	3817 [±17]	13408 [±32]

Table A14. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	0 [±12]	-1 [±2]	-1 [±6]	3 [±10]
2020	10 [±14]	118 [±36]	3 [±5]	154 [±20]	127 [±33]
2030	26 [±20]	237 [±49]	7 [±7]	281 [±27]	328 [±48]
Scenario 2					
2010	-1 [±4]	3 [±12]	1 [±2]	0 [±6]	2 [±10]
2020	41 [±14]	484 [±35]	15 [±5]	504 [±19]	405 [±33]
2030	87 [±20]	851 [±48]	21 [±7]	954 [±26]	942 [±47]

Table A15. Prevalence cases in year [per 100000] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	855 [±8]	1423 [±11]	316 [±5]	5933 [±22]	26724 [±46]
2020	952 [±9]	1816 [±12]	301 [±5]	5456 [±21]	26337 [±46]
2030	1046 [±9]	1887 [±12]	328 [±5]	5542 [±21]	28023 [±47]
Scenario 1					
2010	859 [±8]	1424 [±11]	320 [±5]	5926 [±22]	26711 [±46]
2020	944 [±9]	1799 [±12]	301 [±5]	5331 [±20]	26234 [±45]
2030	1029 [±9]	1864 [±12]	327 [±5]	5356 [±21]	27758 [±47]
Scenario 2					
2010	853 [±8]	1425 [±11]	318 [±5]	5917 [±22]	26705 [±46]
2020	930 [±9]	1737 [±12]	292 [±5]	5092 [±20]	26056 [±45]
2030	1025 [±9]	1809 [±12]	318 [±5]	4917 [±20]	27326 [±46]

Table A16. Prevalence cases avoided in year [per 100000] for Armenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±12]	-1 [±15]	-4 [±7]	7 [±31]	13 [±65]
2020	8 [±12]	17 [±17]	0 [±7]	125 [±29]	103 [±65]
2030	17 [±13]	23 [±17]	1 [±7]	186 [±30]	265 [±67]
Scenario 2					
2010	2 [±12]	-2 [±15]	-2 [±7]	16 [±31]	19 [±65]
2020	22 [±12]	79 [±17]	9 [±7]	364 [±29]	281 [±65]
2030	21 [±13]	78 [±17]	10 [±7]	625 [±29]	697 [±67]

Azerbaijan

Table A17. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	61 [±2]	2232 [±13]	13 [±1]	105 [±3]	449 [±6]
2020	669 [±7]	17162 [±37]	133 [±3]	1126 [±9]	4965 [±20]
2030	1307 [±10]	30683 [±49]	251 [±4]	2148 [±13]	9870 [±28]
Scenario 1					
2010	62 [±2]	2220 [±13]	12 [±1]	107 [±3]	445 [±6]
2020	665 [±7]	17008 [±37]	129 [±3]	1065 [±9]	4823 [±19]
2030	1300 [±10]	30437 [±49]	247 [±4]	1999 [±12]	9522 [±27]
Scenario 2					
2010	60 [±2]	2231 [±13]	13 [±1]	110 [±3]	444 [±6]
2020	641 [±7]	16616 [±36]	123 [±3]	895 [±8]	4573 [±19]
2030	1257 [±10]	29810 [±48]	234 [±4]	1690 [±11]	9029 [±27]

Table A18. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	0 [±12]	-1 [±2]	-1 [±6]	3 [±10]
2020	10 [±14]	118 [±36]	3 [±5]	154 [±20]	127 [±33]
2030	26 [±20]	237 [±49]	7 [±7]	281 [±27]	328 [±48]
Scenario 2					
2010	-1 [±4]	3 [±12]	1 [±2]	0 [±6]	2 [±10]
2020	41 [±14]	484 [±35]	15 [±5]	504 [±19]	405 [±33]
2030	87 [±20]	851 [±48]	21 [±7]	954 [±26]	942 [±47]

Table A19. Prevalence cases in year [per 100000] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	855 [±8]	1423 [±11]	316 [±5]	5933 [±22]	26724 [±46]
2020	952 [±9]	1816 [±12]	301 [±5]	5456 [±21]	26337 [±46]
2030	1046 [±9]	1887 [±12]	328 [±5]	5542 [±21]	28023 [±47]
Scenario 1					
2010	859 [±8]	1424 [±11]	320 [±5]	5926 [±22]	26711 [±46]
2020	944 [±9]	1799 [±12]	301 [±5]	5331 [±20]	26234 [±45]
2030	1029 [±9]	1864 [±12]	327 [±5]	5356 [±21]	27758 [±47]
Scenario 2					
2010	853 [±8]	1425 [±11]	318 [±5]	5917 [±22]	26705 [±46]
2020	930 [±9]	1737 [±12]	292 [±5]	5092 [±20]	26056 [±45]
2030	1025 [±9]	1809 [±12]	318 [±5]	4917 [±20]	27326 [±46]

Table A20. Prevalence cases avoided in year [per 100000] for Azerbaijan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±12]	-1 [±15]	-4 [±7]	7 [±31]	13 [±65]
2020	8 [±12]	17 [±17]	0 [±7]	125 [±29]	103 [±65]
2030	17 [±13]	23 [±17]	1 [±7]	186 [±30]	265 [±67]
Scenario 2					
2010	2 [±12]	-2 [±15]	-2 [±7]	16 [±31]	19 [±65]
2020	22 [±12]	79 [±17]	9 [±7]	364 [±29]	281 [±65]
2030	21 [±13]	78 [±17]	10 [±7]	625 [±29]	697 [±67]

Belarus

Table A21. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	148 [±3]	714 [±8]	17 [±1]	276 [±5]	1003 [±9]
2020	1780 [±12]	8396 [±26]	195 [±4]	3204 [±16]	11195 [±31]
2030	3815 [±19]	18167 [±40]	422 [±6]	6810 [±25]	22512 [±45]
Scenario 1					
2010	146 [±3]	715 [±8]	17 [±1]	277 [±5]	1004 [±9]
2020	1739 [±12]	8255 [±26]	195 [±4]	2955 [±16]	10860 [±30]
2030	3737 [±18]	17785 [±40]	418 [±6]	6312 [±24]	21991 [±44]
Scenario 2					
2010	147 [±3]	717 [±8]	17 [±1]	276 [±5]	1002 [±9]
2020	1697 [±12]	7936 [±26]	183 [±4]	2501 [±14]	10323 [±29]
2030	3598 [±18]	17067 [±39]	396 [±6]	5340 [±22]	20872 [±43]

Table A22. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±5]	-1 [±11]	0 [±2]	-1 [±7]	-1 [±13]
2020	41 [±17]	141 [±36]	0 [±6]	249 [±22]	335 [±42]
2030	78 [±25]	382 [±54]	4 [±8]	498 [±32]	521 [±60]
Scenario 2					
2010	1 [±5]	-3 [±11]	0 [±2]	0 [±7]	1 [±13]
2020	83 [±17]	460 [±36]	12 [±5]	703 [±21]	872 [±41]
2030	217 [±24]	1100 [±53]	26 [±8]	1470 [±31]	1640 [±59]

Table A23. Prevalence cases in year [per 100000] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1436 [±11]	3046 [±16]	388 [±6]	6321 [±22]	34492 [±53]
2020	1742 [±12]	4279 [±19]	420 [±6]	7155 [±24]	38390 [±56]
2030	2011 [±13]	5267 [±22]	481 [±7]	7989 [±27]	41598 [±61]
Scenario 1					
2010	1428 [±11]	3051 [±16]	388 [±6]	6318 [±22]	34490 [±53]
2020	1715 [±12]	4207 [±19]	422 [±6]	6950 [±24]	38115 [±56]
2030	1980 [±13]	5166 [±22]	479 [±7]	7664 [±26]	41245 [±61]
Scenario 2					
2010	1436 [±11]	3044 [±16]	384 [±6]	6306 [±22]	34446 [±52]
2020	1691 [±12]	4092 [±18]	408 [±6]	6570 [±23]	37605 [±56]
2030	1923 [±13]	4984 [±21]	461 [±6]	6987 [±25]	40353 [±60]

Table A24. Prevalence cases avoided in year [per 100000] for Belarus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	8 [±15]	-5 [±22]	0 [±8]	3 [±32]	2 [±74]
2020	27 [±17]	72 [±26]	-2 [±8]	205 [±34]	275 [±78]
2030	31 [±18]	101 [±29]	2 [±9]	325 [±35]	353 [±81]
Scenario 2					
2010	0 [±15]	2 [±22]	4 [±8]	15 [±32]	46 [±74]
2020	51 [±17]	187 [±26]	12 [±8]	585 [±33]	785 [±78]
2030	88 [±18]	283 [±29]	20 [±9]	1002 [±35]	1245 [±81]

Belgium

Table A25. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	245 [±4]	940 [±9]	853 [±8]	266 [±5]	785 [±8]
2020	2764 [±15]	9773 [±28]	9921 [±29]	2942 [±16]	8756 [±27]
2030	5488 [±22]	19130 [±41]	20051 [±41]	6007 [±23]	17459 [±39]
Scenario 1					
2010	245 [±4]	939 [±9]	857 [±8]	262 [±5]	774 [±8]
2020	2742 [±15]	9627 [±28]	9781 [±28]	2794 [±15]	8536 [±27]
2030	5434 [±22]	18771 [±40]	19744 [±41]	5728 [±22]	16973 [±38]
Scenario 2					
2010	245 [±4]	932 [±9]	854 [±8]	263 [±5]	773 [±8]
2020	2681 [±15]	9156 [±27]	9310 [±28]	2413 [±14]	7993 [±26]
2030	5300 [±21]	17848 [±39]	18953 [±40]	4952 [±21]	15931 [±37]

Table A26. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	1 [±12]	0 [±12]	4 [±6]	11 [±11]
2020	22 [±21]	146 [±39]	140 [±40]	148 [±21]	220 [±37]
2030	54 [±30]	359 [±55]	307 [±56]	279 [±31]	486 [±52]
Scenario 2					
2010	0 [±6]	8 [±12]	0 [±12]	3 [±7]	12 [±11]
2020	83 [±21]	617 [±39]	611 [±39]	529 [±21]	763 [±37]
2030	188 [±29]	1282 [±54]	1098 [±56]	1055 [±30]	1528 [±52]

Table A27. Prevalence cases in year [per 100000] for Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2285 [±14]	2052 [±13]	18497 [±38]	3900 [±18]	16167 [±36]
2020	2502 [±14]	2557 [±15]	18697 [±39]	3415 [±17]	16692 [±37]
2030	2655 [±15]	2770 [±15]	19770 [±41]	3580 [±18]	17569 [±39]
Scenario 1					
2010	2291 [±14]	2054 [±13]	18497 [±38]	3890 [±18]	16189 [±36]
2020	2496 [±14]	2521 [±14]	18600 [±39]	3333 [±17]	16552 [±37]
2030	2635 [±15]	2709 [±15]	19613 [±41]	3460 [±17]	17278 [±38]
Scenario 2					
2010	2280 [±14]	2045 [±13]	18461 [±38]	3889 [±18]	16172 [±36]
2020	2468 [±14]	2418 [±14]	18296 [±39]	3135 [±16]	16215 [±37]
2030	2616 [±15]	2613 [±15]	19275 [±41]	3154 [±16]	16760 [±38]

Table A28. Prevalence cases avoided in year [per 100000] Belgium

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±19]	0 [±18]	0 [±54]	10 [±25]	0 [±51]
2020	6 [±20]	36 [±20]	97 [±55]	82 [±23]	140 [±52]
2030	20 [±21]	61 [±21]	157 [±56]	120 [±24]	291 [±53]
Scenario 2					
2010	5 [±19]	7 [±18]	36 [±54]	11 [±25]	-5 [±51]
2020	34 [±20]	139 [±20]	401 [±54]	280 [±23]	477 [±51]
2030	39 [±21]	157 [±21]	495 [±56]	426 [±23]	809 [±52]

Bosnia & Herzegovina

Table A29. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	114 [±3]	631 [±7]	17 [±1]	251 [±4]	855 [±8]
2020	1339 [±11]	7268 [±25]	191 [±4]	2828 [±15]	9452 [±28]
2030	2751 [±16]	15132 [±37]	380 [±6]	5493 [±22]	18477 [±40]
Scenario 1					
2010	113 [±3]	625 [±7]	16 [±1]	249 [±4]	858 [±8]
2020	1323 [±10]	7228 [±24]	184 [±4]	2627 [±15]	9151 [±28]
2030	2714 [±15]	15024 [±36]	366 [±6]	5124 [±21]	17847 [±40]
Scenario 2					
2010	114 [±3]	630 [±7]	17 [±1]	253 [±4]	857 [±8]
2020	1281 [±10]	7165 [±24]	175 [±4]	2204 [±14]	8507 [±27]
2030	2620 [±15]	14843 [±36]	346 [±6]	4288 [±19]	16661 [±38]

Table A30. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±4]	6 [±10]	1 [±2]	2 [±6]	-3 [±12]
2020	16 [±15]	40 [±34]	7 [±5]	201 [±21]	301 [±39]
2030	37 [±21]	108 [±49]	14 [±8]	369 [±29]	630 [±54]
Scenario 2					
2010	0 [±4]	1 [±10]	0 [±2]	-2 [±6]	-2 [±12]
2020	58 [±14]	103 [±34]	16 [±5]	624 [±20]	945 [±38]
2030	131 [±21]	289 [±49]	34 [±8]	1205 [±28]	1816 [±53]

Table A31. Prevalence cases in year [per 100000] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	845 [±8]	2351 [±14]	378 [±6]	6659 [±23]	25035 [±45]
2020	1039 [±9]	3216 [±16]	422 [±6]	7371 [±25]	28209 [±48]
2030	1141 [±10]	3742 [±18]	459 [±6]	7847 [±26]	30438 [±52]
Scenario 1					
2010	841 [±8]	2342 [±14]	373 [±5]	6659 [±23]	25046 [±45]
2020	1031 [±9]	3202 [±16]	416 [±6]	7181 [±24]	27921 [±48]
2030	1132 [±10]	3718 [±18]	450 [±6]	7532 [±26]	29882 [±51]
Scenario 2					
2010	843 [±8]	2348 [±14]	375 [±5]	6651 [±23]	25033 [±45]
2020	1011 [±9]	3181 [±16]	409 [±6]	6799 [±24]	27314 [±48]
2030	1100 [±10]	3670 [±18]	434 [±6]	6868 [±25]	28862 [±51]

Table A32. Prevalence cases avoided in year [per 100000] for Bosnia and Herzegovina

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [±12]	9 [±19]	5 [±8]	0 [±33]	-11 [±63]
2020	8 [±13]	14 [±23]	6 [±8]	190 [±34]	288 [±67]
2030	9 [±13]	24 [±24]	9 [±9]	315 [±35]	556 [±69]
Scenario 2					
2010	2 [±12]	3 [±19]	3 [±8]	8 [±33]	2 [±63]
2020	28 [±13]	35 [±23]	13 [±8]	572 [±34]	895 [±67]
2030	41 [±13]	72 [±24]	25 [±8]	979 [±34]	1576 [±69]

Bulgaria

Table A33. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	171 [±4]	1406 [±11]	18 [±1]	233 [±4]	705 [±8]
2020	1933 [±13]	12944 [±34]	215 [±4]	2856 [±16]	8520 [±27]
2030	3974 [±20]	25378 [±50]	445 [±7]	5957 [±24]	17732 [±42]
Scenario 1					
2010	170 [±4]	1410 [±11]	19 [±1]	234 [±4]	696 [±7]
2020	1910 [±13]	12760 [±34]	215 [±4]	2645 [±15]	8225 [±27]
2030	3914 [±20]	24915 [±49]	439 [±7]	5521 [±23]	17183 [±41]
Scenario 2					
2010	171 [±4]	1407 [±11]	18 [±1]	231 [±4]	706 [±8]
2020	1842 [±13]	12113 [±33]	202 [±4]	2173 [±14]	7602 [±26]
2030	3779 [±19]	23702 [±48]	414 [±6]	4569 [±21]	15927 [±39]

Table A34. Cumulative incidence cases avoided from year 2010 [per 100000] Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±5]	-4 [±15]	-1 [±2]	-1 [±6]	9 [±11]
2020	23 [±18]	184 [±45]	0 [±6]	211 [±21]	295 [±37]
2030	60 [±25]	463 [±63]	6 [±8]	436 [±30]	549 [±53]
Scenario 2					
2010	0 [±5]	-1 [±15]	0 [±2]	2 [±6]	-1 [±11]
2020	91 [±17]	831 [±45]	13 [±6]	683 [±20]	918 [±36]
2030	195 [±25]	1676 [±63]	31 [±8]	1388 [±29]	1805 [±52]

Table A35. Prevalence cases in year [per 100000] for Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1047 [± 9]	2342 [± 14]	406 [± 6]	6690 [± 23]	17721 [± 38]
2020	1152 [± 10]	2431 [± 15]	383 [± 6]	5910 [± 23]	17794 [± 40]
2030	1250 [± 11]	2576 [± 16]	404 [± 6]	6227 [± 25]	19104 [± 43]
Scenario 1					
2010	1049 [± 9]	2345 [± 14]	402 [± 6]	6691 [± 23]	17718 [± 38]
2020	1149 [± 10]	2416 [± 15]	380 [± 6]	5759 [± 23]	17587 [± 39]
2030	1227 [± 11]	2509 [± 16]	399 [± 6]	5936 [± 24]	18773 [± 43]
Scenario 2					
2010	1047 [± 9]	2341 [± 14]	406 [± 6]	6696 [± 23]	17749 [± 38]
2020	1122 [± 10]	2320 [± 14]	380 [± 6]	5467 [± 22]	17227 [± 39]
2030	1201 [± 11]	2413 [± 15]	391 [± 6]	5381 [± 23]	18096 [± 42]

Table A36. Prevalence cases avoided in year [per 100000] Bulgaria

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 13]	-3 [± 19]	4 [± 8]	-1 [± 33]	3 [± 53]
2020	3 [± 14]	15 [± 20]	3 [± 8]	151 [± 31]	207 [± 53]
2030	23 [± 14]	67 [± 20]	5 [± 8]	291 [± 31]	331 [± 55]
Scenario 2					
2010	0 [± 13]	1 [± 19]	0 [± 8]	-6 [± 33]	-28 [± 53]
2020	30 [± 13]	111 [± 19]	3 [± 8]	443 [± 30]	567 [± 53]
2030	49 [± 14]	163 [± 20]	13 [± 8]	846 [± 30]	1008 [± 55]

Croatia

Table A37. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	191 [±4]	1638 [±11]	21 [±1]	245 [±4]	725 [±8]
2020	2110 [±13]	15814 [±37]	237 [±4]	2727 [±15]	8294 [±27]
2030	4246 [±20]	30803 [±53]	473 [±7]	5463 [±22]	16797 [±39]
Scenario 1					
2010	190 [±4]	1636 [±11]	22 [±1]	241 [±4]	722 [±8]
2020	2083 [±13]	15586 [±36]	230 [±4]	2546 [±15]	8035 [±26]
2030	4209 [±20]	30390 [±53]	465 [±7]	5067 [±22]	16327 [±39]
Scenario 2					
2010	189 [±4]	1634 [±11]	21 [±1]	239 [±4]	725 [±8]
2020	2015 [±13]	14946 [±36]	216 [±4]	2033 [±13]	7402 [±25]
2030	4061 [±19]	29012 [±51]	434 [±6]	4036 [±19]	14990 [±37]

Table A38. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±6]	2 [±16]	-1 [±2]	4 [±6]	3 [±11]
2020	27 [±18]	228 [±50]	7 [±6]	181 [±21]	259 [±36]
2030	37 [±26]	413 [±70]	8 [±9]	396 [±29]	470 [±51]
Scenario 2					
2010	2 [±6]	4 [±16]	0 [±2]	6 [±6]	0 [±11]
2020	95 [±18]	868 [±50]	21 [±6]	694 [±20]	892 [±35]
2030	185 [±26]	1791 [±69]	39 [±9]	1427 [±28]	1807 [±50]

