

Table S1: Relative risk (RR) with confidence interval (95%CI) of breast cancer by occupational, socio-professional, economical activity and skill level category, among females aged 18-85 years in western Switzerland, 2005-2014

Occupational variables	Nb cases	Person-years (in 100'000)	Models 1* RR		Models 2 ** RR		Models 3 *** RR	
Occupation^a			p<0.001		p<0.001		p<0.001	
1. Legislators, senior officials and managers	259	1.17	1.00	Ref.	1.00	Ref.	1.00	Ref.
2. Professionals	630	2.64	1.08	[0.93,1.24]	1.14	[0.99,1.32]	1.15	[0.99,1.33]
3. Technicians and associate professionals	1'176	5.96	0.89	[0.77,1.02]	0.97	[0.85,1.11]	0.98	[0.85,1.12]
4. Clerks	1'176	5.50	0.96	[0.84,1.10]	1.05	[0.91,1.20]	1.05	[0.92,1.20]
5. Service workers and shop and market sales workers	868	4.69	0.83	[0.72,0.96]	0.91	[0.79,1.05]	0.91	[0.79,1.05]
6. Skilled agricultural and fishery workers	47	0.29	0.73	[0.53,1.00]	0.78	[0.57,1.06]	0.78	[0.57,1.06]
7. Craft and related trades workers	133	0.68	0.89	[0.72,1.09]	0.97	[0.79,1.20]	0.98	[0.79,1.21]
8. Plant and machine operators and assemblers	44	0.24	0.81	[0.58,1.12]	0.81	[0.59,1.11]	0.81	[0.58,1.11]
9. Elementary occupations	225	1.10	0.92	[0.77,1.10]	0.89	[0.74,1.06]	0.88	[0.74,1.06]
Socioprofessional category			p<0.001		p<0.001		p=0.003	
Top management and independent professions	130	0.50	1.00	Ref.	1.00	Ref.	1.00	Ref.
Other self-employed	467	1.66	1.07	[0.88,1.31]	1.04	[0.86,1.27]	1.03	[0.85,1.26]
Professionals and senior management	504	2.21	0.87	[0.71,1.05]	1.00	[0.83,1.21]	1.01	[0.83,1.23]
Supervisors/low level management and skilled labour	2'608	13.80	0.72	[0.60,0.86]	0.88	[0.74,1.05]	0.89	[0.74,1.06]
Unskilled employees and workers	830	4.01	0.79	[0.65,0.95]	0.85	[0.71,1.02]	0.86	[0.71,1.04]
In paid employment, not classified elsewhere	19	0.09	0.81	[0.50,1.32]	0.90	[0.56,1.46]	0.90	[0.56,1.46]
Skill level required for the occupation			p<0.001		p=0.006		p=0.007	
Lowest skill level	225	1.10	1.00	Ref.	1.00	Ref.	1.00	Ref.
2nd lowest skill level	2'268	11.41	0.98	[0.85,1.12]	1.10	[0.96,1.26]	1.10	[0.96,1.26]
2nd highest skill level	1'176	5.96	0.97	[0.84,1.12]	1.10	[0.95,1.27]	1.10	[0.95,1.27]
Highest skill level	889	3.81	1.15	[0.99,1.33]	1.23	[1.07,1.43]	1.23	[1.06,1.43]
Economic activity branch^b			p<0.001		p=0.059		p=0.123	
Unknown	424	1.88	1.07	[0.95,1.21]	1.04	[0.92,1.17]	1.04	[0.92,1.17]
A-B Agriculture, hunting, forestry, fishing and fish farming	119	0.48	1.18	[0.97,1.43]	1.11	[0.91,1.34]	1.10	[0.90,1.33]
C Mining and quarrying	2	0.01	1.26	[0.31,5.18]	1.23	[0.31,4.92]	1.24	[0.31,4.98]
D Manufacture of goods	310	1.65	0.89	[0.78,1.02]	0.96	[0.84,1.09]	0.97	[0.85,1.10]
E Electricity, gas and water supply	12	0.07	0.82	[0.46,1.46]	0.87	[0.49,1.53]	0.87	[0.49,1.54]

