

Hypertensive Disorders of Pregnancy (HDP) and the Risk of Common Cancers in Women: Evidence from the European Prospective Investigation into Cancer (EPIC)-Norfolk Prospective Population-Based Study

Zahra Pasdar, David T Gamble, Phyo K Myint, Robert N Luben, Nicholas J Wareham, Kay-Tee Khaw and Sohinee Bhattacharya

Table S1. Baseline characteristics of 13,562 women of the EPIC-Norfolk according to incident breast cancer status and corresponding unadjusted and adjusted odds ratios with 95% CIs

	Incident breast cancer		Unadjusted OR (95% CI)	P-value	Adjusted OR* (95% CI)	P-value
	No [n=12860]	Yes [n=702]				
Median age years (IQR) [n=13562]	58.1 (16.2)	57.1 (14.1)	0.99 (0.98-1.00)	0.018	0.99 (0.98-1.00)	0.023
Education (%) [n=13562]						
No qualification	5807 (45.2)	290 (41.3)	Ref		Ref	
0 Level	1512 (11.8)	78 (11.1)	1.03 (0.80-1.34)	0.137	0.93 (0.71-1.21)	0.662
A Level	4334 (33.7)	262 (37.3)	1.21 (1.02-1.44)		1.07 (0.88-1.29)	
Degree	1207 (9.4)	72 (10.3)	1.19 (0.92-1.56)		0.95 (0.70-1.28)	
Occupational Social Class (%) [n=13190]						
Professional	770 (6.0)	50 (7.1)	Ref		Ref	
Manager	4153 (32.3)	232 (33.0)	0.86 (0.63-1.18)		0.89 (0.65-1.23)	
Skilled Non-manual	2395 (18.6)	130 (18.5)	0.84 (0.60-1.17)	0.675	0.92 (0.65-1.30)	0.951
Skilled Manual	2796 (21.7)	158 (22.5)	0.87 (0.63-1.21)		0.98 (0.69-1.38)	
Semi-Skilled	1816 (14.1)	89 (12.7)	0.76 (0.53-1.08)		0.86 (0.59-1.26)	
Non-Skilled	573 (4.5)	28 (4.0)	0.75 (0.47-1.21)		0.90 (0.55-1.48)	
Missing	357 (2.8)	15 (2.1)				
Smoking History (%) [n=13441]						
Never	7094 (55.2)	384 (54.7)	Ref		Ref	
Ex-smoker	4092 (31.8)	80 (11.4)	0.95 (0.74-1.21)	0.886	1.03 (0.86-1.22)	0.965
Currently smoking	1559 (12.1)	232 (33.0.)	1.05 (0.89-1.24)		0.96 (0.74-1.23)	
Missing	115 (0.9)	6 (0.9)				

Alcohol (g) (%) [n=11035]							
0	2584 (20.1)	127 (18.1)	Ref		Ref		
0.1-4.9	4111 (32.0)	211 (30.1)	1.04 (0.83-1.31)		1.00 (0.79-1.25)		
5-14.9	2907 (22.6)	167 (23.8)	1.17 (0.92-1.48)	0.009	1.10 (0.86-1.41)	0.020	
15-29.9	629 (4.9)	52 (7.4)	1.68 (1.20-2.35)		1.61 (1.14-2.28)		
≥30	227 (1.8)	20 (2.8)	1.79 (1.10-2.93)		1.72 (1.04-2.84)		
Missing	2402 (18.7)	125 (17.8)					
Physical activity (%) [n=13562]							
Active	4786 (37.2)	269 (38.3)	Ref	0.556	Ref	0.978	
Inactive	8074 (62.8)	433 (61.7)	0.95 (0.82-1.12)		1.00 (0.85-1.18)		
BMI (kg/m²) (%) [n=11414]							
Normal	4727 (36.8)	222 (31.6)	Ref		Ref		
Underweight	71 (0.6)	1 (0.1)	0.30 (0.04-2.17)		0.31 (0.04-2.23)		
Pre-obesity	4183 (32.5)	272 (38.7)	1.39 (1.15-1.66)	0.005	1.47 (1.22-1.76)	0.001	
Obesity Class I	1402 (10.9)	67 (9.5)	1.02 (0.77-1.35)		1.11 (0.83-1.47)		
Obesity Class II +	439 (3.4)	30 (4.3)	1.46 (0.98-2.16)		1.59 (1.06-2.38)		
Missing	2038 (15.8)	110 (15.7)					
Family history of cancer (%) [n=5295/13561]							
Missing	1 (0.0)	0 (0.0)	1.22 (1.05-1.42)	0.041	1.21 (1.04-1.41)	0.055	
Prevalent MI (%) [n=200/13557]							
Missing	4 (0.0)	1 (0.1)	0.86 (0.44-1.69)	0.361	1.02 (0.52-2.02)	0.294	