Table A39. Prevalence cases in year [per 100000] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1169 [±10]	5254 [±21]	449 [±6]	5814 [±22]	16856 [±37]
2020	1276 [±10]	5750 [±22]	426 [±6]	5615 [±22]	17878 [±39]
2030	1364 [±11]	6116 [±24]	442 [±6]	5941 [±23]	19300 [±42]
Scenario 1					
2010	1162 [±10]	5250 [±20]	448 [±6]	5812 [±22]	16881 [±37]
2020	1264 [±10]	5717 [±22]	422 [±6]	5498 [±22]	17720 [±39]
2030	1368 [±11]	6073 [±24]	440 [±6]	5681 [±23]	19020 [±42]
Scenario 2					
2010	1159 [±10]	5241 [±20]	446 [±6]	5800 [±22]	16845 [±37]
2020	1245 [±10]	5571 [±22]	416 [±6]	5145 [±21]	17264 [±38]
2030	1336 [±11]	5853 [±23]	426 [±6]	5034 [±21]	18195 [±41]

Table A40. Prevalence cases avoided in year [per 100000] for Croatia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	7 [±14]	4 [±29]	1 [±8]	2 [±30]	-25 [±52]
2020	12 [±14]	33 [±30]	4 [±8]	117 [±30]	158 [±53]
2030	-4 [±15]	43 [±31]	2 [±8]	260 [±30]	280 [±55]
Scenario 2					
2010	10 [±14]	13 [±29]	3 [±8]	14 [±30]	11 [±52]
2020	31 [±14]	179 [±30]	10 [±8]	470 [±29]	614 [±53]
2030	28 [±15]	263 [±31]	16 [±8]	907 [±30]	1105 [±55]

Cyprus

Table A41. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	105 [±3]	924 [±9]	181 [±4]	121 [±3]	573 [±7]
2020	1196 [±10]	9939 [±28]	2095 [±13]	1395 [±10]	6471 [±23]
2030	2395 [±14]	20261 [±40]	4192 [±18]	2923 [±15]	13220 [±32]
Scenario 1					
2010	106 [±3]	917 [±9]	183 [±4]	124 [±3]	568 [±7]
2020	1186 [±10]	9778 [±28]	2050 [±13]	1316 [±10]	6277 [±22]
2030	2367 [±14]	19843 [±40]	4102 [±18]	2722 [±15]	12814 [±32]
Scenario 2					
2010	104 [±3]	915 [±9]	183 [±4]	124 [±3]	574 [±7]
2020	1160 [±10]	9283 [±27]	1944 [±12]	1092 [±9]	5810 [±21]
2030	2312 [±14]	18881 [±39]	3896 [±18]	2266 [±13]	11882 [±31]

Table A42. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±4]	7 [±12]	0 [±5]	0 [±4]	5 [±10]
2020	10 [±14]	161 [±40]	45 [±18]	79 [±15]	194 [±32]
2030	28 [±20]	418 [±57]	90 [±26]	201 [±21]	406 [±46]
Scenario 2					
2010	1 [±4]	9 [±12]	-2 [±5]	-3 [±4]	-1 [±10]
2020	36 [±14]	656 [±39]	151 [±18]	303 [±14]	661 [±31]
2030	83 [±19]	1380 [±56]	296 [±25]	657 [±20]	1338 [±45]

Table A43. Prevalence cases in year [per 100000] for Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1114 [±9]	4253 [±18]	3496 [±17]	1762 [±12]	8899 [±27]
2020	1299 [±10]	5098 [±20]	3837 [±17]	2017 [±13]	10616 [±29]
2030	1454 [±11]	5973 [±22]	4334 [±19]	2348 [±14]	12448 [±32]
Scenario 1					
2010	1121 [±9]	4258 [±18]	3491 [±17]	1755 [±12]	8899 [±27]
2020	1301 [±10]	5013 [±20]	3787 [±17]	1954 [±12]	10462 [±29]
2030	1437 [±11]	5814 [±22]	4258 [±18]	2226 [±13]	12171 [±31]
Scenario 2					
2010	1122 [±9]	4264 [±18]	3494 [±17]	1764 [±12]	8918 [±27]
2020	1287 [±10]	4791 [±19]	3721 [±17]	1804 [±12]	10126 [±28]
2030	1422 [±11]	5517 [±21]	4144 [±18]	1983 [±13]	11614 [±30]

Table A44. Prevalence cases avoided in year [per 100000] Cyprus

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±13]	0 [±26]	5 [±24]	7 [±17]	0 [±38]
2020	0 [±14]	85 [±28]	50 [±25]	63 [±18]	154 [±41]
2030	17 [±15]	159 [±31]	76 [±26]	122 [±19]	277 [±44]
Scenario 2					
2010	0 [±13]	-11 [±26]	2 [±24]	-2 [±17]	-19 [±38]
2020	12 [±14]	307 [±28]	116 [±25]	213 [±17]	490 [±41]
2030	32 [±15]	456 [±30]	190 [±26]	365 [±19]	834 [±44]

Czech Republic

Table A45. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	217 [± 4]	1886 [± 12]	19 [± 1]	275 [± 5]	758 [± 8]
2020	2666 [± 16]	17906 [± 41]	255 [± 5]	3272 [± 18]	9443 [± 30]
2030	6015 [± 27]	38310 [± 67]	571 [± 8]	7363 [± 29]	21071 [± 50]
Scenario 1					
2010	219 [± 4]	1882 [± 12]	21 [± 1]	273 [± 5]	757 [± 8]
2020	2663 [± 16]	17749 [± 41]	251 [± 5]	3065 [± 17]	9196 [± 30]
2030	5980 [± 26]	37856 [± 67]	557 [± 8]	6867 [± 28]	20504 [± 49]
Scenario 2					
2010	221 [± 4]	1894 [± 12]	21 [± 1]	276 [± 5]	759 [± 8]
2020	2596 [± 16]	17007 [± 40]	239 [± 5]	2502 [± 15]	8488 [± 29]
2030	5836 [± 26]	36230 [± 65]	532 [± 8]	5523 [± 25]	18756 [± 47]

Table A46. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 6]	4 [± 17]	-2 [± 2]	2 [± 7]	1 [± 11]
2020	3 [± 21]	157 [± 53]	4 [± 6]	207 [± 23]	247 [± 39]
2030	35 [± 31]	454 [± 78]	14 [± 9]	496 [± 34]	567 [± 58]
Scenario 2					
2010	-4 [± 6]	-8 [± 17]	-2 [± 2]	-1 [± 7]	-1 [± 11]
2020	70 [± 21]	899 [± 53]	16 [± 6]	770 [± 21]	955 [± 38]
2030	179 [± 31]	2080 [± 77]	39 [± 9]	1840 [± 32]	2315 [± 56]

Table A47. Prevalence cases in year [per 100000] for Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1291 [±10]	3494 [±17]	451 [±6]	6790 [±23]	17597 [±38]
2020	1555 [±12]	3740 [±19]	471 [±7]	6346 [±25]	19800 [±44]
2030	1849 [±15]	4363 [±23]	553 [±8]	7185 [±29]	23371 [±52]
Scenario 1					
2010	1296 [±10]	3486 [±17]	452 [±6]	6791 [±23]	17621 [±38]
2020	1551 [±12]	3707 [±19]	467 [±7]	6188 [±24]	19640 [±43]
2030	1837 [±15]	4318 [±22]	544 [±8]	6879 [±28]	23017 [±52]
Scenario 2					
2010	1298 [±10]	3500 [±17]	452 [±6]	6781 [±23]	17639 [±38]
2020	1526 [±12]	3607 [±19]	461 [±7]	5859 [±24]	19226 [±43]
2030	1823 [±15]	4187 [±22]	536 [±8]	6131 [±27]	21972 [±51]

Table A48. Prevalence cases avoided in year [per 100000] Czech Republic

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-5 [±14]	8 [±24]	-1 [±8]	-1 [±33]	-24 [±53]
2020	4 [±16]	33 [±24]	4 [±9]	158 [±32]	160 [±56]
2030	12 [±17]	45 [±26]	9 [±9]	306 [±34]	354 [±61]
Scenario 2					
2010	-7 [±14]	-6 [±24]	-1 [±8]	9 [±33]	-42 [±53]
2020	29 [±16]	133 [±24]	10 [±9]	487 [±31]	574 [±56]
2030	26 [±17]	176 [±26]	17 [±9]	1054 [±33]	1399 [±60]

Denmark

Table A49. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	250 [±4]	1330 [±10]	976 [±9]	296 [±5]	776 [±8]
2020	2844 [±16]	12949 [±33]	11993 [±32]	3536 [±17]	8810 [±27]
2030	5572 [±22]	24645 [±47]	24016 [±47]	7348 [±26]	17692 [±40]
Scenario 1					
2010	249 [±4]	1323 [±10]	981 [±9]	298 [±5]	779 [±8]
2020	2820 [±16]	12694 [±33]	11789 [±32]	3323 [±17]	8544 [±27]
2030	5510 [±22]	24079 [±47]	23661 [±46]	6888 [±25]	17139 [±39]
Scenario 2					
2010	248 [±4]	1317 [±10]	974 [±9]	300 [±5]	776 [±8]
2020	2744 [±15]	12060 [±32]	11305 [±31]	2851 [±16]	8023 [±26]
2030	5377 [±22]	22831 [±45]	22825 [±45]	5958 [±23]	16059 [±38]

Table A50. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±6]	7 [±15]	0 [±13]	0 [±7]	0 [±11]
2020	24 [±21]	255 [±45]	204 [±44]	213 [±23]	266 [±37]
2030	62 [±30]	566 [±62]	355 [±62]	460 [±34]	553 [±53]
Scenario 2					
2010	2 [±6]	13 [±15]	2 [±12]	-4 [±7]	0 [±11]
2020	100 [±21]	889 [±45]	688 [±43]	685 [±23]	787 [±37]
2030	195 [±30]	1814 [±62]	1191 [±61]	1390 [±33]	1633 [±52]

Table A51. Prevalence cases in year [per 100000] for Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1918 [±12]	2748 [±15]	21670 [±42]	5352 [±21]	15920 [±36]
2020	1962 [±13]	3063 [±16]	21199 [±43]	4344 [±19]	15558 [±36]
2030	1974 [±13]	3099 [±17]	21325 [±44]	4504 [±20]	15810 [±38]
Scenario 1					
2010	1919 [±12]	2733 [±15]	21624 [±42]	5371 [±21]	15909 [±36]
2020	1971 [±13]	3025 [±16]	21056 [±42]	4237 [±19]	15365 [±36]
2030	1971 [±13]	3031 [±17]	21166 [±44]	4319 [±20]	15531 [±37]
Scenario 2					
2010	1903 [±12]	2730 [±15]	21616 [±42]	5375 [±21]	15891 [±36]
2020	1932 [±13]	2916 [±16]	20809 [±42]	4005 [±18]	15090 [±36]
2030	1957 [±13]	2911 [±16]	20881 [±43]	3959 [±19]	15031 [±37]

Table A52. Prevalence cases avoided in year [per 100000] Denmark

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±18]	15 [±21]	46 [±59]	0 [±29]	11 [±50]
2020	0 [±18]	38 [±22]	143 [±58]	107 [±26]	193 [±50]
2030	3 [±18]	68 [±22]	159 [±58]	185 [±27]	279 [±50]
Scenario 2					
2010	15 [±17]	18 [±21]	54 [±59]	-23 [±29]	29 [±50]
2020	30 [±18]	147 [±22]	390 [±58]	339 [±26]	468 [±50]
2030	17 [±18]	188 [±22]	444 [±58]	545 [±26]	779 [±50]

Estonia

Table A53. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	180 [±4]	1705 [±12]	18 [±1]	209 [±4]	677 [±7]
2020	1827 [±12]	14510 [±35]	187 [±4]	2350 [±14]	7690 [±26]
2030	3521 [±18]	26422 [±49]	366 [±6]	4536 [±20]	15207 [±37]
Scenario 1					
2010	171 [±4]	1701 [±12]	16 [±1]	209 [±4]	682 [±7]
2020	1795 [±12]	14341 [±35]	183 [±4]	2208 [±14]	7487 [±25]
2030	3469 [±18]	26092 [±49]	352 [±6]	4230 [±20]	14766 [±37]
Scenario 2					
2010	174 [±4]	1701 [±12]	17 [±1]	212 [±4]	682 [±7]
2020	1735 [±12]	13723 [±34]	169 [±4]	1808 [±12]	6901 [±24]
2030	3365 [±17]	24959 [±47]	328 [±5]	3455 [±18]	13492 [±35]

Table A54. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	9 [±5]	4 [±17]	2 [±2]	0 [±6]	-5 [±10]
2020	32 [±17]	169 [±48]	4 [±5]	142 [±19]	203 [±35]
2030	52 [±24]	330 [±65]	14 [±8]	306 [±26]	441 [±49]
Scenario 2					
2010	6 [±5]	4 [±17]	1 [±2]	-3 [±6]	-5 [±10]
2020	92 [±17]	787 [±48]	18 [±5]	542 [±18]	789 [±34]
2030	156 [±23]	1463 [±64]	38 [±7]	1081 [±25]	1715 [±48]

Table A55. Prevalence cases in year [per 100000] for Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	976 [± 9]	3099 [± 16]	392 [± 6]	5422 [± 21]	16964 [± 37]
2020	988 [± 9]	2872 [± 16]	343 [± 5]	4494 [± 20]	15972 [± 37]
2030	1003 [± 10]	2837 [± 16]	340 [± 6]	4515 [± 20]	16313 [± 39]
Scenario 1					
2010	976 [± 9]	3092 [± 16]	392 [± 6]	5415 [± 21]	16973 [± 37]
2020	977 [± 9]	2842 [± 16]	340 [± 5]	4388 [± 19]	15850 [± 37]
2030	989 [± 9]	2817 [± 16]	333 [± 5]	4301 [± 20]	16050 [± 38]
Scenario 2					
2010	977 [± 9]	3096 [± 16]	390 [± 6]	5418 [± 21]	16948 [± 37]
2020	954 [± 9]	2766 [± 15]	331 [± 5]	4127 [± 19]	15473 [± 36]
2030	978 [± 9]	2729 [± 16]	322 [± 5]	3865 [± 19]	15271 [± 37]

Table A56. Prevalence cases avoided in year [per 100000] Estonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 12]	7 [± 22]	0 [± 8]	7 [± 29]	-9 [± 52]
2020	11 [± 13]	30 [± 21]	3 [± 7]	106 [± 27]	122 [± 50]
2030	14 [± 13]	20 [± 21]	7 [± 7]	214 [± 27]	263 [± 51]
Scenario 2					
2010	-1 [± 12]	3 [± 22]	2 [± 8]	4 [± 29]	16 [± 52]
2020	34 [± 12]	106 [± 21]	12 [± 7]	367 [± 26]	499 [± 50]
2030	25 [± 13]	108 [± 21]	18 [± 7]	650 [± 26]	1042 [± 50]

Finland

Table A57. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	294 [±5]	973 [±9]	392 [±6]	190 [±4]	635 [±7]
2020	3324 [±17]	10028 [±29]	4243 [±19]	2174 [±13]	7066 [±24]
2030	6460 [±24]	19723 [±41]	8033 [±26]	4420 [±20]	14024 [±35]
Scenario 1					
2010	294 [±5]	965 [±9]	395 [±6]	190 [±4]	634 [±7]
2020	3290 [±16]	9913 [±29]	4165 [±19]	2026 [±13]	6801 [±24]
2030	6405 [±23]	19451 [±41]	7885 [±26]	4100 [±19]	13480 [±34]
Scenario 2					
2010	296 [±5]	964 [±9]	399 [±6]	191 [±4]	632 [±7]
2020	3251 [±16]	9623 [±28]	3946 [±18]	1698 [±12]	6308 [±23]
2030	6325 [±23]	18858 [±40]	7462 [±25]	3450 [±17]	12471 [±33]

Table A58. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±7]	8 [±12]	0 [±8]	0 [±6]	1 [±10]
2020	34 [±23]	115 [±40]	78 [±26]	148 [±18]	265 [±33]
2030	55 [±32]	272 [±56]	148 [±36]	320 [±26]	544 [±47]
Scenario 2					
2010	0 [±7]	9 [±12]	0 [±8]	0 [±6]	3 [±10]
2020	73 [±23]	405 [±40]	297 [±26]	476 [±18]	758 [±33]
2030	135 [±32]	865 [±56]	571 [±35]	970 [±25]	1553 [±46]

Table A59. Prevalence cases in year [per 100000] for Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	6668 [±23]	2578 [±14]	7456 [±24]	3441 [±17]	15870 [±36]
2020	6013 [±22]	3230 [±16]	7630 [±25]	3279 [±16]	16644 [±37]
2030	5615 [±22]	3402 [±17]	7651 [±26]	3449 [±17]	17250 [±39]
Scenario 1					
2010	6652 [±23]	2558 [±14]	7438 [±24]	3432 [±17]	15847 [±36]
2020	5983 [±22]	3204 [±16]	7564 [±25]	3166 [±16]	16417 [±37]
2030	5590 [±22]	3375 [±17]	7565 [±26]	3244 [±17]	16847 [±38]
Scenario 2					
2010	6652 [±23]	2565 [±14]	7456 [±24]	3439 [±17]	15893 [±36]
2020	5968 [±22]	3165 [±16]	7436 [±25]	2951 [±16]	16104 [±36]
2030	5595 [±22]	3308 [±17]	7340 [±25]	2889 [±16]	16228 [±37]

Table A60. Prevalence cases avoided in year [per 100000] Finland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±20]	0 [±29]	0 [±35]	2 [±20]	0 [±69]
2020	21 [±22]	74 [±33]	24 [±37]	109 [±22]	215 [±76]
2030	0 [±23]	194 [±36]	93 [±40]	221 [±24]	474 [±81]
Scenario 2					
2010	0 [±20]	0 [±29]	0 [±35]	0 [±20]	0 [±69]
2020	46 [±22]	380 [±33]	224 [±37]	371 [±22]	697 [±75]
2030	55 [±23]	641 [±35]	362 [±39]	610 [±23]	1375 [±81]

France

Table A61. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	213 [±4]	897 [±8]	16 [±1]	199 [±4]	1353 [±10]
2020	2481 [±14]	9407 [±28]	183 [±4]	2426 [±14]	14376 [±34]
2030	4897 [±20]	18475 [±39]	371 [±6]	5114 [±21]	27688 [±48]
Scenario 1					
2010	214 [±4]	907 [±9]	17 [±1]	201 [±4]	1357 [±10]
2020	2446 [±14]	9289 [±27]	181 [±4]	2252 [±14]	14067 [±34]
2030	4835 [±20]	18148 [±39]	362 [±5]	4756 [±20]	27196 [±47]
Scenario 2					
2010	214 [±4]	898 [±8]	17 [±1]	194 [±4]	1359 [±10]
2020	2398 [±14]	8870 [±27]	173 [±4]	1901 [±12]	13496 [±33]
2030	4733 [±20]	17347 [±38]	344 [±5]	4060 [±18]	26199 [±47]

Table A62. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	0 [±12]	0 [±2]	0 [±6]	0 [±15]
2020	35 [±20]	118 [±39]	2 [±5]	174 [±19]	309 [±48]
2030	62 [±28]	327 [±54]	9 [±8]	358 [±28]	492 [±66]
Scenario 2					
2010	0 [±6]	-1 [±12]	-1 [±2]	5 [±6]	-6 [±15]
2020	83 [±20]	537 [±38]	10 [±5]	525 [±19]	880 [±47]
2030	164 [±28]	1128 [±54]	27 [±8]	1054 [±27]	1489 [±66]

Table A63. Prevalence cases in year [per 100000] for France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	3932 [±18]	2481 [±14]	404 [±6]	3798 [±17]	51131 [±64]
2020	4111 [±18]	3091 [±16]	402 [±6]	3632 [±17]	53004 [±66]
2030	4267 [±19]	3386 [±17]	424 [±6]	4006 [±18]	54421 [±67]
Scenario 1					
2010	3948 [±18]	2489 [±14]	406 [±6]	3821 [±17]	51165 [±64]
2020	4116 [±18]	3063 [±16]	402 [±6]	3514 [±17]	52787 [±65]
2030	4260 [±19]	3333 [±17]	420 [±6]	3807 [±18]	54116 [±67]
Scenario 2					
2010	3942 [±18]	2470 [±14]	406 [±6]	3808 [±17]	51163 [±64]
2020	4091 [±18]	2951 [±15]	401 [±6]	3286 [±16]	52363 [±65]
2030	4252 [±19]	3216 [±16]	414 [±6]	3437 [±17]	53481 [±66]

