

# THE LANCET

## Global Health

### Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed.  
We post it as supplied by the authors.

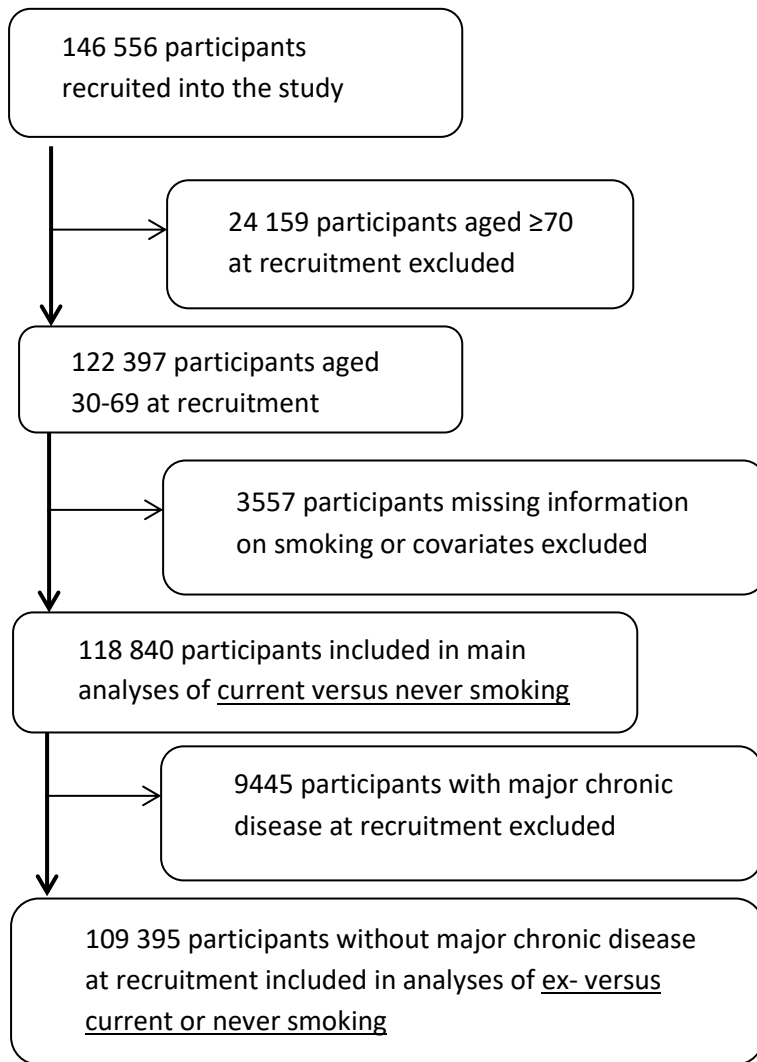
Supplement to: Thomson B, Armas Rojas N, Lacey B, et al. Association of childhood smoking and adult mortality: prospective study of 120 000 Cuban adults.  
*Lancet Glob Health* 2020; **8**: e850–59.

**Supplementary Appendix**  
**Association of childhood smoking and adult mortality:**  
**prospective study of 120 000 Cuban adults**  
**Thomson B, Armas Rojas N, Lacey B et al.**

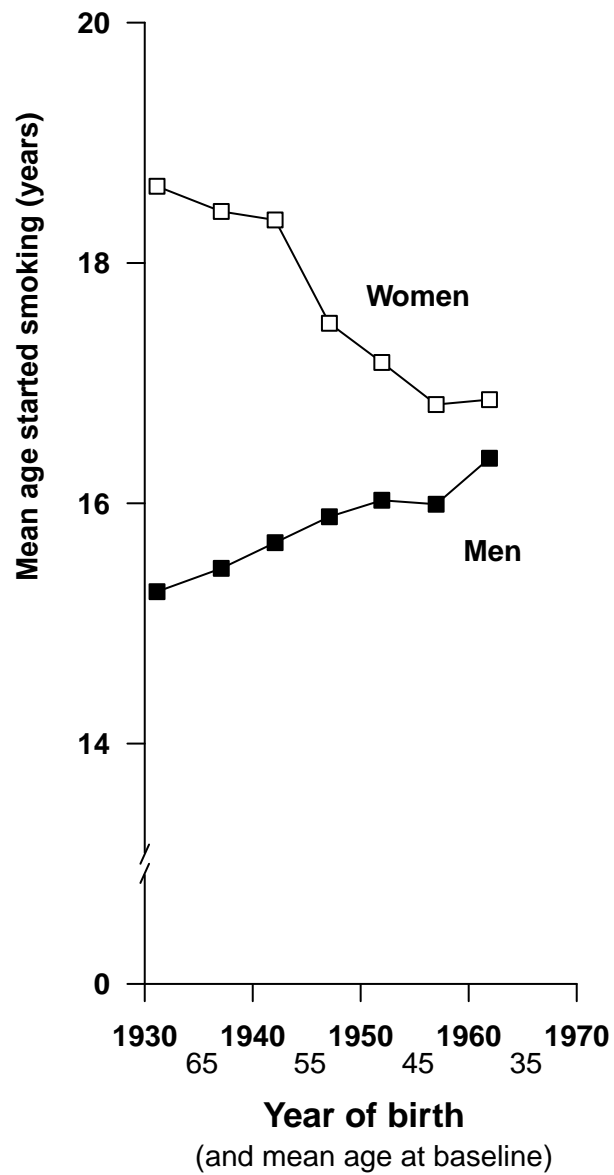
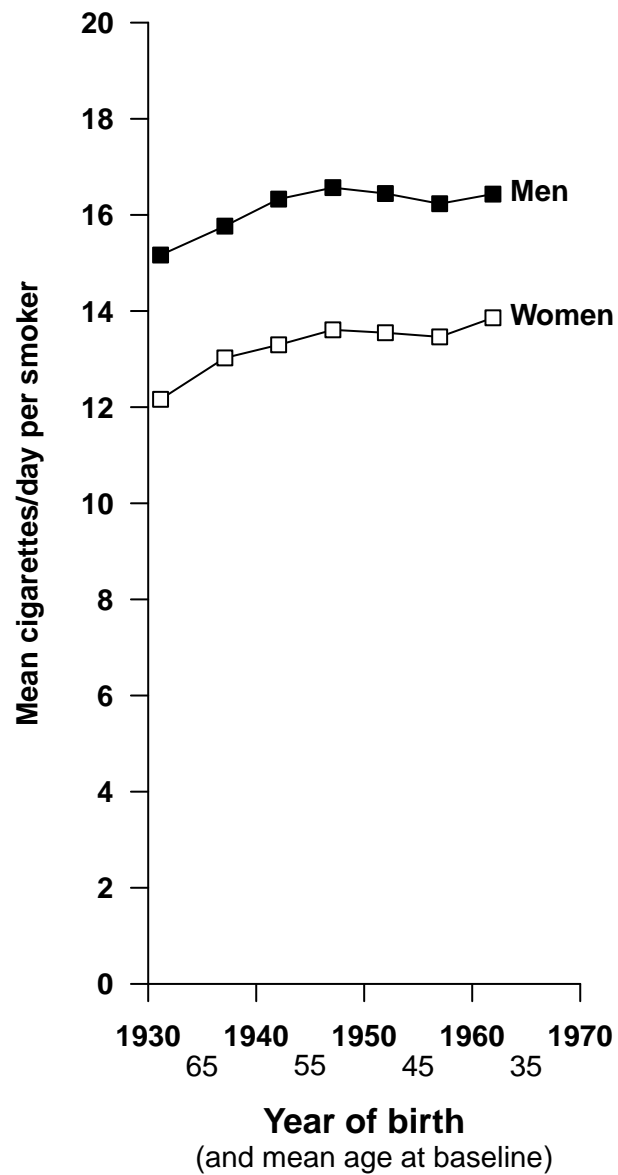
<https://www.ctsu.ox.ac.uk/research/the-cuba-prospective-study>

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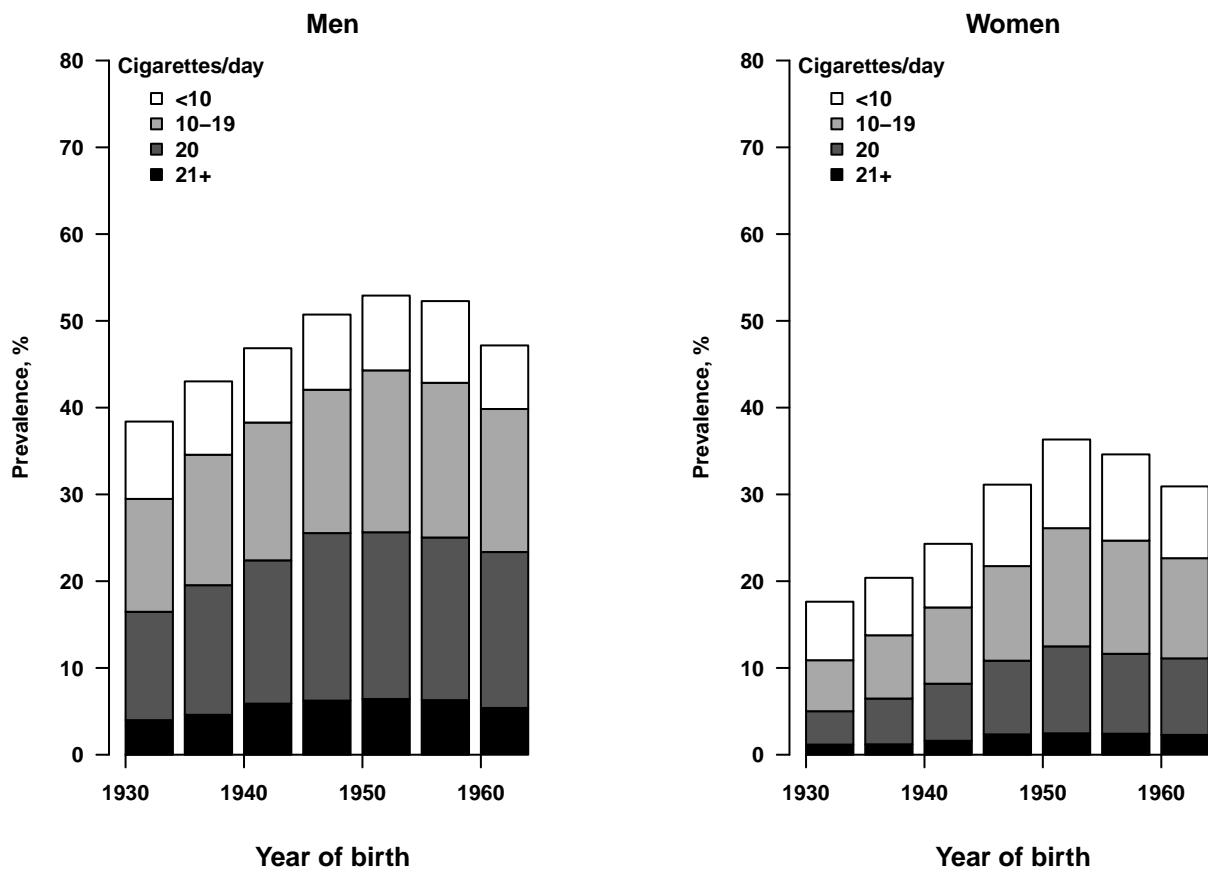
Supplementary Figure 1: Flow chart of participant exclusions



