# *Comparison between transperineal biopsy and transrectal ultrasound guided biopsy in diagnosing prostate cancer (Systematic Review) [Abstract]*

**Background + Aim:** Prostate cancer is the most commonly diagnosed cancer and the third leading cause of cancer-related mortality in men in Australia. Early detection plays a critical role in improving prostate cancer survival. Transrectal ultrasound guided (TRUS) biopsy and transperineal (TP) biopsy are two widely used diagnostic techniques for prostate cancer. However, there is limited evidence evaluating which approach provides a more accurate cancer detection rate (CDR). Therefore, the aim of this systematic review (SR) was to compare the diagnostic accuracy of TRUS biopsy versus TP biopsy approaches in identifying prostate cancer.

**Method + Outcomes:** A search protocol was developed that defined inclusion/exclusion criteria and primary and secondary outcomes. Inclusion criteria included adult males with no previous diagnostic prostate biopsy and randomised controlled trials or comparative study design. MEDLINE, EMBASE and CINAHL databases were used to search for relevant articles using key terms such as ‘transperineal’, ‘transrectal’ and ‘prostatic neoplasms’. The Search strategy was limited to English language and publication years from 2000 to current. Search results were imported into Covidence (online screening and data extraction programme), where two researchers independently reviewed articles for inclusion. The primary outcome was prostate CDR based on sensitivity and specificity of the tests. Secondary outcome measures included cancer survival, quality of life, pain and complications.

**Results:** 1023 articles were identified and screened by the two reviewers and around 100 articles in conflict will be re-reviewed before the final articles are decided. The findings of this SR will help clinicians and patients to make a better informed decision as to which approach provides a more accurate cancer diagnosis.

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