

Supplementary Table S1. Specification of ovarian cancers

Type	Morphology (ICD-O-3)	Specification	N
Serous	8050	Papillary carcinoma, NOS	2
	8260	Papillary adenocarcinoma, NOS	38
	8441	Serous cystadenocarcinoma, NOS	371
	8450	Papillary cystadenocarcinoma, NOS	23
	8460	Papillary serous cystadenocarcinoma	120
	8461	Serous surface papillary carcinoma	16
<i>Sub-total</i>			570
Mucinous	8470	Mucinous cystadenocarcinoma, NOS	59
	8471	Papillary mucinous cystadenocarcinoma	4
	8480	Mucinous adenocarcinoma	47
<i>Sub-total</i>			110
Endometrioid	8380	Endometrioid carcinoma	98
	8560	Adenosquamous carcinoma	5
	8570	Adenocarcinoma with squamous metaplasia	1
<i>Sub-total</i>			104
Clear cell	8310	Clear cell adenocarcinoma, NOS	39
<i>Sub-total</i>			39
Other epithelial	8010	Carcinoma, NOS	23
	8020	Carcinoma, undifferentiated type, NOS	9
	8070	Planocellulært carcinom, NOS	3
	8140	Adenocarcinoma, NOS	149
	8230	Solid carcinoma, NOS	3
	8246	Neuroendocrine carcinoma	2
	8440	Cystadenocarcinoma, NOS	14
	8950	Mullerian mixed tumor	3
	8951	Mesodermal mixed tumor	2
	8980	Carcinosarcoma, NOS	10
<i>Sub-total</i>			218
Total			1,041
Excluded ovarian cancers	8000	Neoplasm, malignant	4
	8001	Tumor cells, malignant	3
	8021	Carcinoma, anaplastic type, NOS	1
	8041	Small cell carcinoma, NOS	1
	8042	Oat cell carcinoma	1
	8130	Papillary urotelial carcinoma	1
	8141	Scirrhus adenocarcinoma	1
	8240	Carcinoid tumor, NOS	1
	8243	Goblet cell carcinoid	1
	83809	Endometrioid carcinoma uncertain primary	1
	84609	Papillary serous cystadenocarcinoma uncertain primary	1
	8490	Signet ring cell carcinoma	1
	8600	Thecoma, malignant	1
	8620	Granulosa cell tumor, malignant	12
	8810	Fibrosarcoma, NOS	1

Supplementary Table S1., continued

Type	Morphology (ICD-O-3)	Specification	N
Excluded ovarian cancers	8890	Leiomyosarcoma, NOS	1
	9000	Brenner tumor, malignant	6
	9060	Dysgerminoma	4
	9071	Yolk sac tumor	1
	9080	Teratoma, malignant, NOS	3
	9110	Mesonephroma, malignant	2
	9580	Granular cell tumor, malignant	1
	9680	Malignant Lymphom, large B-cell, diffust, NOS	1
	9690	Follicular lymphoma, NOS	1
	9990	No morphology	15
<i>Total</i>			<i>66</i>

NOS, Not otherwise specified.

Supplementary Table S2. Childhood overweight status and risks of ovarian cancer overall and its subtypes including women born 1930-1989^a

