**APPENDIX 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Registry, Region, geographic area** | **Resident population x 1,000 (31/12/2012)** | **Coverage with cancer registration (n.)** | **Coverage with cancer registration (%)** | **Number of observed cases** | | | | | **Quality indicators** | | | | | | **Number of analysed (observed and estimated) cases** | | | |
| **Period** | **Incidence** | | **Mortality** | | **DCO^ proportion** | | **MV^ proportion** | | **Mortality to incidence ratio** | | **Incidence** | | **Mortality** | |
| **male** | **female** | **male** | **female** | **male** | **female** | **male** | **female** | **male** | **female** | **male** | **female** | **male** | **female** |
| Aosta |  | 127 |  | 2007-12 | 2,652 | 2,003 | 1239 | 908 | 1 | 1 | 88 | 89 | 47 | 45 | 5,313 | 3,971 | 2487 | 1,829 |
| Biella |  | 358 |  | 2003-10 | 8,874 | 7,332 | 4283 | 3,370 | 1 | 2 | 86 | 85 | 48 | 46 | 18,111 | 14,509 | 8508 | 6,562 |
| Torino |  | 869 |  | 2003-12 | 33,231 | 27,951 | 16125 | 12,830 | 1 | 2 | 89 | 88 | 49 | 46 | 39,630 | 33,799 | 19902 | 15,722 |
| PIEMONTE - VALLE D AOSTA | 4,502 | 1,354 | 30 |  | 44,757 | 37,286 | 21647 | 17,108 | 1 | 2 | 88 | 88 | 48 | 46 | 63,054 | 52,279 | 30,897 | 24,113 |
| Bergamo |  | 1,087 |  | 2007-12 | 21,400 | 17,698 | 10202 | 8,319 | 1 | 1 | 89 | 88 | 48 | 47 | 43,799 | 36,238 | 20,700 | 16,860 |
| Brescia |  | 1,137 |  | 2003-10 | 29,531 | 24,606 | 13544 | 10,519 | 1 | 2 | 75 | 77 | 46 | 43 | 46,300 | 38,313 | 20,865 | 16,363 |
| Como |  | 587 |  | 2003-11 | 16,888 | 14,171 | 8347 | 6,699 | 1 | 1 | 88 | 89 | 49 | 47 | 22,792 | 19,383 | 11,225 | 9,150 |
| Cremona |  | 358 |  | 2005-10 | 8,016 | 6,620 | 4199 | 3,243 | 1 | 1 | 83 | 84 | 52 | 49 | 16,378 | 13,304 | 8,455 | 6,558 |
| Lodi |  | 536 |  | 2003-12 | 20,304 | 17,467 | 4135 | 3,167 | 1 | 1 | 83 | 84 | 20 | 18 | 24,416 | 21,104 | 5,026 | 3,885 |
| Mantova |  | 408 |  | 2003-10 | 11,202 | 9,854 | 5621 | 4,398 | 1 | 2 | 86 | 86 | 50 | 45 | 17,071 | 15,023 | 8,701 | 6,679 |
| Milano |  | 2,771 |  | 2008-12 | 47,504 | 42,999 | 22612 | 19,205 | 1 | 2 | 88 | 89 | 48 | 45 | 115,617 | 104,030 | 54,350 | 46,080 |
| Monza e Brianza |  | 840 |  | 2007-12 | 16,105 | 13,982 | 7462 | 6,184 | 1 | 2 | 87 | 87 | 46 | 44 | 33,177 | 28,432 | 14,866 | 12,379 |
| Pavia |  | 224 |  | 2003-12 | 7,825 | 6,474 | 11100 | 8,566 | 1 | 1 | 82 | 83 | 142 | 132 | 9,319 | 7,841 | 13,344 | 10,427 |
| Sondrio |  | 181 |  | 2003-13 | 7,381 | 5,530 | 3920 | 2,801 | 0 | 1 | 86 | 86 | 53 | 51 | 8,074 | 6,068 | 4,264 | 3,071 |
