

Table 1: Relative risk of dying from ovarian cancer in towns situated near pollutant industries, by industrial group, estimated using BYM and Poisson mixed regression models.

| Industrial group | BYM model | | | | | | | | | | | | Mixed model | | | | | | | |
|--|------------------|-----------------|---------------------|------------------|-----------------|---------------------|------------------|-----------------|---------------------|------------------|-----------------|---------------------|-----------------|--------------------|-----------------|--------------------|-----------------|--------------------|-----------------|--------------------|
| | 2km | | | 3km | | | 4km | | | 5km | | | 2km | | 3km | | 4km | | 5km | |
| | Obs ^a | RR ^b | 95%CrI ^c | Obs ^a | RR ^b | 95%CrI ^c | Obs ^a | RR ^b | 95%CrI ^c | Obs ^a | RR ^b | 95%CrI ^c | RR ^b | 95%CI ^d | RR ^b | 95%CI ^d | RR ^b | 95%CI ^d | RR ^b | 95%CI ^d |
| All sectors | 4587 | 1.01 | 0.97-1.05 | 8456 | 1.05 | 1.01-1.10 | 10224 | 1.06 | 1.02-1.11 | 12365 | 1.07 | 1.02-1.12 | 1.01 | 0.98-1.05 | 1.04 | 1.01-1.08 | 1.06 | 1.01-1.10 | 1.06 | 1.02-1.11 |
| Combustion installations | 221 | 0.93 | 0.80-1.08 | 326 | 1.02 | 0.90-1.15 | 920 | 1.02 | 0.93-1.11 | 1372 | 1.05 | 0.97-1.14 | 0.93 | 0.81-1.06 | 1.00 | 0.89-1.12 | 1.00 | 0.93-1.08 | 1.03 | 0.96-1.11 |
| Refineries and coke ovens | 145 | 1.20 | 0.95-1.50 | 155 | 1.30 | 1.04-1.60 | 386 | 1.22 | 1.04-1.42 | 741 | 1.20 | 1.08-1.34 | 1.19 | 1.00-1.43 | 1.26 | 1.06-1.49 | 1.16 | 1.03-1.31 | 1.18 | 1.07-1.29 |
| Production and processing of metals | 616 | 0.98 | 0.89-1.08 | 1196 | 1.01 | 0.93-1.09 | 1811 | 1.03 | 0.96-1.10 | 2745 | 1.05 | 0.99-1.13 | 0.99 | 0.90-1.08 | 1.01 | 0.95-1.09 | 1.03 | 0.97-1.09 | 1.06 | 0.99-1.12 |
| Galvanization | 218 | 1.12 | 0.96-1.29 | 486 | 0.99 | 0.88-1.10 | 682 | 0.99 | 0.90-1.10 | 760 | 1.01 | 0.92-1.11 | 1.13 | 0.99-1.30 | 0.97 | 0.88-1.08 | 0.98 | 0.90-1.08 | 1.00 | 0.91-1.09 |
| Surface treatment of metals and plastic | 1386 | 0.99 | 0.92-1.06 | 3211 | 1.02 | 0.97-1.08 | 3765 | 1.03 | 0.97-1.09 | 4901 | 1.07 | 1.01-1.13 | 1.00 | 0.94-1.06 | 1.03 | 0.98-1.08 | 1.03 | 0.98-1.08 | 1.07 | 1.01-1.13 |
| Mining industry | 43 | 1.38 | 0.99-1.84 | 109 | 1.00 | 0.81-1.20 | 178 | 1.05 | 0.89-1.22 | 317 | 1.02 | 0.90-1.14 | 1.39 | 1.03-1.88 | 0.99 | 0.82-1.20 | 1.05 | 0.90-1.22 | 1.01 | 0.90-1.13 |