Table A64. Prevalence cases avoided in year [per 100000] France

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±25]	0 [±20]	0 [±8]	0 [±25]	0 [±90]
2020	0 [±26]	28 [±22]	0 [±8]	118 [±24]	217 [±92]
2030	7 [±26]	53 [±23]	4 [±8]	199 [±25]	305 [±93]
Scenario 2					
2010	0 [±25]	11 [±20]	0 [±8]	0 [±25]	0 [±90]
2020	20 [±26]	140 [±22]	1 [±8]	346 [±24]	641 [±92]
2030	15 [±26]	170 [±23]	10 [±8]	569 [±24]	940 [±93]

Georgia

Table A65. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	153 [±3]	1097 [±9]	23 [±1]	271 [±5]	751 [±8]
2020	1636 [±11]	9618 [±27]	254 [±4]	3489 [±16]	8603 [±25]
2030	3151 [±15]	17714 [±36]	490 [±6]	7336 [±23]	16531 [±35]
Scenario 1					
2010	151 [±3]	1109 [±9]	23 [±1]	269 [±5]	742 [±8]
2020	1593 [±11]	9340 [±26]	245 [±4]	3076 [±15]	8183 [±25]
2030	3066 [±15]	17136 [±35]	474 [±6]	6680 [±22]	15890 [±34]
Scenario 2					
2010	154 [±4]	1103 [±9]	24 [±1]	267 [±5]	747 [±8]
2020	1551 [±11]	8802 [±26]	235 [±4]	2585 [±14]	7632 [±24]
2030	2965 [±15]	16146 [±34]	456 [±6]	5652 [±20]	14868 [±33]

Table A66. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±5]	-12 [±13]	0 [±2]	2 [±7]	9 [±11]
2020	43 [±16]	278 [±39]	9 [±6]	413 [±23]	420 [±37]
2030	85 [±22]	578 [±53]	16 [±9]	656 [±33]	641 [±51]
Scenario 2					
2010	-1 [±5]	-6 [±13]	-1 [±2]	4 [±7]	4 [±11]
2020	85 [±16]	816 [±38]	19 [±6]	904 [±22]	971 [±36]
2030	186 [±22]	1568 [±52]	34 [±9]	1684 [±32]	1663 [±50]

Table A67. Prevalence cases in year [per 100000] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1102 [±9]	1589 [±11]	580 [±7]	7073 [±24]	18900 [±39]
2020	1203 [±9]	1905 [±12]	526 [±6]	6279 [±22]	18204 [±37]
2030	1275 [±10]	2042 [±12]	528 [±6]	7123 [±23]	18758 [±37]
Scenario 1					
2010	1099 [±9]	1601 [±11]	580 [±7]	7097 [±24]	18902 [±39]
2020	1178 [±9]	1844 [±12]	519 [±6]	5976 [±21]	17893 [±37]
2030	1235 [±9]	1958 [±12]	519 [±6]	6727 [±22]	18396 [±36]
Scenario 2					
2010	1107 [±9]	1596 [±11]	573 [±7]	7064 [±24]	18899 [±39]
2020	1163 [±9]	1746 [±11]	510 [±6]	5652 [±21]	17547 [±36]
2030	1207 [±9]	1860 [±12]	508 [±6]	6064 [±21]	17840 [±36]

Table A68. Prevalence cases avoided in year [per 100000] for Georgia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±13]	-12 [±16]	0 [±10]	-24 [±34]	-2 [±55]
2020	25 [±14]	61 [±17]	7 [±9]	303 [±31]	311 [±54]
2030	40 [±14]	84 [±18]	9 [±9]	396 [±33]	362 [±55]
Scenario 2					
2010	-5 [±13]	-7 [±16]	7 [±10]	9 [±34]	1 [±55]
2020	40 [±14]	159 [±17]	16 [±9]	627 [±31]	657 [±53]
2030	68 [±14]	182 [±18]	20 [±9]	1059 [±32]	918 [±54]

Germany

Table A69. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 0					
2010	254 [±5]	916 [±9]	735 [±8]	231 [±4]	17 [±1]
2020	3231 [±17]	11095 [±32]	9247 [±29]	3227 [±17]	223 [±5]
2030	7460 [±29]	25401 [±53]	20832 [±48]	7816 [±30]	508 [±8]
Scenario 1					
2010	255 [±5]	911 [±9]	732 [±8]	234 [±4]	18 [±1]
2020	3191 [±17]	10956 [±32]	8919 [±29]	3022 [±17]	221 [±5]
2030	7353 [±29]	25011 [±53]	20191 [±48]	7361 [±29]	500 [±7]
Scenario 2					
2010	256 [±5]	911 [±9]	735 [±8]	236 [±4]	18 [±1]
2020	3098 [±17]	10563 [±31]	8341 [±28]	2568 [±15]	212 [±4]
2030	7129 [±28]	24034 [±52]	18736 [±46]	6285 [±26]	479 [±7]

Table A70. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 1					
2010	0 [±6]	5 [±12]	3 [±11]	0 [±6]	0 [±2]
2020	40 [±23]	139 [±42]	328 [±38]	205 [±22]	2 [±6]
2030	107 [±34]	390 [±64]	641 [±57]	455 [±35]	8 [±9]
Scenario 2					
2010	-2 [±6]	5 [±12]	0 [±11]	-5 [±6]	-1 [±2]
2020	133 [±23]	532 [±42]	906 [±38]	659 [±22]	11 [±6]
2030	331 [±34]	1367 [±63]	2096 [±56]	1531 [±34]	29 [±9]

Table A71. Prevalence cases in year [per 100000] for Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 0					
2010	2470 [±14]	2000 [±13]	18474 [±38]	3470 [±17]	448 [±6]
2020	3075 [±17]	2910 [±16]	22003 [±45]	3698 [±19]	497 [±7]
2030	3715 [±20]	3678 [±20]	25940 [±54]	4599 [±23]	581 [±8]
Scenario 1					
2010	2456 [±14]	2000 [±13]	18501 [±38]	3483 [±17]	449 [±6]
2020	3039 [±17]	2884 [±16]	21756 [±45]	3574 [±18]	494 [±7]
2030	3677 [±20]	3637 [±20]	25526 [±54]	4395 [±22]	576 [±8]
Scenario 2					
2010	2471 [±14]	1994 [±13]	18482 [±38]	3486 [±17]	449 [±6]
2020	3000 [±17]	2834 [±16]	21322 [±45]	3313 [±18]	492 [±7]
2030	3616 [±20]	3551 [±20]	24573 [±52]	3922 [±21]	568 [±8]

Table A72. Prevalence cases avoided in year [per 100000] Germany

Year	Cancers	CHD & Stroke	Hypertension	Diabetes	Osteoarthritis
Scenario 1					
2010	14 [±20]	0 [±18]	0 [±54]	0 [±24]	0 [±8]
2020	36 [±22]	26 [±22]	247 [±59]	124 [±24]	3 [±9]
2030	38 [±24]	41 [±24]	414 [±64]	204 [±27]	5 [±10]
Scenario 2					
2010	0 [±20]	6 [±18]	0 [±54]	-16 [±24]	0 [±8]
2020	75 [±22]	76 [±21]	681 [±59]	385 [±24]	5 [±9]
2030	99 [±24]	127 [±24]	1367 [±64]	677 [±26]	13 [±10]

Greece

Table A73. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	126 [±3]	949 [±9]	299 [±5]	19 [±1]	717 [±8]
2020	1428 [±11]	10931 [±30]	3280 [±16]	195 [±4]	7819 [±25]
2030	2963 [±16]	22627 [±45]	6463 [±24]	388 [±6]	15138 [±36]
Scenario 1					
2010	126 [±3]	950 [±9]	297 [±5]	18 [±1]	719 [±8]
2020	1414 [±11]	10745 [±30]	3095 [±16]	191 [±4]	7632 [±25]
2030	2939 [±16]	22276 [±44]	6093 [±23]	382 [±6]	14756 [±36]
Scenario 2					
2010	126 [±3]	959 [±9]	297 [±5]	17 [±1]	707 [±8]
2020	1372 [±11]	10273 [±29]	2562 [±15]	181 [±4]	7048 [±24]
2030	2849 [±16]	21221 [±43]	5040 [±21]	362 [±6]	13537 [±34]

Table A74. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [±4]	-1 [±12]	2 [±7]	1 [±2]	-2 [±11]
2020	14 [±15]	186 [±42]	185 [±23]	4 [±6]	187 [±35]
2030	24 [±22]	351 [±60]	370 [±32]	6 [±8]	382 [±49]
Scenario 2					
2010	0 [±4]	-10 [±12]	2 [±7]	2 [±2]	10 [±11]
2020	56 [±15]	658 [±41]	718 [±22]	14 [±5]	771 [±34]
2030	114 [±22]	1406 [±59]	1423 [±30]	26 [±8]	1601 [±48]

Table A75. Prevalence cases in year [per 100000] for Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	1190 [±10]	9256 [±27]	6262 [±22]	422 [±6]	17636 [±38]
2020	1350 [±11]	9998 [±29]	6913 [±24]	449 [±6]	19669 [±40]
2030	1499 [±11]	11292 [±31]	7373 [±25]	482 [±7]	21197 [±43]
Scenario 1					
2010	1192 [±10]	9263 [±27]	6250 [±22]	418 [±6]	17646 [±38]
2020	1348 [±11]	9930 [±29]	6763 [±24]	443 [±6]	19531 [±40]
2030	1491 [±11]	11169 [±31]	7112 [±25]	476 [±6]	20904 [±43]
Scenario 2					
2010	1201 [±10]	9255 [±27]	6237 [±22]	413 [±6]	17635 [±38]
2020	1331 [±10]	9656 [±28]	6326 [±23]	437 [±6]	19038 [±40]
2030	1475 [±11]	10751 [±31]	6404 [±24]	469 [±6]	19972 [±42]

Table A76. Prevalence cases avoided in year [per 100000] Greece

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	-2 [±14]	-7 [±38]	12 [±32]	4 [±8]	-10 [±53]
2020	2 [±15]	68 [±40]	150 [±33]	6 [±8]	138 [±56]
2030	8 [±15]	123 [±42]	261 [±34]	6 [±9]	293 [±58]
Scenario 2					
2010	-11 [±14]	1 [±38]	25 [±32]	9 [±8]	1 [±53]
2020	19 [±15]	342 [±40]	587 [±33]	12 [±8]	631 [±56]
2030	24 [±15]	541 [±42]	969 [±33]	13 [±9]	1225 [±57]

Hungary

Table A77. Cumulative Incidence cases in year [per 100,000 of population in 2010] for Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [± 4]	1685 [± 12]	18 [± 1]	225 [± 4]	706 [± 8]
2020	2573 [± 15]	15174 [± 37]	205 [± 4]	2519 [± 15]	8023 [± 27]
2030	5126 [± 22]	28877 [± 53]	407 [± 6]	5011 [± 22]	16029 [± 40]
Scenario 1					
2010	236 [± 4]	1698 [± 12]	18 [± 1]	228 [± 4]	707 [± 8]
2020	2543 [± 15]	15035 [± 36]	200 [± 4]	2389 [± 15]	7817 [± 26]
2030	5056 [± 22]	28528 [± 53]	398 [± 6]	4690 [± 21]	15616 [± 39]
Scenario 2					
2010	235 [± 4]	1684 [± 12]	18 [± 1]	230 [± 4]	714 [± 8]
2020	2460 [± 15]	14355 [± 36]	186 [± 4]	1961 [± 13]	7235 [± 25]
2030	4917 [± 22]	27265 [± 51]	368 [± 6]	3842 [± 19]	14358 [± 37]

Table A78. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 6]	-13 [± 16]	0 [± 2]	-3 [± 6]	-1 [± 11]
2020	30 [± 20]	139 [± 49]	5 [± 6]	130 [± 20]	206 [± 36]
2030	70 [± 29]	349 [± 68]	9 [± 8]	321 [± 28]	413 [± 50]
Scenario 2					
2010	2 [± 6]	1 [± 16]	0 [± 2]	-5 [± 6]	-8 [± 11]
2020	113 [± 20]	819 [± 49]	19 [± 6]	558 [± 19]	788 [± 35]
2030	209 [± 28]	1612 [± 67]	39 [± 8]	1169 [± 27]	1671 [± 49]

Table A79. Prevalence cases from year 2010 [per 100,000] for Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1417 [±11]	3477 [±17]	401 [±6]	6077 [±22]	16584 [±36]
2020	1465 [±11]	3433 [±17]	361 [±6]	5182 [±21]	16272 [±38]
2030	1517 [±12]	3453 [±18]	366 [±6]	5187 [±23]	16708 [±40]
Scenario 1					
2010	1406 [±11]	3483 [±17]	399 [±6]	6076 [±22]	16594 [±36]
2020	1447 [±11]	3406 [±17]	357 [±6]	5099 [±21]	16131 [±38]
2030	1497 [±12]	3414 [±18]	361 [±6]	4982 [±22]	16466 [±40]
Scenario 2					
2010	1411 [±11]	3474 [±17]	392 [±6]	6074 [±22]	16610 [±36]
2020	1425 [±11]	3307 [±17]	345 [±6]	4833 [±21]	15803 [±37]
2030	1473 [±12]	3319 [±18]	343 [±6]	4503 [±21]	15757 [±39]

Table A80. Prevalence cases avoided in year [per 100,000] Hungary

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	11 [±15]	-6 [±24]	2 [±8]	1 [±31]	-10 [±52]
2020	18 [±15]	27 [±23]	4 [±8]	83 [±29]	141 [±51]
2030	20 [±16]	39 [±23]	5 [±8]	205 [±29]	242 [±52]
Scenario 2					
2010	6 [±15]	3 [±24]	9 [±8]	3 [±31]	-26 [±52]
2020	40 [±15]	126 [±23]	16 [±8]	349 [±28]	469 [±51]
2030	44 [±15]	134 [±23]	23 [±8]	684 [±28]	951 [±51]

Iceland

Table A81. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	188 [±4]	477 [±6]	221 [±4]	247 [±4]	642 [±7]
2020	2179 [±13]	5779 [±21]	2606 [±14]	2958 [±15]	7255 [±23]
2030	4365 [±18]	12239 [±30]	5240 [±19]	6155 [±21]	14491 [±32]
Scenario 1					
2010	185 [±4]	473 [±6]	214 [±4]	251 [±4]	645 [±7]
2020	2147 [±13]	5656 [±21]	2545 [±14]	2722 [±14]	6961 [±23]
2030	4292 [±18]	11964 [±29]	5126 [±19]	5647 [±20]	13905 [±32]
Scenario 2					
2010	188 [±4]	484 [±6]	220 [±4]	250 [±4]	651 [±7]
2020	2090 [±12]	5384 [±20]	2392 [±13]	2268 [±13]	6446 [±22]
2030	4143 [±17]	11306 [±28]	4858 [±19]	4771 [±18]	12925 [±30]

Table A82. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±5]	4 [±9]	7 [±6]	-4 [±6]	-3 [±10]
2020	32 [±19]	123 [±30]	61 [±20]	236 [±21]	294 [±34]
2030	73 [±26]	275 [±44]	114 [±29]	508 [±31]	586 [±48]
Scenario 2					
2010	0 [±5]	-7 [±9]	1 [±6]	-3 [±6]	-9 [±10]
2020	89 [±18]	395 [±30]	214 [±20]	690 [±20]	809 [±33]
2030	222 [±26]	933 [±43]	382 [±28]	1384 [±30]	1566 [±47]

Table A83. Prevalence cases in year [per 100000] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2301 [±14]	3481 [±17]	4478 [±19]	4954 [±20]	13289 [±33]
2020	2628 [±14]	4620 [±19]	5201 [±20]	6395 [±22]	16250 [±35]
2030	2873 [±14]	5770 [±20]	5992 [±21]	7794 [±24]	18871 [±37]
Scenario 1					
2010	2292 [±14]	3487 [±17]	4505 [±19]	4950 [±20]	13279 [±33]
2020	2599 [±14]	4538 [±18]	5174 [±20]	6177 [±21]	15967 [±35]
2030	2842 [±14]	5636 [±20]	5934 [±21]	7361 [±23]	18382 [±36]
Scenario 2					
2010	2293 [±14]	3482 [±17]	4484 [±19]	4975 [±20]	13299 [±33]
2020	2578 [±14]	4337 [±18]	5026 [±19]	5787 [±21]	15525 [±34]
2030	2795 [±14]	5279 [±19]	5735 [±20]	6658 [±22]	17618 [±35]

Table A84. Prevalence cases avoided in year [per 100000] for Iceland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	9 [±19]	-6 [±24]	-27 [±27]	4 [±28]	10 [±46]
2020	29 [±20]	82 [±27]	27 [±29]	218 [±32]	283 [±51]
2030	31 [±21]	134 [±30]	58 [±31]	433 [±35]	489 [±55]
Scenario 2					
2010	8 [±19]	-1 [±24]	-6 [±27]	-21 [±28]	-10 [±46]
2020	50 [±20]	283 [±27]	175 [±29]	608 [±31]	725 [±50]
2030	78 [±21]	491 [±30]	257 [±31]	1136 [±34]	1253 [±54]

Ireland

Table A85. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	252 [± 4]	525 [± 6]	42 [± 2]	137 [± 3]	913 [± 9]
2020	3038 [± 15]	5913 [± 21]	508 [± 6]	1650 [± 11]	10638 [± 29]
2030	6450 [± 22]	12134 [± 31]	1041 [± 9]	3568 [± 17]	21499 [± 41]
Scenario 1					
2010	254 [± 5]	521 [± 6]	43 [± 2]	134 [± 3]	916 [± 9]
2020	2948 [± 15]	5801 [± 21]	499 [± 6]	1535 [± 11]	10199 [± 28]
2030	6291 [± 22]	11893 [± 30]	1021 [± 9]	3324 [± 16]	20675 [± 40]
Scenario 2					
2010	249 [± 4]	524 [± 6]	44 [± 2]	139 [± 3]	916 [± 9]
2020	2803 [± 15]	5534 [± 21]	466 [± 6]	1268 [± 10]	9499 [± 27]
2030	5997 [± 21]	11329 [± 29]	957 [± 9]	2745 [± 14]	19360 [± 38]

Table A86. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [± 6]	4 [± 9]	-1 [± 3]	3 [± 5]	-3 [± 12]
2020	90 [± 22]	112 [± 31]	9 [± 9]	115 [± 16]	439 [± 41]
2030	159 [± 32]	241 [± 44]	20 [± 13]	244 [± 23]	824 [± 58]
Scenario 2					
2010	3 [± 6]	1 [± 9]	-2 [± 3]	-2 [± 5]	-3 [± 12]
2020	235 [± 22]	379 [± 30]	42 [± 9]	382 [± 15]	1139 [± 40]
2030	453 [± 32]	805 [± 43]	84 [± 13]	823 [± 22]	2139 [± 57]

Table A87. Prevalence cases in year [per 100000] for Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1346 [±10]	770 [±8]	873 [±8]	2742 [±15]	21728 [±42]
2020	1798 [±12]	1300 [±10]	962 [±9]	2845 [±15]	24392 [±43]
2030	2173 [±13]	1519 [±11]	1083 [±9]	3327 [±16]	27156 [±46]
Scenario 1					
2010	1356 [±10]	765 [±8]	874 [±8]	2738 [±15]	21742 [±42]
2020	1767 [±12]	1280 [±10]	958 [±9]	2752 [±15]	24048 [±43]
2030	2142 [±13]	1495 [±11]	1076 [±9]	3150 [±16]	26566 [±45]
Scenario 2					
2010	1350 [±10]	763 [±8]	873 [±8]	2752 [±15]	21740 [±42]
2020	1705 [±11]	1220 [±10]	932 [±8]	2547 [±14]	23511 [±42]
2030	2079 [±13]	1428 [±10]	1035 [±9]	2744 [±14]	25706 [±44]

Table A88. Prevalence cases avoided in year [per 100000] Ireland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-10 [±15]	5 [±11]	-1 [±12]	4 [±21]	-14 [±59]
2020	31 [±17]	20 [±14]	4 [±12]	93 [±21]	344 [±62]
2030	31 [±19]	24 [±16]	7 [±13]	177 [±23]	590 [±66]
Scenario 2					
2010	-4 [±15]	7 [±11]	0 [±12]	-10 [±21]	-12 [±59]
2020	93 [±17]	80 [±14]	30 [±12]	298 [±21]	881 [±62]
2030	94 [±18]	91 [±15]	48 [±13]	583 [±22]	1450 [±65]