| Varese |  | 871 |  | 2003-12 | 29,441 | 23,799 | 13846 | 10,946 | 1 | 1 | 88 | 88 | 47 | 46 | 35,537 | 29,037 | 16,894 | 13,317 |
| LOMBARDIA | 9,795 | 8,999 | 92 | 2003-13 | 215,597 | 183,200 | 104988 | 84,047 | 1 | 2 | 85 | 86 | 49 | 46 | 372,480 | 318,773 | 178,690 | 144,769 |
| Genova |  | 854 |  | 2003-10 | 29,018 | 25,118 | 14760 | 11,966 | 1 | 2 | 84 | 85 | 51 | 48 | 42,915 | 37,834 | 22,094 | 17,825 |
| LIGURIA | 1,565 | 854 | 55 |  | 29,018 | 25,118 | 14760 | 11,966 | 1 | 2 | 84 | 85 | 51 | 48 | 42,915 | 37,834 | 22,094 | 17,825 |
| **NORTH-WEST** | **15,862** | **11,207** | 71 |  | **289,372** | **245,604** | **141395** | **113,121** | **1** | **2** | **86** | **86** | **49** | **46** | **478,449** | **408,886** | **231,681** | **186,707** |
| Alto Adige |  | 505 |  | 2003-10 | 11,771 | 9,294 | 5061 | 4,107 | 1 | 1 | 91 | 90 | 43 | 44 | 17,818 | 14,337 | 7,770 | 6,412 |
| P.A. ALTO ADIGE | 505 | 505 | 100 |  | 11,771 | 9,294 | 5061 | 4,107 | 1 | 1 | 91 | 90 | 43 | 44 | 17,818 | 14,337 | 7,770 | 6,412 |
| Trento |  | 530 |  | 2003-10 | 11,460 | 10,024 | 6386 | 5,058 | 0 | 1 | 89 | 88 | 56 | 50 | 17,293 | 15,552 | 9,802 | 7,724 |
| P.A. TRENTO | 530 | 530 | 100 |  | 11,460 | 10,024 | 6386 | 5,058 | 0 | 1 | 89 | 88 | 56 | 50 | 17,293 | 15,552 | 9,802 | 7,724 |
| Veneto |  | 2,567 |  | 2003-10 | 66,198 | 55,413 | 30706 | 24,194 | 1 | 1 | 87 | 87 | 46 | 44 | 105,591 | 89,568 | 49,074 | 39,111 |
| VENETO | 4,882 | 2,567 | 53 |  | 66,198 | 55,413 | 30706 | 24,194 | 1 | 1 | 87 | 87 | 46 | 44 | 105,591 | 89,568 | 49,074 | 39,111 |
| Friuli Venezia Giulia |  | 1,222 |  | 2003-10 | 38,461 | 31,959 | 18457 | 15,306 | 0 | 1 | 89 | 88 | 48 | 48 | 56,642 | 48,610 | 28,273 | 23,464 |
| FRIULI VENEZIA GIULIA | 1,222 | 1,222 | 100 |  | 38,461 | 31,959 | 18457 | 15,306 | 0 | 1 | 89 | 88 | 48 | 48 | 56,642 | 48,610 | 28,273 | 23,464 |
| Ferrara |  | 353 |  | 2003-11 | 14,533 | 12,194 | 7067 | 5,352 | 1 | 1 | 86 | 86 | 49 | 44 | 19,082 | 16,494 | 9,432 | 7,164 |
| Modena |  | 686 |  | 2003-13 | 26,423 | 22,816 | 11860 | 9,469 | 0 | 0 | 89 | 90 | 45 | 42 | 28,748 | 25,017 | 12,918 | 10,390 |
| Parma |  | 427 |  | 2003-14 | 19,270 | 17,998 | 9151 | 7,919 | 0 | 0 | 88 | 88 | 47 | 44 | 19,270 | 17,998 | 9,151 | 7,919 |
| Piacenza |  | 284 |  | 2006-14 | 9,752 | 8,516 | 5105 | 4,120 | 1 | 1 | 83 | 83 | 52 | 48 | 12,932 | 11,249 | 6,913 | 5,701 |
| Reggio Emilia |  | 518 |  | 2003-14 | 20,174 | 17,704 | 9134 | 7,304 | 0 | 0 | 88 | 89 | 45 | 41 | 20,174 | 17,704 | 9,134 | 7,304 |