Prevalent stroke (%) [n=144/13559]						
	140 (1.1)	4 (0.6)				
Missing	3 (0.0)	0 (0.0)	0.52 (0.19-1.41)	0.439	0.59 (0.22-1.61)	0.592
Prevalent Diabetes (%) [n=226/13557]						
	218 (1.7)	8 (1.1)				
Missing	5 (0.0)	0 (0.0)	0.67 (0.33-1.36)	0.538	0.72 (0.35-1.47)	0.664
Hypertension during pregnancy (%) [n =2919/12008]						
	86203 (67.0)	469 (66.8)				
Missing	1485 (11.5)	69 (9.8)	1.09 (0.91-1.31)	0.237	1.06 (0.88-1.28)	0.713
Diabetes during pregnancy (%) [n=219/12773]						
	209 (1.6)	10 (1.4)				
Missing	759 (5.9)	30 (4.3)	0.86 (0.45-1.63)	0.182	0.87 (0.46-1.67)	0.423
Age at first live birth (%) [n=13304]						
≤20	2083 (16.2)	91 (13.0)	Ref		Ref	
21-25	6042 (47.0)	316 (45.0)	1.20 (0.94-1.52)		1.22 (0.95-1.56)	
26-30	3278 (25.5)	217 (30.9)	1.52 (1.18-1.95)	0.014	1.56 (1.20-2.04)	0.009
≥31	1213 (9.4)	64 (9.1)	1.21 (0.87-1.68)		1.28 (0.90-1.81)	
Missing	244 (1.9)	14 (2.0)				
Number of children (%) [n=13562]						
0	190 (1.5)	13 (1.9)	Ref		Ref	
1	2209 (17.2)	113 (16.1)	0.75 (0.41-1.35)		0.28 (0.04-2.24)	
2	6023 (46.8)	336 (47.9)	0.82 (0.46-1.45)	0.742	0.30 (0.04-2.35)	0.585
≥3	4438 (34.5)	240 (34.2)	0.79 (0.44-1.41)		0.31 (0.04-2.46)	
Number of stillbirths (%) [n=13562]				0.963		0.948

None	12461 (96.9)	680 (96.9)	Ref		Ref	
Any	399 (3.1)	22 (3.1)	1.01 (0.65-1.56)		1.02 (0.65-1.58)	
Number of miscarriages or abortions [n=13562]						
0	9646 (75.0)	510 (72.6)	Ref		Ref	
1	2412 (18.8)	144 (20.5)	1.13 (0.93-1.37)	0.468	1.07 (0.88-1.31)	0.781
2	574 (4.5)	32 (4.6)	1.05 (0.73-1.52)		1.00 (0.69-1.45)	
≥3	228 (1.8)	16 (2.3)	1.33 (0.79-2.22)		1.25 (0.74-2.10)	

*Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, BMI, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

Table S2. Baseline characteristics of 13,562 women of the EPIC-Norfolk according to incident colorectal cancer status and corresponding unadjusted and adjusted odds ratios with 95% CIs

	Incident colorectal cancer		Unadjusted OR (95% CI)	P-value	Adjusted OR* (95% CI)	P-value
	No [n=13096]	Yes [n=466]				
Median age years (IQR) [n=13562]	57.9 (16.1)	63.5 (13.8)	1.05 (1.04-1.06)	<0.001	1.05 (1.03-1.06)	<0.001
Education (%) [n=13562]						
No qualification	5854 (44.7)	243 (52.1)	Ref		Ref	
0 Level	1543 (11.8)	47 (10.1)	0.73 (0.53-1.01)	0.007	0.95 (0.68-1.31)	0.671
A Level	4450 (34.0)	146 (31.3)	0.79 (0.64-0.97)		0.97 (0.77-1.22)	
Degree	1249 (9.5)	30 (6.4)	0.58 (0.39-0.85)		0.77 (0.50-1.17)	
Occupational Social Class (%) [n=13190]						
Professional	795 (6.1)	25 (5.4)	Ref	0.905	Ref	0.686
Manager	4238 (32.4)	147 (31.5)				
Skilled Non-manual	2441 (18.6)	84 (18.0)	1.10 (0.72-1.70)		1.04 (0.67-1.61)	
Skilled Manual	2844 (21.7)	110 (23.6)	1.09 (0.70-1.72)		0.88 (0.55-1.40)	
Semi-Skilled	1843 (14.1)	62 (13.3)	1.23 (0.79-1.91)		1.11 (0.70-1.76)	
Non-Skilled	578 (4.4)	23 (4.9)	1.07 (0.67-1.72)		0.88 (0.54-1.44)	
Missing	357 (2.7)	15 (3.2)	1.27 (0.71-2.25)		0.96 (0.53-1.75)	
Smoking History (%) [n=13441]						
Never	7228 (55.2)	250 (53.6)	Ref	0.834	Ref	0.461
Ex-smoker	16981 (31.8)	155 (33.3)	1.06 (0.79-1.42)		1.03 (0.83-1.27)	