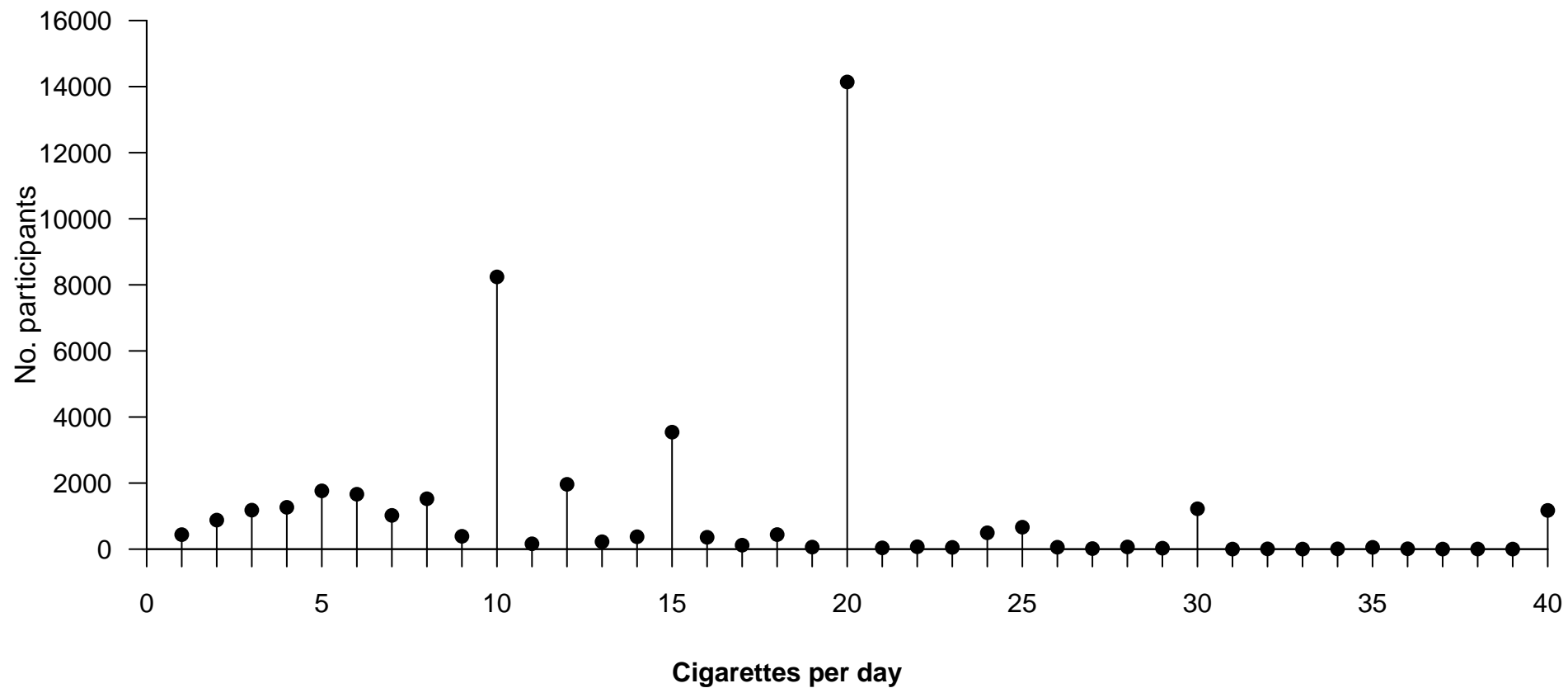
**Supplementary Figure 2:  
Mean consumption and age started smoking, by year of birth**



**Supplementary Figure 3:  
Prevalence of smoking amount (number of cigarettes/day), by sex and year of birth**

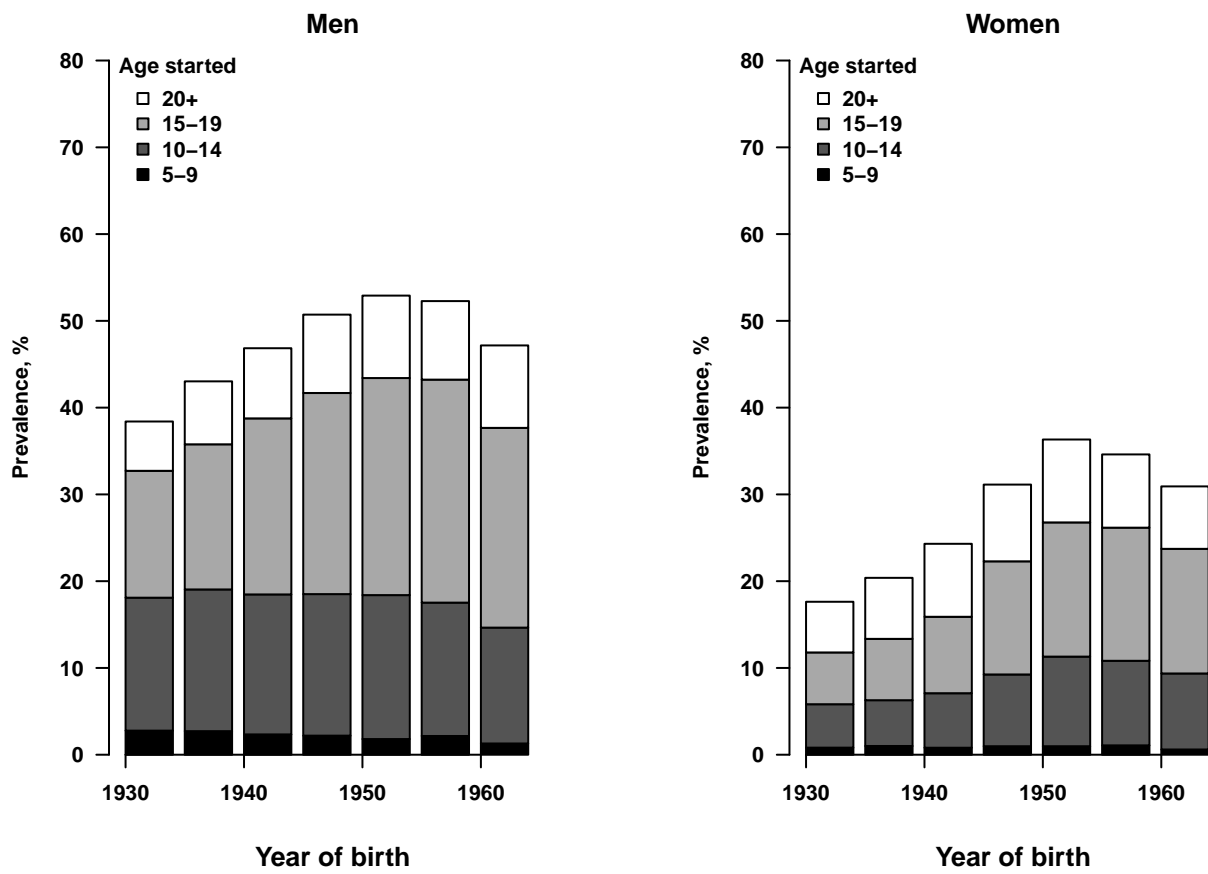


**Supplementary Figure 4:  
Distribution of reported number of cigarettes smoked per day per current smoker at baseline**