| Romagna |  | 1,227 |  | 2003-14 | 55,906 | 47,132 | 24619 | 19,220 | 1 | 1 | 86 | 87 | 44 | 41 | 55,906 | 47,132 | 24,619 | 19,220 |
| EMILIA ROMAGNA | 4,377 | 3,495 | 80 | 2003-14 | 146,058 | 126,360 | 66936 | 53,384 | 1 | 1 | 87 | 88 | 46 | 42 | 156,112 | 135,594 | 72,167 | 57,698 |
| **NORTH EAST** | **11,516** | **8,308** | 72 |  | **273,948** | **233,050** | **127546** | **102,049** | **1** | **1** | **88** | **88** | **47** | **44** | **353,456** | **303,661** | **167,086** | **134,409** |
| MARCHE | 1,545 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Firenze Prato |  | 1,218 |  | 2003-10 | 33,913 | 29,492 | 16826 | 13,219 | 0 | 1 | 84 | 85 | 50 | 45 | 51,215 | 45,258 | 25,488 | 20,154 |
| TOSCANA | 3,693 | 1,218 | 33 |  | 33,913 | 29,492 | 16826 | 13,219 | 0 | 1 | 84 | 85 | 50 | 45 | 51,215 | 45,258 | 25,488 | 20,154 |
| Umbria |  | 886 |  | 2003-13 | 34,630 | 28,371 | 16998 | 12,728 | 0 | 0 | 90 | 89 | 49 | 45 | 37,833 | 31,124 | 18,596 | 13,987 |
| UMBRIA | 886 | 886 | 100 |  | 34,630 | 28,371 | 16998 | 12,728 | 0 | 0 | 90 | 89 | 49 | 45 | 37,833 | 31,124 | 18,596 | 13,987 |
| Viterbo |  | 313 |  | 2006-2010 | 5,559 | 4,471 | 2867 | 2,008 | 2 | 2 | 82 | 84 | 52 | 45 | 13,724 | 10,768 | 6991 | 4,751 |
| Latina |  | 545 |  | 2003-2012 | 14,403 | 12,039 | 7669 | 5,192 | 1 | 1 | 79 | 84 | 53 | 43 | 17,781 | 14,932 | 9411 | 6,397 |
| LAZIO | 5557 | 858 | 15 | 2003-2012 | 19,962 | 16,510 | 10536 | 7,200 | 1 | 1 | 80 | 84 | 53 | 44 | 31,505 | 25,700 | 16402 | 11,148 |
| **CENTRE** | **11681** | **2958** | 25 |  | **88,505** | **74,373** | **44360** | **33,147** | **1** | **1** | **86** | **86** | **50** | **45** | **120,553** | **102,082** | **60486** | **45,289** |
| Caserta |  | 905 |  | 2008-2010 | 6,604 | 5,205 | 3677 | 2,497 | 1 | 2 | 85 | 87 | 56 | 48 | 27,551 | 21,227 | 14984 | 10,120 |
| Napoli 2 |  | 1020 |  | 2010-2012 | 7,613 | 6,126 | 4076 | 2,665 | 2 | 2 | 80 | 83 | 54 | 44 | 30,028 | 24,137 | 16003 | 10,491 |
| Napoli 3 |  | 1062 |  | 2003-2014 | 26,016 | 20,734 | 13272 | 8,834 | 1 | 1 | 85 | 87 | 51 | 43 | 34,239 | 27,923 | 17342 | 11,554 |
| Salerno |  | 1093 |  | 2003-2010 | 21,198 | 16,312 | 11661 | 7,827 | 2 | 2 | 80 | 81 | 55 | 48 | 32,954 | 25,229 | 18307 | 12,218 |
| CAMPANIA | 5770 | 4080 | 71 |  | 61,431 | 48,377 | 32686 | 21,823 | 2 | 2 | 83 | 85 | 53 | 45 | 124,772 | 98,516 | 66636 | 44,383 |
| ABRUZZO | 1313 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MOLISE | 313 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Barletta |  | 392 |  | 2006-2012 | 6,670 | 5,488 | 3076 | 2,300 | 1 | 2 | 81 | 86 | 46 | 42 | 11,501 | 9,427 | 5317 | 3,970 |