Age (years)	Overweight status ^b	N	Overall		Serous		Mucinous		Endometrioid		Clear cell		Other	
			Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)
7	Non-overweight	136,366	923	1.00 (ref.)	510	1.00 (ref.)	95	1.00 (ref.)	91	1.00 (ref.)	32	1.00 (ref.)	195	1.00 (ref.)
	Overweight	9,455	61	1.33 (1.03-1.73)	23	0.91 (0.60-1.38)	12	2.48 (1.36-4.52)	8	1.76 (0.85-3.62)	5	3.01 (1.17-7.74)	13	1.40 (0.80-2.46)
8	Non-overweight	137,382	932	1.00 (ref.)	521	1.00 (ref.)	94	1.00 (ref.)	90	1.00 (ref.)	31	1.00 (ref.)	196	1.00 (ref.)
	Overweight	10,137	62	1.24 (0.96-1.60)	21	0.75 (0.48-1.16)	11	2.11 (1.13-3.95)	9	1.82 (0.92-3.62)	6	3.41 (1.42-8.19)	15	1.48 (0.88-2.51)
9	Non-overweight	132,145	931	1.00 (ref.)	505	1.00 (ref.)	94	1.00 (ref.)	86	1.00 (ref.)	31	1.00 (ref.)	197	1.00 (ref.)
	Overweight	10,373	71	1.34 (1.05-1.71)	30	1.02 (0.71-1.48)	11	1.97 (1.05-3.69)	11	2.16 (1.15-4.06)	7	3.71 (1.63-8.46)	12	1.09 (0.61-1.96)
10	Non-overweight	128,979	917	1.00 (ref.)	509	1.00 (ref.)	92	1.00 (ref.)	87	1.00 (ref.)	32	1.00 (ref.)	197	1.00 (ref.)
	Overweight	10,024	67	1.29 (1.01-1.65)	31	1.07 (0.75-1.54)	11	2.06 (1.10-3.86)	9	1.78 (0.90-3.55)	6	3.14 (1.31-7.53)	10	0.93 (0.49-1.75)
11	Non-overweight	128,602	930	1.00 (ref.)	512	1.00 (ref.)	96	1.00 (ref.)	87	1.00 (ref.)	34	1.00 (ref.)	201	1.00 (ref.)
	Overweight	9,501	63	1.27 (0.98-1.64)	28	1.03 (0.70-1.50)	10	1.89 (0.98-3.63)	10	2.12 (1.10-4.09)	4	2.09 (0.74-5.90)	11	1.07 (0.58-1.96)
12	Non-overweight	127,551	922	1.00 (ref.)	510	1.00 (ref.)	96	1.00 (ref.)	87	1.00 (ref.)	33	1.00 (ref.)	196	1.00 (ref.)
	Overweight	9,49	65	1.31 (1.02-1.69)	30	1.09 (0.76-1.58)	9	1.68 (0.85-3.34)	10	2.11 (1.09-4.06)	6	3.27 (1.36-7.83)	10	0.99 (0.52-1.87)
13	Non-overweight	125,366	908	1.00 (ref.)	512	1.00 (ref.)	93	1.00 (ref.)	86	1.00 (ref.)	32	1.00 (ref.)	185	1.00 (ref.)
	Overweight	9,764	71	1.33 (1.05-1.70)	28	0.93 (0.63-1.36)	11	1.98 (1.06-3.70)	10	1.96 (1.01-3.77)	6	3.11 (1.30-7.47)	16	1.52 (0.91-2.53)

BMI: Body Mass Index, CI: Confidence Interval HR: Hazard Ratio

^a Cox proportional hazards regression models stratified by 5-year birth cohorts

^b Overweight defined using International Obesity Task Force criteria. BMI 7 years: 17.69, BMI 8 years: 18.28, BMI 9 years: 18.99, BMI 10 years: 19.78, BMI 11 years: 20.66, BMI 12 years: 21.59, BMI 13 years: 22.49.

Supplementary Table S3. Childhood BMI at 7-13 years and risks of ovarian cancer overall and its subtypes by BMI categories including women born 1930-1989^a

