

Table S1. Analysis by cancer site in the PolSCa study is based on the International Statistical Classification of Diseases and Related Health Problems 10th revision (ICD-10). Some site codes were combined to provide data comparable with the previous literature. For the reader's convenience, all sites appearing under the specific ICD-10 codes are listed under one collective name - label.

| ICD-10 code | Sites included | Label |
|---------------|---|------------------------|
| C00-C14 + C30 | Lip, oral cavity, pharynx, nasal cavity, and middle ear | Head and neck |
| C15 | Esophagus | Esophagus |
| C16 | Stomach | Stomach |
| C17 | Small intestine | Small intestine |
| C18-C20 | Colon, rectosigmoid junction, rectum | Colorectum |
| C21 | Anus and anal canal | Anus |
| C22-24 | Liver, intrahepatic bile ducts, gallbladder, biliary tract | Liver and gallbladder |
| C25 | Pancreas | Pancreas |
| C32 | Larynx | Larynx |
| C33 | Trachea | Trachea |
| C34 | Bronchus and lung | Lung |
| C37 | Thymus | Thymus |
| C38 | Heart, mediastinum, and pleura | Heart and pleura |
| C40 | Bone and articular cartilage of limbs | Appendicular skeleton |
| C41 | Bone and articular cartilage of other and unspecified sites | Axial skeleton |
| C43 | Malignant melanoma of skin | Melanoma |
| C45-C49 | Mesothelial and soft tissue | Soft tissues |
| C50 | Breast | Breast |
| C51-C52 | Vulva and vagina | Vulva and vagina |
| C53 | Cervix uteri | Cervix uteri |
| C54-C55 | Corpus uteri and uterus unspecified part | Corpus uteri |
| C56 | Ovary | Ovary |
| C60 | Penis | Penis |
| C61 | Prostate | Prostate |
| C62 | Testis | Testis |
| C64 | Kidney, except renal pelvis | Kidney |
| C65-C67 | Renal pelvis, ureter, and bladder | Bladder |
| C69-C72 | Eye, brain, and other parts of central nervous system | Central nervous system |
| C73 | Thyroid gland | Thyroid |
| C74 | Adrenal gland | Adrenal gland |
| C76, C80 | Other and ill-defined sites and unspecified sites | Unspecified site |
| C81-C88 | Lymphoma | Lymphoma |
| C90 | Multiple myeloma and malignant plasma cell neoplasms | Multiple myeloma |
| C91-C96 | Leukemia | Leukemia |

Table S2. Characteristics of the study population.