Israel

Table A89. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Israel

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	191 [±4]	668 [±7]	12 [±1]	214 [±4]	547 [±7]
2020	2013 [±12]	6272 [±21]	127 [±3]	2017 [±12]	5508 [±20]
2030	3668 [±16]	10879 [±27]	229 [±4]	3600 [±16]	10131 [±26]
Scenario 1					
2010	192 [±4]	670 [±7]	11 [±1]	213 [±4]	547 [±7]
2020	1997 [±12]	6223 [±21]	126 [±3]	1912 [±12]	5463 [±20]
2030	3643 [±16]	10737 [±27]	225 [±4]	3395 [±15]	10032 [±26]
Scenario 2					
2010	190 [±4]	666 [±7]	12 [±1]	214 [±4]	544 [±7]
2020	1950 [±12]	5887 [±21]	120 [±3]	1627 [±11]	5314 [±20]
2030	3553 [±15]	10174 [±26]	214 [±4]	2890 [±14]	9769 [±26]

Table A90. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Israel

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-1 [±6]	-2 [±10]	1 [±6]	0 [±9]	1 [±1]
2020	16 [±18]	49 [±32]	105 [±18]	45 [±30]	1 [±4]
2030	25 [±24]	142 [±42]	205 [±24]	99 [±40]	4 [±6]
Scenario 2					
2010	1 [±6]	2 [±10]	0 [±6]	3 [±9]	0 [±1]
2020	63 [±18]	385 [±31]	390 [±17]	194 [±29]	7 [±4]
2030	115 [±24]	705 [±41]	710 [±23]	362 [±40]	15 [±6]

Table A91. Prevalence cases in year [per 100000] for Israel

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1597 [±11]	1900 [±12]	278 [±5]	4189 [±18]	11908 [±31]
2020	1728 [±11]	2143 [±13]	261 [±4]	3601 [±16]	11767 [±29]
2030	1751 [±11]	2085 [±12]	260 [±4]	3410 [±15]	11832 [±28]
Scenario 1					
2010	1602 [±11]	1903 [±12]	278 [±5]	4205 [±18]	11902 [±31]
2020	1725 [±11]	2136 [±13]	259 [±4]	3536 [±16]	11719 [±29]
2030	1744 [±11]	2049 [±12]	256 [±4]	3275 [±15]	11774 [±28]
Scenario 2					
2010	1607 [±11]	1894 [±12]	275 [±5]	4183 [±18]	11855 [±31]
2020	1706 [±11]	2044 [±12]	254 [±4]	3335 [±16]	11655 [±29]
2030	1733 [±11]	1971 [±11]	252 [±4]	2984 [±14]	11699 [±28]

Table A92. Prevalence cases avoided in year [per 100000] for Israel

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	5 [±16]	-1 [±11]	-9 [±27]	-5 [±44]	-4 [±7]
2020	14 [±17]	8 [±13]	67 [±24]	54 [±44]	-2 [±6]
2030	11 [±17]	18 [±12]	139 [±24]	68 [±44]	1 [±7]
Scenario 2					
2010	7 [±16]	-6 [±11]	-10 [±27]	40 [±44]	-3 [±7]
2020	29 [±17]	68 [±12]	262 [±24]	139 [±44]	6 [±6]
2030	19 [±17]	78 [±12]	442 [±23]	155 [±44]	13 [±6]

Italy

Table A93. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	246 [±4]	1095 [±9]	236 [±4]	17 [±1]	746 [±8]
2020	2869 [±16]	11269 [±31]	2733 [±15]	202 [±4]	8253 [±27]
2030	5919 [±24]	22213 [±46]	5518 [±23]	410 [±6]	16310 [±39]
Scenario 1					
2010	246 [±4]	1097 [±9]	237 [±4]	18 [±1]	748 [±8]
2020	2845 [±16]	11119 [±31]	2550 [±15]	196 [±4]	8047 [±26]
2030	5861 [±23]	21865 [±45]	5142 [±22]	398 [±6]	15836 [±38]
Scenario 2					
2010	245 [±4]	1091 [±9]	235 [±4]	18 [±1]	743 [±8]
2020	2748 [±15]	10644 [±30]	2099 [±13]	187 [±4]	7405 [±25]
2030	5651 [±23]	20873 [±44]	4222 [±20]	376 [±6]	14479 [±37]

Table A94. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [±6]	-2 [±13]	-1 [±6]	-1 [±2]	-2 [±11]
2020	24 [±21]	150 [±42]	183 [±21]	6 [±6]	206 [±36]
2030	58 [±31]	348 [±59]	376 [±29]	12 [±8]	474 [±51]
Scenario 2					
2010	1 [±6]	4 [±13]	1 [±6]	-1 [±2]	3 [±11]
2020	121 [±21]	625 [±42]	634 [±20]	15 [±6]	848 [±35]
2030	268 [±30]	1340 [±59]	1296 [±28]	34 [±8]	1831 [±50]

Table A95. Prevalence cases in year [per 100000] for Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	2560 [±14]	2885 [±15]	5845 [±22]	447 [±6]	18448 [±38]
2020	2830 [±16]	3417 [±17]	5791 [±22]	450 [±6]	19563 [±41]
2030	3043 [±17]	3728 [±19]	6040 [±24]	472 [±7]	20547 [±44]
Scenario 1					
2010	2569 [±14]	2877 [±15]	5828 [±22]	450 [±6]	18441 [±38]
2020	2806 [±16]	3372 [±17]	5640 [±22]	442 [±6]	19409 [±41]
2030	3011 [±17]	3663 [±18]	5772 [±23]	462 [±7]	20218 [±43]
Scenario 2					
2010	2560 [±14]	2877 [±15]	5853 [±22]	455 [±6]	18432 [±38]
2020	2767 [±15]	3286 [±17]	5343 [±21]	438 [±6]	18960 [±40]
2030	2966 [±17]	3529 [±18]	5211 [±22]	453 [±6]	19354 [±42]

Table A96. Prevalence cases avoided in year [per 100000] Italy

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	-9 [±20]	8 [±21]	17 [±31]	-3 [±8]	7 [±54]
2020	24 [±21]	45 [±23]	151 [±30]	8 [±8]	154 [±56]
2030	32 [±22]	65 [±24]	268 [±31]	10 [±9]	329 [±57]
Scenario 2					
2010	0 [±20]	8 [±21]	-8 [±31]	-8 [±8]	16 [±54]
2020	63 [±21]	131 [±23]	448 [±30]	12 [±8]	603 [±56]
2030	77 [±22]	199 [±24]	829 [±30]	19 [±9]	1193 [±56]

Kazakhstan

Table A97. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	101 [± 3]	2532 [± 14]	12 [± 1]	257 [± 5]	667 [± 7]
2020	1044 [± 9]	18107 [± 38]	132 [± 3]	2965 [± 15]	6710 [± 23]
2030	1986 [± 13]	31143 [± 50]	246 [± 4]	6231 [± 22]	13355 [± 33]
Scenario 1					
2010	99 [± 3]	2527 [± 14]	11 [± 1]	261 [± 5]	675 [± 7]
2020	1039 [± 9]	17899 [± 38]	128 [± 3]	2782 [± 15]	6503 [± 23]
2030	1972 [± 13]	30782 [± 50]	242 [± 4]	5910 [± 22]	12847 [± 32]
Scenario 2					
2010	100 [± 3]	2528 [± 14]	13 [± 1]	257 [± 5]	670 [± 7]
2020	998 [± 9]	17434 [± 37]	121 [± 3]	2409 [± 14]	5827 [± 22]
2030	1896 [± 12]	29971 [± 49]	232 [± 4]	5057 [± 20]	11505 [± 30]

Table A98. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [± 4]	5 [± 20]	1 [± 1]	-4 [± 6]	-8 [± 10]
2020	5 [± 13]	208 [± 54]	4 [± 5]	183 [± 21]	207 [± 33]
2030	14 [± 18]	361 [± 70]	4 [± 6]	321 [± 31]	508 [± 46]
Scenario 2					
2010	1 [± 4]	4 [± 20]	-1 [± 1]	0 [± 6]	-3 [± 10]
2020	46 [± 13]	673 [± 53]	11 [± 4]	556 [± 21]	883 [± 32]
2030	90 [± 18]	1172 [± 70]	14 [± 6]	1174 [± 30]	1850 [± 45]

Table A99. Prevalence cases in year [per 100000] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	402 [±6]	6484 [±23]	243 [±4]	4527 [±19]	11972 [±31]
2020	437 [±6]	6014 [±22]	199 [±4]	4820 [±20]	12084 [±31]
2030	462 [±6]	6021 [±22]	201 [±4]	5810 [±22]	13681 [±33]
Scenario 1					
2010	397 [±6]	6469 [±23]	247 [±4]	4535 [±19]	11947 [±31]
2020	437 [±6]	5970 [±22]	197 [±4]	4687 [±19]	11924 [±31]
2030	463 [±6]	5987 [±22]	200 [±4]	5643 [±21]	13384 [±33]
Scenario 2					
2010	404 [±6]	6476 [±23]	244 [±4]	4538 [±19]	12007 [±31]
2020	425 [±6]	5859 [±22]	193 [±4]	4423 [±19]	11525 [±30]
2030	448 [±6]	5877 [±22]	194 [±4]	5069 [±20]	12606 [±32]

Table A100. Prevalence cases avoided in year [per 100000] for Kazakhstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [±8]	15 [±32]	-4 [±6]	-8 [±27]	25 [±44]
2020	0 [±8]	44 [±31]	2 [±6]	133 [±28]	160 [±44]
2030	-1 [±9]	34 [±31]	1 [±6]	167 [±30]	297 [±47]
Scenario 2					
2010	-2 [±8]	8 [±32]	-1 [±6]	-11 [±27]	-35 [±44]
2020	12 [±8]	155 [±31]	6 [±6]	397 [±27]	559 [±43]
2030	14 [±9]	144 [±31]	7 [±6]	741 [±30]	1075 [±46]

Kyrgyzstan

Table A101. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	66 [±2]	1637 [±11]	9 [±1]	212 [±4]	411 [±6]
2020	656 [±7]	12239 [±30]	101 [±3]	2258 [±13]	4426 [±18]
2030	1214 [±9]	20914 [±38]	190 [±4]	4037 [±17]	8387 [±24]
Scenario 1					
2010	62 [±2]	1640 [±11]	9 [±1]	209 [±4]	409 [±6]
2020	644 [±7]	12117 [±30]	98 [±3]	2148 [±13]	4331 [±18]
2030	1194 [±9]	20708 [±37]	186 [±4]	3867 [±16]	8252 [±24]
Scenario 2					
2010	64 [±2]	1643 [±11]	9 [±1]	209 [±4]	413 [±6]
2020	636 [±7]	11863 [±30]	95 [±3]	1910 [±12]	4141 [±17]
2030	1175 [±9]	20300 [±37]	176 [±3]	3409 [±15]	7855 [±23]

Table A102. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±3]	5 [±16]	0 [±1]	1 [±6]	-4 [±8]
2020	4 [±10]	227 [±45]	2 [±4]	130 [±20]	116 [±27]
2030	13 [±14]	280 [±59]	3 [±6]	222 [±28]	168 [±38]
Scenario 2					
2010	-1 [±3]	12 [±16]	0 [±1]	1 [±6]	-5 [±8]
2020	25 [±10]	602 [±44]	7 [±4]	470 [±19]	365 [±27]
2030	53 [±14]	859 [±59]	13 [±6]	865 [±27]	644 [±37]

Table A103. Prevalence cases in year [per 100000] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	304 [±5]	4239 [±18]	175 [±4]	3479 [±17]	9006 [±27]
2020	334 [±5]	4522 [±18]	155 [±3]	3782 [±17]	9483 [±26]
2030	353 [±5]	4676 [±18]	166 [±3]	4029 [±17]	10217 [±26]
Scenario 1					
2010	302 [±5]	4255 [±18]	174 [±4]	3494 [±17]	9005 [±27]
2020	333 [±5]	4487 [±18]	153 [±3]	3705 [±17]	9409 [±26]
2030	350 [±5]	4656 [±18]	164 [±3]	3942 [±16]	10145 [±26]
Scenario 2					
2010	298 [±5]	4251 [±18]	169 [±4]	3504 [±17]	9024 [±27]
2020	326 [±5]	4427 [±18]	150 [±3]	3531 [±16]	9290 [±26]
2030	349 [±5]	4572 [±18]	155 [±3]	3647 [±16]	9876 [±26]

Table A104. Prevalence cases avoided in year [per 100000] for Kyrgyzstan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±7]	-16 [±26]	1 [±5]	-15 [±24]	1 [±38]
2020	1 [±7]	35 [±27]	2 [±5]	77 [±24]	74 [±39]
2030	3 [±7]	20 [±27]	2 [±5]	87 [±25]	72 [±40]
Scenario 2					
2010	6 [±7]	-12 [±26]	6 [±5]	-25 [±24]	-18 [±38]
2020	8 [±7]	95 [±27]	5 [±5]	251 [±24]	193 [±39]
2030	4 [±7]	104 [±27]	11 [±5]	382 [±25]	341 [±40]

Latvia

Table A105. Cumulative incidence cases from year 2010 [per 100,000 of population in 2010] for Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	143 [± 3]	1918 [± 12]	16 [± 1]	242 [± 4]	656 [± 7]
2020	1738 [± 13]	19994 [± 45]	199 [± 4]	3349 [± 18]	8959 [± 30]
2030	3976 [± 23]	44170 [± 76]	460 [± 8]	7977 [± 32]	21728 [± 53]
Scenario 1					
2010	142 [± 3]	1917 [± 12]	15 [± 1]	243 [± 4]	646 [± 7]
2020	1703 [± 13]	19665 [± 45]	194 [± 4]	3084 [± 18]	8697 [± 30]
2030	3900 [± 23]	43389 [± 75]	447 [± 8]	7355 [± 31]	21082 [± 52]
Scenario 2					
2010	141 [± 3]	1920 [± 12]	15 [± 1]	241 [± 4]	649 [± 7]
2020	1632 [± 13]	18814 [± 43]	178 [± 4]	2522 [± 16]	7987 [± 28]
2030	3772 [± 22]	41434 [± 73]	413 [± 7]	6013 [± 28]	19291 [± 50]

Table A106. Cumulative incidence cases avoided from year 2010 [per 100,000 of population in 2010] Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 5]	1 [± 18]	1 [± 2]	-1 [± 6]	10 [± 10]
2020	35 [± 17]	329 [± 56]	5 [± 6]	265 [± 23]	262 [± 38]
2030	76 [± 25]	781 [± 84]	13 [± 9]	622 [± 35]	646 [± 59]
Scenario 2					
2010	2 [± 5]	-2 [± 18]	1 [± 2]	1 [± 6]	7 [± 10]
2020	106 [± 16]	1180 [± 56]	21 [± 5]	827 [± 22]	972 [± 37]
2030	204 [± 25]	2736 [± 83]	47 [± 8]	1964 [± 33]	2437 [± 57]

Table A107. Prevalence cases in year [per 100,000] for Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	817 [±8]	3989 [±18]	310 [±5]	5910 [±22]	14809 [±34]
2020	909 [±10]	4440 [±21]	306 [±6]	5858 [±24]	16043 [±40]
2030	1064 [±12]	5192 [±26]	354 [±7]	7129 [±31]	19764 [±51]
Scenario 1					
2010	818 [±8]	3984 [±18]	313 [±5]	5909 [±22]	14791 [±34]
2020	893 [±9]	4368 [±21]	304 [±6]	5670 [±24]	15861 [±40]
2030	1054 [±12]	5107 [±26]	350 [±7]	6729 [±30]	19420 [±50]
Scenario 2					
2010	813 [±8]	3989 [±18]	309 [±5]	5910 [±22]	14788 [±34]
2020	877 [±9]	4270 [±21]	293 [±5]	5305 [±23]	15472 [±39]
2030	1041 [±12]	4947 [±25]	336 [±7]	5954 [±28]	18447 [±49]

Table A108. Prevalence cases avoided in year [per 100,000] Latvia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±11]	5 [±25]	-3 [±7]	1 [±31]	18 [±49]
2020	16 [±12]	72 [±27]	2 [±7]	188 [±30]	182 [±51]
2030	10 [±13]	85 [±29]	4 [±8]	400 [±33]	344 [±56]
Scenario 2					
2010	4 [±11]	0 [±25]	1 [±7]	0 [±31]	21 [±49]
2020	32 [±12]	170 [±26]	13 [±7]	553 [±30]	571 [±50]
2030	23 [±13]	245 [±28]	18 [±7]	1175 [±32]	1317 [±55]

Lithuania

Table A109. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	147 [±3]	588 [±7]	17 [±1]	239 [±4]	665 [±7]
2020	1718 [±12]	6465 [±23]	196 [±4]	2635 [±15]	7481 [±25]
2030	3498 [±18]	12873 [±34]	394 [±6]	4912 [±21]	15020 [±37]
Scenario 1					
2010	151 [±3]	593 [±7]	16 [±1]	239 [±4]	657 [±7]
2020	1707 [±12]	6420 [±23]	191 [±4]	2489 [±14]	7304 [±25]
2030	3469 [±18]	12739 [±34]	387 [±6]	4625 [±20]	14656 [±36]
Scenario 2					
2010	153 [±3]	585 [±7]	17 [±1]	244 [±4]	666 [±7]
2020	1655 [±12]	6174 [±23]	177 [±4]	2057 [±13]	6770 [±24]
2030	3364 [±17]	12217 [±33]	361 [±6]	3807 [±19]	13481 [±35]

Table A110. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [±5]	-5 [±10]	1 [±2]	0 [±6]	8 [±10]
2020	11 [±17]	45 [±32]	5 [±6]	146 [±20]	177 [±34]
2030	29 [±24]	134 [±45]	7 [±8]	287 [±28]	364 [±49]
Scenario 2					
2010	-6 [±5]	3 [±10]	0 [±2]	-5 [±6]	-1 [±10]
2020	63 [±16]	291 [±32]	19 [±5]	578 [±19]	711 [±34]
2030	134 [±23]	656 [±45]	33 [±8]	1105 [±26]	1539 [±48]

Table A111. Prevalence cases in year [per 100000] for Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	929 [±9]	1881 [±12]	374 [±5]	6588 [±23]	16489 [±36]
2020	1108 [±10]	2338 [±14]	389 [±6]	6692 [±24]	17528 [±38]
2030	1195 [±10]	2516 [±15]	406 [±6]	6530 [±24]	18358 [±41]
Scenario 1					
2010	923 [±9]	1889 [±12]	374 [±5]	6591 [±23]	16479 [±36]
2020	1093 [±10]	2319 [±14]	382 [±6]	6579 [±24]	17377 [±38]
2030	1177 [±10]	2471 [±15]	401 [±6]	6328 [±24]	18095 [±41]
Scenario 2					
2010	929 [±9]	1870 [±12]	374 [±5]	6560 [±23]	16513 [±36]
2020	1076 [±10]	2244 [±14]	374 [±6]	6213 [±23]	16986 [±38]
2030	1152 [±10]	2363 [±15]	389 [±6]	5751 [±23]	17266 [±40]

Table A112. Prevalence cases avoided in year [per 100000] Lithuania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	6 [±12]	-8 [±17]	0 [±8]	-3 [±32]	10 [±51]
2020	15 [±13]	19 [±19]	7 [±8]	113 [±33]	151 [±53]
2030	18 [±14]	45 [±20]	5 [±8]	202 [±32]	263 [±54]
Scenario 2					
2010	0 [±12]	11 [±17]	0 [±8]	28 [±32]	-24 [±51]
2020	32 [±13]	94 [±19]	15 [±8]	479 [±32]	542 [±53]
2030	43 [±14]	153 [±20]	17 [±8]	779 [±31]	1092 [±53]

Luxembourg

Table A113. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	216 [± 4]	687 [± 7]	15 [± 1]	130 [± 3]	1166 [± 10]
2020	2498 [± 14]	7826 [± 25]	180 [± 4]	1578 [± 11]	12432 [± 32]
2030	5223 [± 21]	16397 [± 37]	368 [± 5]	3344 [± 17]	24431 [± 45]
Scenario 1					
2010	211 [± 4]	682 [± 7]	16 [± 1]	134 [± 3]	1165 [± 10]
2020	2452 [± 14]	7655 [± 25]	178 [± 4]	1473 [± 11]	12066 [± 31]
2030	5129 [± 20]	16013 [± 36]	366 [± 5]	3118 [± 16]	23747 [± 44]
Scenario 2					
2010	214 [± 4]	686 [± 7]	15 [± 1]	131 [± 3]	1155 [± 10]
2020	2388 [± 14]	7308 [± 24]	168 [± 4]	1211 [± 10]	11300 [± 30]
2030	4978 [± 20]	15270 [± 35]	344 [± 5]	2601 [± 15]	22311 [± 43]