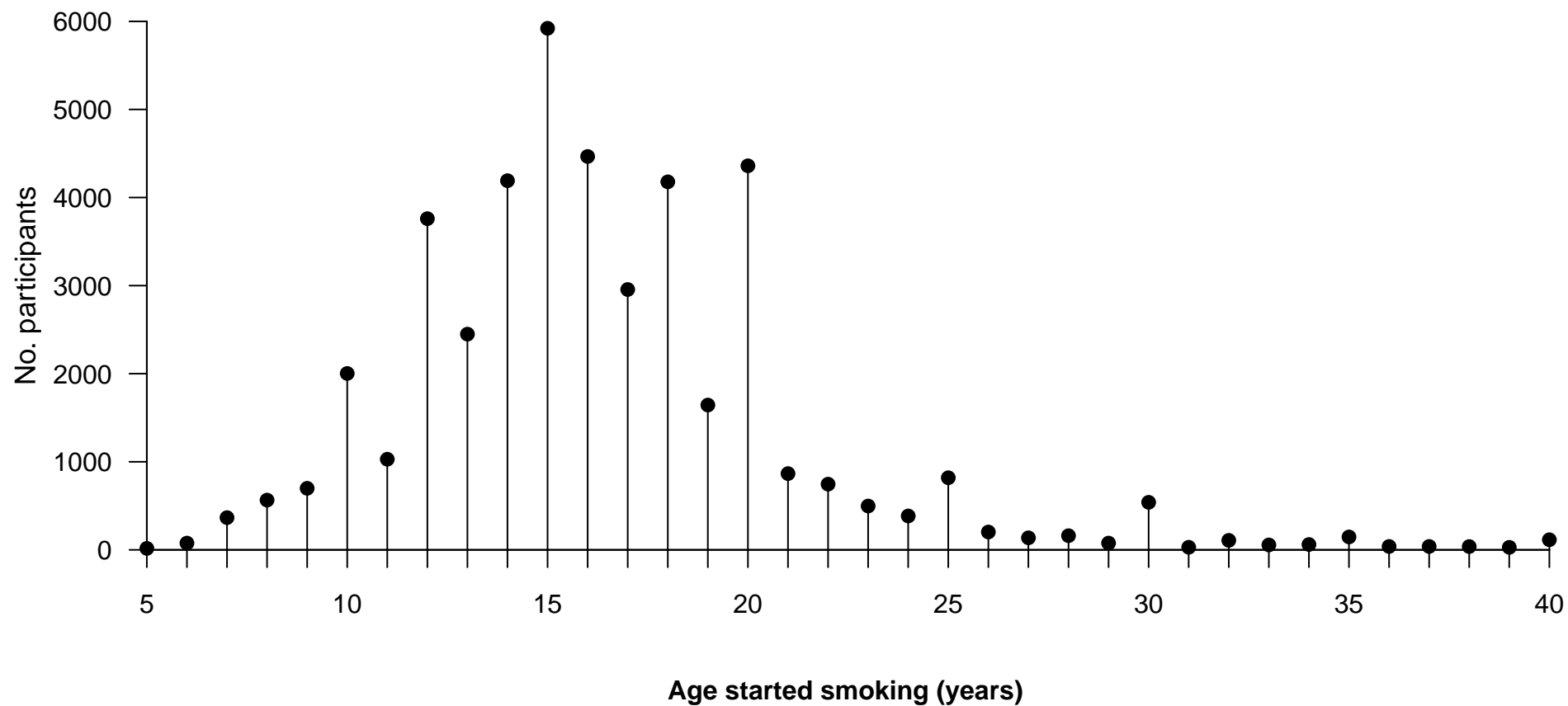


Note: the <1% of smokers who reported smoking >40 cigarettes/day not pictured.

**Supplementary Figure 5:**  
**Prevalence of age started smoking, by sex and year of birth**



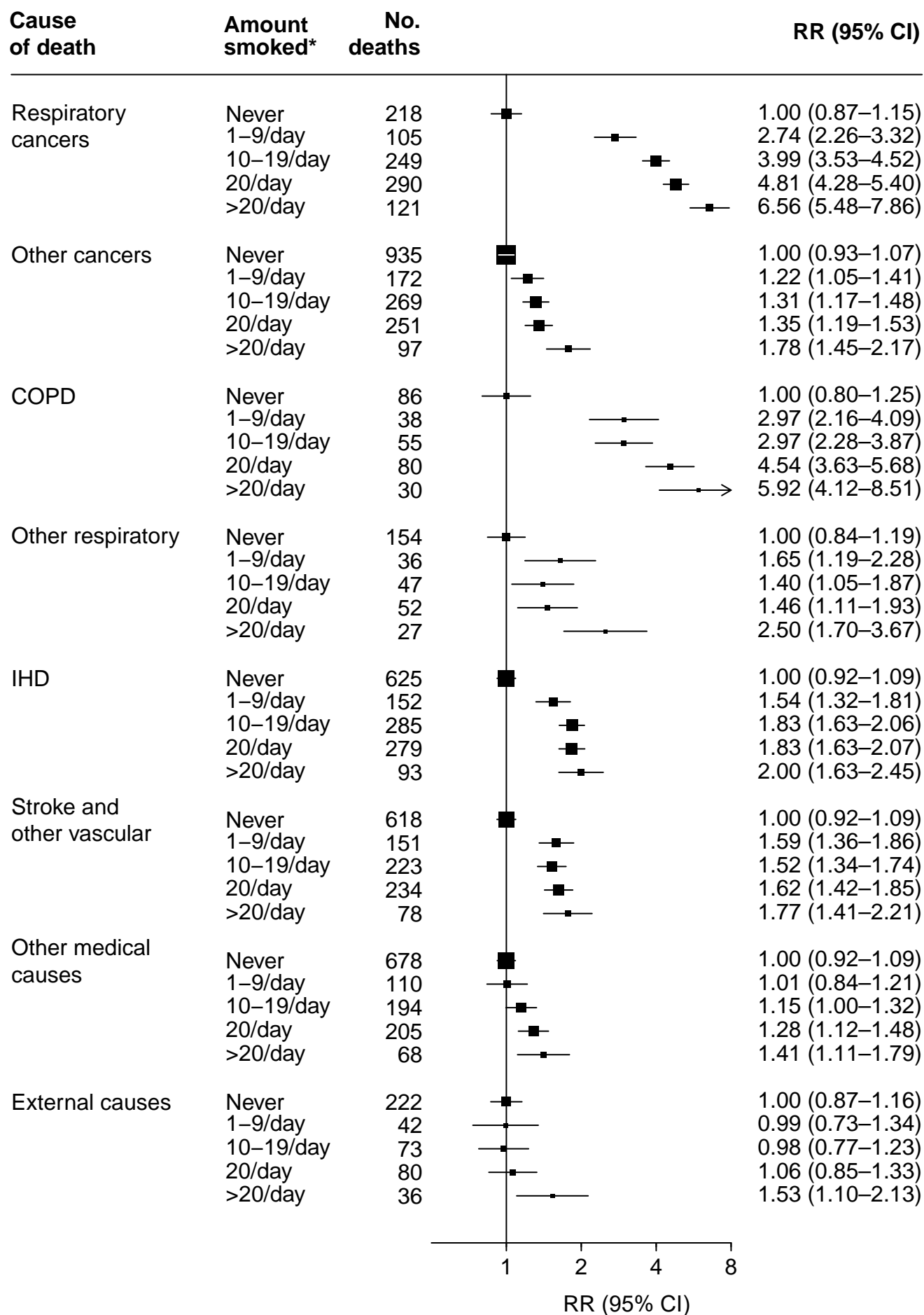
**Supplementary Figure 6:  
Distribution of reported age started smoking among current smokers at baseline**



Note: the <1% of smokers who reported starting to smoke after age 40 not pictured.



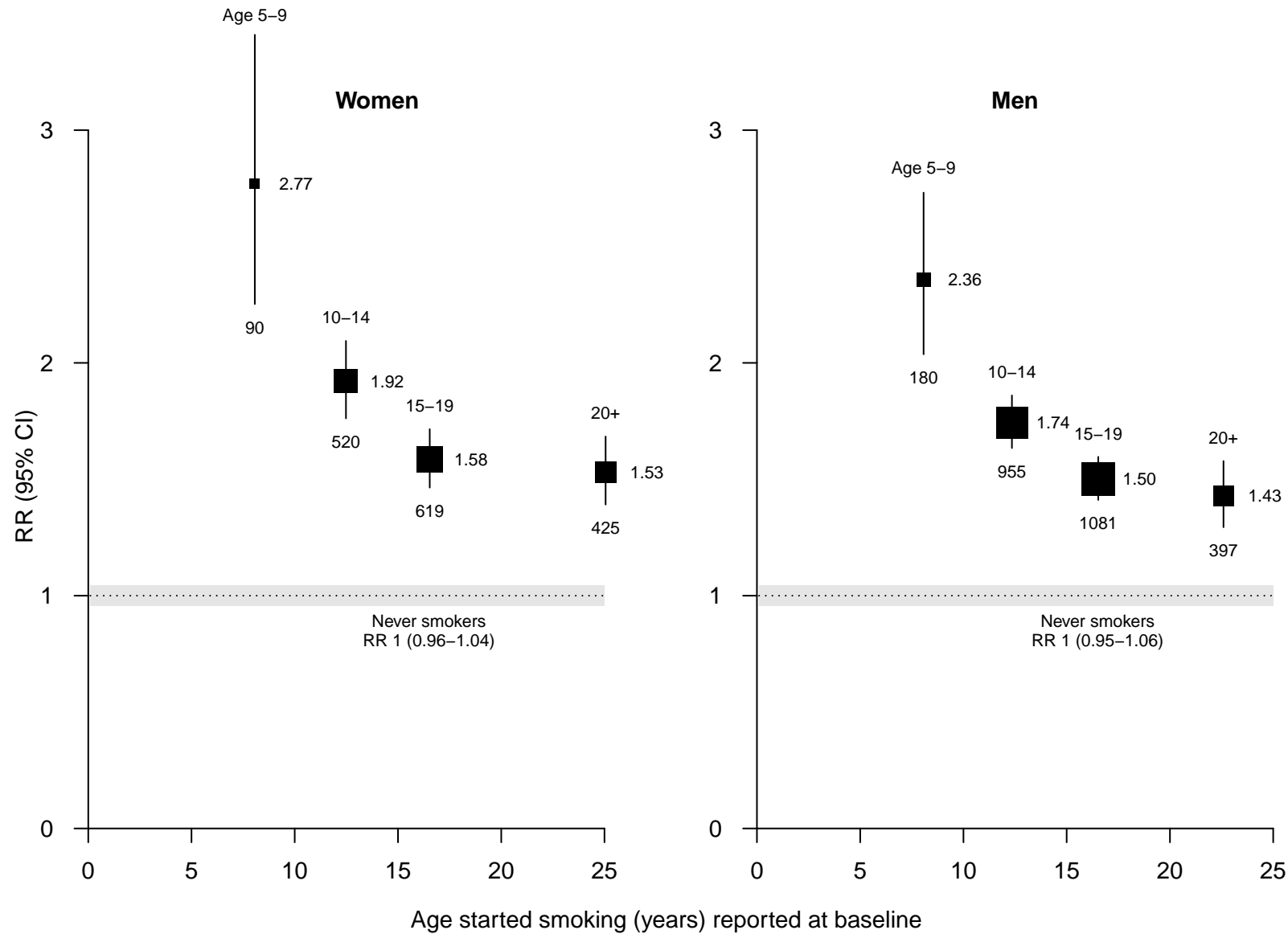
### Supplementary Figure 7: Cause-specific mortality at ages 30-69 years, cigarette smoker vs never-smoker, by amount smoked at baseline