| Brindisi |  | 401 |  | 2006-2008 | 3,204 | 2,728 | 1624 | 1,105 | 2 | 2 | 83 | 86 | 51 | 41 | 13,265 | 11,248 | 6774 | 4,549 |
| Foggia | 630 | 630 | 100 | 2006-08 | 5382 | 4052 | 2640 | 1808 | 2% | 2% | 81% | 84% | 49% | 45% | 22231 | 16738 | 10887 | 7456 |
| Lecce |  | 801 |  | 2003-2008 | 13,704 | 10,659 | 7518 | 4,954 | 2 | 2 | 81 | 84 | 55 | 46 | 29,358 | 23,472 | 16273 | 10,589 |
| Taranto |  | 584 |  | 2006-2012 | 11,411 | 9,491 | 5785 | 4,099 | 2 | 2 | 86 | 88 | 51 | 43 | 19,475 | 16,087 | 9789 | 6,937 |
| PUGLIA | 4051 | 2,808 | 69 |  | 40,371 | 32,418 | 20,643 | 14,266 | 2 | 2 | 83 | 86 | 51 | 44 | 95,830 | 76,972 | 49,040 | 33,501 |
| Basilicata |  | 576 |  | 2006-2010 | 8,602 | 6,137 | 4199 | 2,726 | 1 | 2 | 78 | 79 | 49 | 44 | 20,831 | 15,030 | 10196 | 6,600 |
| BASILICATA | 576 | 576 | 100 |  | 8,602 | 6,137 | 4199 | 2,726 | 1 | 2 | 78 | 79 | 49 | 44 | 20,831 | 15,030 | 10196 | 6,600 |
| Catanzaro |  | 360 |  | 2003-2010 | 6,332 | 4,877 | 3059 | 2,084 | 1 | 1 | 83 | 86 | 48 | 43 | 10,969 | 8,308 | 5351 | 3,604 |
| Cosenza-Crotone |  | 885 |  | 2006-2008 | 6,004 | 4,773 | 3250 | 2,156 | 2 | 3 | 75 | 79 | 54 | 45 | 24,545 | 19,295 | 13527 | 8,887 |
| Reggio Calabria | 550 | 550 | 100 | 2010-13 | 5842 | 4748 | 3182 | 2164 | 2% | 2% | 83% | 86% | 54% | 46% | 17402 | 14144 | 9472 | 6442 |
| CALABRIA | 1958 | 1,794 | 92 |  | 18,178 | 14,398 | 9,494 | 6,404 | 2 | 2 | 79 | 82 | 51 | 44 | 52,916 | 41,747 | 28,350 | 18,933 |
| Catania Messina Enna |  | 1900 |  | 2003-2013 | 53,746 | 46,882 | 26958 | 20,532 | 1 | 2 | 86 | 88 | 50 | 44 | 58,939 | 51,541 | 29718 | 22,599 |
| Palermo |  | 1243 |  | 2003-2013 | 34,731 | 29,202 | 18095 | 13,505 | 3 | 3 | 80 | 83 | 52 | 46 | 38,287 | 32,241 | 19965 | 14,877 |
| Ragusa |  | 581 |  | 2003-2012 | 11,685 | 9,763 | 6279 | 4,472 | 2 | 2 | 79 | 83 | 54 | 46 | 17,346 | 14,552 | 9409 | 6,548 |
| Siracusa |  | 400 |  | 2003-2012 | 10,216 | 8,129 | 5540 | 3,893 | 2 | 3 | 81 | 84 | 54 | 48 | 12,572 | 9,901 | 6764 | 4,710 |
| Trapani |  | 430 |  | 2003-2010 | 8,574 | 6,758 | 4721 | 3,394 | 1 | 1 | 81 | 84 | 55 | 50 | 13,040 | 10,356 | 7249 | 5,216 |
| SICILIA | 5000 | 4552 | 91 |  | 118,952 | 100,734 | 61593 | 45,796 | 2 | 2 | 83 | 85 | 52 | 45 | 140,184 | 118,591 | 73105 | 53,950 |
| Nuoro |  | 216 |  | 2003-2012 | 6,201 | 4,947 | 3459 | 2,329 | 1 | 2 | 80 | 85 | 56 | 47 | 7,611 | 6,068 | 4221 | 2,851 |
| Sassari |  | 478 |  | 2003-2011 | 12,083 | 10,047 | 6124 | 4,362 | 3 | 3 | 84 | 86 | 51 | 43 | 16,515 | 14,136 | 8559 | 5,986 |