Currently smoking	1581 (12.1.)	58 (12.4)	1.08 (0.88-1.32)		1.22 (0.91-1.65)	
Missing	118 (0.9)	3 (0.6)				
Alcohol (g) (%) [n=11035]						
0	2597 (19.8)	114 (24.5)	Ref		Ref	
0.1-4.9	4180 (31.9)	142 (30.5)	0.77 (0.60-1.00)		0.87 (0.67-1.12)	
5-14.9	2987 (22.8)	87 (18.7)	0.66 (0.50-0.88)	0.107	0.79 (0.59-1.07)	0.707
15-29.9	656 (5.0)	25 (5.4)	0.87 (0.56-1.35)		1.02 (0.65-1.61)	
≥30	240 (1.8)	7 (1.5)	0.66 (0.31-1.44)		0.84 (0.38-1.86)	
Missing	2436 (18.6)	91 (19.5)				
Physical activity (%) [n=13562]						
Active	4921 (37.6)	134 (28.8)	Ref	<0.001	Ref	0.180
Inactive	8175 (62.4)	332 (71.2)	1.49 (1.21-1.83)		1.16 (0.94-1.43)	
BMI (kg/m²) (%) [n=11414]						
Normal	4818 (36.8)	131 (28.1)	Ref		Ref	
Underweight	70 (0.5)	2 (0.4)	1.05 (0.26-4.33)		1.04 (0.25-4.32)	
Overweight	4276 (32.7)	179 (38.4)	1.54 (1.22-1.94)	<0.001	1.34 (1.06-1.69)	0.005
Obese	1421 (10.9)	48 (10.3)	1.24 (0.89-1.74)		1.07 (0.76-1.51)	
Morbidly obese	440 (3.4)	29 (6.2)	2.42 (1.60-3.67)		2.27 (1.48-3.47)	
Missing	2071 (15.8)	77 (16.5)				
Family history of cancer (%) [n=5295/13561]						
	5091 (38.9)	204 (43.8)	1.22 (1.02-1.48)	0.104	1.20 (0.99-1.45)	0.167
Missing						

	1 (0.0)	0 (0.0)				
Prevalent MI (%) [n=200/13557]	193 (1.5)	7 (1.5)				
Missing	4 (0.0)	1 (0.2)	1.02 (0.48-2.18)	0.956	0.75 (0.35-1.61)	0.156
Prevalent stroke (%) [n=144/13559]	143 (1.1)	1 (0.2)				
Missing	3 (0.0)	0 (0.0)	0.20 (0.03-1.40)	0.266	0.13 (0.02-0.97)	0.137
Prevalent Diabetes (%) [n=226/13557]	218 (1.7)	8 (1.7)				
Missing	5 (0.0)	0 (0.0)	1.03 (0.51-2.10)	0.996	0.75 (0.37-1.55)	0.745
Hypertension during pregnancy (%) [n =2919/12008]	2807 (21.4)	112 (24.0)				
Missing	1501 (11.5)	53 (11.4)	1.17 (0.93-1.45)	0.399	1.15 (0.92-1.45)	0.154
Diabetes during pregnancy (%) [n=219/12773]	210 (1.6)	9 (1.9)				
Missing	750 (5.7)	39 (8.4)	1.24 (0.63-2.44)	0.049	1.40 (0.71-2.78)	0.238
Age at first live birth (%) [n=13304]						
≤20	2104 (16.1)	70 (15.0)	Ref		Ref	
21-25	6152 (47.0)	206 (44.2)	1.01 (0.76-1.33)		0.99(0.74-1.31)	
26-30	3366 (25.7)	129 (27.7)	1.15 (0.86-1.55)	0.547	1.13 (0.83-1.56)	0.686
≥31	1226 (9.4)	51 (10.9)	1.25 (0.87-1.81)		1.22 (0.83-1.82)	
Missing	248 (1.9)	10 (2.1)				
Number of children (%) [n=13562]						
0	195 (1.5)	8 (1.7)	Ref		Ref	
1	2230 (17.0)	92 (19.7)	1.01 (0.48-2.10)	0.125	0.78 (0.16-3.90)	0.756
2	6165 (47.1)	194 (41.6)	0.77 (0.37-1.58)		0.73 (0.15-3.63)	