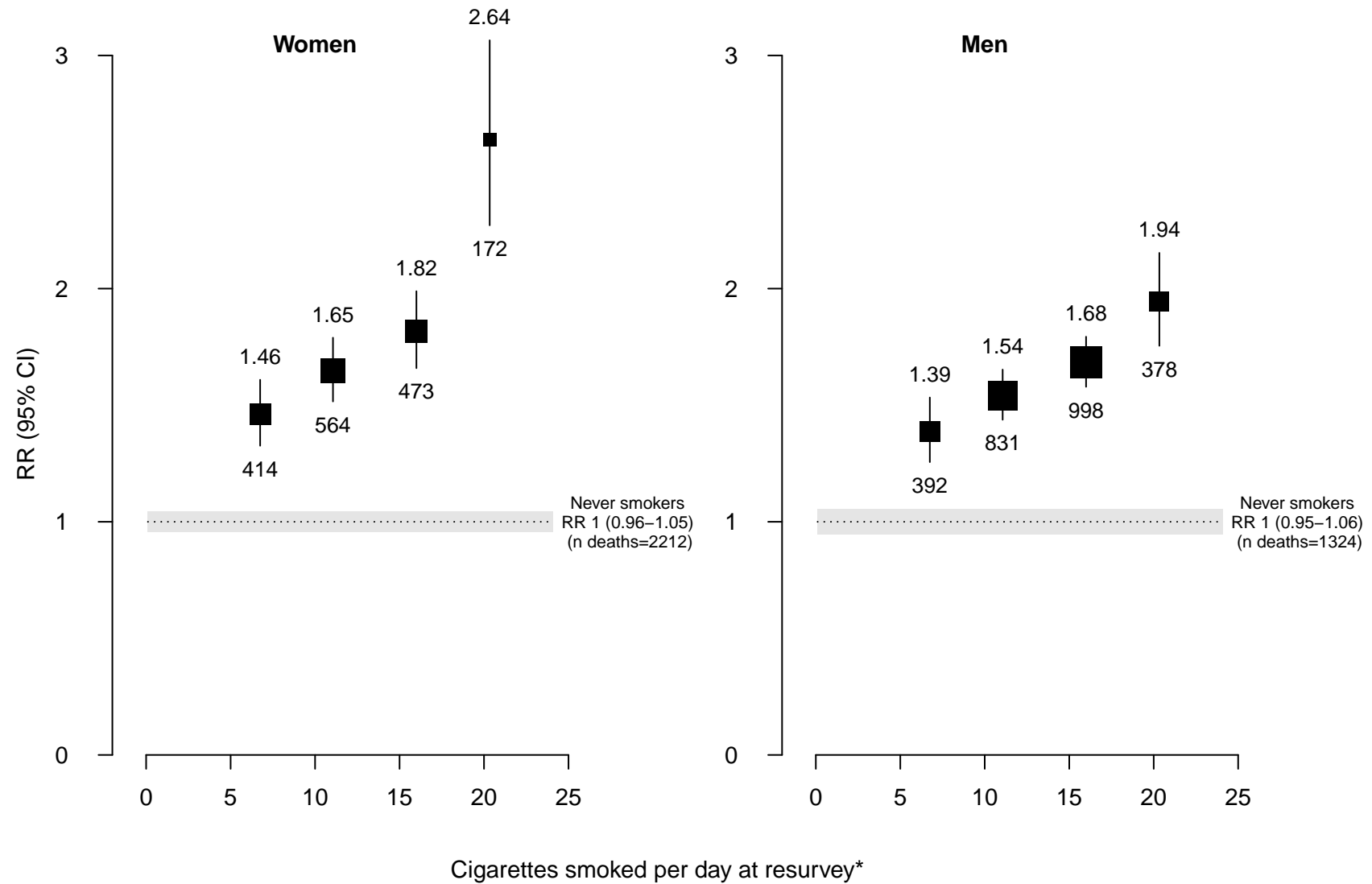
RR=mortality rate ratio, adjusted for age at risk, sex, province, education, alcohol consumption and BMI  
CI=confidence interval

\*Groups defined by number of cigarettes smoked reported at baseline. Mean number of cigarettes smoked at re-survey in those baseline-defined groups was 9, 14, 18, and 24 cigarettes per day, respectively.

Supplementary Figure 8: All-cause mortality at ages 30-69 years, by sex and age started smoking



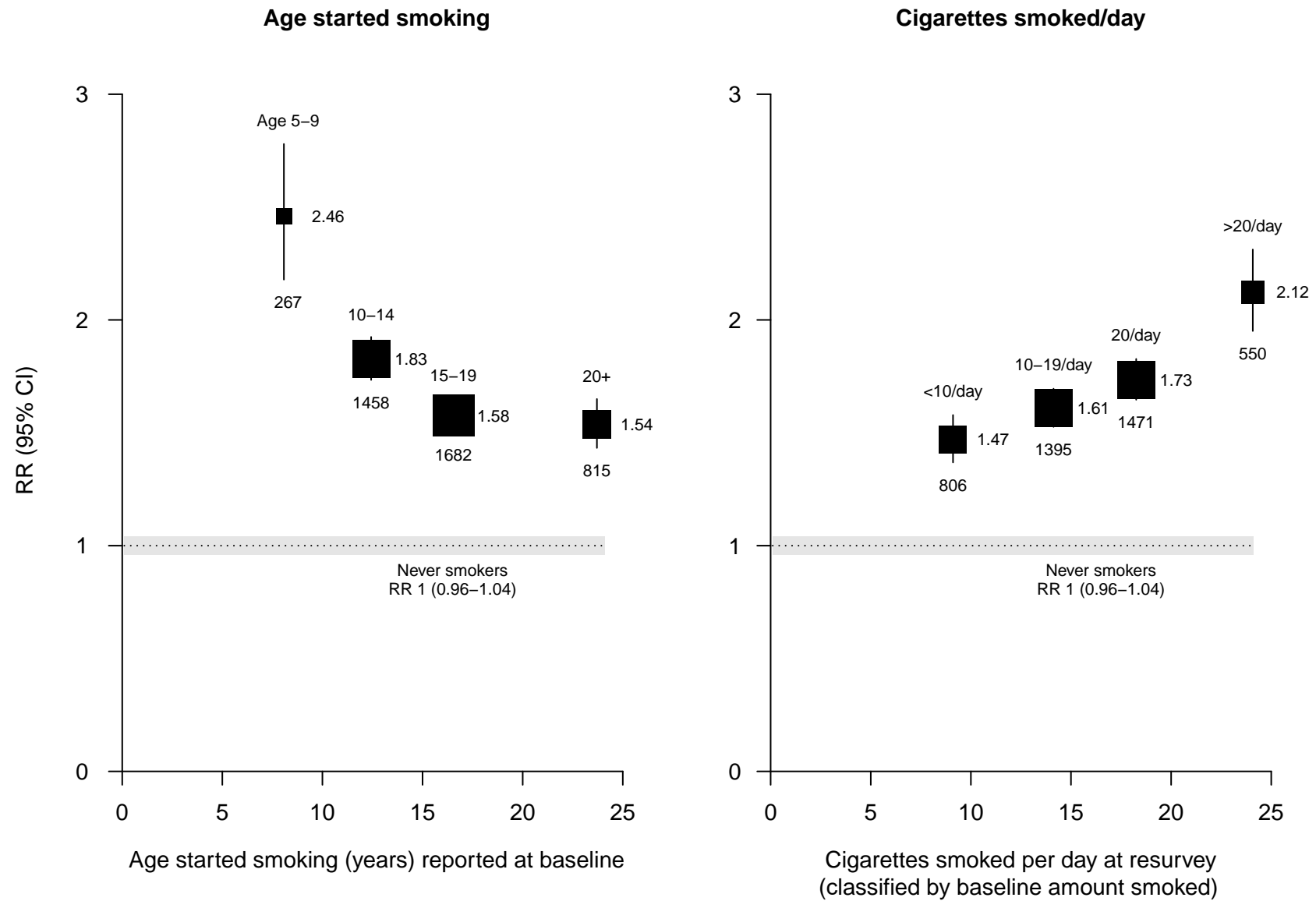
Supplementary Figure 9: All-cause mortality at ages 30-69 years, by sex and amount smoked



RR=mortality rate ratio adjusted for age at risk, province, education, alcohol consumption and BMI

