Preliminary Metaanalysis

We conducted a careful Medline search (up to May 2017) and consecutive reference survey of retrieved studies to identify all studies that investigated the diagnostic performance of ^{18}F-FDG PET for differential diagnosis of parkinsonism in individual patients in a double-masked manner (i.e., imaging analysis unaware of clinical diagnosis and vice versa), included at least 3 diagnostic patient groups (typically PD, MSA, and PSP, to reflect clinical reality), and provided sufficient data on individual patients to calculate study-specific and pooled diagnostic measures. Clinical diagnosis after follow-up served as the reference standard in these studies. Summary receiver-operating-characteristic curves and estimates of diagnostic performance were calculated by metaregression with the R packages "mada" (version 0.5.7.; https://CRAN.R-project.org/package=mada (*1*)) and "meta" (http://meta-analysis-with-r.org/ (*2*); https://www.R-project.org/ (*3*)), in which the PET analysis method was used as the covariate (i.e., observer-dependent visual reads supported by voxel-based statistical analyses *or* observer-independent automated classifications). This also in part accounts for overlapping patient populations between the 2005 (*4*) and 2010 (*5*) studies of the Eidelberg group and between the 2013 (*6*) and 2016 (*7*) Tripathi papers, where an observer-dependent visual analysis supported by SPM was used in the earlier studies and an observer-independent automated classification based on metabolic covariance patterns was used in the later studies.

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