≥3	4506 (34.4)	172 (36.9)	0.93 (0.45-1.92)		0.82 (0.16-4.06)	
Number of stillbirths (%) [n=13562]						
None	12691 (96.9)	450 (96.6)	Ref	0.677	Ref	0.869
Any	405 (3.1)	16 (3.4)	1.11 (0.67-1.85)		0.96 (0.57-1.60)	
Number of miscarriages or abortions [n=13562]						
0	9799 (74.8)	357 (76.6)	Ref		Ref	
1	2472 (18.9)	84 (18.0)	0.93 (0.73-1.19)	0.747	1.00 (0.78-1.28)	0.938
2	587 (4.5)	19 (4.1)	0.88 (0.56-1.42)		0.96 (0.59-1.54)	
≥3	238 (1.8)	6 (1.3)	0.69 (0.31-1.57)		0.77 (0.34-1.76)	

*Adjusted for age, education level, Townsend Deprivation Index, smoking status, alcohol consumption, physical activity, BMI, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

Table S3. Baseline characteristics of 13,562 women of the EPIC-Norfolk according to incident lung cancer status and corresponding unadjusted and adjusted odds ratios with 95% CIs

	Incident lung cancer		Unadjusted OR (95% CI)	P-value	Adjusted OR* (95% CI)	P-value
	No [n=13315]	Yes [n=247]				
Median age years (IQR) [n=13562]	58.0 (16.2)	62.9 (14.2)	1.04 (1.03-1.05)	<0.001	1.04 (1.03-1.06)	<0.001
Education (%) [n=13562]						0.064
No qualification	5949 (44.7)	148 (59.9)	Ref		Ref	
0 Level	1563 (11.7)	27 (10.9)	0.69 (0.46-1.05)	<0.001	0.92 (0.60-1.43)	
A Level	4530 (34.0)	66 (26.7)	0.59 (0.44-0.79)		0.84 (0.60-1.16)	
Degree	1273 (9.6)	6 (2.4)	0.19 (0.08-0.43)		0.32 (0.13-0.75)	
Occupational Social Class (%) [n=13190]						0.213
Professional	4317 (32.4)	12 (4.9)	Ref		Ref	
Manager	2491 (18.7)	68 (27.5)	1.06 (0.57-1.97)		0.81 (0.43-1.52)	
Skilled Non-manual	2892 (21.7)	34 (13.8)	0.92 (0.47-1.78)	0.019	0.53 (0.27-1.06)	
Skilled Manual	1861 (14.0)	62 (25.1)	1.44 (0.77-2.69)		0.88 (0.46-1.69)	
Semi-Skilled	582 (4.4)	44 (17.8)	1.59 (0.84-3.03)		0.88 (0.45-1.74)	
Non-Skilled	364 (2.7)	19 (7.7)	2.20 (1.06-4.56)		1.11 (0.51-2.42)	
Missing		8 (3.2)				
Smoking History (%) [n=13441]						<0.001
Never	7431 (55.8)	47 (19.0)	Ref	<0.001	Ref	
Ex-smoker	4241 (31.9)	116 (47.0)	3.09 (2.16-4.43)		2.91 (2.02-4.20)	

Currently smoking	1523 (11.4)	83 (33.6)	12.04 (8.54-16.98)		13.22 (9.26-18.89.)
Missing	120 (0.9)	1 (0.4)			
Alcohol (g) (%) [n=11035]					0.654
0	2664 (20.0)	47 (19.0)	Ref		Ref
0.1-4.9	4249 (31.9)	73 (29.6)	0.97 (0.67-1.41)		1.15 (0.78-1.68)
5-14.9	3027 (22.7)	47 (19.0)	0.88 (0.59-1.32)	0.049	1.05 (0.68-1.62)
15-29.9	668 (5.0)	13 (5.3)	1.10 (0.59-2.05)		1.04 (0.54-1.98)
≥30	245 (1.8)	2 (0.8)	0.46 (0.11-1.92)		0.50 (0.12-2.13)
Missing	2462 (18.5)	65 (26.3)			
Physical activity (%) [n=13562]					0.006
Active	4997 (37.5)	58 (23.5)	Ref	<0.001	Ref
Inactive	8318 (62.5)	189 (76.5)	1.96 (1.46-2.63)		1.55 (1.13-2.12)
BMI (kg/m²) (%) [n=11414]					0.204
Normal or Underweight	4948 (37.2)	73 (29.6)	Ref		Ref
Pre-obesity	4365 (32.8)	90 (36.4)	1.40 (1.02-1.91)		1.36 (0.99-1.88)
Obesity Class I	1442 (10.8)	27 (10.9)	1.27 (0.81-1.98)	0.034	1.17 (0.74-1.85)
Obesity Class II +	464 (3.5)	5 (2.0)	0.73 (0.29-1.82)		0.69 (0.27-1.74)
Missing	2096 (15.7)	52 (21.1)			
Family history of cancer (%) [n=5295/13561]	5192 (39.0)	103 (41.7)			0.811
Missing	1 (0.0)	0 (0.0)	1.12 (0.87-1.44)	0.689	1.09 (0.84-1.42)