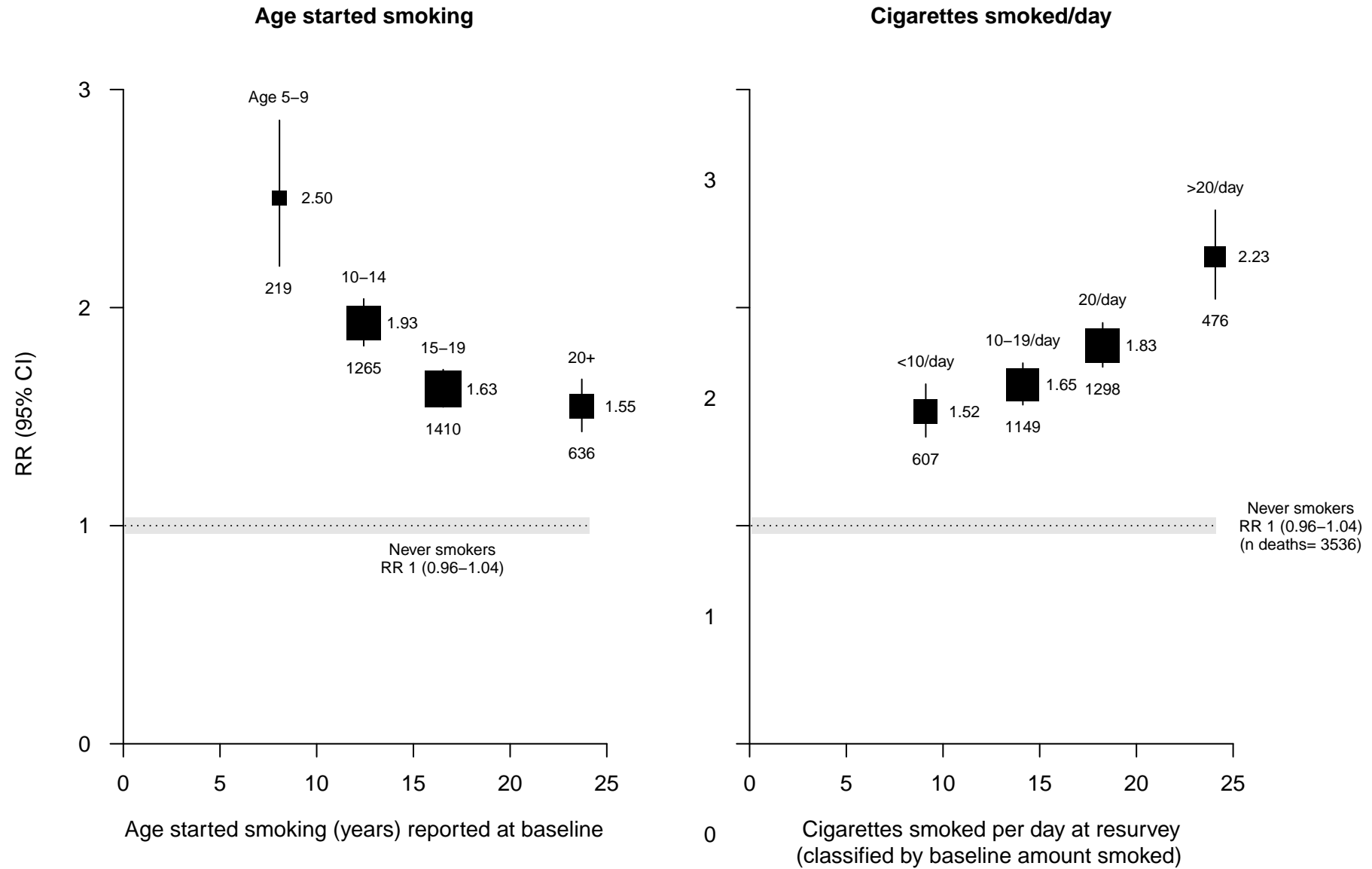
\* Mean of 6.4 years between baseline and resurvey among continuing smokers

### Supplementary Figure 10: All-cause mortality at ages 30-69 years, by age started smoking and amount smoked, after mutual adjustment



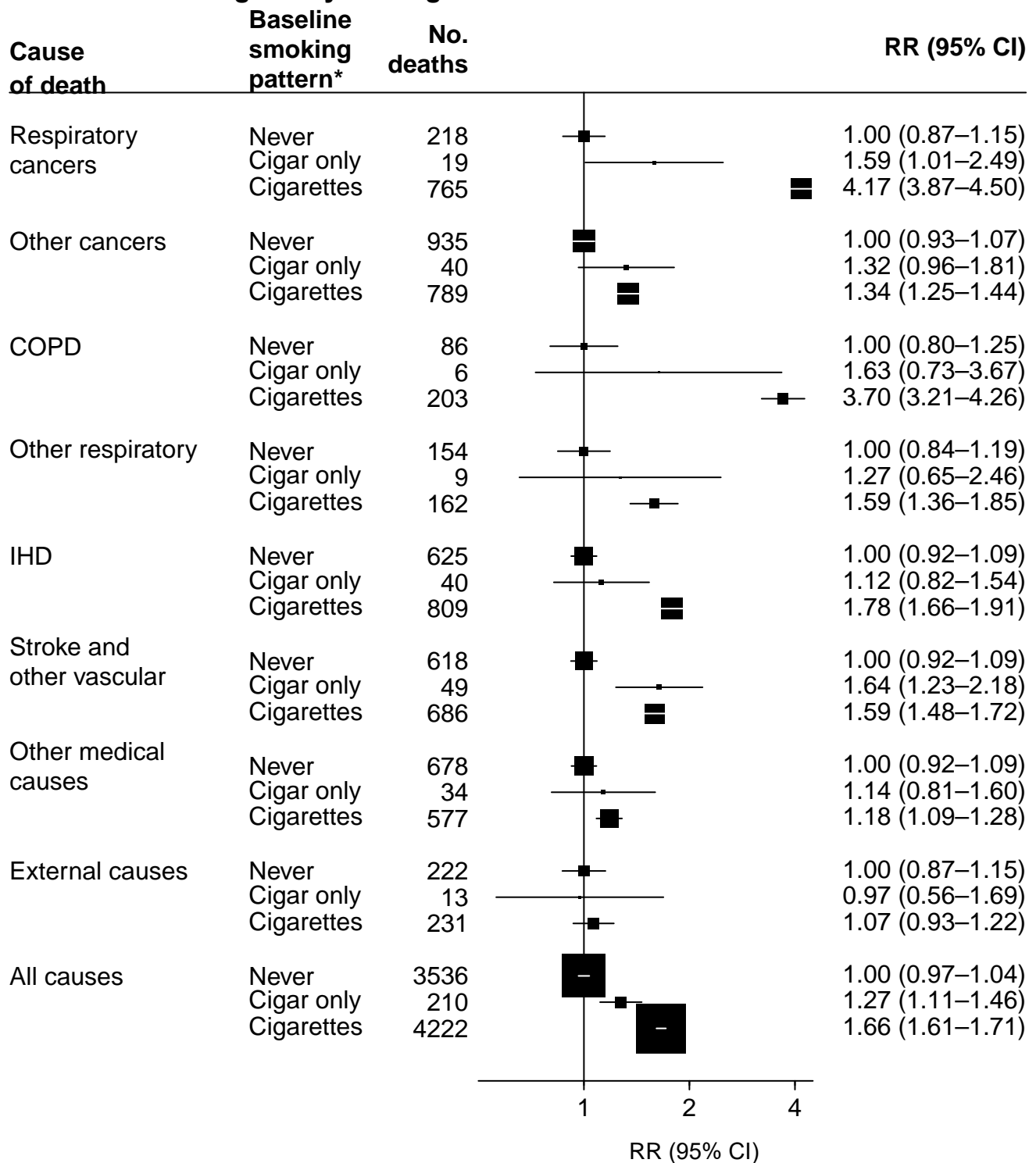
RR=mortality rate ratio adjusted for age at risk, sex, province, education, alcohol consumption and BMI

### Supplementary Figure 11: All-cause mortality at ages 30–69 years, by age started smoking and amount smoked. Effect of excluding those who had quit for one or more years



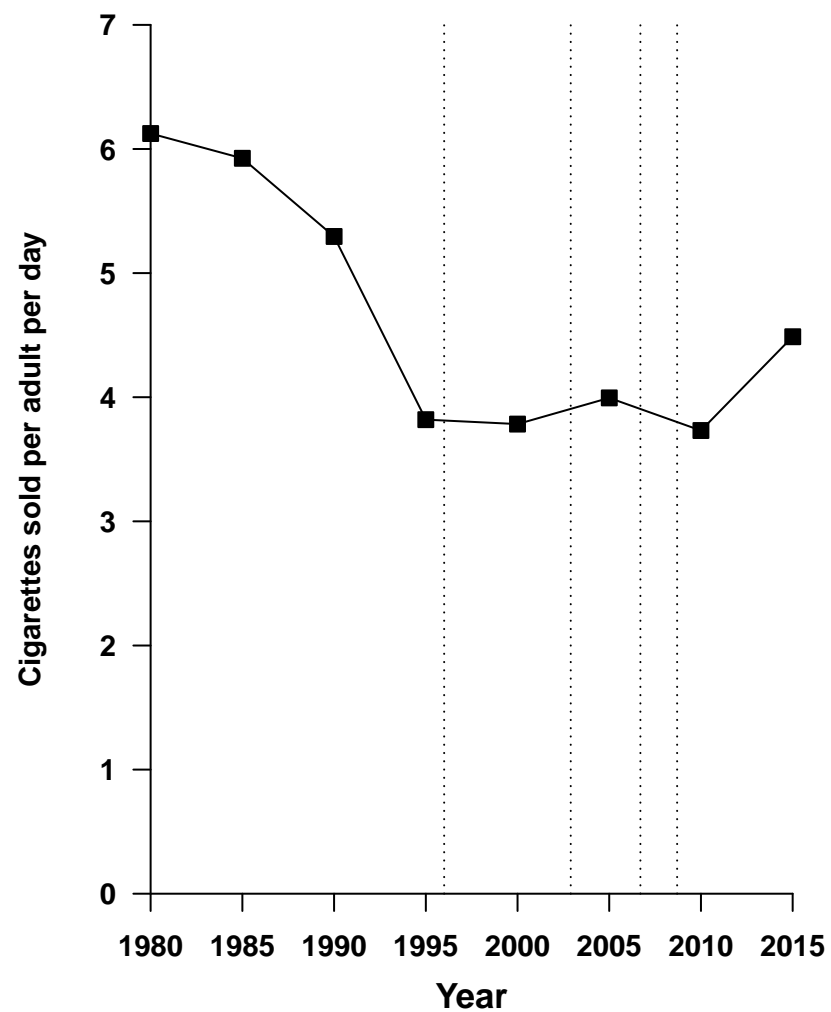
RR=mortality rate ratio adjusted for age at risk, sex, province, education, alcohol consumption and BMI

**Supplementary Figure 12: All-cause mortality at ages 30-69 years for cigar only and cigarette smokers versus never-smokers**



RR=mortality rate ratio adjusted for age at risk, sex, province, education, alcohol consumption and BMI  
 CI=Confidence interval  
 Cigar only: mean 3 cigars/day. Cigarette: mean 15 cigarettes/day (and 7% also smoked cigars).