| ICD-10 | Site | Number of persons under follow-up | | | Person-years under risk of suicide | | | Age at diagnosis, mean (SD) | | | Number of suicides | | |
|---------------|-----------------------|-----------------------------------|---------|---------|------------------------------------|-----------|-----------|-----------------------------|----------------|----------------|--------------------|-----|-------|
| | | Overall | Men | Women | Overall | Men | Women | Overall | Men | Women | Overall | Men | Women |
| | All cancers* | 1 426 661 | 717 144 | 709 517 | 3 627 793 | 1 622 638 | 2 005 155 | 64.1 (12.1) | 65.1 (12.2) | 63.0 (13.8) | 830 | 683 | 147 |
| C00-C14 + C30 | Head and neck | 43 136 | 30 876 | 12 260 | 95 596 | 63 816 | 31 780 | 61.8 (11.9) | 61.1 (11.0) | 63.5 (13.7) | 49 | 47 | 2 |
| C15 | Esophagus | 13 799 | 10 843 | 2 956 | 13 494 | 10 099 | 3 395 | 64.2 (10.6) | 63.4 (10.0) | 66.9 (12.1) | 11 | 10 | 1 |
| C16 | Stomach | 53 144 | 34 001 | 19 143 | 80 512 | 49 036 | 31 476 | 67.0 (12.1) | 66.4 (11.5) | 67.9 (13.1) | 49 | 46 | 3 |
| C17 | Small intestine | 3 212 | 1 657 | 1 555 | 7 962 | 4 093 | 3 869 | 63.4 (12.8) | 62.3 (12.5) | 64.7 (13.1) | 2 | 2 | 0 |
| C18-C20 | Colorectum | 178 267 | 99 329 | 78 938 | 461 416 | 250 212 | 211 205 | 67.6 (11.4) | 67.1 (10.9) | 68.3 (12.0) | 134 | 121 | 13 |
| C21 | Anus | 2 785 | 888 | 1 897 | 7 290 | 2 008 | 5 282 | 64.8 (12.2) | 62.9 (12.5) | 65.7 (12.0) | 2 | 1 | 1 |
| C22-24 | Liver and gallbladder | 28 362 | 12 693 | 15 669 | 32 707 | 14 544 | 18 163 | 67.7 (11.6) | 66.0 (11.3) | 69.1 (11.6) | 8 | 7 | 1 |
| C25 | Pancreas | 33 440 | 16 477 | 16 963 | 29 050 | 13 838 | 15 212 | 66.5 (11.4) | 64.6 (10.8) | 68.4 (11.6) | 10 | 9 | 1 |
| C32 | Larynx | 23 362 | 20 238 | 3 124 | 64 060 | 54 629 | 9 431 | 63.0 (9.3) | 63.1 (9.3) | 62.8 (9.5) | 28 | 24 | 4 |
| C33 | Trachea | 308 | 185 | 123 | 475 | 248 | 227 | 62.9 (11.7) | 63.4 (10.8) | 62.2 (12.9) | 0 | 0 | 0 |
| C34 | Lung | 210 584 | 140 184 | 70 400 | 265 661 | 167 877 | 97 784 | 66.0 (9.5) | 66.2 (9.4) | 65.7 (9.7) | 100 | 89 | 11 |
| C37 | Thymus | 790 | 373 | 417 | 2 341 | 1 100 | 1 241 | 57.0 (14.1) | 55.4 (14.3) | 58.4 (13.7) | 0 | 0 | 0 |
| C38 | Heart and pleura | 1 428 | 846 | 582 | 2 261 | 1 283 | 978 | 63.5 (16.2) | 61.7 (16.5) | 66.1 (15.4) | 2 | 2 | 0 |
| C40 | Bone – limbs | 1 472 | 823 | 649 | 5 044 | 2 682 | 2 362 | 45.4 (20.7) | 43.4 (20.2) | 48.0 (21.1) | 0 | 0 | 0 |
| C41 | Bone – axial skeleton | 1 770 | 924 | 846 | 4 691 | 2 219 | 2 472 | 53.0 (19.7) | 52.8 (19.2) | 53.3 (20.3) | 1 | 1 | 0 |
| C43 | Melanoma | 34 653 | 16 172 | 18 481 | 107 060 | 46 248 | 60 812 | 60.1 (16.4) | 61.1 (15.3) | 59.3 (17.3) | 18 | 17 | 1 |
| C45-C49 | Soft tissues | 13 272 | 7 162 | 6 110 | 30 647 | 15 470 | 15 177 | 60.4 (16.3) | 59.9 (16.3) | 60.9 (16.4) | 6 | 6 | 0 |
| C50 | Breast | 187 919 | 1 371 | 186 548 | 680 682 | 4 053 | 676 629 | 60.6 (13.0) | 65.9 (11.8) | 60.5 (13.0) | 48 | 1 | 47 |
| C51-C52 | Vulva and vagina | 6 433 | - | 6 433 | 15 393 | - | 15 393 | 70.4 (12.4) | - | 70.4 (12.4) | 3 | - | 3 |