| Cement and lime | 68 | 0.83 | 0.64-1.05 | 291 | 0.90 | 0.78-1.02 | 591 | 0.90 | 0.82-1.00 | 799 | 0.95 | 0.86-1.04 | 0.83 | 0.66-1.06 | 0.91 | 0.80-1.03 | 0.92 | 0.84-1.00 | 0.97 | 0.89-1.05 |
| Glass and mineral fibers | 296 | 1.13 | 0.97-1.30 | 607 | 1.08 | 0.97-1.19 | 808 | 1.06 | 0.96-1.16 | 1166 | 1.15 | 1.05-1.25 | 1.08 | 0.96-1.22 | 1.05 | 0.96-1.15 | 1.03 | 0.95-1.12 | 1.11 | 1.03-1.19 |
| Ceramic | 499 | 1.03 | 0.94-1.14 | 852 | 1.06 | 0.98-1.15 | 1151 | 1.10 | 1.02-1.18 | 1983 | 1.08 | 1.01-1.15 | 1.04 | 0.95-1.13 | 1.06 | 0.98-1.14 | 1.10 | 1.03-1.17 | 1.08 | 1.02-1.15 |
| Organic chemical industry | 453 | 1.00 | 0.89-1.11 | 987 | 1.00 | 0.92-1.08 | 1562 | 1.07 | 1.00-1.15 | 3477 | 1.08 | 1.01-1.16 | 1.01 | 0.91-1.11 | 1.00 | 0.93-1.07 | 1.07 | 1.00-1.14 | 1.07 | 1.01-1.13 |
| Inorganic chemical industry | 203 | 1.04 | 0.89-1.21 | 1301 | 1.04 | 0.96-1.13 | 1521 | 1.07 | 0.99-1.16 | 1754 | 1.08 | 1.00-1.16 | 1.05 | 0.91-1.21 | 1.03 | 0.96-1.11 | 1.06 | 0.99-1.14 | 1.07 | 1.00-1.14 |
| Fertilizers | 160 | 1.22 | 1.00-1.46 | 181 | 1.24 | 1.03-1.47 | 406 | 1.16 | 1.02-1.31 | 550 | 1.17 | 1.04-1.30 | 1.24 | 1.04-1.47 | 1.25 | 1.06-1.47 | 1.16 | 1.04-1.30 | 1.17 | 1.06-1.29 |
| Biocides | 29 | 0.88 | 0.58-1.25 | 149 | 0.92 | 0.75-1.10 | 183 | 0.95 | 0.80-1.13 | 196 | 0.96 | 0.80-1.12 | 0.88 | 0.61-1.27 | 0.95 | 0.80-1.12 | 0.99 | 0.84-1.15 | 0.98 | 0.85-1.15 |
| Pharmaceutical products | 258 | 0.96 | 0.83-1.10 | 708 | 1.06 | 0.96-1.17 | 1004 | 1.06 | 0.96-1.16 | 1220 | 1.10 | 1.00-1.20 | 0.99 | 0.87-1.12 | 1.08 | 1.00-1.18 | 1.08 | 1.00-1.17 | 1.12 | 1.03-1.21 |
| Explosives and pyrotechnics | 90 | 0.82 | 0.65-1.01 | 204 | 0.95 | 0.82-1.10 | 712 | 1.04 | 0.93-1.16 | 930 | 1.04 | 0.94-1.14 | 0.81 | 0.66-1.01 | 0.92 | 0.80-1.06 | 1.04 | 0.94-1.14 | 1.02 | 0.94-1.11 |
| Hazardous waste | 152 | 1.17 | 0.97-1.39 | 339 | 1.09 | 0.95-1.23 | 759 | 1.05 | 0.95-1.15 | 1400 | 1.10 | 1.01-1.20 | 1.15 | 0.97-1.36 | 1.08 | 0.96-1.21 | 1.04 | 0.96-1.14 | 1.08 | 1.00-1.16 |
| Non-hazardous waste | 104 | 0.89 | 0.71-1.09 | 451 | 1.01 | 0.90-1.13 | 577 | 1.06 | 0.95-1.17 | 1069 | 1.05 | 0.96-1.14 | 0.88 | 0.72-1.07 | 1.02 | 0.92-1.13 | 1.06 | 0.97-1.17 | 1.05 | 0.97-1.14 |