Prevalent MI (%) [n=200/13557]	195 (1.5)	5 (2.0)				1.00
Missing	5 (0.0)	0 (0.0)	1.39 (0.57-3.41)	0.772	1.01 (0.40-2.55)	
Prevalent stroke (%) [n=144/13559]	142 (1.1)	2 (0.9)				0.556
Missing	3 (0.0)	0 (0.0)	0.76 (0.19-3.07)	0.927	0.45 (0.11-1.89)	
Prevalent Diabetes (%) [n=226/13557]	220 (1.7)	6 (2.4)				0.820
Missing	5 (0.0)	0 (0.0)	1.48 (0.65-3.37)	0.644	1.32 (0.56-3.11)	
Hypertension during pregnancy (%) [n =2919/12008]	2875 (21.6)	44 (17.8)				0.122
Missing	1513 (11.4)	41 (16.6)	0.84 (0.60-1.18)	0.025	0.96 (0.68-1.35)	
Diabetes during pregnancy (%) [n=219/12773]	215 (1.6)	4 (1.6)				0.421
Missing	774 (5.8)	15 (6.1)	1.01 (0.37-2.73)	0.985	1.20 (0.43-3.35)	
Age at first live birth (%) [n=13304]						0.494
≤20	2114 (15.9)	60 (24.3)	Ref		Ref	
21-25	6255 (47.0)	103 (41.7)	0.58 (0.42-0.80)	0.008	0.78 (0.56-1.10)	
26-30	3441 (25.8)	54 (21.9)	0.55 (0.38-0.80)		0.90 (0.60-1.36)	
≥31	1253 (9.4)	24 (9.7)	0.68 (0.42-1.09)		1.08 (0.63-1.84)	
Missing	252 (1.9)	6 (2.4)				
Number of children (%) [n=13562]						0.500
0	199 (1.5)	4 (1.6)	Ref		Ref	
1	2275 (17.1)	47 (19.0)	1.03 (0.37-2.88)	0.045	1.22 (0.20-7.39)	
2	6265 (47.1)	94 (38.1)	0.75 (0.27-2.05)		1.20 (0.20-7.31)	
≥3	4576 (34.4)	102 (41.3)	1.11 (0.40-3.04)		1.49 (0.25-9.06)	
Number of stillbirths (%) [n=13562]				0.538		0.336

None	12900 (96.9)	241 (97.6)	Ref		Ref
Any	415 (3.1)	6 (2.4)	0.77 (0.34-1.75)		0.67 (0.29-1.53)
Number of miscarriages or abortions [n=13562]					0.570
0	9969 (74.9)	187 (75.7)	Ref		Ref
1	2516 (18.9)	40 (16.2)	0.85 (0.60-1.20)	0.482	0.87 (0.61-1.25)
2	591 (4.4)	15 (6.1)	1.35 (0.79-2.30)		1.36 (0.78-2.38)
≥3	239 (1.8)	5 (2.0)	1.12 (0.46-2.74)		1.08 (0.42-2.74)

*Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, BMI, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

Table S4. Baseline characteristics of 13,562 women of the EPIC-Norfolk according to incident ovarian cancer status and corresponding unadjusted and adjusted odds ratios with 95% CIs

	Incident ovarian cancer		Unadjusted OR (95% CI)	P-value	Adjusted OR* (95% CI)	P-value	
	No [n=13374]	Yes [n=188]					
Median (IQR) age years [n=13562]	58.0 (16.2)	59.5 (12.7)	1.01 (1.00-1.03)	0.184	1.00 (0.99-1.02)	0.650	
Education (%) [n=13562]							
No qualification	5999 (44.9)	98 (52.1)	Ref		Ref		
0 Level	1572 (11.8)	18 (9.6)	0.70 (0.42-1.16)	0.247	0.72 (0.43-1.21)	0.385	
A Level	4541 (34.0)	55 (29.3)	0.74 (0.53-1.03)		0.75 (0.52-1.08)		
Degree	1262 (9.4)	17 (9.0)	0.83 (0.49-1.39)		0.83 (0.46-1.48)		
Occupational Social Class (%) [n=13190]							
Professional							
Manager	812 (6.1)	8 (4.3)	Ref		Ref		
Skilled Non-manual	4325 (32.3)	60 (31.9)					
	2488 (18.6)	37 (19.7)	1.41 (0.67-2.96)	0.953	1.38 (0.65-2.91)	0.950	
Skilled Manual							
	2911 (21.8)	43 (22.9)	1.51 (0.70-3.26)		1.42 (0.64-3.11)		
Semi-Skilled							
	1878 (14.0)	27 (14.4)	1.50 (0.70-3.20)		1.34 (0.61-2.95)		
Non-Skilled							
	594 (4.4)	7 (3.7)	1.46 (0.66-3.23)		1.25 (0.55-2.86)		
Missing							
	366 (2.7)	6 (3.2)	1.20 (0.43-3.32)		0.96 (0.34-2.76)		
Smoking History (%) [n=13441]							
Never	7375 (55.1)	103 (54.8)	Ref	0.946	Ref	0.910	
Ex-smoker	4262 (31.9)	62 (33.0)	1.04 (0.76-1.43)		1.07 (0.67-1.72)		
Currently smoking	1617 (12.1)	22 (11.7)	0.97 (0.61-1.55)		1.05 (0.76-1.45)		

