

# Gleason Grade 4 at a PSM is a feature of biologically aggressive prostate cancer that is associated with a significant increase risk of BCR. Gleason Grade should be recorded in each pathological report. Patients with GG4 at PSM should be considered for multimodal therapy such as radiotherapy.

## The Problem

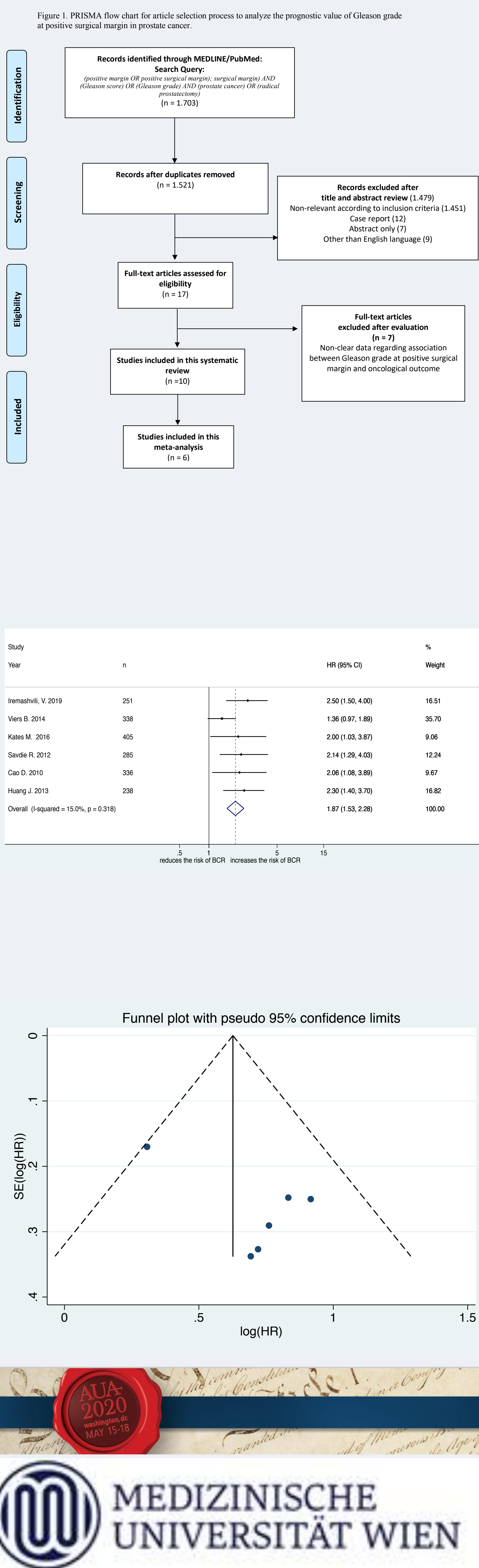
The individual clinical significance of a positive surgical margin (PSM) after radical prostatectomy (RP) remains controversial. Studies have suggested that Gleason grade (GG) at the PSM may improve our predictive accuracy and decision making. Therefore, efforts have been focused on further refining PSM features that could help identify those patients who are most highly likely to experience disease and progression. One such feature is the grade of PSM with some evidence suggesting that GG4 vs 3 is associated with an increased risk for BCR. These studies suffer from several limitations such as retrospective and single center design. The objective of the current analysis was to summarize the available data to test the hypothesis that GG of PSM affects the risk of early BCR and, therefore, can help of counselling patients tailor individual treatment decision.

## Methods

- Keywords used for search: *(positive margin OR positive surgical margin); surgical margin) AND (Gleason score) OR (Gleason grade) AND (prostate cancer) OR (radical prostatectomy)*. The last search was performed on the 1<sup>st</sup> of June 2019.
- This systematic review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement (PROSPERO number: CRD42020141894).
- The primary outcome of interest was BCR due to the long history of prostate cancer and limited data on metastasis and mortality in the literature.

## Key Results

- A total **1,676** papers were identified using MEDLINE/PubMed database.
- 10** papers comprising **14,108** patients conducted between 2010 and 2019 were considered for systematic review; Rate of BCR ranged from 13.9% to 48.9% with median follow-up ranging from 18 to 156 months.
- 6** studies, including **1,863** patients, were eligible for the meta-analysis.
- The forest plot showed that GG at PSM was significantly associated with BCR (pooled HR, 1.87; 95% CI, 1.53–2.28;  $z=5.87$ ). The Cochrane Q test ( $\chi^2 = 5.94$ ;  $P = 0.312$ ) and  $I^2$  test ( $I^2 = 15.8\%$ ) revealed no significant heterogeneity.
- The funnel plot did not identified any studies over the pseudo 95% CI.



## Prognostic Value of Gleason Score at Positive Surgical Margin in Prostate Cancer. A Systematic Review and Meta-Analysis.



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