**Supplementary Table 1.** Specificity with 95% confidence interval (CI) of dementia diagnoses in the National Patient and Cause of Death Registers

|  |  |  |  |
| --- | --- | --- | --- |
|  | **National Patient Register1** |  | **Cause of Death Register2** |
|  | **FN (n)** | **Specificity****(95% CI)** |  | **FN (n)** | **Specificity**3**(95% CI)** |
| **Prevalent cases** | **16104** | **99.8 (99.7−99.8)** |  | **394** | **99.0 (97.4−99.7)** |
| Men | 6687 | 99.8 (99.7**−**99.9) |  | 198 | 99.5 (97.2**−**100) |
| Women | 9417 | 99.7 (99.6**−** 99.8) |  | 196 | 98.5 (95.7**−** 99.7) |
| ≤69 y  | 5704 | 99.8 (99.7**−**99.9) |  | 48 | 98 (89.1**−** 99.9) |
| 70−79 y | 7037 | 99.8 (99.6**−**99.9) |  | 138 | 100 (97.4**−**100) |
| 80−89 y | 2847 | 99.6 (99.3**−**99.8) |  | 136 | 97.8 (93.8**−** 99.6) |
| ≥90 y | 516 | 99.6 (98.6**−**100) |  | 72 | 100 (95.0**−**100) |
| AD  | 16403 | 99.7 (99.6**−**99.7) |  | 460 | 95.2 (92.9**−**97) |
| VaD | 16923 | 99.9 (99.8**−**99.9) |  | 584 | 99.8 (99.1**−**100) |
| OD | 16862 | 99.7 (99.6**−**99.7) |  | 564 | 97.6 (96.0**−** 98.7) |

Age refers to the age at dementia diagnosis or last screening in the population based studies.

1Follow-up from 1964 to screening; 2Follow-up for 1 year from screening; 3The denominator was the total number of dementia non-cases in the population based studies who were deceased

**Supplementary Table 2.** Sensitivity, specificity and positive predictive values (PPV) of dementia detection in the National Patient and Cause of Death Registers by study populations

|  |  |  |  |
| --- | --- | --- | --- |
|  | **National Patient Register** |  | **Cause of Death Register** |
|  | **Sensitivity1****(95% CI)** | **Specificity****(95% CI)** | **PPV3****(95% CI)** |  | **Sensitivity2****(95% CI)** | **Specificity****(95% CI)** | **PPV4****(95% CI)** |
| **Prevalent cases**  |  |  |  |  |  |  |  |
|  KP | 56.4 (49.4−63.2) | 99.5 (98.9−99.8) | 85.2 (72.9−93.4) |  | 30.3 (24.2−37.0) | 98.8(93.4−100) | 90.0 (55.5−99.7) |
|  HARMONY | 40.5 (36.1−45.0) | 99.8(99.6− 99.8) | 80.1 (72.7−86.3) |  | 48.6 (44.0−53.1) | 98.8(96.5−99.7) | 93.3 (81.7−98.6) |
|  SNAC-K | 53.3 (46.8−59.8) | 99.9(99.7−100) | 78.6 (49.2−95.3) |  | 47.4 (40.7−54.1) | 100(94.8−100) | 100 (88.4−100) |

1Follow-up from 1964 to 2012 for HARMONY and SNAC-K, and 2000 for KP

2Follow-up from screening to 2015 for HARMONY, 2011 for SNAC-K, 2008 for KP. The denominator was the total number of dementia cases diagnosed in the population based studies that were deceased

3Follow-up from 1964 to screening

4Follow-up for one year from screening. The denominator was the total number of dementia non-cases in the population based studies

PPV, positive predictive value; KP, Kungsholmen Project; HARMONY, Study of Dementia in Swedish Twins; SNAC-K, Swedish National study on Aging and Care in Kungsholmen