Table A114. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	5 [± 6]	5 [± 10]	0 [± 2]	0 [± 5]	1 [± 14]
2020	46 [± 20]	171 [± 35]	2 [± 5]	105 [± 16]	366 [± 44]
2030	94 [± 29]	384 [± 51]	2 [± 8]	226 [± 23]	684 [± 62]
Scenario 2					
2010	2 [± 6]	1 [± 10]	0 [± 2]	0 [± 5]	11 [± 14]
2020	110 [± 20]	518 [± 35]	12 [± 5]	367 [± 15]	1132 [± 44]
2030	245 [± 29]	1127 [± 50]	24 [± 8]	743 [± 22]	2120 [± 61]

Table A115. Prevalence cases in year [per 100000] for Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1996 [±13]	2750 [±15]	353 [±5]	1773 [±12]	28536 [±48]
2020	2345 [±14]	3492 [±17]	386 [±6]	2091 [±13]	31884 [±50]
2030	2648 [±15]	4267 [±19]	429 [±6]	2492 [±14]	34618 [±53]
Scenario 1					
2010	1999 [±13]	2755 [±15]	350 [±5]	1777 [±12]	28530 [±48]
2020	2315 [±14]	3433 [±17]	378 [±5]	2012 [±13]	31561 [±50]
2030	2619 [±15]	4153 [±18]	428 [±6]	2348 [±14]	34098 [±53]
Scenario 2					
2010	2005 [±13]	2765 [±15]	347 [±5]	1778 [±12]	28530 [±48]
2020	2286 [±14]	3296 [±16]	371 [±5]	1823 [±12]	30960 [±50]
2030	2582 [±15]	3962 [±18]	413 [±6]	2059 [±13]	33109 [±52]

Table A116. Prevalence cases avoided in year [per 100000] Luxembourg

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±18]	0 [±21]	3 [±7]	0 [±17]	6 [±68]
2020	30 [±19]	59 [±24]	8 [±8]	79 [±18]	323 [±71]
2030	29 [±21]	114 [±26]	1 [±8]	144 [±20]	520 [±74]
Scenario 2					
2010	0 [±18]	0 [±21]	6 [±7]	0 [±17]	6 [±68]
2020	59 [±19]	196 [±23]	15 [±8]	268 [±18]	924 [±71]
2030	66 [±20]	305 [±26]	16 [±8]	433 [±19]	1509 [±74]

Malta

Table A117. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	183 [± 4]	726 [± 8]	227 [± 4]	17 [± 1]	682 [± 7]
2020	2157 [± 13]	8884 [± 27]	2521 [± 14]	194 [± 4]	8078 [± 26]
2030	4447 [± 20]	19356 [± 41]	5243 [± 21]	404 [± 6]	16937 [± 38]
Scenario 1					
2010	180 [± 4]	724 [± 8]	225 [± 4]	17 [± 1]	691 [± 7]
2020	2133 [± 13]	8696 [± 27]	2369 [± 14]	191 [± 4]	7829 [± 25]
2030	4401 [± 20]	19017 [± 41]	4929 [± 21]	397 [± 6]	16469 [± 38]
Scenario 2					
2010	187 [± 4]	729 [± 8]	230 [± 4]	17 [± 1]	688 [± 7]
2020	2066 [± 13]	8289 [± 26]	1967 [± 13]	176 [± 4]	7192 [± 24]
2030	4258 [± 19]	18103 [± 40]	4099 [± 19]	369 [± 6]	15208 [± 36]

Table A118. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	3 [± 5]	2 [± 11]	2 [± 6]	0 [± 2]	-9 [± 10]
2020	24 [± 19]	188 [± 38]	152 [± 20]	3 [± 6]	249 [± 36]
2030	46 [± 27]	339 [± 55]	314 [± 29]	7 [± 8]	468 [± 52]
Scenario 2					
2010	-4 [± 5]	-3 [± 11]	-3 [± 6]	0 [± 2]	-6 [± 10]
2020	91 [± 18]	595 [± 37]	554 [± 19]	18 [± 5]	886 [± 35]
2030	189 [± 26]	1253 [± 55]	1144 [± 27]	35 [± 8]	1729 [± 51]

Table A119. Prevalence cases in year [per 100000] for Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 0					
2010	1490 [±11]	3077 [±16]	6691 [±23]	380 [±6]	15627 [±35]
2020	1831 [±12]	4189 [±19]	7386 [±25]	417 [±6]	18245 [±39]
2030	2000 [±13]	4945 [±21]	7964 [±26]	462 [±6]	20580 [±42]
Scenario 1					
2010	1490 [±11]	3071 [±16]	6683 [±23]	378 [±5]	15648 [±35]
2020	1820 [±12]	4105 [±18]	7255 [±24]	415 [±6]	18067 [±38]
2030	1977 [±13]	4854 [±21]	7712 [±26]	460 [±6]	20274 [±42]
Scenario 2					
2010	1496 [±11]	3075 [±16]	6703 [±23]	386 [±6]	15646 [±35]
2020	1783 [±12]	3948 [±18]	6921 [±24]	409 [±6]	17541 [±38]
2030	1925 [±13]	4616 [±20]	7057 [±25]	444 [±6]	19388 [±41]

Table A120. Prevalence cases avoided in year [per 100000] Malta

Year	Cancers	CHD & Stroke	Diabetes	Osteoarthritis	Hypertension
Scenario 1					
2010	0 [±15]	6 [±22]	8 [±33]	2 [±8]	-21 [±50]
2020	11 [±17]	84 [±26]	131 [±34]	2 [±8]	178 [±54]
2030	23 [±18]	91 [±28]	252 [±35]	2 [±9]	306 [±57]
Scenario 2					
2010	-6 [±15]	2 [±22]	-12 [±33]	-6 [±8]	-19 [±50]
2020	48 [±17]	241 [±26]	465 [±34]	8 [±8]	704 [±54]
2030	75 [±18]	329 [±28]	907 [±35]	18 [±9]	1192 [±57]

Monaco

Table A121. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [±4]	1305 [±10]	18 [±1]	230 [±4]	1237 [±10]
2020	2797 [±16]	13904 [±35]	220 [±4]	2894 [±16]	13547 [±35]
2030	5670 [±24]	26778 [±51]	452 [±7]	6144 [±24]	27373 [±52]
Scenario 1					
2010	238 [±4]	1307 [±10]	19 [±1]	231 [±4]	1227 [±10]
2020	2751 [±16]	13677 [±35]	219 [±4]	2702 [±15]	13247 [±34]
2030	5576 [±23]	26245 [±51]	451 [±7]	5724 [±24]	26825 [±51]
Scenario 2					
2010	238 [±4]	1329 [±10]	18 [±1]	234 [±4]	1234 [±10]
2020	2705 [±15]	13173 [±34]	202 [±4]	2291 [±14]	12675 [±34]
2030	5470 [±23]	25220 [±49]	416 [±6]	4904 [±22]	25828 [±50]

Table A122. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	-2 [±14]	-1 [±2]	-1 [±6]	10 [±14]
2020	46 [±21]	227 [±47]	1 [±6]	192 [±21]	300 [±46]
2030	94 [±30]	533 [±65]	1 [±8]	420 [±31]	548 [±66]
Scenario 2					
2010	-1 [±6]	-24 [±15]	0 [±2]	-4 [±6]	3 [±14]
2020	92 [±21]	731 [±47]	18 [±6]	603 [±20]	872 [±46]
2030	200 [±30]	1558 [±64]	36 [±8]	1240 [±30]	1545 [±65]

Table A123. Prevalence cases in year [per 100000] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	4555 [±19]	3402 [±16]	491 [±6]	4987 [±20]	57472 [±68]
2020	4490 [±20]	4007 [±19]	458 [±6]	4358 [±20]	57611 [±72]
2030	4506 [±21]	4048 [±20]	460 [±7]	4560 [±21]	57335 [±75]
Scenario 1					
2010	4557 [±19]	3399 [±16]	495 [±6]	4978 [±20]	57517 [±68]
2020	4475 [±20]	3953 [±19]	461 [±6]	4220 [±19]	57432 [±71]
2030	4496 [±21]	3990 [±20]	467 [±7]	4350 [±21]	57067 [±75]
Scenario 2					
2010	4556 [±19]	3426 [±17]	497 [±6]	4990 [±20]	57512 [±68]
2020	4478 [±20]	3832 [±18]	451 [±6]	3976 [±19]	57024 [±71]
2030	4489 [±21]	3859 [±19]	445 [±7]	3954 [±20]	56475 [±74]

Table A124. Prevalence cases avoided in year [per 100000] for Monaco

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±27]	3 [±23]	-4 [±9]	9 [±28]	-45 [±96]
2020	15 [±27]	54 [±25]	-3 [±9]	138 [±26]	179 [±96]
2030	10 [±27]	58 [±25]	-7 [±9]	210 [±27]	268 [±96]
Scenario 2					
2010	-1 [±27]	-24 [±23]	-6 [±9]	-3 [±28]	-40 [±96]
2020	12 [±27]	175 [±25]	7 [±9]	382 [±26]	587 [±96]
2030	17 [±27]	189 [±25]	15 [±9]	606 [±26]	860 [±95]

Montenegro

Table A125. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	135 [± 3]	732 [± 8]	17 [± 1]	213 [± 4]	652 [± 7]
2020	1487 [± 11]	7603 [± 25]	169 [± 4]	2356 [± 14]	7390 [± 24]
2030	2928 [± 16]	14574 [± 35]	330 [± 5]	4541 [± 19]	14529 [± 35]
Scenario 1					
2010	134 [± 3]	733 [± 8]	16 [± 1]	212 [± 4]	653 [± 7]
2020	1473 [± 11]	7560 [± 25]	167 [± 4]	2204 [± 13]	7183 [± 24]
2030	2896 [± 16]	14442 [± 35]	323 [± 5]	4212 [± 19]	14026 [± 34]
Scenario 2					
2010	132 [± 3]	736 [± 8]	16 [± 1]	214 [± 4]	654 [± 7]
2020	1427 [± 11]	7245 [± 24]	158 [± 4]	1858 [± 12]	6675 [± 23]
2030	2809 [± 15]	13816 [± 34]	305 [± 5]	3560 [± 17]	13095 [± 33]

Table A126. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [± 5]	-1 [± 11]	1 [± 2]	1 [± 6]	-1 [± 10]
2020	14 [± 15]	43 [± 35]	2 [± 5]	152 [± 19]	207 [± 34]
2030	32 [± 22]	132 [± 48]	7 [± 7]	329 [± 26]	503 [± 48]
Scenario 2					
2010	3 [± 5]	-4 [± 11]	1 [± 2]	-1 [± 6]	-2 [± 10]
2020	60 [± 15]	358 [± 34]	11 [± 5]	498 [± 18]	715 [± 34]
2030	119 [± 21]	758 [± 48]	25 [± 7]	981 [± 25]	1434 [± 47]

Table A127. Prevalence cases in year [per 100000] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	997 [±9]	2105 [±13]	335 [±5]	5239 [±20]	15121 [±35]
2020	1151 [±10]	2512 [±14]	341 [±5]	5191 [±21]	16059 [±36]
2030	1218 [±10]	2644 [±15]	359 [±5]	5440 [±21]	17175 [±38]
Scenario 1					
2010	998 [±9]	2108 [±13]	331 [±5]	5257 [±21]	15121 [±35]
2020	1147 [±10]	2514 [±14]	338 [±5]	5075 [±20]	15888 [±36]
2030	1202 [±10]	2628 [±15]	356 [±5]	5178 [±21]	16756 [±37]
Scenario 2					
2010	1003 [±9]	2113 [±13]	329 [±5]	5249 [±20]	15107 [±35]
2020	1123 [±10]	2437 [±14]	330 [±5]	4807 [±20]	15490 [±35]
2030	1173 [±10]	2519 [±14]	342 [±5]	4741 [±20]	16128 [±37]

Table A128. Prevalence cases avoided in year [per 100000] for Montenegro

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±13]	-3 [±18]	4 [±7]	-18 [±29]	0 [±49]
2020	4 [±14]	-2 [±20]	3 [±7]	116 [±29]	171 [±51]
2030	16 [±14]	16 [±21]	3 [±8]	262 [±29]	419 [±52]
Scenario 2					
2010	-6 [±13]	-8 [±18]	6 [±7]	-10 [±29]	14 [±49]
2020	28 [±13]	75 [±20]	11 [±7]	384 [±28]	569 [±50]
2030	45 [±14]	125 [±20]	17 [±7]	699 [±29]	1047 [±52]

Netherlands

Table A129. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for the Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	237 [±4]	1006 [±9]	219 [±4]	219 [±4]	1055 [±9]
2020	3057 [±17]	12610 [±34]	2820 [±16]	2744 [±16]	12989 [±35]
2030	6953 [±28]	28886 [±57]	6272 [±27]	6204 [±26]	28037 [±56]
Scenario 1					
2010	238 [±4]	1008 [±9]	218 [±4]	217 [±4]	1058 [±9]
2020	3051 [±17]	12398 [±34]	2742 [±16]	2608 [±16]	12677 [±34]
2030	6907 [±28]	28380 [±56]	6113 [±26]	5908 [±26]	27417 [±55]
Scenario 2					
2010	236 [±4]	1006 [±9]	218 [±4]	223 [±4]	1053 [±9]
2020	2962 [±17]	11771 [±33]	2587 [±16]	2217 [±14]	11997 [±33]
2030	6721 [±27]	26894 [±55]	5766 [±25]	5072 [±24]	25886 [±54]

Table A130. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	-2 [±13]	1 [±6]	2 [±6]	-3 [±13]
2020	6 [±22]	212 [±45]	78 [±21]	136 [±21]	312 [±45]
2030	46 [±33]	506 [±68]	159 [±31]	296 [±31]	620 [±67]
Scenario 2					
2010	1 [±6]	0 [±13]	1 [±6]	-4 [±6]	2 [±13]
2020	95 [±22]	839 [±44]	233 [±21]	527 [±20]	992 [±45]
2030	232 [±33]	1992 [±67]	506 [±31]	1132 [±30]	2151 [±66]

Table A131. Prevalence cases in year [per 100000] for The Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2253 [±13]	4904 [±20]	5406 [±21]	2436 [±14]	28935 [±48]
2020	2889 [±16]	6500 [±25]	6336 [±24]	2989 [±17]	35543 [±58]
2030	3450 [±20]	7927 [±30]	7407 [±29]	3542 [±20]	41456 [±68]
Scenario 1					
2010	2266 [±13]	4905 [±20]	5409 [±21]	2437 [±14]	28916 [±48]
2020	2885 [±16]	6400 [±24]	6281 [±24]	2892 [±16]	35285 [±57]
2030	3437 [±20]	7778 [±30]	7307 [±29]	3408 [±20]	41009 [±68]
Scenario 2					
2010	2253 [±13]	4890 [±20]	5408 [±21]	2434 [±14]	28908 [±48]
2020	2850 [±16]	6114 [±24]	6166 [±24]	2634 [±16]	34781 [±57]
2030	3405 [±19]	7385 [±29]	7104 [±28]	3060 [±18]	40045 [±67]

Table A132. Prevalence cases avoided in year [per 100000] for Netherlands

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-13 [±19]	-1 [±28]	-3 [±29]	-1 [±20]	19 [±68]
2020	4 [±21]	100 [±32]	55 [±32]	97 [±22]	258 [±75]
2030	13 [±23]	149 [±35]	100 [±34]	134 [±24]	447 [±81]
Scenario 2					
2010	0 [±19]	14 [±28]	-2 [±29]	2 [±20]	27 [±68]
2020	39 [±21]	386 [±32]	170 [±32]	355 [±21]	762 [±75]
2030	45 [±23]	542 [±35]	303 [±34]	482 [±23]	1411 [±81]

Norway

Table A133. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	200 [±4]	861 [±8]	493 [±6]	124 [±3]	550 [±7]
2020	2324 [±14]	8686 [±27]	5756 [±22]	1516 [±11]	6430 [±23]
2030	4596 [±19]	16870 [±37]	11407 [±31]	3156 [±16]	12871 [±33]
Scenario 1					
2010	198 [±4]	864 [±8]	493 [±6]	124 [±3]	549 [±7]
2020	2298 [±14]	8597 [±26]	5648 [±21]	1425 [±11]	6269 [±23]
2030	4540 [±19]	16632 [±37]	11177 [±30]	2941 [±16]	12546 [±32]
Scenario 2					
2010	199 [±4]	849 [±8]	488 [±6]	124 [±3]	550 [±7]
2020	2240 [±13]	8224 [±26]	5322 [±21]	1208 [±10]	5874 [±22]
2030	4425 [±19]	15886 [±36]	10589 [±29]	2514 [±14]	11683 [±31]

Table A134. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±6]	-3 [±12]	0 [±9]	0 [±4]	1 [±9]
2020	26 [±19]	89 [±37]	108 [±30]	91 [±15]	161 [±32]
2030	56 [±27]	238 [±52]	230 [±43]	215 [±22]	325 [±45]
Scenario 2					
2010	1 [±6]	12 [±12]	5 [±9]	0 [±4]	0 [±9]
2020	84 [±19]	462 [±37]	434 [±30]	308 [±15]	556 [±31]
2030	171 [±27]	984 [±51]	818 [±42]	642 [±21]	1188 [±44]

Table A135. Prevalence cases in year [per 100000] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2862 [±15]	1361 [±10]	10972 [±30]	2715 [±15]	11631 [±31]
2020	3098 [±16]	1856 [±12]	11508 [±31]	2572 [±14]	12324 [±32]
2030	3265 [±16]	2027 [±13]	12301 [±32]	2777 [±15]	13244 [±33]
Scenario 1					
2010	2871 [±15]	1366 [±10]	10991 [±30]	2723 [±15]	11632 [±31]
2020	3093 [±16]	1832 [±12]	11403 [±30]	2506 [±14]	12178 [±31]
2030	3253 [±16]	1999 [±13]	12138 [±32]	2647 [±15]	13011 [±33]
Scenario 2					
2010	2848 [±15]	1354 [±10]	10963 [±30]	2725 [±15]	11610 [±30]
2020	3054 [±16]	1767 [±12]	11184 [±30]	2373 [±14]	11899 [±31]
2030	3210 [±16]	1913 [±13]	11822 [±31]	2437 [±14]	12487 [±32]

Table A136. Prevalence cases avoided in year [per 100000] for Norway

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-9 [±21]	-5 [±15]	-19 [±42]	-8 [±21]	-1 [±43]
2020	5 [±22]	24 [±17]	105 [±43]	66 [±20]	146 [±44]
2030	12 [±23]	28 [±18]	163 [±44]	130 [±21]	233 [±46]
Scenario 2					
2010	14 [±21]	7 [±15]	9 [±42]	-10 [±21]	21 [±43]
2020	44 [±22]	89 [±17]	324 [±43]	199 [±20]	425 [±44]
2030	55 [±23]	114 [±18]	479 [±44]	340 [±20]	757 [±45]

Poland

Table A137. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	132 [± 3]	987 [± 9]	19 [± 1]	203 [± 4]	667 [± 7]
2020	1674 [± 12]	10546 [± 31]	250 [± 5]	2426 [± 15]	8627 [± 28]
2030	3857 [± 21]	23564 [± 51]	566 [± 8]	5396 [± 25]	19558 [± 47]
Scenario 1					
2010	133 [± 3]	988 [± 9]	20 [± 1]	203 [± 4]	674 [± 7]
2020	1659 [± 12]	10377 [± 31]	246 [± 5]	2252 [± 14]	8369 [± 28]
2030	3820 [± 21]	23163 [± 51]	556 [± 8]	5011 [± 24]	18954 [± 46]
Scenario 2					
2010	132 [± 3]	988 [± 9]	19 [± 1]	200 [± 4]	663 [± 7]
2020	1613 [± 12]	9866 [± 30]	234 [± 5]	1832 [± 13]	7726 [± 27]
2030	3709 [± 20]	22018 [± 49]	524 [± 8]	4064 [± 21]	17327 [± 44]