Supplementary Figure 13: Mean number of cigarettes sold per adult per day in Cuba, 1980–2015



Vertical dotted lines refer to baseline survey (1996–2002) and resurvey (2006–2008) periods.

Source: Suarez–Lugo N. Consumo de cigarrillos y elasticidad precio–demanda. Cuba 2016. Horizonte Sanitario 2016; 16(3).

**Supplementary Table 1: ICD-9 and ICD-10 codes for mortality endpoints**

| <b>Endpoint</b>             | <b>ICD-9 codes</b>        | <b>ICD-10 codes</b>      |
|-----------------------------|---------------------------|--------------------------|
| Cancer                      |                           |                          |
| Lung or upper-aerodigestive | 140-150, 161-162          | C00-C15, C32-C34         |
| All other                   | 151-160, 163-208          | C16-C31, C35-C97         |
| Respiratory                 |                           |                          |
| COPD                        | 490-492, 494-496          | J40-J44, J47             |
| All other                   | 460-489, 497-519, 010-012 | A15-16, J00-J39, J48-J98 |
| Vascular                    |                           |                          |
| Ischaemic heart disease     | 410-414                   | I20-I25                  |
| Stroke and all other        | 390-409, 415-459, 798     | I00-I19, I26-I99         |
| External                    | 800-1002                  | S00-Y89                  |
| All-cause                   | 000-1002                  | A00-Y89                  |

ICD=International Classification of Diseases; COPD=Chronic Obstructive Pulmonary Disease



**Supplementary Table 2: Characteristics of the 52 524 male participants included in the mortality analyses, by smoking pattern and age started smoking**

|  | Never smoker | Ex smoker  | Smoke cigars only | Cigarette smoker, by age started |             |             |             |            |
|--|--------------|------------|-------------------|----------------------------------|-------------|-------------|-------------|------------|
|  |              |            |                   | Any                              | 5-9         | 10-14       | 15-19       | 20+        |
| <b>Participants</b>                              | 21 515       | 3745       | 2184              | 25 080                           | 1129        | 8210        | 11 323      | 4418       |
| <b>Age, years</b>                                | 50 (10)      | 53 (10)    | 57 (9)            | 50 (9)                           | 52 (10)     | 51 (10)     | 49 (9)      | 49 (9)     |
| <b>Smoking behavior</b>                          |              |            |                   |                                  |             |             |             |            |
| Age started smoking (years)                      | -            | 16.3 (4.9) | 16.7 (6.8)        | 15.8 (4.4)                       | 8.1 (0.9)   | 12.4 (1.4)  | 16.5 (1.3)  | 22.5 (4.5) |
| Cigar smokers                                    | -            | -          | 2184 (100%)       | 2662 (11%)                       | 181 (16%)   | 1032 (13%)  | 1064 (9%)   | 385 (9%)   |
| Cigarettes/day at baseline                       | -            | -          | -                 | 16.2 (8.7)                       | 19.6 (10.9) | 17.5 (8.9)  | 15.8 (8.2)  | 13.7 (8.0) |
| Cigars/day at baseline                           | -            | -          | 3.2 (3.0)         | 3.4 (4.0)                        | 2.9 (3.2)   | 3.2 (3.7)   | 3.8 (4.5)   | 3.2 (3.6)  |
| Current smokers at resurvey*                     | 7%           | 26%        | 83%               | 85%                              | 86%         | 82%         | 87%         | 85%        |
| Cigarettes/day at resurvey*                      | -            | -          | -                 | 17.8 (10.1)                      | 19.7 (9.7)  | 19.9 (10.5) | 17.3 (10.1) | 14.6 (8.7) |
| Cigarettes/day at resurvey among all resurveyed* | 0.9 (4.3)    | 4.6 (10.6) | 2.6 (6.1)         | 14.6 (11.4)                      | 15.7 (11.7) | 15.7 (12.4) | 14.6 (11.2) | 11.9 (9.7) |
| <b>Other characteristics</b>                     |              |            |                   |                                  |             |             |             |            |
| Completed high school                            | 11 411 (53%) | 1786 (48%) | 566 (26%)         | 11 377 (45%)                     | 286 (25%)   | 3110 (38%)  | 5561 (49%)  | 2420 (55%) |
| Consume alcohol weekly                           | 4376 (20%)   | 1011 (27%) | 619 (28%)         | 10 354 (41%)                     | 428 (38%)   | 3356 (41%)  | 4791 (42%)  | 1779 (40%) |
| BMI kg/m <sup>2</sup>                            | 24.4 (3.8)   | 24.5 (3.7) | 24.7 (4.1)        | 23.8 (3.6)                       | 23.7 (4.0)  | 23.7 (3.7)  | 23.8 (3.5)  | 24.0 (3.6) |
| SBP (mmHg)                                       | 125 (13)     | 127 (15)   | 128 (16)          | 125 (14)                         | 125 (16)    | 124 (14)    | 125 (13)    | 125 (14)   |

N (%) or mean (SD) shown.

BMI=body-mass index; SBP=systolic blood pressure

\* Of the 3578 participants resurveyed, 1519 were men. Among men at baseline, 732 participants reported never smoking, 57 ex-smoking, 69 cigar smoking only, and 661 cigarette smoking (mean 18/day).

**Supplementary Table 3: Characteristics of the 66 316 female participants included in the mortality analyses, by smoking pattern and age started smoking**

|  | Never smoker | Ex smoker  | Smoke cigars only | Cigarette smoker, by age started |             |            |            |            |
|--|--------------|------------|-------------------|----------------------------------|-------------|------------|------------|------------|
|  |              |            |                   | Any                              | 5-9         | 10-14      | 15-19      | 20+        |
| <b>Participants</b>                              | 43 671       | 3332       | 351               | 18 962                           | 595         | 5222       | 7842       | 5303       |
| <b>Age, years</b>                                | 51 (10)      | 52 (10)    | 57 (9)            | 48 (9)                           | 50 (10)     | 48 (9)     | 47 (9)     | 49 (9)     |
| <b>Smoking behavior</b>                          |              |            |                   |                                  |             |            |            |            |
| Age started smoking (years)                      | -            | 18.8 (7.3) | 19.5 (9.9)        | 17.5 (6.2)                       | 8.1 (1.0)   | 12.5 (1.3) | 16.5 (1.4) | 24.7 (6.7) |
| Cigar smokers                                    | -            | -          | 351 (100%)        | 502 (3%)                         | 26 (4%)     | 147 (3%)   | 192 (2%)   | 137 (3%)   |
| Cigarettes/day at baseline                       | -            | -          | -                 | 13.4 (8.2)                       | 16.1 (9.6)  | 15.1 (8.5) | 13.3 (7.8) | 11.5 (7.8) |
| Cigars/day at baseline                           | -            | -          | 3.4 (3.7)         | 5.6 (6.2)                        | 2.0 (1.3)   | 5.1 (5.7)  | 7.2 (7.2)  | 4.7 (5.4)  |
| Current smokers at resurvey*                     | 3%           | 26%        | 50%               | 81%                              | 86%         | 83%        | 83%        | 76%        |
| Cigarettes/day at resurvey*                      | -            | -          | -                 | 13.7 (8.4)                       | 17.8 (9.9)  | 14.5 (8.0) | 13.8 (7.6) | 12.1 (9.4) |
| Cigarettes/day at resurvey among all resurveyed* | 0.3 (2.3)    | 3.1 (6.5)  | 5.0 (12.2)        | 11.0 (9.3)                       | 15.4 (11.1) | 12.1 (9.1) | 11.3 (8.7) | 9.0 (9.7)  |
| <b>Other characteristics</b>                     |              |            |                   |                                  |             |            |            |            |
| Completed high school                            | 17 072 (39%) | 1221 (37%) | 63 (18%)          | 7270 (38%)                       | 92 (15%)    | 1554 (30%) | 3289 (42%) | 2335 (44%) |
| Consume alcohol weekly                           | 1235 (3%)    | 190 (6%)   | 51 (15%)          | 1752 (9%)                        | 50 (8%)     | 553 (11%)  | 768 (10%)  | 381 (7%)   |
| BMI kg/m <sup>2</sup>                            | 24.8 (4.4)   | 24.7 (4.8) | 24.7 (4.5)        | 23.9 (4.4)                       | 23.6 (5.2)  | 23.7 (4.6) | 23.8 (4.2) | 24.2 (4.4) |
| SBP (mmHg)                                       | 124 (16)     | 124 (17)   | 128 (17)          | 122 (16)                         | 123 (19)    | 121 (16)   | 122 (16)   | 122 (16)   |

N (%) or mean (SD) shown.

BMI=body-mass index; SBP=systolic blood pressure

\* Of the 3578 participants resurveyed, 2059 were women. Among women at baseline, 1501 participants reported never smoking, 34 ex-smoking, 6 cigar smoking only, and 518 cigarette smoking (mean 13/day).

