A SYSTEMATIC REVIEW OF COMBINED POLY (ADP-RIBOSE) POLYMERASE INHIBITOR AND ANDROGEN RECEPTOR ANTAGONISTS IN METASTATIC CASTRATION-RESISTANT PROSTATE CANCER

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Background and Importance

- Poly (ADP-ribose) polymerase inhibitors (PARPi) and androgen deprivation therapy (ADT) may have synergistic efficacy for metastatic castration-resistant prostate cancer (mCRPC) patients.
- The effectiveness of PARPi and ADT was highly depended on mCRPC patients' heterogeneous gene status.

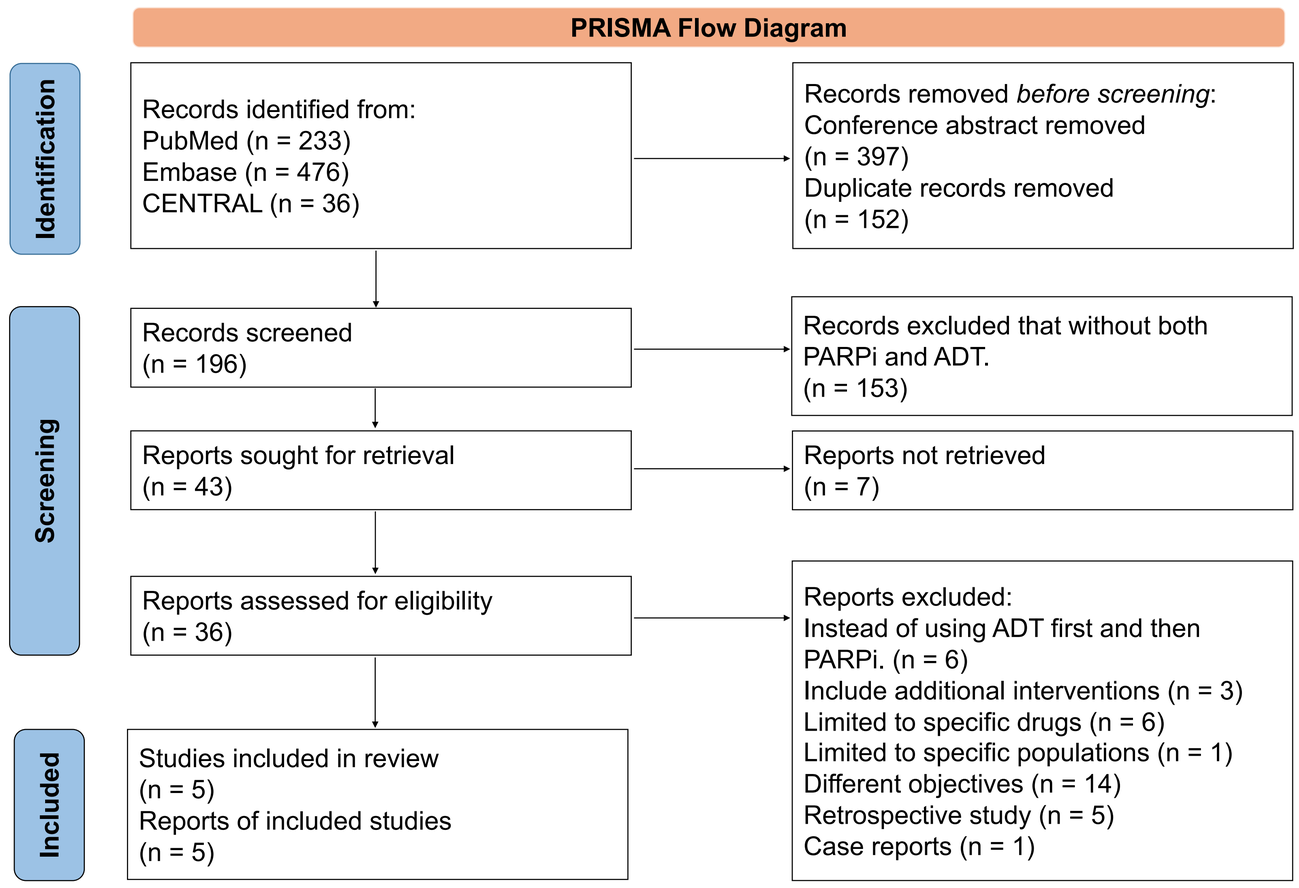
Aim and Objectives

- To conduct a systematic review and meta-analysis to estimate effectiveness of PARP inhibitors combined with ADT versus standard ADT in the mCRPC patients with homologous recombination repair (HRR) positive and negative.

