



Large Comprehensive Incidence and Risk Factors Meta-analysis of Dysphagia in over 132,000 Anterior, Posterior, and Hybrid Surgeries for Cervical Spondylosis Myelopathy

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Introduction:
- Surgical management of Cervical Spondylotic Myelopathy (CSM) is associated with complications with devastating impacts.

- Dysphagia is one of these major complications with the incidence rate being not completely known in different surgical approaches.

Aims:
To assess the incidence rate of dysphagia and its risk factors in anterior (A; i.e., anterior cervical discectomy/corpectomy and fusion [ACDF/ACCF]), posterior (P; i.e., laminectomy with or without fusion [PCF] or laminoplasty), and hybrid anterior-posterior (H; i.e., ACDF/ACCF + PCF)

Methods:
PubMed/MEDLINE, SCOPUS, and Cochrane were systematically searched until January 2023.

Rates and risk of complications were assessed.

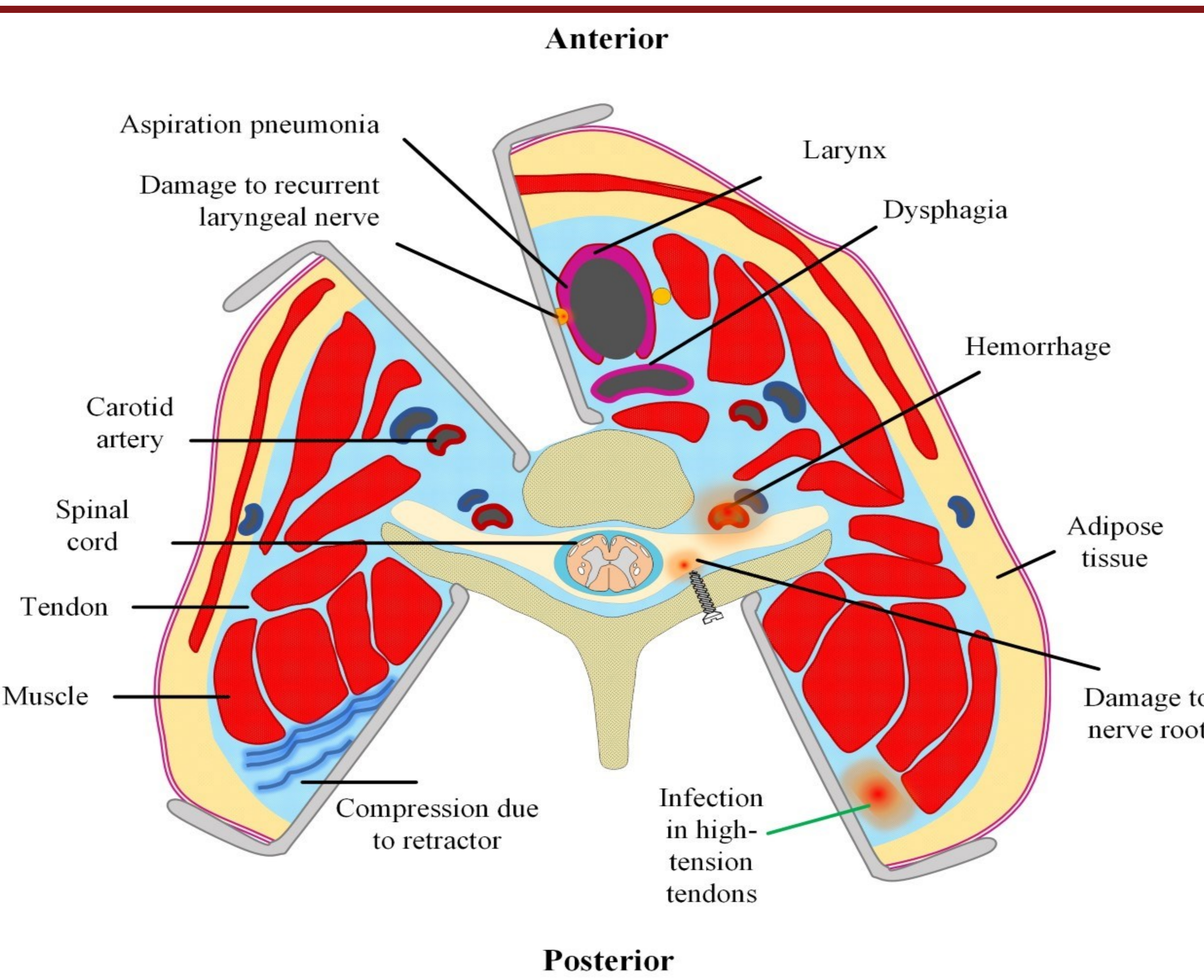
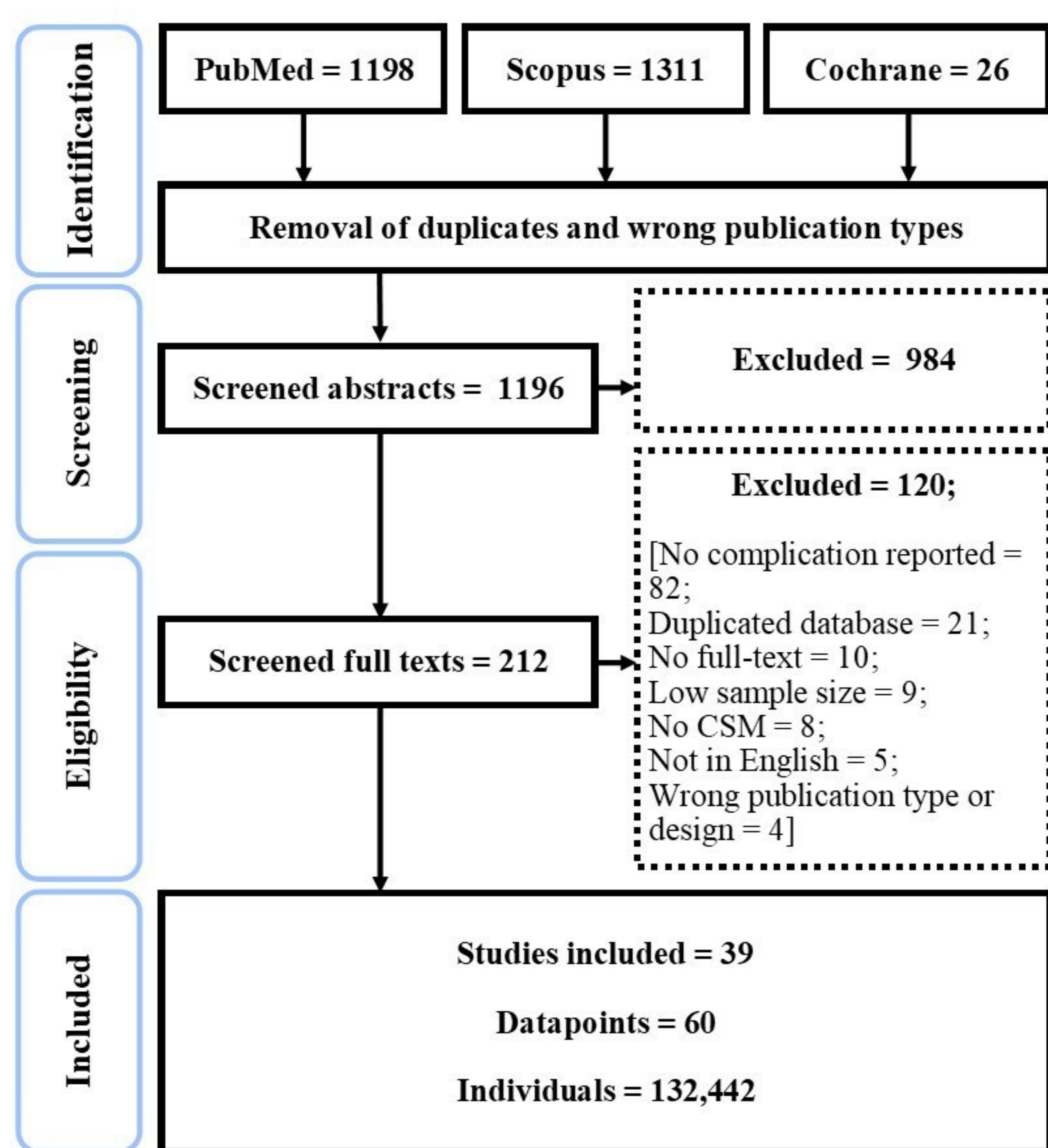
Meta-analysis of rates and risks was performed with generalized linear mixed model (GLMM) and inverse variance method, respectively, and compared between techniques.