F Construction	69	0.34	0.96 [0.75,1.23]	0.96 [0.75,1.23]	0.96 [0.75,1.22]
G Trade; repair of motor vehicles and of domestic articles	710	3.73	0.91 [0.82,1.00]	0.95 [0.86,1.05]	0.96 [0.86,1.06]
H Hotels and restaurants	233	1.29	0.86 [0.74,1.00]	0.95 [0.82,1.09]	0.96 [0.83,1.11]
I Transport and communication	161	0.96	0.80 [0.67,0.94]	0.89 [0.75,1.05]	0.90 [0.76,1.06]
J Financial intermediation; insurance	244	1.32	0.88 [0.76,1.02]	0.98 [0.85,1.14]	0.99 [0.86,1.15]
K Real estate, renting, IT activities; research and development; other business services	442	2.15	0.98 [0.87,1.10]	1.05 [0.94,1.18]	1.07 [0.95,1.20]
LA Public administration	192	0.72	1.28 [1.09,1.50]	1.23 [1.05,1.45]	1.22 [1.04,1.43]
LB Defence	47	0.25	0.90 [0.67,1.22]	0.94 [0.70,1.27]	0.94 [0.70,1.26]
LC Compulsory social security	16	0.07	1.14 [0.69,1.88]	1.19 [0.73,1.96]	1.20 [0.73,1.96]
M Education	498	2.10	1.13 [1.01,1.27]	1.06 [0.95,1.19]	1.06 [0.95,1.19]
N Health and social activities	792	3.76	1.00 Ref.	1.00 Ref.	1.00 Ref.
O Other community, social and personal service activities	267	1.38	0.92 [0.80,1.06]	0.94 [0.82,1.08]	0.95 [0.83,1.09]
Q Extra-territorial organizations and bodies	20	0.13	0.71 [0.45,1.11]	0.58 [0.37,0.90]	0.60 [0.39,0.94]

^a Occupation is coded on 1 digit using the International Classification of Occupations, version 1988 (ISCO-88).

^b Economic activity/industry is coded using the General Classification of Economic Activities (NOGA), based on ISCI third and NACE first revisions

* Univariate model

** Adjusted for age, period and canton

*** Adjusted for age, period, canton, civil status, civil status x age and nationality

Statistically significant estimates and p-values<0.05 are shown in bold

Table S2: Relative risk (RR) with confidence interval (95%CI) of breast cancer by occupational, socio-professional, economical activity and skill level category, among females aged 18-49 years in in Swiss cantons of Neuchâtel, Geneva, Vaud and Wallis, 1990-2014

Occupational variables	Nb cases	Person-years (in 100'000)	Models 1* RR	Models 2 ** RR	Models 3 *** RR
Occupation^a			p<0.001	p=0.002	p<0.001
1. Legislators, senior officials and managers	143	1.61	1.00 Ref.	1.00 Ref.	1.00 Ref.
2. Professionals	415	3.97	1.19 [0.96,1.47]	1.18 [0.95,1.46]	1.22 [0.99,1.52]
3. Technicians and associate professionals	757	9.01	1.06 [0.86,1.29]	1.07 [0.88,1.31]	1.11 [0.90,1.35]
4. Clerks	704	9.43	1.00 [0.82,1.23]	1.03 [0.84,1.26]	1.04 [0.85,1.28]
5. Service workers and shop and market sales workers	469	7.14	0.86 [0.69,1.05]	0.89 [0.72,1.10]	0.89 [0.72,1.10]
6. Skilled agricultural and fishery workers	28	0.43	0.77 [0.49,1.21]	0.79 [0.50,1.25]	0.78 [0.49,1.24]
7. Craft and related trades workers	93	1.07	0.98 [0.73,1.30]	0.98 [0.73,1.31]	1.00 [0.74,1.33]
8. Plant and machine operators and assemblers	23	0.36	0.69 [0.43,1.11]	0.68 [0.42,1.10]	0.68 [0.42,1.09]
9. Elementary occupations	211	3.68	0.87 [0.68,1.11]	0.83 [0.65,1.07]	0.80 [0.62,1.02]
Socioprofessional category			p<0.001	p<0.001	p<0.001
Top management and independent professions	73	0.53	1.00 Ref.	1.00 Ref.	1.00 Ref.
Other self-employed	195	1.81	0.83 [0.62,1.13]	0.87 [0.64,1.18]	0.81 [0.59,1.09]
Professionals and senior management	332	3.16	0.78 [0.59,1.04]	0.77 [0.58,1.02]	0.80 [0.60,1.07]
Supervisors/low level management and skilled labour	1732	23.00	0.64 [0.50,0.83]	0.66 [0.51,0.86]	0.68 [0.53,0.89]
Unskilled employees and workers	477	7.30	0.58 [0.44,0.76]	0.58 [0.44,0.76]	0.59 [0.44,0.78]
In paid employment, not classified elsewhere	34	0.90	0.49 [0.30,0.79]	0.44 [0.27,0.72]	0.46 [0.28,0.75]
Skill level required for the occupation			p<0.001	p=0.002	p<0.001
Lowest skill level	211	3.68	1.00 Ref.	1.00 Ref.	1.00 Ref.
2nd lowest skill level	1317	18.44	1.07 [0.90,1.27]	1.15 [0.96,1.37]	1.20 [1.01,1.44]
2nd highest skill level	757	9.01	1.22 [1.01,1.46]	1.29 [1.07,1.55]	1.37 [1.14,1.66]
Highest skill level	558	5.57	1.31 [1.08,1.58]	1.35 [1.11,1.63]	1.44 [1.18,1.74]
Economic activity branch^b			p=0.002	p=0.001	p=0.009
Unknown	169	1.98	0.94 [0.77,1.14]	0.95 [0.78,1.15]	0.95 [0.78,1.15]
A-B Agriculture,hunting, forestry, fishing and fish farming	53	0.55	1.01 [0.73,1.39]	1.04 [0.75,1.45]	0.96 [0.70,1.33]
D Manufacture of goods	241	3.29	0.86 [0.72,1.03]	0.85 [0.70,1.01]	0.85 [0.71,1.03]