Table A138. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [± 5]	-1 [± 13]	-1 [± 2]	0 [± 6]	-7 [± 10]
2020	15 [± 16]	169 [± 41]	4 [± 6]	174 [± 19]	258 [± 37]
2030	37 [± 25]	401 [± 61]	10 [± 9]	385 [± 29]	604 [± 56]
Scenario 2					
2010	0 [± 5]	-1 [± 13]	0 [± 2]	3 [± 6]	4 [± 10]
2020	61 [± 16]	680 [± 40]	16 [± 6]	594 [± 18]	901 [± 36]
2030	148 [± 25]	1546 [± 60]	42 [± 9]	1332 [± 28]	2231 [± 54]

Table A139. Prevalence cases in year [per 100000] for Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	786 [±8]	1738 [±12]	434 [±6]	5080 [±20]	16306 [±36]
2020	1050 [±10]	2187 [±14]	494 [±7]	5072 [±22]	19038 [±42]
2030	1297 [±12]	2755 [±18]	601 [±8]	5759 [±25]	22979 [±51]
Scenario 1					
2010	784 [±8]	1740 [±12]	434 [±6]	5085 [±20]	16305 [±36]
2020	1044 [±10]	2143 [±14]	496 [±7]	4937 [±21]	18824 [±42]
2030	1292 [±12]	2725 [±17]	596 [±8]	5486 [±25]	22566 [±50]
Scenario 2					
2010	781 [±8]	1735 [±12]	433 [±6]	5086 [±20]	16285 [±36]
2020	1022 [±10]	2079 [±14]	485 [±7]	4682 [±21]	18404 [±41]
2030	1268 [±12]	2608 [±17]	579 [±8]	4923 [±23]	21503 [±49]

Table A140. Prevalence cases avoided in year [per 100000] Poland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±11]	-2 [±17]	0 [±8]	-5 [±29]	1 [±51]
2020	6 [±13]	44 [±19]	-2 [±9]	135 [±28]	214 [±55]
2030	5 [±14]	30 [±21]	5 [±10]	273 [±30]	413 [±60]
Scenario 2					
2010	5 [±11]	3 [±17]	1 [±8]	-6 [±29]	21 [±51]
2020	28 [±13]	108 [±18]	9 [±9]	390 [±28]	634 [±55]
2030	29 [±14]	147 [±21]	22 [±10]	836 [±29]	1476 [±60]

Portugal

Table A141. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	169 [±4]	1091 [±9]	16 [±1]	166 [±4]	739 [±8]
2020	1950 [±13]	12046 [±31]	192 [±4]	1794 [±12]	8058 [±26]
2030	3998 [±19]	24590 [±46]	391 [±6]	3507 [±17]	15738 [±37]
Scenario 1					
2010	170 [±4]	1087 [±9]	17 [±1]	166 [±4]	741 [±8]
2020	1932 [±13]	11925 [±31]	189 [±4]	1688 [±12]	7877 [±25]
2030	3965 [±19]	24351 [±46]	381 [±6]	3278 [±17]	15353 [±37]
Scenario 2					
2010	168 [±4]	1101 [±9]	16 [±1]	165 [±4]	745 [±8]
2020	1870 [±12]	11493 [±31]	175 [±4]	1360 [±11]	7255 [±24]
2030	3819 [±18]	23379 [±45]	352 [±6]	2655 [±15]	14046 [±35]

Table A142. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±5]	4 [±13]	-1 [±2]	0 [±5]	-2 [±11]
2020	18 [±18]	121 [±44]	3 [±6]	106 [±17]	181 [±36]
2030	33 [±25]	239 [±63]	10 [±8]	229 [±23]	385 [±50]
Scenario 2					
2010	1 [±5]	-10 [±13]	0 [±2]	1 [±5]	-6 [±11]
2020	80 [±17]	553 [±43]	17 [±5]	434 [±16]	803 [±35]
2030	179 [±25]	1211 [±62]	39 [±8]	852 [±22]	1692 [±49]

Table A143. Prevalence cases in year [per 100000] for Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	660 [±7]	4159 [±18]	416 [±6]	4177 [±18]	17216 [±37]
2020	810 [±8]	5118 [±21]	437 [±6]	4528 [±19]	19181 [±40]
2030	917 [±9]	5759 [±22]	470 [±6]	4791 [±20]	20435 [±42]
Scenario 1					
2010	665 [±7]	4151 [±18]	422 [±6]	4181 [±18]	17223 [±37]
2020	808 [±8]	5069 [±20]	439 [±6]	4442 [±19]	19037 [±40]
2030	914 [±9]	5655 [±22]	466 [±6]	4601 [±20]	20130 [±42]
Scenario 2					
2010	667 [±7]	4189 [±18]	416 [±6]	4172 [±18]	17217 [±37]
2020	791 [±8]	4911 [±20]	426 [±6]	4157 [±18]	18545 [±39]
2030	879 [±9]	5408 [±22]	445 [±6]	4117 [±19]	19208 [±41]

Table A144. Prevalence cases avoided in year [per 100000] Portugal

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-5 [±10]	8 [±26]	-6 [±8]	-4 [±26]	-7 [±52]
2020	2 [±11]	49 [±29]	-2 [±8]	86 [±27]	144 [±55]
2030	3 [±12]	104 [±30]	4 [±9]	190 [±27]	305 [±57]
Scenario 2					
2010	-7 [±10]	-30 [±26]	0 [±8]	5 [±26]	-1 [±52]
2020	19 [±11]	207 [±28]	11 [±8]	371 [±26]	636 [±55]
2030	38 [±12]	351 [±30]	25 [±9]	674 [±27]	1227 [±56]

Republic of Macedonia

Table A145. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for The Republic of Macedonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	134 [±3]	1238 [±10]	15 [±1]	252 [±4]	1781 [±12]
2020	1572 [±11]	12717 [±32]	175 [±4]	2771 [±15]	17912 [±39]
2030	3198 [±17]	25371 [±47]	354 [±6]	5413 [±22]	34255 [±55]
Scenario 1					
2010	137 [±3]	1230 [±10]	14 [±1]	255 [±5]	1779 [±12]
2020	1572 [±11]	12536 [±32]	165 [±4]	2666 [±15]	17602 [±38]
2030	3182 [±17]	24985 [±47]	341 [±5]	5214 [±21]	33870 [±54]
Scenario 2					
2010	135 [±3]	1233 [±10]	15 [±1]	252 [±4]	1779 [±12]
2020	1511 [±11]	12144 [±32]	157 [±4]	2237 [±14]	16772 [±37]
2030	3079 [±16]	24149 [±46]	325 [±5]	4390 [±20]	32856 [±54]

Table A146. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Macedonia

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-3 [±5]	8 [±14]	-3 [±6]	2 [±17]	1 [±2]
2020	0 [±16]	181 [±45]	105 [±21]	310 [±53]	10 [±5]
2030	16 [±23]	386 [±63]	199 [±29]	385 [±74]	13 [±7]
Scenario 2					
2010	-1 [±5]	5 [±14]	0 [±6]	2 [±17]	0 [±2]
2020	61 [±16]	573 [±45]	534 [±20]	1140 [±53]	18 [±5]
2030	119 [±22]	1222 [±63]	1023 [±28]	1399 [±73]	29 [±7]

Table A147. Prevalence cases in year [per 100000] for The Republic of Macedonia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	960 [± 9]	3920 [± 18]	322 [± 5]	5704 [± 21]	48850 [± 63]
2020	1161 [± 10]	4671 [± 20]	340 [± 5]	6219 [± 23]	53661 [± 67]
2030	1271 [± 11]	5133 [± 21]	371 [± 6]	6487 [± 24]	57062 [± 71]
Scenario 1					
2010	962 [± 9]	3921 [± 18]	321 [± 5]	5709 [± 21]	48826 [± 62]
2020	1160 [± 10]	4597 [± 20]	332 [± 5]	6144 [± 23]	53373 [± 67]
2030	1260 [± 10]	5015 [± 21]	364 [± 6]	6368 [± 24]	56800 [± 71]
Scenario 2					
2010	959 [± 9]	3923 [± 18]	325 [± 5]	5710 [± 21]	48916 [± 63]
2020	1131 [± 10]	4433 [± 19]	327 [± 5]	5801 [± 22]	52737 [± 66]
2030	1239 [± 10]	4810 [± 20]	354 [± 6]	5802 [± 23]	56131 [± 70]

Table A148. Prevalence cases avoided in year [per 100000] for Macedonia

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-2 [± 12]	-1 [± 25]	-5 [± 30]	24 [± 88]	1 [± 7]
2020	1 [± 14]	74 [± 27]	75 [± 31]	288 [± 93]	8 [± 7]
2030	11 [± 14]	118 [± 28]	119 [± 32]	262 [± 95]	7 [± 8]
Scenario 2					
2010	1 [± 12]	-3 [± 25]	-6 [± 30]	-66 [± 88]	-3 [± 7]
2020	30 [± 14]	238 [± 27]	418 [± 31]	924 [± 92]	13 [± 7]
2030	32 [± 14]	323 [± 28]	685 [± 31]	931 [± 95]	17 [± 8]

Republic of Moldova

Table A149. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Republic of Moldova

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	136 [±3]	673 [±7]	25 [±1]	223 [±4]	657 [±7]
2020	1594 [±11]	7871 [±25]	286 [±5]	2689 [±15]	6871 [±24]
2030	3223 [±17]	16206 [±38]	590 [±7]	5484 [±22]	13603 [±34]
Scenario 1					
2010	139 [±3]	672 [±7]	26 [±1]	223 [±4]	653 [±7]
2020	1577 [±11]	7784 [±25]	281 [±5]	2478 [±14]	6698 [±23]
2030	3183 [±17]	15966 [±37]	576 [±7]	5060 [±21]	13167 [±34]
Scenario 2					
2010	140 [±3]	685 [±7]	26 [±1]	224 [±4]	657 [±7]
2020	1531 [±11]	7434 [±25]	262 [±5]	2080 [±13]	6274 [±23]
2030	3075 [±16]	15177 [±36]	535 [±7]	4234 [±19]	12310 [±33]

Table A150. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Moldova

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	-3 [±5]	1 [±10]	0 [±6]	4 [±10]	-1 [±2]
2020	17 [±16]	87 [±35]	211 [±20]	173 [±33]	5 [±7]
2030	40 [±23]	240 [±51]	424 [±29]	436 [±46]	14 [±10]
Scenario 2					
2010	-4 [±5]	-12 [±10]	-1 [±6]	0 [±10]	-1 [±2]
2020	63 [±16]	437 [±35]	609 [±20]	597 [±32]	24 [±7]
2030	148 [±22]	1029 [±50]	1250 [±28]	1293 [±46]	55 [±9]

Table A151. Prevalence cases in year [per 100000] for Republic of Moldova

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	796 [±8]	4438 [±19]	520 [±6]	4498 [±19]	16552 [±36]
2020	986 [±9]	5303 [±21]	550 [±7]	5504 [±21]	18310 [±39]
2030	1048 [±10]	5850 [±23]	599 [±7]	6308 [±23]	19356 [±41]
Scenario 1					
2010	794 [±8]	4440 [±19]	522 [±6]	4518 [±19]	16553 [±36]
2020	980 [±9]	5249 [±21]	543 [±7]	5331 [±21]	18158 [±39]
2030	1030 [±9]	5738 [±22]	588 [±7]	5976 [±23]	19001 [±41]
Scenario 2					
2010	807 [±8]	4450 [±19]	524 [±6]	4512 [±19]	16543 [±36]
2020	959 [±9]	5045 [±20]	528 [±7]	4985 [±20]	17790 [±38]
2030	1007 [±9]	5447 [±22]	564 [±7]	5368 [±22]	18386 [±40]

Table A152. Prevalence cases avoided in year [per 100000] for Moldova

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	2 [±11]	-2 [±27]	-20 [±27]	-1 [±51]	-2 [±9]
2020	6 [±13]	54 [±29]	173 [±29]	152 [±54]	7 [±9]
2030	18 [±13]	112 [±30]	332 [±31]	355 [±55]	11 [±10]
Scenario 2					
2010	-11 [±11]	-12 [±27]	-14 [±27]	9 [±51]	-4 [±9]
2020	27 [±12]	258 [±29]	519 [±29]	520 [±54]	22 [±9]
2030	41 [±13]	403 [±30]	940 [±31]	970 [±55]	35 [±10]

Romania

Table A153. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	149 [+3]	1814 [+12]	16 [+1]	225 [+4]	738 [+8]
2020	1636 [+12]	16871 [+38]	181 [+4]	2788 [+16]	8843 [+28]
2030	3352 [+18]	32601 [+56]	367 [+6]	5890 [+24]	18285 [+42]
Scenario 1					
2010	145 [+3]	1794 [+12]	16 [+1]	208 [+4]	716 [+8]
2020	1644 [+12]	16730 [+38]	177 [+4]	2576 [+15]	8570 [+27]
2030	3356 [+18]	32217 [+56]	357 [+6]	5403 [+23]	17732 [+41]
Scenario 2					
2010	143 [+3]	1685 [+12]	15 [+1]	162 [+4]	653 [+7]
2020	1632 [+12]	15922 [+37]	166 [+4]	2048 [+13]	7842 [+26]
2030	3346 [+18]	30755 [+54]	343 [+6]	4340 [+20]	16372 [+39]

Table A154. Cumulative incidence cases avoided from year 2010 [per 100,000 of population in 2010] Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [+5]	20 [+17]	0 [+2]	17 [+6]	22 [+11]
2020	-8 [+16]	141 [+52]	4 [+5]	212 [+21]	273 [+37]
2030	-4 [+23]	384 [+72]	10 [+8]	487 [+30]	553 [+54]
Scenario 2					
2010	6 [+5]	129 [+17]	1 [+2]	63 [+6]	85 [+11]
2020	4 [+16]	949 [+51]	15 [+5]	740 [+20]	1001 [+37]
2030	6 [+23]	1846 [+71]	24 [+8]	1550 [+29]	1913 [+53]

Table A155. Prevalence cases in year [per 100,000] for Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	807 [+8]	4603 [+19]	347 [+5]	5446 [+21]	16357 [+36]
2020	916 [+9]	4673 [+20]	328 [+5]	5222 [+21]	17258 [+39]
2030	1012 [+10]	5050 [+22]	351 [+6]	5856 [+24]	19198 [+43]
Scenario 1					
2010	805 [+8]	4586 [+19]	343 [+5]	5439 [+21]	16340 [+36]
2020	924 [+9]	4660 [+20]	321 [+5]	5058 [+21]	17048 [+39]
2030	1012 [+10]	4971 [+22]	343 [+6]	5512 [+23]	18817 [+42]
Scenario 2					
2010	798 [+8]	4481 [+19]	343 [+5]	5384 [+21]	16284 [+36]
2020	924 [+9]	4506 [+20]	319 [+5]	4702 [+20]	16599 [+38]
2030	1026 [+10]	4825 [+21]	343 [+6]	4877 [+22]	18068 [+41]

Table A156. Prevalence cases avoided in year [per 100,000] Romania

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [+11]	17 [+27]	4 [+7]	7 [+30]	17 [+51]
2020	-8 [+12]	13 [+27]	7 [+7]	164 [+29]	210 [+52]
2030	0 [+13]	79 [+28]	8 [+7]	344 [+30]	381 [+55]
Scenario 2					
2010	9 [+11]	122 [+27]	4 [+7]	62 [+29]	73 [+51]
2020	-8 [+12]	167 [+27]	9 [+7]	520 [+28]	659 [+52]
2030	-14 [+13]	225 [+28]	8 [+7]	979 [+29]	1130 [+55]

Russian Federation

Table A157. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Russian Federation

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	234 [±4]	843 [±8]	22 [±1]	56 [±2]	704 [±8]
2020	3042 [±17]	10400 [±32]	288 [±5]	732 [±8]	8437 [±28]
2030	7117 [±29]	23994 [±53]	685 [±9]	1765 [±14]	20107 [±49]
Scenario 1					
2010	235 [±4]	839 [±8]	23 [±1]	58 [±2]	702 [±7]
2020	3015 [±17]	10319 [±31]	286 [±5]	687 [±8]	8239 [±28]
2030	7050 [±29]	23764 [±53]	682 [±9]	1646 [±14]	19560 [±48]
Scenario 2					
2010	236 [±4]	847 [±8]	23 [±1]	56 [±2]	706 [±8]
2020	2906 [±17]	9989 [±31]	274 [±5]	550 [±7]	7645 [±27]
2030	6812 [±28]	22959 [±52]	650 [±9]	1307 [±12]	18009 [±46]

Table A158. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Russia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	4 [±12]	-1 [±2]	-2 [±3]	2 [±11]
2020	27 [±22]	81 [±41]	2 [±7]	45 [±11]	198 [±37]
2030	67 [±34]	230 [±62]	3 [±10]	119 [±17]	547 [±56]
Scenario 2					
2010	-2 [±6]	-4 [±12]	-1 [±2]	0 [±3]	-2 [±11]
2020	136 [±22]	411 [±40]	14 [±7]	182 [±10]	792 [±36]
2030	305 [±33]	1035 [±61]	35 [±10]	458 [±16]	2098 [±55]

Table A159. Prevalence cases in year [per 100000] for Russian Federation

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1313 [±10]	4014 [±18]	319 [±5]	1234 [±10]	17518 [±37]
2020	1785 [±13]	5544 [±23]	350 [±6]	1510 [±12]	20711 [±44]
2030	2208 [±16]	7034 [±29]	430 [±7]	1911 [±15]	24987 [±54]
Scenario 1					
2010	1310 [±10]	4017 [±18]	323 [±5]	1237 [±10]	17527 [±37]
2020	1771 [±13]	5521 [±23]	350 [±6]	1474 [±12]	20566 [±44]
2030	2197 [±16]	6972 [±29]	432 [±7]	1817 [±15]	24579 [±54]
Scenario 2					
2010	1308 [±10]	4002 [±18]	320 [±5]	1233 [±10]	17552 [±37]
2020	1732 [±13]	5363 [±23]	338 [±6]	1351 [±11]	20106 [±44]
2030	2147 [±16]	6722 [±28]	416 [±7]	1553 [±14]	23524 [±53]

Table A160. Prevalence cases avoided in year [per 100000] for Russia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	4 [±59]	-4 [±23]	-4 [±7]	5 [±10]	-3 [±47]
2020	111 [±58]	9 [±24]	-3 [±6]	25 [±12]	147 [±51]
2030	153 [±60]	14 [±24]	4 [±5]	68 [±13]	348 [±55]
Scenario 2					
2010	21 [±59]	10 [±23]	0 [±7]	5 [±10]	6 [±47]
2020	523 [±58]	41 [±23]	3 [±6]	95 [±11]	485 [±51]
2030	624 [±59]	62 [±24]	13 [±5]	201 [±12]	1195 [±55]

San Marino

Table A161. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	241 [±4]	2104 [±13]	14 [±1]	229 [±4]	659 [±7]
2020	2921 [±17]	17245 [±42]	192 [±4]	2843 [±17]	7904 [±28]
2030	5726 [±25]	28951 [±57]	387 [±7]	5673 [±25]	15689 [±42]
Scenario 1					
2010	242 [±4]	2095 [±13]	15 [±1]	225 [±4]	662 [±7]
2020	2897 [±17]	17077 [±42]	191 [±4]	2846 [±17]	7694 [±28]
2030	5659 [±25]	28640 [±56]	382 [±7]	5672 [±25]	15224 [±41]
Scenario 2					
2010	238 [±4]	2087 [±13]	15 [±1]	229 [±4]	659 [±7]
2020	2792 [±17]	16509 [±41]	180 [±4]	2850 [±17]	7108 [±27]
2030	5461 [±25]	27686 [±55]	355 [±6]	5668 [±25]	13966 [±39]

Table A162. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	9 [±18]	-1 [±2]	4 [±6]	-3 [±10]
2020	24 [±22]	168 [±52]	1 [±6]	-3 [±21]	210 [±35]
2030	67 [±30]	311 [±68]	5 [±8]	1 [±30]	465 [±50]
Scenario 2					
2010	3 [±6]	17 [±18]	-1 [±2]	0 [±6]	0 [±10]
2020	129 [±21]	736 [±52]	12 [±5]	-7 [±21]	796 [±35]
2030	265 [±30]	1265 [±67]	32 [±8]	5 [±30]	1723 [±49]