| Disposal or recycling of animal waste | 78 | 1.25 | 0.98-1.55 | 241 | 1.04 | 0.90-1.19 | 503 | 1.08 | 0.97-1.20 | 1288 | 1.12 | 1.02-1.22 | 1.22 | 0.97-1.52 | 1.01 | 0.88-1.15 | 1.06 | 0.96-1.16 | 1.09 | 1.01-1.18 |
| Urban waste-water treatment plants | 166 | 1.08 | 0.90-1.27 | 690 | 1.10 | 1.00-1.20 | 1104 | 1.09 | 1.01-1.18 | 4792 | 1.06 | 0.99-1.14 | 1.08 | 0.92-1.26 | 1.11 | 1.02-1.21 | 1.12 | 1.04-1.20 | 1.06 | 0.99-1.12 |
| Paper and wood production | 511 | 0.98 | 0.86-1.10 | 771 | 1.07 | 0.97-1.17 | 1526 | 1.12 | 1.03-1.21 | 1860 | 1.12 | 1.04-1.21 | 0.97 | 0.87-1.08 | 1.05 | 0.97-1.15 | 1.10 | 1.02-1.18 | 1.10 | 1.03-1.18 |
| Pre-treatment or dyeing of textiles | 92 | 0.99 | 0.79-1.23 | 119 | 1.01 | 0.82-1.22 | 128 | 1.04 | 0.85-1.25 | 148 | 0.95 | 0.79-1.13 | 1.02 | 0.83-1.26 | 1.03 | 0.86-1.24 | 1.06 | 0.89-1.27 | 0.99 | 0.84-1.17 |
| Tanning of hides and skins | 21 | 1.04 | 0.62-1.58 | 25 | 1.11 | 0.70-1.63 | 29 | 1.25 | 0.81-1.80 | 30 | 1.25 | 0.81-1.78 | 1.12 | 0.73-1.71 | 1.18 | 0.79-1.75 | 1.32 | 0.91-1.90 | 1.31 | 0.91-1.88 |
| Food and beverage sector | 845 | 1.02 | 0.94-1.11 | 2729 | 1.05 | 0.98-1.11 | 3922 | 1.07 | 1.02-1.13 | 5371 | 1.10 | 1.04-1.16 | 1.02 | 0.94-1.09 | 1.03 | 0.97-1.08 | 1.06 | 1.01-1.11 | 1.08 | 1.03-1.14 |
| Aquiculture | 2 | 0.76 | 0.10-2.15 | 2 | 0.60 | 0.08-1.70 | 2 | 0.61 | 0.08-1.71 | 6 | 1.25 | 0.45-2.45 | 0.73 | 0.18-2.92 | 0.58 | 0.14-2.32 | 0.58 | 0.14-2.33 | 1.19 | 0.53-2.66 |
| Surface treatment using organic solvents | 353 | 0.84 | 0.74-0.94 | 756 | 0.96 | 0.87-1.04 | 1374 | 0.99 | 0.92-1.06 | 2187 | 1.04 | 0.97-1.12 | 0.85 | 0.76-0.95 | 0.95 | 0.87-1.03 | 0.99 | 0.92-1.05 | 1.05 | 0.98-1.11 |
| Production of carbon or electro-graphite | 0 | - | --- | 1 | 3.38 | 0.11-12.75 | 2 | 1.84 | 0.23-5.19 | 158 | 1.29 | 0.99-1.66 | - | --- | 3.10 | 0.44-22.09 | 1.68 | 0.42-6.77 | 1.28 | 1.07-1.53 |
| Ship building | 305 | 0.96 | 0.81-1.13 | 449 | 0.97 | 0.84-1.11 | 476 | 0.97 | 0.84-1.11 | 490 | 0.96 | 0.84-1.10 | 0.98 | 0.87-1.11 | 0.97 | 0.87-1.08 | 0.97 | 0.88-1.08 | 0.97 | 0.88-1.08 |

^aObserved deaths.

^bRRs adjusted for population size, percentage of illiteracy, farmers and unemployed persons, average persons per household, and mean income

^c95% credible interval.

^d95% confidence interval.