E Electricity, gas and water supply	6	0.10	0.54 [0.23,1.28]	0.53 [0.22,1.26]	0.54 [0.23,1.28]
F Construction	44	0.53	0.89 [0.63,1.27]	0.88 [0.61,1.26]	0.84 [0.59,1.21]
G Trade; repair of motor vehicles and of domestic articles	441	6.39	0.81 [0.70,0.94]	0.80 [0.69,0.93]	0.81 [0.69,0.94]
H Hotels and restaurants	155	2.38	0.79 [0.64,0.97]	0.79 [0.64,0.97]	0.81 [0.66,1.00]
I Transport and communication	96	1.71	0.63 [0.49,0.80]	0.60 [0.47,0.77]	0.62 [0.48,0.79]
J Financial intermediation; insurance	183	2.66	0.91 [0.75,1.10]	0.86 [0.70,1.04]	0.89 [0.73,1.08]
K Real estate, renting, IT activities; research and development; other business services	297	3.76	0.89 [0.75,1.05]	0.85 [0.72,1.01]	0.88 [0.74,1.03]
LA Public administration	115	1.20	1.06 [0.83,1.34]	1.01 [0.79,1.28]	0.98 [0.77,1.25]
LB Defence	18	0.20	0.87 [0.53,1.42]	0.90 [0.55,1.49]	0.90 [0.55,1.48]
LC Compulsory social security	5	0.06	0.79 [0.31,1.99]	0.79 [0.31,2.00]	0.80 [0.32,2.02]
M Education	320	3.23	1.17 [0.99,1.38]	1.12 [0.95,1.33]	1.12 [0.94,1.32]
N Health and social activities	484	5.91	1.00 Ref.	1.00 Ref.	1.00 Ref.
O Other community, social and personal service activities	182	2.20	0.90 [0.74,1.09]	0.87 [0.72,1.06]	0.89 [0.73,1.08]
P Domestic services	13	0.23	0.76 [0.38,1.49]	0.61 [0.31,1.23]	0.64 [0.32,1.26]
Q Extra-territorial organizations and bodies	20	0.30	0.83 [0.50,1.37]	0.68 [0.40,1.14]	0.75 [0.45,1.26]

^a Occupation is coded using the International Classification of Occupations, version 1988 (ISCO-88), coded on 1 digit.

^b Economic activity/industry is coded using the General Classification of Economic Activities (NOGA), based on ISCI third and NACE first revisions

* Univariate model

** Adjusted for age, time period and canton

*** Adjusted for age, time period, canton, civil status, civil status x age and nationality

Statistically significant estimates and p-values<0.05 are shown in bold

Table S3: Relative risk (RR) with confidence interval (95%CI) of breast cancer by occupational, socio-professional, economical activity and skill level category, among females aged 50-85 years in in Swiss cantons of Neuchâtel, Geneva, Vaud and Wallis, 1990-2014