Missing	120 (0.9)	1 (0.5)				
Alcohol (g) (%) [n=11035]						
0	2661 (19.9)	50 (26.6)	Ref		Ref	
0.1-4.9	4272 (31.9)	50 (26.6)	0.62 (0.42-0.93)		0.64 (0.43-0.95)	
5-14.9	3034 (22.7)	40 (21.3)	0.70 (0.46-1.07)	0.240	0.75 (0.48-1.16)	0.347
15-29.9	674 (5.0)	7 (3.7)	0.55 (0.25-1.23)		0.59 (0.26-1.34)	
≥30	243 (1.8)	4 (2.1)	0.88 (0.31-2.45)		0.96 (0.34-2.74)	
Missing	2490 (18.6)	37 (19.7)				
Physical activity (%) [n=13562]						
Active	8393 (62.8)	114 (60.6)	Ref	0.551	Ref	0.224
Inactive	4981 (37.2)	74 (39.4)	0.91 (0.68-1.23)		0.83 (0.61-1.13)	
BMI (kg/m²) (%) [n=11414]						
Normal or Underweight	4965 (37.1)	56 (29.8)	Ref		Ref	
Pre-obesity	4385 (32.8)		1.42 (0.99-2.02)		1.37 (0.96-1.97)	
Obesity Class I	1445 (10.8)	70 (37.2)	1.47 (0.91-2.38)	0.340	1.41 (0.86-2.30)	0.473
Obesity Class II +	462 (3.5)	24 (12.8)	1.34 (0.61-2.96)		1.30 (0.58-2.91)	
Missing	2117 (15.8)	7 (3.7)				
		31 (16.5)				
Family history of cancer (%) [n=5295/13561]						
Missing	5206 (38.9)	89 (47.3)	1.41 (1.06-1.88)	0.065	1.42 (1.06-1.89)	0.063
Prevalent MI (%) [n=200/13557]	1 (0.0)	0 (0.0)				
	197 (1.5)	3 (1.6)	1.08 (0.34-3.42)	0.991	1.01 (0.32-3.24)	1.00
Missing	5 (0.0)	0 (0.0)				

Prevalent stroke (%) [n=144/13559]	144 (1.1)	0 (0.0)				
Missing	3 (0.0)	0 (0.0)	—	—	—	—
Prevalent Diabetes (%) [n=226/13557]	223 (1.7)	3 (1.6)				
Missing	5 (0.0)	0 (0.0)	0.96 (0.30-3.01)	0.997	0.85 (0.27-2.75)	0.966
Hypertension during pregnancy (%) [n =2919/12008]	2868 (21.4)	51 (27.1)				
Missing	1534 (11.5)	20 (10.6)	1.36 (0.98-1.90)	0.172	1.30 (0.93-1.83)	0.183
Diabetes during pregnancy (%) [n=219/12773]	215 (1.6)	4 (2.1)				
Missing	773 (5.8)	16 (8.5)	1.37 (0.50-3.73)	0.239	1.39 (0.50-3.82)	0.266
Age at first live birth (%) [n=13304]						
≤20	2150 (16.1)	24 (12.8)	Ref		Ref	
21-25	6271 (46.9)	87 (46.3)	1.24 (0.79-1.96)		1.28 (0.80-2.04)	
26-30	3451 (25.8)	44 (23.4)	1.14 (0.69-1.88)	0.038	1.20 (0.71-2.02)	0.074
≥31	1247 (9.3)	30 (16.0)	2.16 (1.25-3.70)		2.19 (1.21-3.95)	
Missing	255 (1.9)	3 (1.6)				
Number of children (%) [n=13562]						
0	201 (1.5)	2 (1.1)	Ref		Ref	
1	2283 (17.1)	39 (20.7)	1.72 (0.41-7.16)		1.60 (0.14-18.76)	
2	6268 (46.9)	91 (48.4)	1.46 (0.36-5.97)	0.392	1.57 (0.13-18.42)	0.824
≥3	4622 (34.6)	56 (29.8)	1.22 (0.30-5.03)		1.36 (0.12-15.88)	