Age (years)	BMI percentiles	N	Overall		Serous		Mucinous		Endometrioid		Clear cell		Other	
			Cases	HR (95 % CI)	Cases	HR (95 % CI)	Cases	HR (95 % CI)	Cases	HR (95 % CI)	Cases	HR (95 % CI)	Cases	HR (95 % CI)
7	<10 th	13,014	93	1.12 (0.90-1.40)	50	1.12 (0.83-1.52)	9	1.00 (0.49-2.02)	8	0.94 (0.45-1.98)	5	1.63 (0.61-4.36)	21	1.19 (0.74-1.89)
	10-<25 th	22,237	164	1.10 (0.92-1.31)	96	1.20 (0.95-1.51)	14	0.87 (0.48-1.56)	20	1.32 (0.78-2.20)	4	0.73 (0.25-2.15)	30	0.92 (0.61-1.37)
	25-<75 th	78,388	516	1.00 (ref.)	275	1.00 (ref.)	56	1.00 (ref.)	52	1.00 (ref.)	19	1.00 (ref.)	114	1.00 (ref.)
	75-<90 th	19,306	122	1.08 (0.89-1.31)	76	1.26 (0.98-1.63)	13	1.05 (0.57-1.91)	9	0.79 (0.39-1.60)	2	0.47 (0.11-2.02)	22	0.89 (0.56-1.40)
	≥90 th	12,876	89	1.43 (1.15-1.80)	36	1.08 (0.77-1.54)	15	2.17 (1.22-3.84)	10	1.58 (0.80-3.12)	7	2.94 (1.23-7.01)	21	1.59 (1.00-2.54)
8	<10 th	11,844	72	1.01 (0.79-1.29)	43	1.08 (0.78-1.49)	5	0.66 (0.26-1.64)	7	0.97 (0.44-2.14)	1	0.42 (0.06-3.13)	16	1.10 (0.65-1.86)
	10-<25 th	22,157	153	1.02 (0.86-1.23)	85	1.03 (0.81-1.31)	16	1.02 (0.59-1.78)	16	1.09 (0.62-1.90)	8	1.63 (0.71-3.75)	28	0.89 (0.59-1.35)
	25-<75 th	80,658	543	1.00 (ref.)	300	1.00 (ref.)	57	1.00 (ref.)	53	1.00 (ref.)	18	1.00 (ref.)	115	1.00 (ref.)
	75-<90 th	19,749	139	1.16 (0.96-1.39)	76	1.14 (0.89-1.47)	15	1.18 (0.67-2.08)	13	1.10 (0.60-2.02)	3	0.73 (0.21-2.47)	32	1.27 (0.86-1.88)
	≥90 th	13,111	87	1.35 (1.07-1.69)	38	1.06 (0.76-1.49)	12	1.71 (0.92-3.20)	10	1.55 (0.78-3.04)	7	3.07 (1.28-7.37)	20	1.52 (0.95-1.45)
9	<10 th	11,441	73	1.04 (0.82-1.33)	45	1.19 (0.87-1.62)	4	0.49 (0.18-1.33)	8	1.22 (0.58-2.59)	3	1.29 (0.38-4.37)	13	0.88 (0.50-1.56)
	10-<25 th	21,085	148	1.02 (0.85-1.23)	83	1.06 (0.83-1.35)	15	0.89 (0.51-1.57)	13	0.98 (0.53-1.81)	6	1.25 (0.50-3.16)	31	0.99 (0.67-1.47)
	25-<75 th	77,886	544	1.00 (ref.)	294	1.00 (ref.)	63	1.00 (ref.)	49	1.00 (ref.)	18	1.00 (ref.)	120	1.00 (ref.)
	75-<90 th	19,146	131	1.08 (0.89-1.30)	77	1.17 (0.91-1.51)	9	0.63 (0.31-1.28)	15	1.37 (0.77-2.44)	2	0.48 (0.11-2.09)	28	1.05 (0.70-1.59)
	≥90 th	12,960	88	1.31 (1.05-1.64)	36	0.99 (0.70-1.40)	14	1.75 (0.98-3.14)	12	1.94 (1.03-3.65)	9	3.85 (1.72-8.61)	17	1.20 (0.72-1.99)
10	<10 th	10,834	59	0.86 (0.66-1.13)	36	0.95 (0.67-1.34)	5	0.67 (0.27-1.67)	4	0.59 (0.21-1.65)	2	0.83 (0.19-3.58)	12	0.87 (0.48-1.58)
	10-<25 th	20,812	163	1.11 (0.93-1.32)	94	1.15 (0.91-1.44)	15	0.95 (0.54-1.68)	15	1.07 (0.60-1.89)	6	1.18 (0.47-2.96)	33	1.08 (0.73-1.59)
	25-<75 th	75,880	555	1.00 (ref.)	308	1.00 (ref.)	59	1.00 (ref.)	52	1.00 (ref.)	19	1.00 (ref.)	117	1.00 (ref.)
	75-<90 th	18,715	123	0.98 (0.80-1.19)	62	0.89 (0.68-1.17)	13	0.97 (0.53-1.76)	13	1.10 (0.60-2.03)	4	0.91 (0.31-2.67)	31	1.18 (0.79-1.75)
	≥90 th	12,762	84	1.23 (0.98-1.55)	40	1.06 (0.76-1.47)	11	1.48 (0.77-2.82)	12	1.83 (0.97-3.44)	7	2.84 (1.19-6.78)	14	1.01 (0.58-1.77)
11	<10 th	10,710	63	0.94 (0.72-1.22)	36	0.98 (0.70-1.39)	3	0.41 (0.13-1.31)	9	1.33 (0.65-2.70)	2	0.72 (0.17-3.07)	13	0.96 (0.54-1.71)
	10-<25 th	20,742	165	1.14 (0.96-1.36)	92	1.16 (0.92-1.47)	22	1.42 (0.87-2.33)	9	0.63 (0.31-1.28)	4	0.68 (0.23-1.97)	38	1.26 (0.87-1.82)
	25-<75 th	74,982	548	1.00 (ref.)	299	1.00 (ref.)	58	1.00 (ref.)	53	1.00 (ref.)	22	1.00 (ref.)	116	1.00 (ref.)
	75-<90 th	19,047	134	1.05 (0.87-1.27)	73	1.05 (0.81-1.36)	11	0.81 (0.42-1.54)	16	1.30 (0.74-2.27)	5	0.96 (0.36-2.53)	29	1.09 (0.72-1.63)