**Supplementary Table 4: Characteristics at resurvey about 6 years later, by baseline smoking status and amount smoked**

|                                   | Never smoker | Ex smoker   | Smoke cigars only | Cigarette smoker, by cigarettes/day at recruitment |           |            |            |             |
|-----------------------------------|--------------|-------------|-------------------|--|-----------|------------|------------|-------------|
|                                   |              |             |                   | Any  | < 10      | 10-19      | 20         | 21+         |
| <b>Participants</b>               | 2243         | 92          | 76                | 1186   | 262       | 350        | 430        | 144         |
| <b>Smoking status at resurvey</b> |              |             |                   |  |           |            |            |             |
| Never-smoker                      | 2070 (92%)   | 0 (0%)      | 0 (0%)            | 1 (<0.5%)  | 0 (0%)    | 0 (0%)     | 0 (0%)     | 1 (1%)      |
| Ex-smoker                         | 73 (3%)      | 68 (74%)    | 15 (20%)          | 194 (16%)  | 63 (24%)  | 67 (19%)   | 50 (12%)   | 14 (10%)    |
| Smoke < 20 cigs/day               | 62 (3%)      | 13 (14%)    | 10 (13%)          | 525 (44%)  | 168 (64%) | 199 (57%)  | 126 (29%)  | 32 (22%)    |
| Smoke 20 cigs/day                 | 23 (1%)      | 5 (5%)      | 4 (5%)            | 317 (27%)  | 19 (7%)   | 57 (16%)   | 198 (46%)  | 43 (30%)    |
| Smoke >20 cigs/day                | 6 (<0.5%)    | 4 (4%)      | 2 (3%)            | 121 (10%)  | 5 (2%)    | 18 (5%)    | 49 (11%)   | 49 (34%)    |
| Smoke cigars only                 | 9 (<0.5%)    | 2 (2%)      | 45 (59%)          | 28 (2%)  | 7 (3%)    | 9 (3%)     | 7 (2%)     | 5 (3%)      |
| <b>Average daily cigs</b>         |              |             |                   |  |           |            |            |             |
| At baseline                       | -            | -           | -                 | 15.8 (9.5)   | 4.8 (2.0) | 11.5 (2.2) | 20.0 (0.0) | 34.0 (8.6)  |
| At resurvey, per smoker *         | 12.3 (9.6)   | 16.8 (11.9) | 13.0 (8.9)        | 16.0 (9.6)   | 9.3 (7.5) | 14.1 (7.6) | 18.3 (7.5) | 24.1 (13.0) |
| At resurvey, all participants †   | 0.5 (3.1)    | 4.0 (9.2)   | 2.7 (6.6)         | 13.0 (10.7)  | 6.8 (7.6) | 11.1 (8.9) | 15.8 (9.4) | 20.7 (14.7) |
| <b>Average daily cigars</b>       |              |             |                   |  |           |            |            |             |
| At baseline                       | -            | -           | 2.4 (1.4)         | 0.1 (0.4)  | 0.0 (0.2) | 0.1 (0.4)  | 0.1 (0.4)  | 0.1 (0.3)   |
| At resurvey, per smoker *         | 0.3 (1.1)    | 0.3 (0.7)   | 1.9 (1.7)         | 0.1 (0.6)  | 0.2 (0.7) | 0.1 (0.7)  | 0.1 (0.6)  | 0.1 (0.6)   |
| At resurvey, all participants †   | 0.0 (0.2)    | 0.1 (0.4)   | 1.5 (1.7)         | 0.1 (0.6)  | 0.1 (0.6) | 0.1 (0.6)  | 0.1 (0.6)  | 0.1 (0.5)   |

N (%) or mean (SD) shown. Includes only participants with non-missing smoking information, and non-missing blood pressure and BMI values

\* Among those self-reporting current smoking at resurvey

† Among all participants, ie, those reporting never- or ex-smoking assigned zero cigarettes/day

**Supplementary Table 5: Cause-specific population-attributable fractions (PAF) at ages 30-69 years, by sex**

| Cause of death            | Male                                 |                  |         | Female                               |                  |         |
|---------------------------|--------------------------------------|------------------|---------|--------------------------------------|------------------|---------|
|                           | No. of deaths<br>smokers/non-smokers | RR (95% CI)      | PAF (%) | No. of deaths<br>smokers/non-smokers | RR (95% CI)      | PAF (%) |
| IHD                       | 662/304                              | 1.55 (1.35-1.78) | 24      | 320/321                              | 2.03 (1.74-2.38) | 25      |
| Stroke and other vascular | 526/223                              | 1.57 (1.34-1.84) | 26      | 321/395                              | 1.60 (1.38-1.86) | 17      |
| Respiratory cancers       | 575/104                              | 3.22 (2.60-3.99) | 58      | 271/114                              | 4.61 (3.69-5.75) | 55      |
| Other cancers             | 473/236                              | 1.30 (1.11-1.53) | 15      | 478/699                              | 1.34 (1.19-1.51) | 10      |
| COPD                      | 115/23                               | 3.25 (2.06-5.12) | 58      | 113/63                               | 3.48 (2.54-4.77) | 46      |
| Other respiratory         | 110/62                               | 1.21 (0.88-1.66) | 11      | 78/92                                | 1.80 (1.33-2.45) | 20      |
| Other medical             | 441/230                              | 1.25 (1.06-1.47) | 13      | 276/448                              | 1.19 (1.02-1.38) | 6       |
| All medical               | 2902/1182                            | 1.61 (1.50-1.73) | 27      | 1857/2132                            | 1.72 (1.61-1.83) | 19      |

IHD=Ischaemic Heart Disease; COPD=Chronic Obstructive Pulmonary Disease

**Supplementary Table 6: Comparisons between the never-smoker lung cancer mortality rates in the Cuba Prospective Study during 1996-2016 and the American Cancer Society prospective study during 1984-88**

| <b>Men</b>          |              |                  |                         |                            |                             |
|---------------------|--------------|------------------|-------------------------|----------------------------|-----------------------------|
| Age at risk (years) | Person years | Cuba rate/100000 | ACS 1984-88 rate/100000 | Cuba study lung ca. deaths | Expected deaths at ACS rate |
| 40-44               | 31886        | 0                | 3                       | 0                          | 1                           |
| 45-49               | 47970        | 2.1              | 5                       | 1                          | 2                           |
| 50-54               | 59413        | 10.1             | 7                       | 6                          | 4                           |
| 55-59               | 57494        | 19.1             | 10                      | 11                         | 6                           |
| 60-64               | 53857        | 53.8             | 14                      | 29                         | 8                           |
| 65-69               | 47224        | 57.2             | 20                      | 27                         | 9                           |
| 70-74               | 39586        | 98.5             | 27                      | 39                         | 11                          |
| 75-79               | 31523        | 92.0             | 35                      | 29                         | 11                          |
| <b>Women</b>        |              |                  |                         |                            |                             |
| Age at risk (years) | Person years | Cuba rate/100000 | ACS 1984-88 rate/100000 | Cuba study lung ca. deaths | Expected deaths at ACS rate |
| 40-44               | 60140        | 3.3              | 3                       | 2                          | 2                           |
| 45-49               | 91629        | 2.2              | 4                       | 2                          | 4                           |
| 50-54               | 116435       | 7.7              | 7                       | 9                          | 8                           |
| 55-59               | 118020       | 13.6             | 10                      | 16                         | 12                          |
| 60-64               | 113870       | 28.1             | 14                      | 32                         | 16                          |
| 65-69               | 105126       | 39.0             | 19                      | 41                         | 20                          |
| 70-74               | 92355        | 40.1             | 26                      | 37                         | 24                          |
| 75-79               | 75781        | 42.2             | 34                      | 32                         | 26                          |

Source: appendix to Lancet 1992; 339: 1268-78

**Supplementary Table 7: Baseline characteristics of 1997-2014 US National Health Interview Surveys**

|                                  | Never smoker<br>n=186 040 | Ex-smoker<br>n=77 315 | Daily* smoker<br>n=63 101 | Daily smokers, by age began regular smoking |                   |                   |                   |                  | Total<br>n=326 456 |
|----------------------------------|---------------------------|-----------------------|---------------------------|---|-------------------|-------------------|-------------------|------------------|--------------------|
|                                  |                           |                       |                           | < 10<br>n=1225                              | 10-14<br>n=12 111 | 15-17<br>n=21 381 | 18-20<br>n=16 132 | > 20<br>n=12 252 |                    |
| <b>Mean (SD):</b>                |                           |                       |                           |   |                   |                   |                   |                  |                    |
| Age started smoking†             | -                         | 18 (4)                | 18 ( 5)                   | 8 (1)                                       | 13 (1)            | 16 (1)            | 19 (0.1)          | 26 (5)           | -                  |
| Cigarettes/day                   | -                         | -                     | 17 (10)                   | 21 (13)                                     | 20 (11)           | 18 ( 10)          | 16 (9)            | 14 (9)           | -                  |
| Age (in range 30-69)             | 46 (11)                   | 52 (11)               | 47 (10)                   | 49 (11)                                     | 47 (10)           | 46 (10)           | 47 (10)           | 48 (10)          | 48 (11)            |
| <b>Characteristics (% of n):</b> |                           |                       |                           |   |                   |                   |                   |                  |                    |
| Male                             | 40%                       | 53%                   | 50%                       | 68%   | 55%               | 50%               | 49%               | 44%              | 45%                |
| Consume alcohol weekly           | 25%                       | 37%                   | 37%                       | 36%   | 37%               | 38%               | 38%               | 34%              | 30%                |
| High school graduate             | 85%                       | 86%                   | 78%                       | 58%   | 70%               | 76%               | 84%               | 84%              | 84%                |
| Race/ethnicity, self-defined     |                           |                       |                           |   |                   |                   |                   |                  |                    |
| Non-Hispanic White               | 57%                       | 73%                   | 71%                       | 72%   | 75%               | 74%               | 70%               | 62%              | 64%                |
| Non-Hispanic Black               | 16%                       | 10%                   | 15%                       | 12%   | 11%               | 14%               | 16%               | 21%              | 14%                |
| Hispanic                         | 21%                       | 12%                   | 10%                       | 11%   | 10%               | 9%                | 10%               | 12%              | 17%                |
| Other                            | 7%                        | 4%                    | 4%                        | 5%  | 4%                | 4%                | 5%                | 5%               | 6%                 |
| Region                           |                           |                       |                           |   |                   |                   |                   |                  |                    |
| North-East                       | 17%                       | 19%                   | 17%                       | 14%   | 18%               | 18%               | 17%               | 15%              | 18%                |
| Mid-West                         | 21%                       | 23%                   | 26%                       | 24%   | 25%               | 26%               | 27%               | 24%              | 22%                |
| South                            | 37%                       | 34%                   | 39%                       | 41%   | 38%               | 39%               | 38%               | 41%              | 37%                |
| West                             | 25%                       | 24%                   | 18%                       | 20%   | 19%               | 17%               | 18%               | 20%              | 23%                |

Analyses restricted to 326 456 adults surveyed at ages 30-69 in the 1997-2014 annual National Health Interview Surveys (NHIS).