Number of stillbirths (%) [n=13562]						
None	12955 (96.9)	186 (98.9)	Ref	0.122	Ref	0.111
Any	419 (3.1)	2 (1.1)	0.33 (0.08-1.34)		0.32 (0.08-1.30)	
Number of miscarriages or abortions [n=13562]						
0	10008 (74.8)	148 (78.7)	Ref		Ref	
1	2525 (18.9)	31 (16.5)	0.83 (0.56-1.23)	0.645	0.86 (0.58-1.28)	0.789
2	600 (4.5)	6 (3.2)	0.68 (0.30-1.54)		0.72 (0.31-1.65)	
≥3	241 (1.8)	3 (1.6)	0.84 (0.27-2.66)		0.88 (0.28-2.82)	

*Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, BMI, family history of cancer, prevalent MI, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

Table S5. Baseline characteristics of 13,562 women of the EPIC-Norfolk according to incident endometrial cancer status and corresponding unadjusted and adjusted odds ratios with 95% CIs

	Incident endometrial cancer		Unadjusted OR (95% CI)	P-value	Adjusted OR* (95% CI)	P-value
	No [n=13399]	Yes [n=163]				
Median (IQR) age years [n=13562]	58.1 (16.2)	56.7 (14.00)	1.00 (0.98-1.01)	0.610	0.99 (0.97-1.01)	0.256
Education (%) [n=13562]						0.327
No qualification	6019 (44.9)	78 (47.9)	Ref		Ref	
0 Level	1565 (11.7)	25 (15.3)	1.23 (0.78-1.94)	0.258	1.26 (0.78-2.03)	
A Level	4551 (34.0)	45 (27.6)	0.76 (0.53-1.10)		0.79 (0.53-1.18)	
Degree	1264 (9.4)	15 (9.2)	0.92 (0.53-1.60)		0.99 (0.53-1.84)	
Occupational Social Class (%) [n=13190]						0.190
Professional	816 (6.1)	4 (2.5)	Ref		Ref	
Manager	4336 (32.4)	49 (30.1)	2.31 (0.83-6.41)		2.36 (0.84-6.60)	
Skilled Non-manual	2494 (18.6)	31 (19.0)	2.54 (0.89-7.21)	0.108	2.58 (0.89-7.46)	
Skilled Manual	2913 (21.7)	41 (25.2)	2.87 (1.03-8.04)		2.70 (0.94-7.74)	
Semi-Skilled	1874 (14.0)	31 (19.0)	3.38 (1.19-9.59)		3.06 (1.05-8.95)	
Non-Skilled	599 (4.5)	2 (1.2)	0.68 (0.12-3.73)		0.60 (0.11-3.38)	
Missing	367 (2.7)	5 (3.1)				
Smoking History (%) [n=13441]						<0.001
Never	7361 (54.9)	117 (71.8)	Ref		Ref	
Ex-smoker	4286 (32.0)	38 (23.3)	0.56 (0.39-0.81)	<0.001	0.28 (0.13-0.61)	
Currently smoking	1632 (12.2)	7 (4.3)	0.27 (0.13-0.58)		0.53 (0.37-0.78)	

Missing	120 (0.9)	1 (0.6)			
Alcohol (g) (%) [n=11035]					0.873
0	2673 (19.9)	38 (23.3)	Ref		Ref
0.1-4.9	4265 (31.8)	57 (35.0)	0.94 (0.62-1.42)		1.01 (0.66-1.54)
5-14.9	3045 (22.7)	29 (17.8)	0.67 (0.41-1.09)	0.534	0.89 (0.53-1.47)
15-29.9	675 (5.0)	6 (3.7)	0.63 (0.26-1.49)		0.98 (0.40-2.37)
≥30	243 (1.8)	4 (2.5)	1.16 (0.41-3.27)		1.78 (0.61-5.16)
Missing	2498 (18.6)	29 (17.8)			
Physical activity (%) [n=13562]					0.556
Active	4994 (37.3)	61 (37.4)	Ref	0.968	Ref
Inactive	4405 (62.7)	102 (62.6)	0.99 (0.72-1.37)		0.90 (0.65-1.27)
BMI (kg/m ²) (%) [n=11414]					<0.001
Normal or Underweight	4982 (37.2)	39 (23.9)	Ref		Ref
Pre-obesity	4411 (32.9)	44 (27.0)	1.27 (0.83-1.97)		1.26 (0.81-1.95)
Obesity Class I	1435 (10.7)	34 (20.9)	3.03 (1.90-4.81)	<0.001	3.00 (1.86-4.82)
Obesity Class II +	448 (3.3)	21 (12.9)	5.99 (3.49-10.27)		5.90 (3.36-10.37)
Missing	2123 (15.8)	25 (15.3)			
Family history of cancer (%) [n=5295/13561]					0.872
Missing	5229 (39.0)	66 (40.5)	1.06 (0.78-1.46)	0.930	1.09 (0.79-1.50)
	1 (0.0)	0 (0.0)			
Prevalent MI (%) [n=200/13557]					0.672
Missing	196 (1.5)	4 (2.5)	1.69 (0.62-4.62)	0.588	1.61 (0.57-4.56)
	5 (0.0)	0 (0.0)			