| SARDEGNA | 1640 | 695 |  |  | 18,284 | 14,994 | 9583 | 6,691 | 2 | 2 | 83 | 86 | 52 | 45 | 24,126 | 20,204 | 12780 | 8,837 |
| **SUTH ISLANDS** | **20621** | **14.507** | **70** |  | **265,818** | **217,058** | **138,192** | **97,706** | **2** | **2** | **82** | **85** | **52** | **45** | **458,659** | **371,060** | **240,104** | **166,204** |
| **POOL** | **59680** | **36,980** | **62** |  | **917,643** | **770,085** | **451,493** | **346,023** | **1** | **1** | **85** | **86** | **49** | **45** | **1,411,117** | **1,185,689** | **699,357** | **532,609** |

**Appendix 1. Table 1. Characteristics of the areas included in the study by Cancer Registry region and geographic macro-area: resident population (31/12/2012), coverage with cancer registration (absolute number and proportion), period with available data during 2003-2014, observed cancer cases and deaths by sex, quality indicators (DCO and MV proportion, mortality to incidence ratio) by sex, total number of cases (observed and estimated) included in time trend analysis.**

**DCO = death certificate Only, MV = microscopic verification.**

|  |  |  |
| --- | --- | --- |
| **Cancer site** | **ICD-10 codes** | **ICD9 codes** |
| Upper aerodigestive tract | C01-6,9-14, C32 | 141, 143-149, 161 |
| Oesophagus | C15 | 150 |
| Stomach | C16 | 151 |
| Colon rectum | C18-21 | 153-154 |
| Liver | C22 | 155 |
| Biliary tract | C23-24 | 156 |
| Pancreas | C25 | 157 |
| Lung | C33-34 | 162 |
| Bone | C40-41 | 170 |
| Melanoma of skin | C43 | 172 |
| Mesothelioma | C45 | - |
| Kaposi s sarcoma | C46 | - |
| Connective and soft tissue | C47,49 | 171 |
| Breast | C50 | 174-175 |
| Cervix uteri | C53 | 180 |
| Corpus uteri | C54 | 182 |
| Uterus (total) | C53-55 | 179-180,182 |
| Ovary | C56 | 183 |
| Prostate | C61 | 185 |
| Testis | C62 | 186 |
| Kidney and urinary organs | C64-C66,68 | 189 |
| Urinary bladder | C67, | 188 |
| Brain and nervous system | C70-72 | 191-192 |
| Thyroid | C73 | 193 |
| Hodgkin disease | C81 | 201 |
| Non Hodgkin lymphomas | C82-85,96 | 200 |
| Multiple myeloma | C88-90 | 203 |
| Leukaemia | C92-95 | 204-208 |
| All sites except skin | C00-43, C45-96 | 140-172, 174-208 |

**Appendix 1. Table 2. List of the analysed cancer sites, corresponding code of the 10th revision of the International Classification of Diseases (ICD-10), used for selecting cancer incident cases and corresponding code of the 9th revision of the International Classification of Diseases (ICD-9), used for selecting cancer deaths.**