Table A163. Prevalence cases in year [per 100000] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2798 [±15]	4968 [±20]	604 [±7]	8512 [±26]	22430 [±42]
2020	2704 [±17]	3812 [±20]	437 [±7]	6845 [±26]	18625 [±44]
2030	2733 [±17]	3519 [±20]	427 [±7]	6798 [±27]	18722 [±46]
Scenario 1					
2010	2792 [±15]	4955 [±20]	598 [±7]	8491 [±26]	22446 [±42]
2020	2697 [±17]	3773 [±20]	436 [±7]	6852 [±26]	18483 [±43]
2030	2724 [±17]	3491 [±20]	427 [±7]	6816 [±28]	18406 [±45]
Scenario 2					
2010	2783 [±15]	4948 [±20]	597 [±7]	8503 [±26]	22416 [±42]
2020	2648 [±16]	3678 [±19]	429 [±7]	6904 [±26]	18103 [±43]
2030	2671 [±17]	3402 [±19]	411 [±7]	6892 [±28]	17587 [±44]

Table A164. Prevalence cases avoided in year [per 100000] for San Marino

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	6 [±21]	13 [±28]	6 [±10]	21 [±37]	-16 [±60]
2020	7 [±21]	39 [±25]	1 [±8]	-7 [±33]	142 [±54]
2030	9 [±21]	28 [±24]	0 [±8]	-18 [±33]	316 [±54]
Scenario 2					
2010	15 [±21]	20 [±28]	7 [±10]	9 [±37]	14 [±60]
2020	56 [±21]	134 [±24]	8 [±8]	-59 [±33]	522 [±54]
2030	62 [±21]	117 [±24]	16 [±8]	-94 [±33]	1135 [±54]

Serbia

Table A165. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	133 [± 3]	1183 [± 10]	20 [± 1]	197 [± 4]	685 [± 7]
2020	1510 [± 11]	11709 [± 31]	219 [± 4]	2274 [± 14]	8107 [± 26]
2030	3009 [± 16]	22511 [± 45]	438 [± 6]	4657 [± 20]	16498 [± 38]
Scenario 1					
2010	133 [± 3]	1148 [± 10]	19 [± 1]	180 [± 4]	668 [± 7]
2020	1486 [± 11]	11481 [± 31]	220 [± 4]	2109 [± 13]	7831 [± 26]
2030	2977 [± 16]	22100 [± 44]	439 [± 6]	4357 [± 20]	16001 [± 38]
Scenario 2					
2010	129 [± 3]	1085 [± 9]	17 [± 1]	141 [± 3]	600 [± 7]
2020	1438 [± 11]	10847 [± 30]	205 [± 4]	1678 [± 12]	7122 [± 25]
2030	2884 [± 16]	20946 [± 43]	411 [± 6]	3553 [± 18]	14636 [± 36]

Table A166. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 5]	35 [± 14]	1 [± 2]	17 [± 5]	17 [± 10]
2020	24 [± 15]	228 [± 43]	-1 [± 6]	165 [± 19]	276 [± 36]
2030	32 [± 22]	411 [± 60]	-1 [± 8]	300 [± 27]	497 [± 51]
Scenario 2					
2010	4 [± 5]	98 [± 13]	3 [± 2]	56 [± 5]	85 [± 10]
2020	72 [± 15]	862 [± 42]	14 [± 6]	596 [± 18]	985 [± 35]
2030	125 [± 22]	1565 [± 59]	27 [± 8]	1104 [± 26]	1862 [± 50]

Table A167. Prevalence cases in year [per 100000] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	826 [±8]	3258 [±16]	383 [±6]	2703 [±15]	15734 [±35]
2020	922 [±9]	3525 [±17]	360 [±6]	2304 [±14]	16206 [±37]
2030	998 [±9]	3748 [±18]	377 [±6]	2462 [±15]	17467 [±40]
Scenario 1					
2010	828 [±8]	3217 [±16]	385 [±6]	2690 [±15]	15718 [±35]
2020	915 [±9]	3493 [±17]	362 [±6]	2215 [±14]	16023 [±37]
2030	986 [±9]	3695 [±18]	378 [±6]	2342 [±14]	17152 [±39]
Scenario 2					
2010	822 [±8]	3153 [±16]	382 [±6]	2645 [±15]	15637 [±35]
2020	891 [±9]	3353 [±17]	353 [±5]	1976 [±13]	15528 [±36]
2030	970 [±9]	3564 [±18]	369 [±6]	2016 [±13]	16295 [±38]

Table A168. Prevalence cases avoided in year [per 100000] for Serbia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±12]	41 [±23]	-2 [±8]	13 [±21]	16 [±50]
2020	7 [±12]	32 [±24]	-2 [±8]	89 [±19]	183 [±51]
2030	12 [±13]	53 [±24]	-1 [±8]	120 [±20]	315 [±53]
Scenario 2					
2010	4 [±11]	105 [±23]	1 [±8]	58 [±21]	97 [±50]
2020	31 [±12]	172 [±23]	7 [±8]	328 [±19]	678 [±50]
2030	28 [±13]	184 [±24]	8 [±8]	446 [±19]	1172 [±52]

Slovakia

Table A169. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	178 [±4]	1431 [±11]	16 [±1]	525 [±6]	708 [±8]
2020	2247 [±15]	15302 [±38]	196 [±4]	6866 [±26]	9193 [±30]
2030	5156 [±25]	33631 [±63]	456 [±7]	16371 [±44]	21156 [±50]
Scenario 1					
2010	177 [±4]	1433 [±11]	16 [±1]	522 [±6]	710 [±8]
2020	2218 [±15]	14950 [±38]	194 [±4]	6425 [±25]	8986 [±29]
2030	5078 [±24]	32704 [±62]	444 [±7]	15274 [±42]	20715 [±49]
Scenario 2					
2010	176 [±4]	1428 [±11]	16 [±1]	521 [±6]	703 [±8]
2020	2157 [±14]	14068 [±36]	182 [±4]	5479 [±23]	8626 [±29]
2030	4911 [±24]	30577 [±59]	419 [±7]	13002 [±39]	19837 [±48]

Table A170. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±5]	-2 [±15]	0 [±2]	3 [±9]	-2 [±11]
2020	29 [±19]	352 [±49]	2 [±6]	441 [±33]	207 [±38]
2030	78 [±29]	927 [±73]	12 [±8]	1097 [±50]	441 [±58]
Scenario 2					
2010	2 [±5]	3 [±15]	0 [±2]	4 [±9]	5 [±11]
2020	90 [±19]	1234 [±48]	14 [±5]	1387 [±31]	567 [±38]
2030	245 [±28]	3054 [±72]	37 [±8]	3369 [±48]	1319 [±57]

Table 171. Prevalence cases in year [per 100000] for Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1175 [±10]	2392 [±14]	351 [±5]	9343 [±27]	15583 [±35]
2020	1502 [±12]	3076 [±17]	380 [±6]	8997 [±29]	17970 [±41]
2030	1811 [±15]	3657 [±21]	469 [±7]	10870 [±36]	22046 [±51]
Scenario 1					
2010	1173 [±10]	2392 [±14]	351 [±5]	9329 [±27]	15567 [±35]
2020	1484 [±12]	3013 [±17]	380 [±6]	8715 [±29]	17859 [±41]
2030	1791 [±14]	3553 [±20]	462 [±7]	10314 [±35]	21904 [±50]
Scenario 2					
2010	1176 [±10]	2393 [±14]	347 [±5]	9327 [±27]	15554 [±35]
2020	1469 [±12]	2866 [±16]	374 [±6]	8209 [±28]	17754 [±41]
2030	1751 [±14]	3386 [±20]	452 [±7]	9338 [±33]	21688 [±50]

Table A172. Prevalence cases avoided in year [per 100000] Slovakia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	2 [±14]	0 [±20]	0 [±7]	14 [±39]	16 [±50]
2020	18 [±15]	63 [±22]	0 [±8]	282 [±38]	111 [±54]
2030	20 [±17]	104 [±24]	7 [±9]	556 [±41]	142 [±59]
Scenario 2					
2010	-1 [±14]	-1 [±20]	4 [±7]	16 [±39]	29 [±50]
2020	33 [±15]	210 [±22]	6 [±8]	788 [±37]	216 [±53]
2030	60 [±17]	271 [±24]	17 [±9]	1532 [±40]	358 [±59]

Slovenia

Table A173. Cumulative incidence cases in year 2010 [per 100,000 of population in 2010] for Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	192 [+4]	1013 [+9]	18 [+1]	248 [+4]	729 [+8]
2020	2239 [+14]	10422 [+30]	209 [+4]	2742 [+15]	8183 [+26]
2030	4602 [+21]	20833 [+44]	420 [+6]	5444 [+22]	16306 [+39]
Scenario 1					
2010	194 [+4]	993 [+9]	18 [+1]	232 [+4]	703 [+8]
2020	2213 [+14]	10261 [+29]	204 [+4]	2560 [+15]	7953 [+26]
2030	4562 [+20]	20507 [+43]	414 [+6]	5064 [+22]	15870 [+38]
Scenario 2					
2010	188 [+4]	939 [+9]	17 [+1]	183 [+4]	632 [+7]
2020	2171 [+14]	9806 [+29]	191 [+4]	2054 [+13]	7286 [+25]
2030	4485 [+20]	19557 [+42]	386 [+6]	4104 [+19]	14574 [+36]

Table A174. Cumulative incidence cases avoided in year [per 100,000 of population in 2010] Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [+6]	20 [+13]	0 [+2]	16 [+6]	26 [+11]
2020	26 [+19]	161 [+41]	5 [+6]	182 [+21]	230 [+36]
2030	40 [+27]	326 [+58]	6 [+8]	380 [+29]	436 [+51]
Scenario 2					
2010	4 [+6]	74 [+12]	1 [+2]	65 [+6]	97 [+10]
2020	68 [+19]	616 [+40]	18 [+6]	688 [+20]	897 [+35]
2030	117 [+27]	1276 [+57]	34 [+8]	1340 [+28]	1732 [+50]

Table A175. Prevalence cases in year [per 100,000] for Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1407 [+11]	2454 [+14]	385 [+6]	7051 [+24]	17563 [+37]
2020	1585 [+12]	2907 [+16]	383 [+6]	6826 [+24]	18482 [+40]
2030	1743 [+13]	3217 [+17]	406 [+6]	6983 [+25]	19508 [+42]
Scenario 1					
2010	1408 [+11]	2431 [+14]	390 [+6]	7024 [+24]	17561 [+37]
2020	1578 [+12]	2886 [+16]	386 [+6]	6672 [+24]	18338 [+39]
2030	1742 [+13]	3182 [+17]	408 [+6]	6705 [+25]	19221 [+42]
Scenario 2					
2010	1400 [+11]	2374 [+14]	389 [+6]	6978 [+24]	17480 [+37]
2020	1556 [+11]	2792 [+15]	377 [+6]	6286 [+23]	17835 [+39]
2030	1719 [+13]	3041 [+17]	391 [+6]	6052 [+23]	18381 [+41]

Table A176. Prevalence cases avoided in year [per 100,000] Slovenia

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [+15]	23 [+20]	-5 [+8]	27 [+34]	2 [+53]
2020	7 [+16]	21 [+22]	-3 [+8]	154 [+33]	144 [+54]
2030	1 [+17]	35 [+23]	-2 [+8]	278 [+33]	287 [+56]
Scenario 2					
2010	7 [+15]	80 [+20]	-4 [+8]	73 [+34]	83 [+53]
2020	29 [+16]	115 [+21]	6 [+8]	540 [+32]	647 [+54]
2030	24 [+17]	176 [+22]	15 [+8]	931 [+32]	1127 [+55]

Spain

Table A177. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	180 [±4]	412 [±6]	203 [±4]	599 [±7]	17 [±1]
2020	2103 [±13]	4296 [±19]	2503 [±14]	6873 [±23]	184 [±4]
2030	4399 [±19]	8737 [±27]	5402 [±21]	14107 [±34]	374 [±6]
Scenario 1					
2010	180 [±4]	414 [±6]	203 [±4]	597 [±7]	16 [±1]
2020	2070 [±13]	4179 [±18]	2338 [±14]	6806 [±23]	184 [±4]
2030	4313 [±19]	8483 [±27]	5031 [±20]	13954 [±34]	370 [±6]
Scenario 2					
2010	180 [±4]	414 [±6]	209 [±4]	598 [±7]	16 [±1]
2020	2004 [±13]	3925 [±18]	1957 [±13]	6573 [±23]	180 [±4]
2030	4171 [±19]	7934 [±26]	4250 [±19]	13493 [±33]	364 [±5]

Table A178. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	0 [±5]	0 [±8]	0 [±6]	2 [±10]	1 [±2]
2020	33 [±18]	117 [±26]	165 [±20]	67 [±33]	0 [±5]
2030	86 [±26]	254 [±37]	371 [±29]	153 [±47]	4 [±8]
Scenario 2					
2010	0 [±5]	-2 [±8]	-6 [±6]	1 [±10]	1 [±2]
2020	99 [±18]	371 [±26]	546 [±19]	300 [±33]	4 [±5]
2030	228 [±26]	803 [±37]	1152 [±28]	614 [±47]	10 [±8]

Table A179. Prevalence cases in year [per 100000] for Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	650 [±7]	585 [±7]	4383 [±19]	14819 [±34]	403 [±6]
2020	830 [±8]	880 [±8]	4389 [±19]	15999 [±36]	428 [±6]
2030	995 [±9]	1030 [±9]	5105 [±21]	17950 [±39]	476 [±6]
Scenario 1					
2010	654 [±7]	587 [±7]	4380 [±19]	14811 [±34]	401 [±6]
2020	814 [±8]	842 [±8]	4256 [±18]	15960 [±36]	428 [±6]
2030	968 [±9]	995 [±9]	4842 [±20]	17906 [±39]	474 [±6]
Scenario 2					
2010	648 [±7]	586 [±7]	4393 [±19]	14795 [±34]	403 [±6]
2020	801 [±8]	791 [±8]	3993 [±18]	15807 [±36]	426 [±6]
2030	947 [±9]	924 [±9]	4366 [±19]	17645 [±38]	469 [±6]

Table A180. Prevalence cases avoided in year [per 100000] Spain

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 1					
2010	0 [±10]	0 [±10]	3 [±26]	8 [±49]	2 [±8]
2020	16 [±11]	38 [±12]	133 [±26]	39 [±51]	0 [±8]
2030	27 [±13]	35 [±13]	263 [±28]	44 [±54]	2 [±9]
Scenario 2					
2010	2 [±10]	-1 [±10]	-10 [±26]	24 [±49]	0 [±8]
2020	29 [±11]	89 [±12]	396 [±26]	192 [±50]	2 [±8]
2030	48 [±12]	106 [±13]	739 [±28]	305 [±53]	7 [±9]

Sweden

Table A181. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	190 [±4]	926 [±9]	15 [±1]	90 [±3]	687 [±7]
2020	2437 [±15]	10894 [±32]	216 [±4]	1190 [±10]	8822 [±28]
2030	5512 [±24]	24901 [±52]	495 [±7]	2862 [±18]	20527 [±47]
Scenario 1					
2010	195 [±4]	926 [±9]	16 [±1]	89 [±3]	682 [±7]
2020	2425 [±15]	10742 [±31]	209 [±4]	1103 [±10]	8500 [±28]
2030	5444 [±24]	24514 [±51]	482 [±7]	2660 [±17]	19779 [±46]
Scenario 2					
2010	188 [±4]	916 [±9]	16 [±1]	91 [±3]	692 [±7]
2020	2352 [±15]	10283 [±31]	195 [±4]	934 [±9]	7934 [±27]
2030	5281 [±24]	23450 [±50]	454 [±7]	2252 [±16]	18423 [±44]

Table A182. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	0 [±12]	0 [±2]	1 [±4]	5 [±10]
2020	12 [±20]	152 [±42]	7 [±6]	87 [±14]	322 [±37]
2030	68 [±30]	387 [±63]	13 [±9]	202 [±21]	748 [±57]
Scenario 2					
2010	2 [±5]	10 [±12]	0 [±2]	0 [±4]	0 [±11]
2020	85 [±20]	611 [±41]	21 [±6]	256 [±13]	888 [±37]
2030	231 [±29]	1451 [±62]	41 [±9]	610 [±20]	2104 [±56]

Table A183. Prevalence cases in year [per 100000] for Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	2861 [±15]	2569 [±14]	405 [±6]	1195 [±10]	17095 [±37]
2020	3443 [±18]	3741 [±18]	476 [±7]	1380 [±11]	20889 [±44]
2030	4130 [±21]	4738 [±23]	579 [±8]	1784 [±14]	25845 [±53]
Scenario 1					
2010	2874 [±15]	2571 [±14]	407 [±6]	1203 [±10]	17095 [±37]
2020	3441 [±18]	3700 [±18]	472 [±7]	1331 [±11]	20637 [±43]
2030	4092 [±21]	4658 [±22]	570 [±8]	1682 [±13]	25299 [±52]
Scenario 2					
2010	2847 [±15]	2557 [±14]	407 [±6]	1193 [±10]	17097 [±37]
2020	3381 [±18]	3560 [±18]	460 [±6]	1215 [±11]	20202 [±43]
2030	4045 [±21]	4497 [±22]	553 [±8]	1486 [±13]	24377 [±51]

Table A184. Prevalence cases avoided in year [per 100000] Sweden

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±21]	02 [±20]	0 [±8]	0 [±14]	0 [±52]
2020	2 [±23]	41 [±24]	4 [±9]	49 [±15]	252 [±58]
2030	38 [±26]	80 [±27]	9 [±10]	102 [±17]	546 [±64]
Scenario 2					
2010	14 [±21]	12 [±20]	0 [±8]	2 [±14]	0 [±52]
2020	62 [±23]	181 [±24]	16 [±9]	165 [±14]	687 [±57]
2030	85 [±26]	241 [±27]	26 [±10]	298 [±16]	1468 [±63]

Switzerland

Table A185. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Switzerland

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	202 [±4]	542 [±7]	59 [±2]	628 [±7]	22 [±1]
2020	2435 [±14]	6484 [±23]	679 [±7]	7207 [±24]	257 [±5]
2030	5023 [±21]	13941 [±34]	1376 [±11]	14429 [±35]	526 [±7]
Scenario 1					
2010	204 [±4]	541 [±7]	59 [±2]	629 [±7]	22 [±1]
2020	2404 [±14]	6418 [±23]	627 [±7]	6983 [±24]	253 [±5]
2030	4953 [±20]	13745 [±34]	1264 [±10]	13997 [±34]	522 [±7]
Scenario 2					
2010	204 [±4]	544 [±7]	57 [±2]	628 [±7]	21 [±1]
2020	2348 [±14]	6152 [±22]	519 [±6]	6548 [±23]	237 [±4]
2030	4819 [±20]	13183 [±33]	1054 [±9]	13119 [±33]	490 [±6]

Table A186. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Switzerland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±6]	1 [±9]	0 [±3]	-1 [±10]	0 [±2]
2020	31 [±20]	66 [±32]	52 [±10]	224 [±34]	4 [±6]
2030	70 [±28]	196 [±47]	112 [±15]	432 [±48]	4 [±9]
Scenario 2					
2010	-2 [±6]	-2 [±9]	2 [±3]	0 [±10]	1 [±2]
2020	87 [±20]	332 [±32]	160 [±10]	659 [±33]	20 [±6]
2030	204 [±28]	758 [±47]	322 [±14]	1310 [±47]	36 [±9]

Table A187. Prevalence cases in year [per 100000] for Switzerland

Year	Cancers	CHD & Stroke	Diabetes	Hypertension	Osteoarthritis
Scenario 0					
2010	1560 [±11]	3217 [±16]	1066 [±9]	13580 [±33]	520 [±6]
2020	1998 [±13]	4180 [±18]	1422 [±11]	16507 [±36]	584 [±7]
2030	2273 [±14]	5088 [±21]	1672 [±12]	18714 [±40]	661 [±7]
Scenario 1					
2010	1566 [±11]	3220 [±16]	1064 [±9]	13564 [±33]	520 [±6]
2020	1977 [±13]	4145 [±18]	1373 [±11]	16299 [±36]	580 [±7]
2030	2241 [±14]	5000 [±20]	1578 [±12]	18370 [±39]	658 [±7]
Scenario 2					
2010	1567 [±11]	3209 [±16]	1068 [±9]	13600 [±33]	519 [±6]
2020	1945 [±13]	3975 [±18]	1281 [±10]	15935 [±36]	568 [±7]
2030	2198 [±14]	4771 [±20]	1419 [±11]	17708 [±38]	635 [±7]