Prevalent stroke (%) [n=144/13559]	141 (1.1)	3 (1.8)				0.646
Missing	3 (0.0)	0 (0.0)	1.76 (0.56-5.59)	0.629	1.77 (0.54-5.83)	
Prevalent Diabetes (%) [n=226/13557]	220 (1.6)	6 (3.7)				0.484
Missing	5 (0.0)	0 (0.0)	2.29 (1.00-5.23)	0.145	1.70 (0.72-4.05)	
Hypertension during pregnancy (%) [n =2919/12008]	2875 (21.5)	44 (27.0)				0.577
Missing	1532 (11.4)	22 (13.5)	1.42 (0.99-2.03)	0.120	1.16 (0.80-1.67)	
Diabetes during pregnancy (%) [n=219/12773]	214 (1.6)	5 (3.1)				0.598
Missing	780 (5.8)	9 (5.5)	1.95 (0.79-4.79)	0.346	1.52 (0.60-3.85)	
Age at first live birth (%) [n=13304]						0.578
≤20	2152 (16.1)	22 (13.5)	Ref		Ref	
21-25	6282 (46.9)	76 (46.6)	1.18 (0.73-1.91)		1.22 (0.75-1.98)	
26-30	3451 (25.8)	44 (27.0)	1.25 (0.75-2.09)	0.733	1.36 (0.80-2.32)	
≥31	1258 (9.4)	19 (11.7)	1.48 (0.80-2.74)		1.66 (0.88-3.15)	
Missing	256 (1.9)	2 (1.2)				
Number of children (%) [n=13562]						
0	203 (1.5)	0 (0.0)				
1	2294 (17.1)	28 (17.2)	-----		-----	
2	6277 (46.8)	82 (50.3)				
3 or more	4625 (34.5)	53 (32.5)				
Number of stillbirths (%) [n=13562]						0.971
None	12983 (96.9)	158 (96.9)	Ref	0.978	Ref	

Any	416 (3.1)	5 (3.1)	0.99 (0.40-2.42)		1.02 (0.41-2.52)
Number of miscarriages or abortions [n=13562]					0.496
0	10029 (74.8)	127 (77.9)	Ref		Ref
1	2526 (18.9)	30 (18.4)	0.94 (0.63-1.40)	0.459	0.97 (0.64-1.46)
2	603 (4.5)	3 (1.8)	0.39 (0.13-1.24)		0.40 (0.13-1.28)
≥3	241 (1.8)	3 (1.8)	0.98 (0.31-3.11)		0.92 (0.28-2.95)

*Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, BMI, family history of cancer, prevalent ML, prevalent stroke prevalent diabetes, diabetes during pregnancy, age at first live birth, number of still births and number of miscarriages or abortion.

Table S6. Unadjusted and adjusted odds ratios and corresponding 95% CIs for HDP and incident cancer and site-specific cancers in the subgroup of participants with high BMI

	Hypertension during pregnancy [n=1573]			
	Unadjusted OR (95% CI)	P-value	Adjusted OR ¹ (95% CI)	P-value
Incident Cancer [n=1330]	1.12 (0.98-1.30)	0.251	1.17 (1.01-1.35)	0.099
Breast [n=369]	1.07 (0.84-1.37)	0.859	1.05 (0.82-1.35)	0.687
Colorectal [n=256]	1.28 (0.96-1.70)	0.206	1.37 (1.02-1.83)²	0.113
Lung [n=122]	0.89 (0.57-1.38)	0.752	1.00 (0.63-1.59)	0.982
Ovarian [n=101]	1.47 (0.95-2.26)	0.159	1.50 (0.97-2.34) ³	0.114
Endometrial [n=99]	1.38 (0.88-2.16)	0.364	1.30 (0.83-2.06) ⁴	0.513

¹Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

² Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, number of children, number of still births and number of miscarriages or abortion.

³Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, family history of cancer, prevalent MI, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of children, number of still births and number of miscarriages or abortion.

⁴Adjusted for age, education level, occupational social class, smoking status, alcohol consumption, physical activity, family history of cancer, prevalent MI, prevalent stroke, prevalent diabetes, diabetes during pregnancy, age at first live birth, number of still births and number of miscarriages or abortion.