| ICD-10 | Site | Number of persons under follow-up | | | Person-years under risk of suicide | | | Age at diagnosis, mean (SD) | | | Number of suicides | | |
|----------|------------------------|-----------------------------------|---------|--------|------------------------------------|---------|---------|-----------------------------|----------------|----------------|--------------------|-----|-------|
| | | Overall | Men | Women | Overall | Men | Women | Overall | Men | Women | Overall | Men | Women |
| C53 | Cervix uteri | 28 903 | - | 28 903 | 90 365 | - | 90 365 | 57.1 (13.7) | - | 57.1 (13.7) | 10 | - | 10 |
| C54-C55 | Corpus uteri | 61 037 | - | 61 037 | 215 944 | - | 215 944 | 64.1 (10.8) | - | 64.1 (10.8) | 12 | - | 12 |
| C56 | Ovary | 37 976 | - | 37 976 | 102 438 | - | 102 438 | 60.1 (13.5) | - | 60.1 (13.5) | 8 | - | 8 |
| C60 | Penis | 2 549 | 2 549 | - | 6 929 | 6 929 | - | 64.8 (12.7) | 64.8 (12.7) | - | 2 | 2 | - |
| C61 | Prostate | 142 079 | 142 079 | - | 432 193 | 432 193 | - | 69.0 (8.4) | 69.0 (8.4) | - | 133 | 133 | - |
| C62 | Testis | 12 193 | 12 193 | - | 51 221 | 51 221 | - | 34.6 (11.7) | 34.6 (11.7) | - | 18 | 18 | - |
| C64 | Kidney | 51 349 | 30 915 | 20 434 | 155 159 | 89 332 | 65 826 | 63.9 (11.6) | 63.0 (11.2) | 65.4 (11.9) | 32 | 27 | 5 |
| C65-C67 | Bladder | 74 785 | 56 193 | 18 592 | 206 075 | 153 743 | 52 332 | 68.5 (10.9) | 68.5 (10.7) | 68.3 (11.5) | 63 | 61 | 2 |
| C69-C72 | Central nervous system | 32 663 | 16 364 | 16 299 | 65 452 | 31 039 | 34 413 | 58.6 (16.1) | 57.1 (15.8) | 60.2 (16.3) | 11 | 9 | 2 |
| C73 | Thyroid gland | 34 448 | 5 800 | 28 648 | 123 578 | 19 403 | 104 176 | 49.9 (15.6) | 51.9 (15.8) | 49.5 (15.5) | 8 | 2 | 6 |
| C74 | Adrenal gland | 1 072 | 479 | 593 | 2 935 | 1 124 | 1 811 | 59.0 (15.2) | 59.0 (15.0) | 58.9 (15.5) | 0 | 0 | 0 |
| C76, C80 | Unspecified site | 16 663 | 8 205 | 8 458 | 16 217 | 7 556 | 8 662 | 68.3 (12.8) | 66.2 (12.2) | 70.5 (13.1) | 10 | 8 | 2 |
| C81-C88 | Lymphoma | 38 841 | 19 466 | 19 375 | 119 243 | 58 128 | 61 115 | 58.3 (18.4) | 57.5 (17.9) | 59.1 (18.8) | 23 | 14 | 9 |
| C90 | Multiple myeloma | 15 477 | 7 294 | 8 183 | 36 408 | 16 606 | 19 802 | 66.9 (11.1) | 65.8 (11.2) | 67.9 (10.9) | 11 | 9 | 2 |
| C91-C96 | Leukemia | 32 611 | 17 957 | 14 654 | 85 566 | 46 764 | 38 802 | 64.3 (15.5) | 63.1 (15.4) | 65.9 (15.4) | 18 | 17 | 1 |

* All primary malignant neoplasms except non-melanoma skin cancers (C00-C43, C45-C76, C80-C96 according to the ICD-10).

Table S3. Mechanism of suicide among patients with cancer by sex – Poland, 2009-2019.

| ICD 10 code and mechanism of suicide | Overall | Men | Women |
|--|----------------|------------|--------------|
| X60. Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics | 0.11% | 0.00% | 0.63% |
| X61. Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified | 0.33% | 0.26% | 0.63% |
| X64. Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances | 0.65% | 0.00% | 3.75% |
| X65. Intentional self-poisoning by and exposure to alcohol | 2.94% | 3.16% | 1.88% |
| X67. Intentional self-poisoning by and exposure to carbon monoxide and other gases and vapours | 0.22% | 0.13% | 0.63% |
| X69. Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances | 0.11% | 0.13% | 0.00% |
| X70. Intentional self-harm by hanging, strangulation and suffocation | 84.55% | 86.69% | 74.38% |
| X71. Intentional self-harm by drowning and submersion | 0.87% | 0.66% | 1.88% |
| X72. Intentional self-harm by handgun discharge | 0.76% | 0.92% | 0.00% |
| X73. Intentional self-harm by rifle, shotgun and larger firearm discharge | 0.44% | 0.40% | 0.63% |
| X74. Intentional self-harm by other and unspecified firearm discharge | 0.44% | 0.53% | 0.00% |
| X75. Intentional self-harm by explosive material | 0.11% | 0.13% | 0.00% |
| X78. Intentional self-harm by sharp object | 2.39% | 2.24% | 3.13% |
| X79. Intentional self-harm by blunt object | 0.11% | 0.00% | 0.63% |
| X80. Intentional self-harm by jumping from a high place | 4.90% | 4.08% | 8.75% |
| X81. Intentional self-harm by jumping or lying before moving object | 0.44% | 0.13% | 1.88% |
| X83. Intentional self-harm by other specified means | 0.22% | 0.13% | 0.63% |
| X84. Intentional self-harm by unspecified means | 0.44% | 0.40% | 0.63% |