Objective To undertake a meta-analysis of suitable diagnostic accuracy studies of the Addenbrooke’s Cognitive Examination (ACE) and its revised version (ACE-R) for the diagnosis of dementia.

Results Of 61 possible publications identified, meta-analysis of qualifying studies encompassed 5 for ACE (1090 participants) and 5 for ACE-R (1156 participants); of these, 9 made direct comparisons with the Mini-Mental State Examination (MMSE). Sensitivity and specificity of the ACE were 96.9% (95% CI=92.7% to 99.4%) and 77.4% (95% CI=58.3% to 91.8%); and for the ACE-R were 95.7% (95% CI=92.2% to 98.2%) and 87.5% (95% CI=63.8% to 99.4%). In high prevalence settings such as memory clinics where the prevalence of dementia may be 50% or higher, overall accuracy again favoured ACE-R (0.916) over ACE (0.872) and MMSE (0.895).

Conclusions The ACE-R has somewhat superior diagnostic accuracy to the MMSE whilst the ACE appears to have inferior accuracy. The ACE-R is recommended in high prevalence settings.