Results:
1196 citations were screened and 39 studies with 60 instances of dysphagia incidence/risk factors reports from over 132,442 patients were identified (F1).

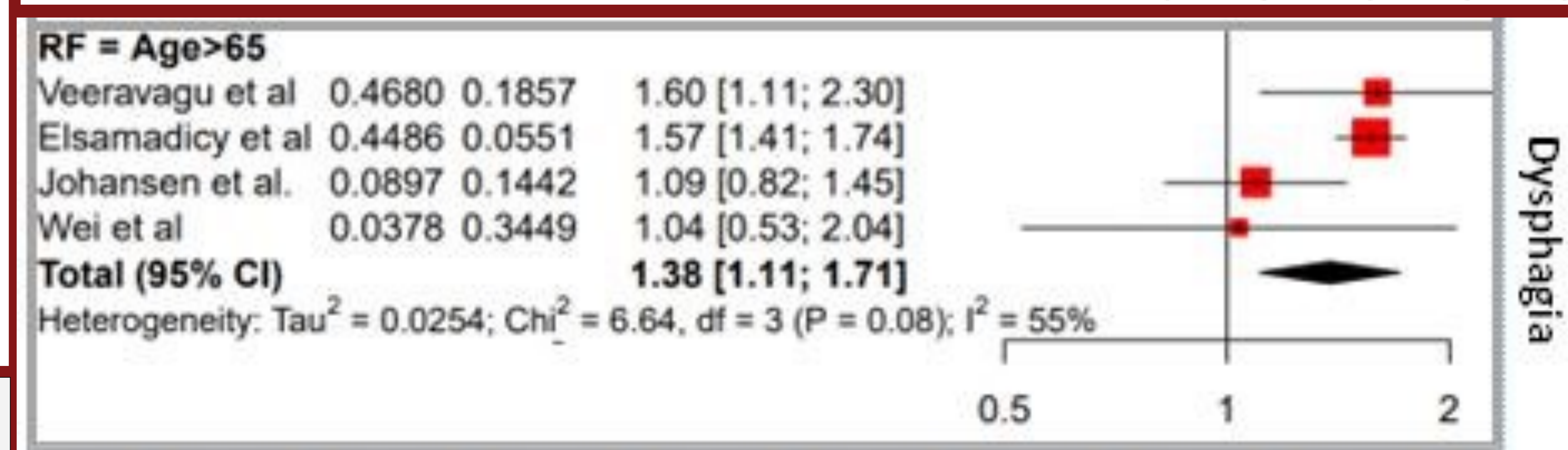
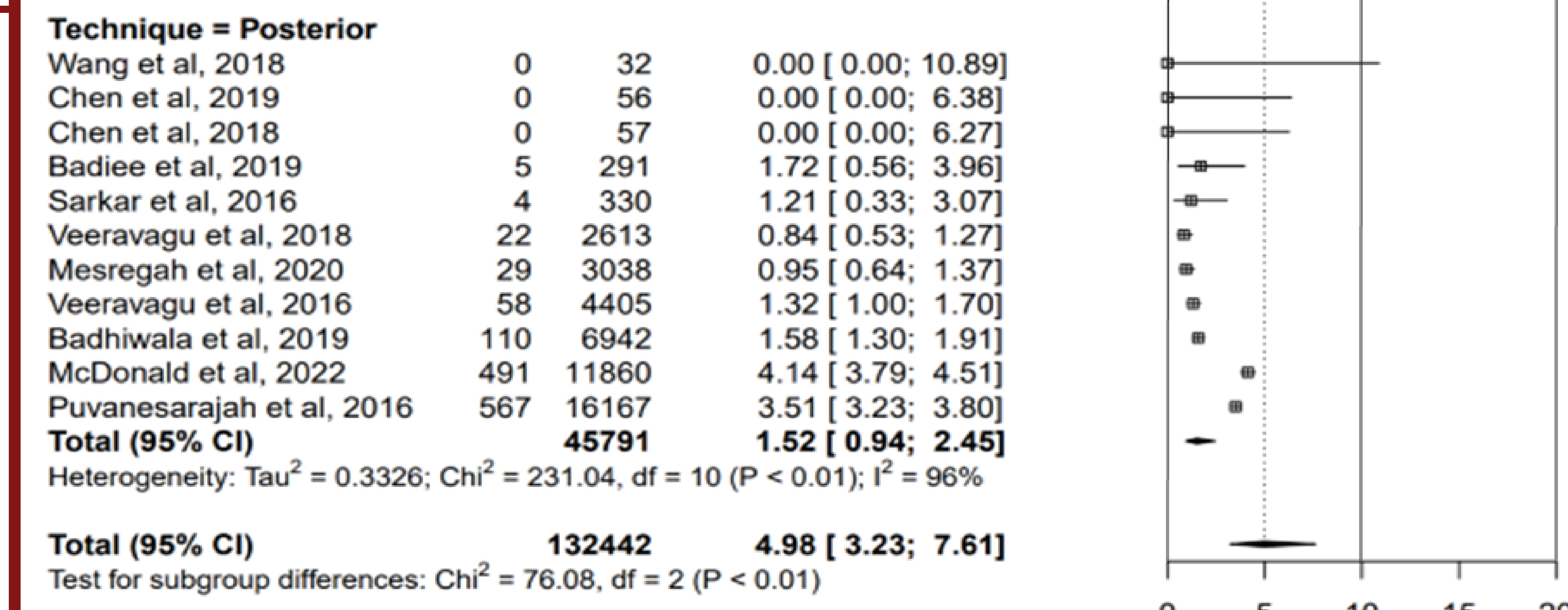
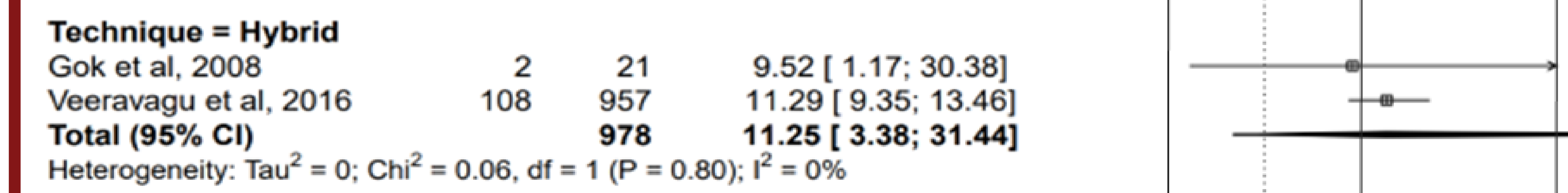
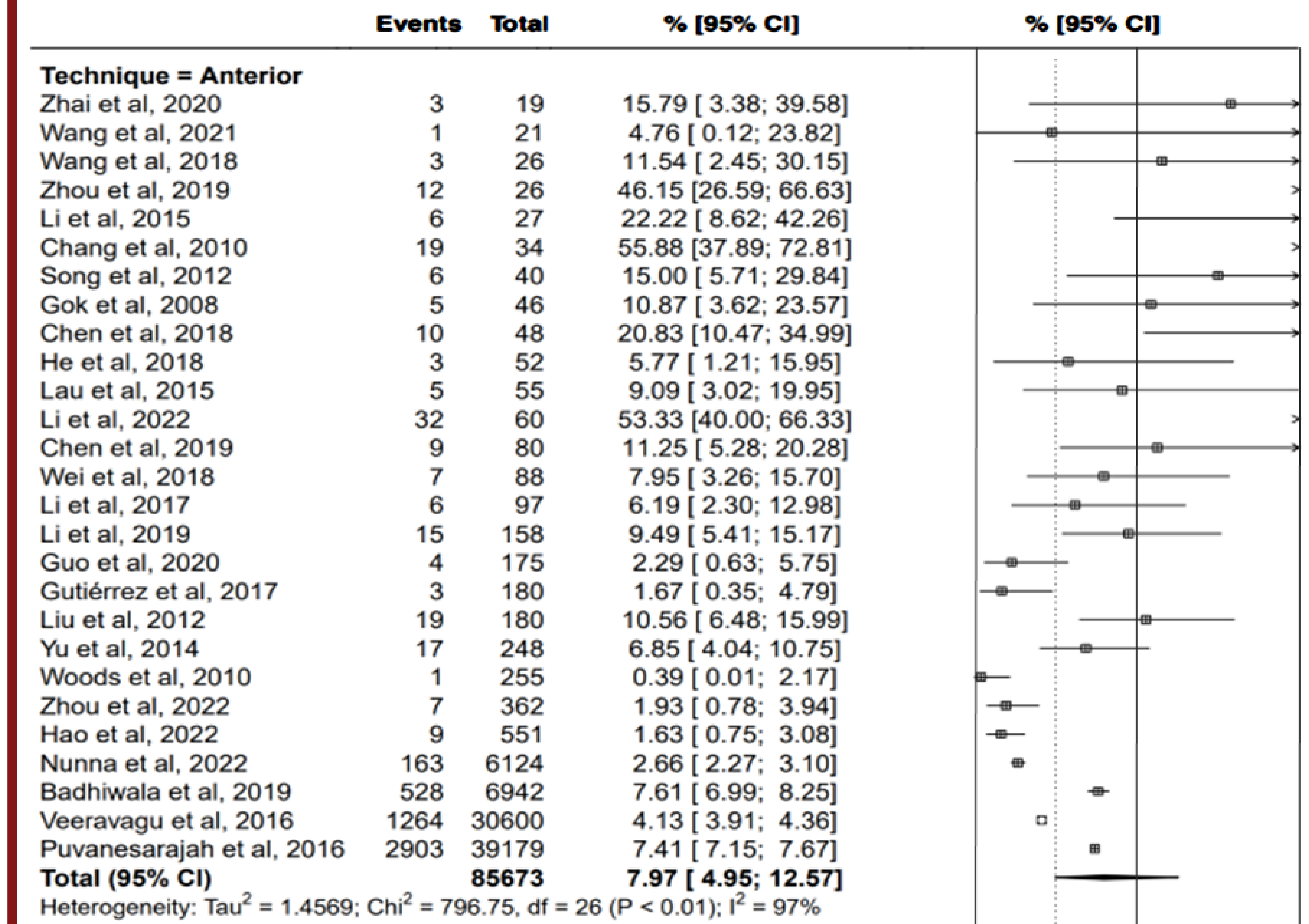
Dysphagia's overall incidence rate was 4.98% [95% confidence interval 3.23-7.61] and was significantly different between surgery groups (Chi2 P<0.01) (F2).

It was found in 7.97% [4.95-12.57] of anterior surgeries, 1.52% [0.94-2.45] of posterior ones, and 11.25% [3.38-31.44] of hybrid techniques (statistical comparison: P<A<H).

Advanced age (>65) risked dysphagia significantly (OR 1.38 [95%CI 1.11-1.71]) (F3).



Conclusion:
Chances of posterior surgery being complicated with dysphagia is not negligible and should be discussed with patient before surgery, especially with older adults.



References:
Elsamadicy AA, Koo AB, David WB, et al. Ramifications of Postoperative Dysphagia on Health Care Resource Utilization Following Elective Anterior Cervical Discectomy and Interbody Fusion for Cervical Spondylotic