	≥90 th	12622	83	1.23 (0.98-1.56)	40	1.09 (0.78-1.52)	12	1.63 (0.87-3.03)	10	1.50 (0.76-2.96)	5	1.74 (0.66-4.62)	16	1.17 (0.69-1.98)
12	<10 th	10534	72	1.06 (0.83-1.36)	41	1.12 (0.81-1.56)	8	1.04 (0.50-2.18)	9	1.25 (0.62-2.53)	0		14	1.01 (0.58-1.76)
	10-<25 th	20097	133	0.93 (0.77-1.12)	78	1.01 (0.79-1.30)	13	0.82 (0.45-1.50)	7	0.47 (0.22-1.04)	9	1.71 (0.78-3.76)	26	0.86 (0.56-1.32)
	25-<75 th	73875	548	1.00 (ref.)	295	1.00 (ref.)	60	1.00 (ref.)	56	1.00 (ref.)	20	1.00 (ref.)	117	1.00 (ref.)
	75-<90 th	19689	141	1.05 (0.87-1.26)	85	1.17 (0.92-1.49)	10	0.67 (0.34-1.32)	12	0.87 (0.47-1.63)	3	0.60 (0.18-2.03)	31	1.08 (0.73-1.61)
	≥90 th	12846	93	1.32 (1.06-1.65)	41	1.09 (0.78-1.50)	14	1.75 (0.98-3.15)	13	1.78 (0.97-3.26)	7	2.62 (1.10-6.23)	18	1.25 (0.76-2.05)
13	<10 th	10,137	61	0.92 (0.70-1.19)	38	1.05 (0.75-1.48)	6	0.81 (0.35-1.88)	6	0.87 (0.37-2.02)	2	0.83 (0.19-3.56)	9	0.65 (0.33-1.28)
	10-<25 th	18,391	136	1.03 (0.85-1.25)	80	1.12 (0.87-1.44)	16	1.12 (0.64-1.95)	12	0.89 (0.48-1.66)	6	1.27 (0.51-3.19)	22	0.79 (0.50-1.24)
	25-<75 th	72,613	534	1.00 (ref.)	289	1.00 (ref.)	57	1.00 (ref.)	54	1.00 (ref.)	19	1.00 (ref.)	115	1.00 (ref.)
	75-<90 th	20,666	144	1.01 (0.84-1.21)	84	1.08 (0.85-1.38)	11	0.72 (0.38-1.37)	11	0.76 (0.40-1.45)	4	0.78 (0.27-2.30)	34	1.10 (0.75-1.61)
	≥90 th	13,323	104	1.38 (1.12-1.71)	49	1.20 (0.89-1.63)	14	1.71 (0.95-3.07)	13	1.69 (0.92-3.10)	7	2.56 (1.07-6.10)	21	1.33 (0.84-2.12)

BMI, Body Mass Index; CI, confidence interval; HR, hazard ratio

^a Cox proportional hazards regression models stratified by 5-year birth cohorts.

Supplementary Table S4. Childhood height at 7-13 years and risks of ovarian cancer overall and its subtypes per z-score increase including women born 1930-1989^a