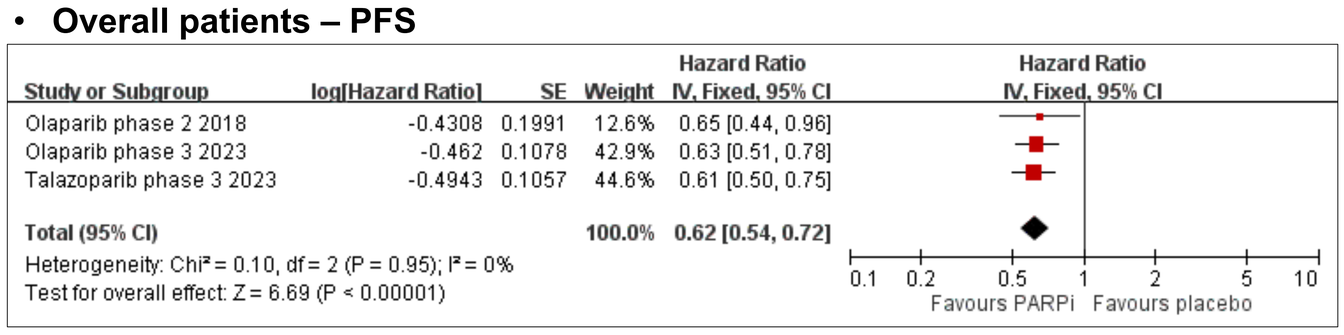
Materials and Methods

- Study design: Systematic review of RCTs
- Database: PubMed, Embase, Cochrane
- Duration: 2009 to September 2023
- No Searching restrictions
- Two independent review authors
- Assessed risk of bias
- Outcomes among all patients, HRR+ and HRR-:
  1. Progression-free survival (PFS)
  2. Overall survival (OS)
- A fixed-effects meta-analysis was applied to pool hazard ratio (HR) with 95% confidence intervals (CIs).

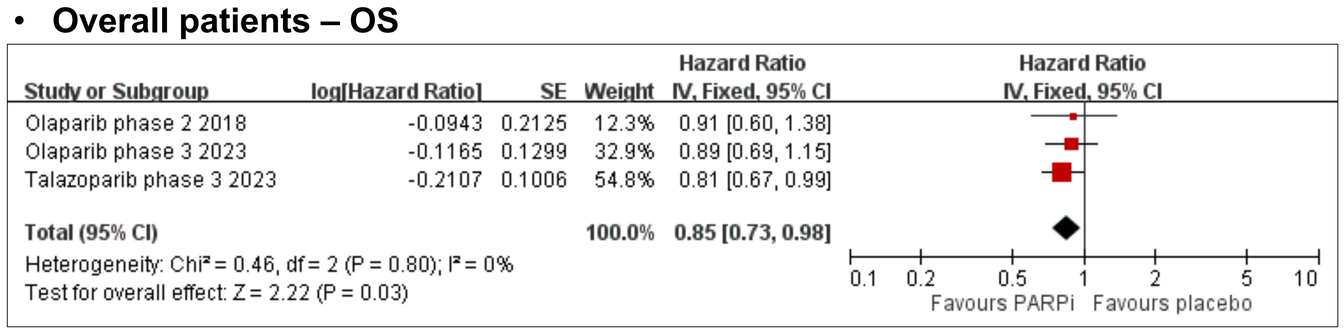
Results



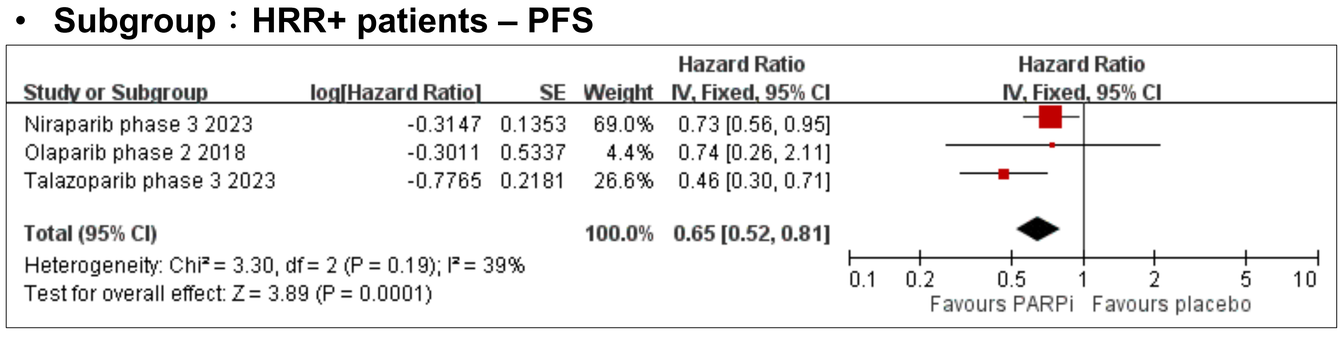
- **Overall patients – PFS**



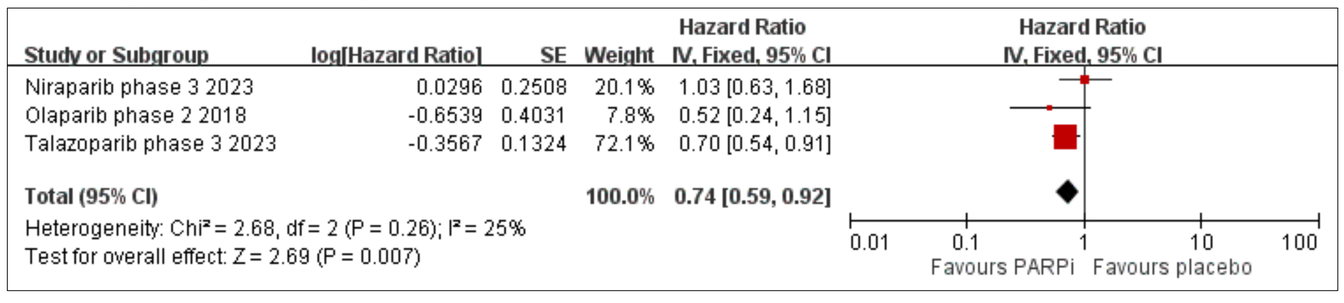
- **Overall patients – OS**



- **Subgroup：HRR+ patients – PFS**



- **Subgroup：HRR− patients – PFS**



Conclusion and Relevance

- The combination of PARPi and ADT in patients with mCRPC to significantly improved both progression-free survival and overall survival rates, especially for HRR+ patients.

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