Occupational variables	Nb cases	Person-years (in 100'000)	Models 1* RR	Models 2 ** RR	Models 3 *** RR
Occupation^a			p<0.001	p=0.002	p<0.001
3. Technicians and associate professionals	1367	4.36	0.96 [0.85,1.09]	0.98 [0.86,1.11]	0.97 [0.86,1.10]
4. Clerks	1579	4.75	1.07 [0.95,1.21]	1.09 [0.96,1.23]	1.09 [0.96,1.23]
5. Service workers and shop and market sales workers	1060	3.69	0.91 [0.80,1.03]	0.95 [0.83,1.07]	0.96 [0.84,1.09]
6. Skilled agricultural and fishery workers	73	0.29	0.81 [0.61,1.07]	0.84 [0.63,1.12]	0.84 [0.63,1.12]
7. Craft and related trades workers	182	0.638	0.87 [0.72,1.05]	0.87 [0.71,1.05]	0.88 [0.72,1.06]
8. Plant and machine operators and assemblers	70	0.24	0.88 [0.67,1.15]	0.88 [0.67,1.16]	0.90 [0.68,1.18]
9. Elementary occupations	496	2.12	0.78 [0.68,0.91]	0.76 [0.66,0.89]	0.78 [0.67,0.91]
Socioprofessional category			p<0.001	p<0.001	p<0.001
Top management and independent professions	159	0.45	1.00 Ref.	1.00 Ref.	1.00 Ref.
Other self-employed	628	1.87	0.99 [0.82,1.19]	1.03 [0.85,1.24]	1.03 [0.86,1.25]
Professionals and senior management	594	1.67	1.04 [0.86,1.25]	1.04 [0.86,1.25]	1.04 [0.86,1.25]
Supervisors/low level management and skilled labour	3271	10.31	0.95 [0.80,1.13]	0.99 [0.83,1.17]	0.99 [0.84,1.18]
Unskilled employees and workers	1234	4.73	0.81 [0.68,0.96]	0.83 [0.70,0.99]	0.86 [0.71,1.02]
In paid employment, not classified elsewhere	89	0.35	0.91 [0.67,1.22]	0.86 [0.64,1.17]	0.87 [0.65,1.18]
Skill level required for the occupation			p<0.001	p<0.001	p<0.001
Lowest skill level	496	2.12	1.00 Ref.	1.00 Ref.	1.00 Ref.
2nd lowest skill level	2964	9.60	1.25 [1.12,1.39]	1.31 [1.17,1.46]	1.28 [1.15,1.43]
2nd highest skill level	1367	4.36	1.23 [1.09,1.38]	1.27 [1.13,1.43]	1.23 [1.09,1.39]
Highest skill level	1148	3.30	1.37 [1.22,1.54]	1.39 [1.23,1.57]	1.34 [1.19,1.52]
Economic activity branch^b			p=0.022	p=0.050	p=0.067
Unknown	467	1.37	1.10 [0.98,1.24]	1.09 [0.97,1.23]	1.10 [0.98,1.24]
A-B Agriculture,hunting, forestry, fishing and fish farming	132	0.48	0.91 [0.74,1.11]	0.93 [0.76,1.15]	0.93 [0.76,1.15]
D Manufacture of goods	491	1.70	0.99 [0.88,1.12]	0.98 [0.87,1.11]	0.99 [0.87,1.12]
E Electricity, gas and water supply	17	0.06	0.96 [0.58,1.58]	0.98 [0.59,1.63]	0.96 [0.58,1.60]
F Construction	80	0.31	0.77 [0.60,0.99]	0.76 [0.59,0.98]	0.76 [0.59,0.98]

G Trade; repair of motor vehicles and of domestic articles	1064	3.45	1.03 [0.93,1.14]	1.02 [0.92,1.13]	1.03 [0.93,1.14]
H Hotels and restaurants	269	0.99	0.87 [0.75,1.01]	0.86 [0.74,1.00]	0.88 [0.76,1.02]
I Transport and communication	182	0.68	0.86 [0.73,1.02]	0.84 [0.71,1.00]	0.84 [0.70,1.00]
J Financial intermediation; insurance	335	1.03	1.10 [0.96,1.27]	1.05 [0.91,1.21]	1.04 [0.90,1.20]
K Real estate, renting, IT activities; research and development; other business services	532	1.63	1.06 [0.94,1.19]	1.02 [0.90,1.15]	1.02 [0.91,1.15]
LA Public administration	277	0.75	1.20 [1.03,1.39]	1.15 [0.99,1.34]	1.14 [0.98,1.32]
LB Defence	40	0.12	1.00 [0.72,1.39]	1.03 [0.74,1.43]	1.01 [0.73,1.41]
LC Compulsory social security	12	0.04	1.02 [0.56,1.85]	1.01 [0.56,1.84]	1.00 [0.55,1.81]
M Education	642	2.02	1.03 [0.93,1.15]	1.00 [0.90,1.12]	1.00 [0.89,1.11]
N Health and social activities	970	3.16	1.00 Ref.	1.00 Ref.	1.00 Ref.
O Other community, social and personal service activities	352	1.19	0.94 [0.82,1.07]	0.90 [0.79,1.03]	0.90 [0.79,1.03]
P Domestic services	28	0.14	0.80 [0.51,1.23]	0.70 [0.45,1.10]	0.73 [0.47,1.13]
Q Extra-territorial organizations and bodies	84	0.27	1.12 [0.88,1.43]	0.95 [0.74,1.22]	0.99 [0.77,1.27]

^a Occupation is coded using the International Classification of Occupations, version 1988 (ISCO-88), coded on 1 digit.

^b Economic activity/industry is coded using the General Classification of Economic Activities (NOGA), based on ISCI third and NACE first revisions

* Univariate model

** Adjusted for age, time period and canton

*** Adjusted for age, time period, canton, civil status, civil status x age and nationality

Statistically significant estimates and p-values<0.05 are shown in bold