Table 7. Study Characteristics and Outcomes for Cognitive Impairment Screening (MCI/Dementia vs. Normal), Very Brief Instruments

| **Study,**  **Quality** | **Instrument (non-English Language)** | **Est. Time (Min)** | **N Screened,**  **N Analyzed** | **Selection Criteria** | **Age (y),**  **% Female,**  **Education (y)** | **% MCI** | **Diagnostic Criteria / Verification** | **Cut Point** | **Sens (95% CI or SE)** | **Spec (95% CI or SE)** | **PPV (95% CI)** | **NPV (95% CI)** | **AUC (95% CI or SE)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Borson, 200657  Fair | Mini-cog (primary language spoken) | 3-4 | 371  371 | Community | NR  NR  NR | 40.2  12.1 | CDR ≤0.5  All | 2/3 | 84\* (78.6, 88.5\*) | 87.9\* (81.3, 92.8\*) | 91.9\* (87.4, 95.2\*) | 76.9\* (69.6, 83.2\*) | NR |
| Holsinger, 201258 | Mini-cog | 3-4 | 639  630 | ≥65 y  PC | 74.8  7.1  NR | 3.3  39.2 | Mayo criteria  All | 2/3 | 39 (34, 45) | 78 (73, 82) | 56.8\*\* (49.3, 64.0\*\*) | 63.4\*\* (58.7, 67.9\*\*) | NR |
| Holsinger, 201258 | Memory Function 2 (MF-2) | 1.5 | 639  630 | ≥65 y  PC | 74.8  7.1  NR | 3.3  39.2 | Mayo criteria  All | Both yes | 24 (19, 29) | 93 (90, 95) | 71.9\*\* (61.4, 80.9\*\*) | 62.3\*\* (58.1, 66.4\*\*) | NR |
| Li, 200697  Fair | Informant Report of Memory Problems (IRMP) (Chinese or English) | 1-2 | 144  NR | 65-90 y  Community; neuroscience clinic | 72.7  50.7  4.7 | 13.2  25.7 | Mayo criteria and CDR=0.5  All | NR | NR | NR | NR | NR | 0.832 (0.037) |
| Callahan, 200267  Fair | 6-item screener | 1-2 | 2212  344 | ≥65 y  Black  Community | 74.4  59.4  12.1 | 4.3  26.4 | Mayo criteria  Subset | ≥2 | 74.2 (64.5, 83.3\*\*) | 80.2 (74.8, 85.0\*\*) | 57.4 (48.2, 66.7\*\*) | 89.6 (85.1, 93.4\*\*) | 0.86 (NR) |
| Galvin, 2005103  Fair | AD8 | <3 | 236  236 | PC referral; Community | 78.1  53  NR | 24  29 | CDR=0.5  All | ≥2 | 85 (77, 91\*\*) | 86 (78, 92\*\*) | 86.8\*\*£ (79.4, 92.3\*\*) | 84 (75.4, 89.8\*\*) | 90 (NR) |
| Holsinger, 201258 | Memory Impairment Screen (MIS) | 4 | 639  630 | ≥65 y  PC | 74.8  7.1  NR | 3.3  39.2 | Mayo criteria  All | 2/3 | 17 (13, 22) | 98 (96, 99) | 86.8\*\* (74.7, 94.5\*\*) | 61.5\*\* (57.4, 65.5\*\*) | NR |
| Li, 200697  Fair | Brief IADL (4IADL) (Chinese or English) | <5‡ | 144  NR | 65-90 y  Community; neuroscience clinic | 72.7  50.7  4.7 | 13.2  25.7 | Mayo criteria and CDR=0.5  All | NR | NR | NR | NR | NR | 0.847 (0.033) |
| Cruz-Orduna, 201171  Fair | Functional Activities Questionnaire (FAQ) (Spanish) | 5 | 160  160 | Cognition-related complaint  PC | 72.4  70  88.8% ≤primary school | 9.4  46.9 | Below 10th percentile on at least one test  All | 1/2 | 73.33 (62.97, 82.11\*\*) | 72.86 (60.90, 82.80\*\*) | 77.65 (67.3, 86\*\*) | 68.00 (56.2, 78.3\*\*) | 0.77 (0.69, 0.84) |

\* Calculated from 2x2 table.

‡ Assumed.

║ Reported administration times varied, but the IQCODE can be self-administered in less than 20 minutes, so was included.

†† Confidence intervals could not be calculated.

\*\* Calculated using the sensitivity, specificity, and prevalence of cognitive impairment.

£ PPV reported in the text does not match what was calculated using the sensitivity, specificity, and prevalence of MCI. The number presented has been calculated.

Abbreviations: AD-8 = Alzheimer’s Disease 8-item Questionnaire; AUC = area under the curve; CDR = clinical dementia rating; CI = confidence interval; Est = estimate ; FAQ = Functional Activities Questionnaire; IADL = instrumental activities of daily living; IRMP = Informant Report of Memory Problems; MCI = mild cognitive impairment; MF-2 = Memory Function 2; MIS = memory impairment screen; N = number; NPV = negative predictive value; NR = not reported; PC = primary care; PPV = positive predictive value; SE = standard error; SD = Standard Deviation; y = year.