\*Smokers who at the time they were surveyed did not smoke daily are excluded from this table.

†The few who reported starting regular smoking before age 6 were assigned age 6 during data collection.

ESTUDIO CUBANO SOBRE TABACO Y SALUD

Provincia No.  1-9 Municipio No.   0-99 Area de  0-9 Salud No.

**17524** **A**

Carnet de -  
 Identidad No. Fecha de nacimiento (a.m.d) + 5 números  
 (11 números: excluir si no tiene C.I. de 6 + 5 números)

Nombre de la persona y dirección:   
 Calle No. Teléfono

Nombre del familiar y dirección:   
 Calle No. Municipio Provincia Teléfono

**LETRA DE MOLDE,  
 POR FAVOR**

Sexo (1 = masc, 2 = fem.)  1-2  
 Color de piel (1 = blanco, 2 = negro, 3 = mestizo, 4 = otra)  1-4  
 Estado social (1 = soltero/viudo, 2 = casado)  1-2  
 Educación completada (0 = ninguno\*, 1 = primaria, 2 = secundaria, 3 = técnico medio, 4 = obrero calificado, 5 = pre-universitario, 6 = universitario)  0-6  
 Categoría ocupacional (0 = ninguno\*, 1 = dirigente, 2 = profesional, 3 = técnico, 4 = de servicio, 5 = agrícola, 6 = industria, 7 = militar)  0-7

\* Si es cero (Ej. ama de casa, jubilado o desempleado), diga si ha trabajado alguna vez.  0-7

Quisiera medir su presión arterial mientras esta sentado, hacerle unas pocas preguntas sobre tabaco y alcohol, y medir su PA de nuevo.  
 Presión arterial (una sola toma, sentado):  /  PAS / PAD

Ahora, TABACO: ¿Ha fumado alguna vez regularmente (Ej. en la mayoría de los días)?  S=Sí, N=No  
 SI NO, vaya directamente a las preguntas sobre ALCOHOL.

¿A QUE EDAD APROXIMADAMENTE COMENZO USTED A FUMAR REGULARMENTE?  años de edad  
 ¿Desde entonces ha dejado de fumar alguna vez por un año o más?  S=Sí, N=No  
 ¿Aproximadamente cuántos cigarrillos por día se fumó usted el último mes? (0 = ninguno)  diariamente  
 ¿Aproximadamente cuántos tabacos por día se fumó usted el último mes? (0 = ninguno)  diariamente  
 ¿Si no fumó el último mes, a que edad dejó usted de fumar? (en blanco si no es aplicable)  años de edad

Ahora me gustaría hacerle algunas preguntas sobre ALCOHOL:

¿Aproximadamente cuántos días a la semana toma usted ron u otra bebida fuerte?  0-7  
 (0 = cero días o usualmente menos de una vez por semana)  
 ¿El día que usted toma ron (u otra bebida fuerte) cuántas líneas se toma?  líneas  
 ¿Aproximadamente cuántos días a la semana toma usted cerveza?  0-7  
 (0 = cero días o usualmente menos de una vez por semana)  
 ¿El día que usted toma cerveza, cuántas botellas se toma (aprox.)  botellas

Finalmente, algunos aspectos médicos: Quisiera preguntarle sobre algunas enfermedades. Lo que quiero conocer es si usted alguna vez ha sido tratado por alguna de estas enfermedades. Si no lo ha sido, conteste No (N).

Asma  S/N A.V.E. (definitivo/probable)  S/N Cirrosis  S/N  
 Enfisema (E.P.O.C.)  S/N Infarto miocardio "  S/N Enf. renal crónica  S/N  
 Diabetes  S/N Angina pectoris "  S/N Cáncer de piel  S/N  
 Úlcera péptica  S/N Hipertensión arterial  S/N Otro cáncer\*  S/N

\*Si Otro Cáncer = Sí, dónde le comenzó el cáncer?  0-9

(1 = boca o faringe, 2 = laringe, 3 = pulmón, 4 = esófago, 5 = estómago, 6 = páncreas, 7 = cuello útero, 8 = vejiga, 9 = mama, 0 = otro, más de un sitio, o no conocido)

¿Esta usted tomando alguna medicina regularmente desde hace más de un mes? Si es Sí: ¿Qué medicinas esta tomando? (Marque con X)

Digoxina  Nitratos  Hipoglic. oral  Anticoncept.  Ca. Antag.   
 Beta B.  Inh. ACE  Insulina  Antidepres.  Broncodilat.   
 Diurético  ASA  Esteroides  Ansiolítico  Antiácido/H2

MUCHAS GRACIAS POR SUS RESPUESTAS: Ahora necesito tomarle

de nuevo su presión arterial. Repita la toma de PA (una sola toma sentado):  /  PAS/PAD

¿Cuál es la última cifra PA que tiene en su historia clínica antes de hoy?

Fecha de la última PA (a.m.d)  &  /  PAS/PAD

¿Cuál es su TALLA aproximada? (medirlo o preguntarlo)  cm

¿Cuál es su PESO aproximado? (pesarlo o preguntarlo)  kg

Fecha de la entrevista  (a.m.d)

Calidad de la cooperación (1 = pobre, 2 = regular, 3 = buena)  1-3

Nombre y apellidos del entrevistador:

¿Algún comentario? .....





## Brief report on analyses of the 1997-2014 US National Health Interview Surveys

**Introduction:** We investigate the association between age started smoking and adult mortality, using public data from the annual US National Health Interview Surveys (NHIS).<sup>1</sup>

**Methods:** 552 837 US adults aged  $\geq 18$  years were surveyed in 1997-2014 and followed until 1.1.2016 via the National Death Index. They were asked whether they smoked, how much they smoked, and when they had started regular smoking. The few who smoked, but not every day, were excluded. Current smokers were grouped by the age when they had begun daily smoking (<10, 10-14, 15-17, 18-20, or >20 years). Adjusted Cox regression was used to estimate smoker versus never-smoker mortality rate ratios at ages 30-69 years in each group. Rate ratios (with group-specific 95% CIs<sup>2</sup>) were adjusted for age-at-risk (8 categories), sex, race (4 categories), education (4 categories), region (4 categories), and drinking (5 categories). NHIS surveys were conducted by the National Center for Health Statistics; participants gave informed consent. We used SASv9.4 (SAS Institute) for statistical analyses, and Rv3.1.1 for graph-plotting.

**Results:** Among 326 456 adults aged 30-69 without missing demographic or mortality information, 63 101 (19%) were daily smokers, 77 315 (24%) ex-smokers, and 186 040 (57%) never-smokers. Of daily smokers, 13 336 (21%) had started smoking regularly in childhood (ie, before age 15), of whom 1225 (2%) had started before age 10 (Table). Compared with those who had started later, those who had started in childhood were more likely to be male, more likely to be non-Hispanic white, less likely to graduate high school, equally likely to drink, but smoked more cigarettes/day.

During 2.2 million person-years of follow-up at ages 30-69, there were 6698 deaths among never-smokers and 6691 among daily smokers. The fully adjusted all-cause mortality rate ratio comparing daily versus never-smokers was 3.70 (95% CI 3.25-4.21) for those who had started before age 10, 2.91 (2.76-3.06) for those who had started at ages 10-14, 2.43 (2.33-2.54) for those who had started at ages 15-17, 2.20 (2.09-2.32) for those who had started at ages 18-20, and 2.04 (1.93-2.17) for those who had started after age 20. These associations were little altered by further adjustment for cigarettes/day.

**Discussion:** For those who had started after age 20, current smoking approximately *doubled* all-cause mortality rates at ages 30-69, but for those who had started in childhood current smoking approximately *tripled* all-cause mortality rates at ages 30-69, with the highest rates in the few who had started before age 10. According to the 2017 NHIS, about 5 million of the 25 million daily

smokers in the US had started in childhood, among whom 0.5 million had started before age 10. These 5 million smokers will be at particularly high risk of death from smoking if they do not quit.

Tobacco surveillance systems routinely report the incidence and prevalence of smoking before age 15 in the United States<sup>3</sup> and other populations,<sup>4</sup> and those who start smoking before age 10 will, if they continue, be at even greater risk of premature death than children who start at 10-14. Starting daily smoking in childhood approximately triples the risk of premature death at ages 30-69, and if this three-fold death rate ratio continues at older ages among those who continue to smoke then it means that about two-thirds of those who start smoking before 15 and do not stop will eventually be killed by their habit. These US findings (which match similar findings from Cuba in this report) mean that adult smokers who started in childhood or adolescence can expect particularly large gains from smoking cessation.

### References

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