Age (years)	N	Overall		Serous		Mucinous		Endometrioid		Clear cell		Other		p ^b
		Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	Cases	HR (95% CI)	
7	145,821	984	1.09 (1.02-1.16)	533	1.04 (0.96-1.14)	107	1.09 (0.90-1.32)	99	1.29 (1.05-1.57)	37	1.03 (0.75-1.43)	208	1.13 (0.99-1.30)	0.41
8	147,519	994	1.09 (1.02-1.16)	542	1.03 (0.95-1.12)	105	1.11 (0.92-1.35)	99	1.33 (1.09-1.62)	37	1.06 (0.76-1.47)	211	1.11 (0.97-1.28)	0.24
9	142,518	984	1.09 (1.02-1.16)	535	1.03 (0.95-1.13)	105	1.09 (0.90-1.32)	97	1.34 (1.09-1.64)	38	1.15 (0.83-1.58)	209	1.13 (0.99-1.30)	0.21
10	139,003	984	1.10 (1.04-1.18)	540	1.06 (0.97-1.15)	103	1.06 (0.87-1.29)	96	1.32 (1.08-1.62)	38	1.12 (0.81-1.55)	207	1.16 (1.01-1.34)	0.31
11	138,103	993	1.10 (1.04-1.18)	540	1.05 (0.97-1.15)	106	1.03 (0.85-1.25)	97	1.30 (1.06-1.59)	38	1.12 (0.81-1.55)	212	1.19 (1.04-1.36)	0.26
12	137,041	987	1.10 (1.04-1.17)	540	1.07 (0.98-1.17)	105	1.02 (0.84-1.23)	97	1.26 (1.03-1.54)	39	1.02 (0.75-1.40)	206	1.18 (1.03-1.35)	0.40
13	135,130	979	1.07 (1.00-1.14)	540	1.05 (0.97-1.15)	104	1.01 (0.83-1.22)	96	1.19 (0.97-1.45)	38	0.96 (0.69-1.32)	201	1.13 (0.98-1.30)	0.63

CI, confidence interval; HR, hazard ratio.

^a Cox models stratified by 5-year birth cohorts.

^b Test for heterogeneity using the likelihood ratio tests by including an interaction term between childhood height and the ovarian cancer subtype.

Supplementary Table S5. Childhood overweight status and risks of ovarian cancer overall including women born 1936-1989 with information on birthweight in models unadjusted and adjusted for birthweight^a

Age (years)	Overweight status*	N	Cases	Unadjusted	Adjusted for birthweight ^a
				HR (95% CI)	HR (95% CI)
7	Non-overweight	105,115	592	1.00 (ref.)	1.00 (ref.)
	Overweight	7,866	43	1.32 (0.97-1.79)	1.29 (0.94-1.76)
8	Non-overweight	105,325	598	1.00 (ref.)	1.00 (ref.)
	Overweight	8,429	44	1.21 (0.89-1.64)	1.19 (0.87-1.62)
9	Non-overweight	100,514	586	1.00 (ref.)	1.00 (ref.)
	Overweight	8,594	53	1.36 (1.03-1.81)	1.35 (1.02-1.79)
10	Non-overweight	97,647	588	1.00 (ref.)	1.00 (ref.)
	Overweight	8,235	50	1.31 (0.98-1.75)	1.30 (0.97-1.73)
11	Non-overweight	97,098	594	1.00 (ref.)	1.00 (ref.)
	Overweight	7,757	46	1.25 (0.93-1.69)	1.24 (0.92-1.67)
12	Non-overweight	96,125	586	1.00 (ref.)	1.00 (ref.)
	Overweight	7,675	50	1.37 (1.03-1.83)	1.35 (1.01-1.81)
13	Non-overweight	94,556	575	1.00 (ref.)	1.00 (ref.)
	Overweight	7,731	55	1.46 (1.11-1.93)	1.44 (1.09-1.89)

BMI, body mass index; CI, confidence interval; HR, hazard ratio.

^a Cox proportional hazards regression models stratified by 5-year birth cohorts. Birthweight was modelled categorically (2.0-3.25, 3.26-3.75, 3.76-5.5).

^b Overweight defined using International Obesity Task Force criteria.

Supplementary Table S6. Childhood height and risks of ovarian cancer overall per z-score increase including women born 1936-1989 with information on birthweight in models unadjusted and adjusted for birthweight^a

Age (years)	N	Cases	Unadjusted	Adjusted for birthweight
			HR (95% CI)	HR (95% CI)
7	112,981	635	1.08 (1.00-1.17)	1.08 (1.00-1.17)
8	113,754	642	1.07 (0.99-1.16)	1.07 (0.99-1.16)
9	109,108	639	1.08 (1.00-1.17)	1.08 (1.00-1.17)
10	105,882	638	1.09 (1.00-1.18)	1.09 (1.00-1.18)
11	104,855	640	1.09 (1.01-1.18)	1.09 (1.01-1.18)
12	103,800	636	1.10 (1.02-1.19)	1.10 (1.02-1.19)
13	102,287	630	1.08 (1.00-1.17)	1.08 (0.99-1.17)

CI, confidence interval; HR, hazard ratio.

^a Cox proportional hazards regression models stratified by 5-year birth cohorts. Birthweight was modelled categorically (2.0-3.25, 3.26-3.75, 3.76-5.5).