Table A188. Prevalence cases avoided in year [per 100000] for Switzerland

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-6 [±16]	-3 [±23]	2 [±13]	16 [±47]	0 [±9]
2020	21 [±18]	35 [±26]	49 [±15]	208 [±51]	4 [±10]
2030	32 [±19]	88 [±28]	94 [±16]	344 [±54]	3 [±10]
Scenario 2					
2010	-7 [±16]	8 [±23]	-2 [±13]	-20 [±47]	1 [±9]
2020	53 [±18]	205 [±26]	141 [±15]	572 [±51]	16 [±10]
2030	75 [±19]	317 [±28]	253 [±16]	1006 [±54]	26 [±10]

Tajikistan

Table A189. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	47 [±2]	2137 [±13]	8 [±1]	615 [±7]	2171 [±13]
2020	460 [±6]	12097 [±29]	81 [±2]	5290 [±19]	19237 [±37]
2030	807 [±7]	19104 [±34]	146 [±3]	9953 [±24]	33320 [±44]
Scenario 1					
2010	46 [±2]	2151 [±13]	8 [±1]	621 [±7]	2171 [±13]
2020	456 [±6]	12019 [±29]	81 [±2]	5135 [±19]	19133 [±37]
2030	798 [±7]	18922 [±33]	145 [±3]	9648 [±24]	33078 [±44]
Scenario 2					
2010	43 [±2]	2136 [±13]	8 [±1]	620 [±7]	2174 [±13]
2020	447 [±6]	11732 [±29]	79 [±2]	4721 [±18]	18786 [±36]
2030	783 [±7]	18457 [±33]	144 [±3]	8839 [±23]	32583 [±44]

Table A190. Prevalence cases avoided in year [per 100000] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±6]	1 [±30]	10 [±35]	-12 [±80]	4 [±5]
2020	3 [±6]	32 [±28]	124 [±35]	69 [±83]	3 [±4]
2030	2 [±7]	35 [±28]	201 [±37]	152 [±85]	2 [±4]
Scenario 2					
2010	1 [±6]	1 [±30]	5 [±35]	-19 [±80]	4 [±5]
2020	2 [±6]	96 [±28]	423 [±34]	297 [±83]	2 [±4]
2030	6 [±7]	125 [±28]	770 [±37]	450 [±85]	1 [±4]

Table A191. Prevalence cases in year [per 100000] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	244 [±4]	5726 [±21]	141 [±3]	7630 [±25]	40074 [±57]
2020	257 [±4]	4814 [±18]	112 [±3]	7537 [±23]	43011 [±55]
2030	271 [±4]	4872 [±17]	121 [±3]	8724 [±23]	45533 [±52]
Scenario 1					
2010	241 [±4]	5725 [±21]	137 [±3]	7620 [±25]	40086 [±57]
2020	254 [±4]	4782 [±18]	109 [±3]	7413 [±23]	42942 [±55]
2030	269 [±4]	4837 [±17]	119 [±3]	8523 [±22]	45381 [±52]
Scenario 2					
2010	243 [±4]	5725 [±21]	137 [±3]	7625 [±25]	40093 [±57]
2020	255 [±4]	4718 [±18]	110 [±3]	7114 [±22]	42714 [±55]
2030	265 [±4]	4747 [±17]	120 [±3]	7954 [±22]	45083 [±52]

Table A192. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Tajikistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	1 [±3]	-14 [±19]	-6 [±10]	0 [±19]	0 [±1]
2020	4 [±9]	78 [±44]	155 [±29]	104 [±55]	0 [±4]
2030	9 [±11]	182 [±55]	305 [±40]	242 [±73]	1 [±5]
Scenario 2					
2010	4 [±3]	1 [±18]	-5 [±10]	-3 [±19]	0 [±1]
2020	13 [±9]	365 [±44]	569 [±28]	451 [±55]	2 [±4]
2030	24 [±11]	647 [±55]	1114 [±39]	737 [±73]	2 [±5]

Turkey

Table A193. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	38 [±2]	2602 [±14]	12 [±1]	179 [±4]	1353 [±10]
2020	396 [±6]	19989 [±40]	129 [±3]	2042 [±13]	14697 [±35]
2030	719 [±8]	35917 [±54]	237 [±4]	4138 [±18]	28836 [±49]
Scenario 1					
2010	38 [±2]	2582 [±14]	12 [±1]	176 [±4]	1346 [±10]
2020	391 [±6]	19611 [±40]	127 [±3]	1893 [±12]	14343 [±34]
2030	716 [±8]	35202 [±54]	235 [±4]	3836 [±18]	28157 [±48]
Scenario 2					
2010	39 [±2]	2573 [±14]	12 [±1]	178 [±4]	1345 [±10]
2020	379 [±6]	18604 [±39]	119 [±3]	1558 [±11]	13340 [±33]
2030	698 [±8]	33357 [±52]	222 [±4]	3195 [±16]	26218 [±46]

Table A194. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±2]	20 [±20]	0 [±1]	3 [±5]	7 [±15]
2020	5 [±8]	378 [±56]	2 [±5]	149 [±18]	354 [±48]
2030	3 [±11]	715 [±75]	2 [±6]	302 [±25]	679 [±68]
Scenario 2					
2010	-1 [±2]	29 [±20]	0 [±1]	1 [±5]	8 [±15]
2020	17 [±8]	1385 [±56]	10 [±4]	484 [±17]	1357 [±47]
2030	21 [±11]	2560 [±74]	15 [±6]	943 [±24]	2618 [±66]

Table A195. Prevalence cases in year [per 100000] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	221 [±4]	3632 [±17]	212 [±4]	3060 [±16]	28282 [±48]
2020	210 [±4]	3422 [±17]	172 [±4]	1664 [±12]	26775 [±47]
2030	209 [±4]	3473 [±17]	167 [±4]	1772 [±12]	27525 [±48]
Scenario 1					
2010	218 [±4]	3608 [±17]	211 [±4]	3063 [±16]	28250 [±48]
2020	211 [±4]	3372 [±17]	172 [±4]	1604 [±11]	26594 [±46]
2030	211 [±4]	3408 [±17]	171 [±4]	1681 [±12]	27252 [±47]
Scenario 2					
2010	220 [±4]	3592 [±17]	213 [±4]	3078 [±16]	28255 [±48]
2020	210 [±4]	3227 [±16]	169 [±4]	1457 [±11]	26139 [±46]
2030	210 [±4]	3261 [±16]	165 [±4]	1498 [±11]	26409 [±46]

Table A196. Prevalence cases avoided in year [per 100000] for Turkey

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	3 [±6]	24 [±24]	1 [±6]	-3 [±22]	32 [±67]
2020	-1 [±6]	50 [±23]	0 [±5]	60 [±16]	181 [±65]
2030	-2 [±6]	65 [±23]	-4 [±5]	91 [±17]	273 [±66]
Scenario 2					
2010	1 [±6]	40 [±24]	-1 [±6]	-18 [±22]	27 [±67]
2020	0 [±6]	195 [±23]	3 [±5]	207 [±16]	636 [±65]
2030	-1 [±6]	212 [±23]	2 [±5]	274 [±16]	1116 [±66]

Turkmenistan

Table A197. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 3]	-2 [± 16]	0 [± 1]	4 [± 6]	-6 [± 9]
2020	8 [± 11]	160 [± 45]	4 [± 4]	163 [± 20]	127 [± 29]
2030	16 [± 15]	301 [± 60]	4 [± 6]	343 [± 28]	283 [± 41]
Scenario 2					
2010	-2 [± 3]	1 [± 16]	0 [± 1]	1 [± 6]	-6 [± 9]
2020	16 [± 11]	457 [± 45]	9 [± 4]	490 [± 20]	397 [± 29]
2030	47 [± 15]	864 [± 60]	14 [± 6]	1025 [± 27]	897 [± 41]

Table A198. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	66 [± 2]	1622 [± 11]	10 [± 1]	229 [± 4]	490 [± 6]
2020	726 [± 7]	12865 [± 31]	111 [± 3]	2626 [± 14]	5498 [± 20]
2030	1387 [± 10]	22975 [± 40]	215 [± 4]	5203 [± 19]	10810 [± 28]
Scenario 1					
2010	66 [± 2]	1624 [± 11]	10 [± 1]	225 [± 4]	496 [± 6]
2020	718 [± 7]	12705 [± 31]	107 [± 3]	2463 [± 14]	5371 [± 20]
2030	1371 [± 10]	22674 [± 40]	211 [± 4]	4860 [± 19]	10527 [± 27]
Scenario 2					
2010	68 [± 2]	1621 [± 11]	10 [± 1]	228 [± 4]	496 [± 6]
2020	710 [± 7]	12408 [± 31]	102 [± 3]	2136 [± 13]	5101 [± 20]
2030	1340 [± 10]	22111 [± 40]	201 [± 4]	4178 [± 17]	9913 [± 26]

Table A199. Prevalence cases in year [per 100000] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	252 [±4]	4424 [±19]	174 [±4]	3807 [±17]	11857 [±31]
2020	328 [±5]	4863 [±19]	164 [±4]	4333 [±18]	13101 [±31]
2030	357 [±5]	5309 [±19]	182 [±4]	5020 [±19]	14446 [±32]
Scenario 1					
2010	252 [±4]	4419 [±19]	170 [±4]	3808 [±17]	11868 [±31]
2020	324 [±5]	4825 [±19]	161 [±3]	4210 [±18]	13005 [±31]
2030	349 [±5]	5239 [±19]	180 [±4]	4785 [±18]	14236 [±32]
Scenario 2					
2010	254 [±5]	4414 [±19]	176 [±4]	3808 [±17]	11861 [±31]
2020	323 [±5]	4751 [±19]	159 [±3]	3948 [±17]	12770 [±31]
2030	344 [±5]	5131 [±19]	175 [±4]	4313 [±17]	13747 [±31]

Table A200. Prevalence cases avoided in year [per 100000] for Turkmenistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±6]	5 [±27]	4 [±5]	-1 [±25]	-11 [±44]
2020	4 [±7]	38 [±28]	3 [±5]	123 [±26]	96 [±46]
2030	8 [±8]	70 [±29]	2 [±5]	235 [±28]	210 [±48]
Scenario 2					
2010	-2 [±6]	10 [±27]	-2 [±5]	-1 [±25]	-4 [±44]
2020	5 [±7]	112 [±28]	5 [±5]	385 [±26]	331 [±45]
2030	13 [±7]	178 [±29]	7 [±5]	707 [±27]	699 [±47]

Ukraine

Table A201. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	147 [±3]	1126 [±9]	529 [±7]	244 [±4]	824 [±8]
2020	1783 [±12]	12672 [±33]	6748 [±24]	2789 [±16]	8735 [±27]
2030	3899 [±20]	27074 [±52]	15184 [±39]	5838 [±24]	17390 [±42]
Scenario 1					
2010	149 [±3]	1127 [±9]	537 [±7]	237 [±4]	814 [±8]
2020	1773 [±12]	12548 [±33]	6596 [±24]	2582 [±15]	8335 [±27]
2030	3850 [±20]	26792 [±51]	14823 [±38]	5427 [±23]	16636 [±41]
Scenario 2					
2010	145 [±3]	1125 [±9]	535 [±7]	245 [±4]	819 [±8]
2020	1700 [±12]	12299 [±33]	6199 [±23]	2172 [±14]	7571 [±26]
2030	3706 [±19]	26166 [±51]	13941 [±37]	4597 [±21]	15195 [±39]

Table A202. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-2 [±5]	-1 [±13]	7 [±6]	10 [±11]	-8 [±9]
2020	10 [±17]	124 [±45]	207 [±21]	400 [±37]	152 [±33]
2030	49 [±25]	282 [±66]	411 [±30]	754 [±52]	361 [±49]
Scenario 2					
2010	2 [±5]	1 [±13]	-1 [±6]	5 [±11]	-6 [±9]
2020	83 [±17]	373 [±45]	617 [±20]	1164 [±36]	549 [±32]
2030	193 [±25]	908 [±65]	1241 [±29]	2195 [±51]	1243 [±48]

Table A203. Prevalence cases in year [per 100000] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	736 [± 8]	4382 [± 19]	16571 [± 36]	5822 [± 22]	29854 [± 49]
2020	967 [± 9]	5757 [± 22]	18053 [± 40]	6619 [± 24]	32922 [± 53]
2030	1106 [± 10]	6780 [± 26]	20729 [± 45]	7355 [± 27]	35361 [± 59]
Scenario 1					
2010	740 [± 8]	4379 [± 19]	16573 [± 36]	5807 [± 22]	29859 [± 49]
2020	967 [± 9]	5710 [± 22]	17942 [± 39]	6428 [± 24]	32585 [± 53]
2030	1093 [± 10]	6682 [± 26]	20495 [± 45]	7045 [± 26]	34786 [± 59]
Scenario 2					
2010	742 [± 8]	4383 [± 19]	16560 [± 36]	5825 [± 22]	29822 [± 49]
2020	938 [± 9]	5598 [± 22]	17591 [± 39]	6096 [± 23]	31894 [± 52]
2030	1063 [± 10]	6479 [± 25]	19842 [± 44]	6457 [± 25]	33643 [± 58]

Table A204. Prevalence cases avoided in year [per 100000] for Ukraine

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-4 [± 11]	3 [± 26]	15 [± 31]	-5 [± 69]	-2 [± 51]
2020	0 [± 12]	47 [± 30]	191 [± 32]	337 [± 72]	111 [± 54]
2030	13 [± 13]	98 [± 33]	310 [± 34]	575 [± 75]	234 [± 57]
Scenario 2					
2010	-6 [± 11]	-1 [± 26]	-3 [± 31]	32 [± 69]	11 [± 51]
2020	29 [± 12]	159 [± 30]	523 [± 32]	1028 [± 72]	462 [± 53]
2030	43 [± 13]	301 [± 33]	898 [± 33]	1718 [± 74]	887 [± 57]

United Kingdom

Table A205. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] UK

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	223 [± 4]	519 [± 6]	17 [± 1]	168 [± 4]	247 [± 4]
2020	2577 [± 14]	5938 [± 22]	187 [± 4]	1923 [± 12]	2794 [± 15]
2030	5164 [± 20]	12164 [± 31]	370 [± 5]	3919 [± 17]	5539 [± 21]
Scenario 1					
2010	226 [± 4]	521 [± 6]	17 [± 1]	166 [± 4]	247 [± 4]
2020	2541 [± 14]	5869 [± 21]	182 [± 4]	1802 [± 12]	2717 [± 15]
2030	5092 [± 20]	11960 [± 31]	360 [± 5]	3656 [± 17]	5354 [± 20]
Scenario 2					
2010	229 [± 4]	526 [± 6]	17 [± 1]	165 [± 4]	247 [± 4]
2020	2458 [± 14]	5589 [± 21]	172 [± 4]	1474 [± 11]	2481 [± 14]
2030	4925 [± 20]	11348 [± 30]	339 [± 5]	3021 [± 15]	4888 [± 19]

Table A206. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] United Kingdom

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [± 6]	0 [± 9]	0 [± 2]	2 [± 5]	0 [± 6]
2020	36 [± 20]	69 [± 31]	5 [± 5]	121 [± 17]	77 [± 21]
2030	72 [± 29]	204 [± 44]	10 [± 8]	263 [± 25]	185 [± 30]
Scenario 2					
2010	0 [± 6]	0 [± 9]	0 [± 2]	3 [± 5]	0 [± 6]
2020	119 [± 20]	349 [± 30]	15 [± 5]	449 [± 16]	313 [± 21]
2030	239 [± 28]	816 [± 43]	31 [± 8]	898 [± 24]	651 [± 29]

Table A207. Prevalence cases in year [per 100000] UK

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	1202 [±10]	2657 [±15]	381 [±6]	2747 [±15]	5190 [±20]
2020	1478 [±11]	3229 [±16]	405 [±6]	3372 [±16]	5910 [±21]
2030	1631 [±11]	3730 [±17]	434 [±6]	3850 [±17]	6422 [±22]
Scenario 1					
2010	1203 [±10]	2656 [±15]	382 [±6]	2754 [±15]	5204 [±20]
2020	1459 [±11]	3198 [±16]	402 [±6]	3275 [±16]	5867 [±21]
2030	1621 [±11]	3652 [±17]	431 [±6]	3656 [±17]	6296 [±22]
Scenario 2					
2010	1221 [±10]	2660 [±15]	386 [±6]	2752 [±15]	5194 [±20]
2020	1431 [±11]	3047 [±15]	396 [±6]	2999 [±15]	5663 [±21]
2030	1583 [±11]	3457 [±16]	419 [±6]	3220 [±16]	5983 [±22]

Table A208. Prevalence cases avoided in year [per 100000] United Kingdom

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	0 [±14]	1 [±21]	0 [±8]	0 [±21]	0 [±29]
2020	19 [±15]	31 [±23]	3 [±8]	97 [±23]	43 [±31]
2030	10 [±16]	78 [±24]	3 [±8]	194 [±25]	126 [±32]
Scenario 2					
2010	0 [±14]	0 [±21]	0 [±8]	0 [±21]	0 [±29]
2020	47 [±15]	182 [±22]	9 [±8]	373 [±23]	247 [±30]
2030	48 [±16]	273 [±24]	15 [±8]	630 [±24]	439 [±32]

Uzbekistan

Table A209. Cumulative incidence cases from year 2010 [per 100000 of population in 2010] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	33 [±2]	1302 [±10]	8 [±1]	68 [±2]	239 [±4]
2020	345 [±5]	10832 [±28]	91 [±3]	811 [±8]	2664 [±14]
2030	665 [±7]	19682 [±37]	182 [±4]	1742 [±11]	5435 [±19]
Scenario 1					
2010	33 [±2]	1308 [±10]	8 [±1]	68 [±2]	236 [±4]
2020	342 [±5]	10721 [±28]	88 [±3]	735 [±7]	2533 [±14]
2030	658 [±7]	19405 [±36]	175 [±3]	1568 [±10]	5172 [±19]
Scenario 2					
2010	31 [±2]	1300 [±10]	8 [±1]	68 [±2]	239 [±4]
2020	327 [±5]	10413 [±28]	83 [±2]	616 [±7]	2399 [±13]
2030	634 [±7]	18838 [±36]	166 [±3]	1295 [±9]	4847 [±18]

Table A210. Cumulative incidence cases avoided from year 2010 [per 100000 of population in 2010] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Hypertension	Diabetes
Scenario 1					
2010	0 [±2]	-6 [±14]	0 [±1]	3 [±6]	0 [±3]
2020	3 [±7]	111 [±42]	3 [±4]	131 [±20]	76 [±11]
2030	7 [±10]	277 [±56]	7 [±5]	263 [±29]	174 [±16]
Scenario 2					
2010	2 [±2]	2 [±14]	0 [±1]	0 [±6]	0 [±3]
2020	18 [±7]	419 [±41]	8 [±4]	265 [±20]	195 [±11]
2030	31 [±10]	844 [±56]	16 [±5]	588 [±29]	447 [±16]

Table A211. Prevalence cases in year [per 100000] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 0					
2010	196 [±4]	3374 [±16]	139 [±3]	1228 [±10]	5113 [±20]
2020	218 [±4]	4097 [±17]	136 [±3]	1390 [±10]	5665 [±20]
2030	242 [±4]	4654 [±18]	156 [±3]	1733 [±11]	6565 [±21]
Scenario 1					
2010	197 [±4]	3389 [±16]	138 [±3]	1223 [±10]	5100 [±20]
2020	221 [±4]	4051 [±17]	133 [±3]	1321 [±10]	5536 [±20]
2030	241 [±4]	4574 [±18]	153 [±3]	1604 [±10]	6346 [±21]
Scenario 2					
2010	196 [±4]	3384 [±16]	140 [±3]	1228 [±10]	5094 [±20]
2020	215 [±4]	3951 [±17]	131 [±3]	1226 [±10]	5427 [±20]
2030	235 [±4]	4443 [±17]	147 [±3]	1398 [±10]	6109 [±20]

Table A212. Prevalence cases avoided in year [per 100000] for Uzbekistan

Year	Cancers	CHD & Stroke	Osteoarthritis	Diabetes	Hypertension
Scenario 1					
2010	-1 [±6]	-15 [±23]	1 [±5]	5 [±14]	13 [±29]
2020	-3 [±6]	46 [±26]	3 [±5]	69 [±15]	129 [±30]
2030	1 [±6]	80 [±27]	3 [±5]	129 [±16]	219 [±32]
Scenario 2					
2010	0 [±6]	-10 [±23]	-1 [±5]	0 [±14]	19 [±29]
2020	3 [±6]	146 [±25]	5 [±5]	164 [±14]	238 [±30]
2030	7 [±6]	211 [±27]	9 [±5]	335 [±16]	456 [±32]