A Systematic Literature Review of Randomized Controlled Trials Reporting Efficacy and Safety of Treatments in Patients with Advanced Prostate Cancer in Asian Countries

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Background

- Several therapies are available for the treatment of advanced/metastatic prostate cancer (PC). However, the systematic assessment of evidence pertaining to the use of these therapies in Asian patients is lacking.

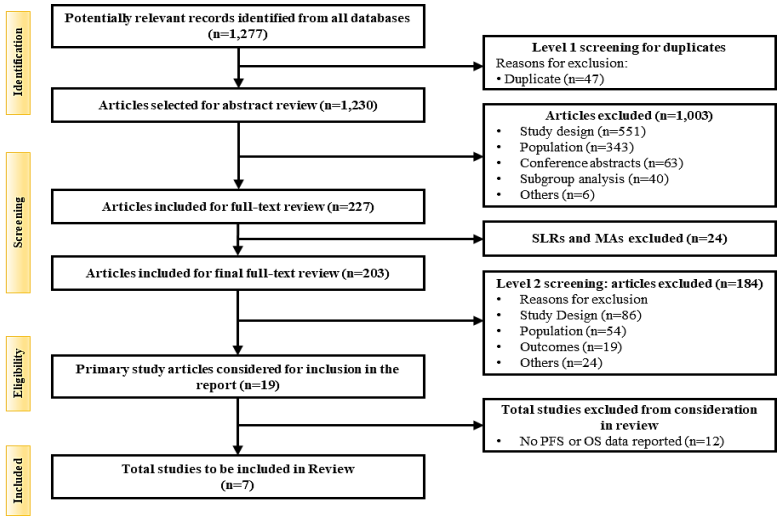
Objectives

- The study aimed to conduct a systematic literature review (SLR) to evaluate the efficacy and safety of treatments available in advanced PC patients in Asian countries.

Methodology

- A comprehensive SLR was performed in the PubMed database to identify relevant randomized controlled trials (RCTs) published in English from 2016 to 2021 as full papers. Additional citations were taken from gray literature. Outcomes of interest were progression-free survival (PFS), overall survival (OS), and safety.

Figure 1: PRISMA diagram for study selection



Results

- Of the 1,277 publication records identified from the database, seven different RCTs were included (Fig. 1). Patients in these RCTs were enrolled from China, East Asia, Japan, Malaysia, Russia, South Korea, Taiwan, and Thailand.
- All RCTs were placebo controlled. Included RCTs had patients with non-metastatic castration-resistant PC (nmCRPC; n=2), metastatic castration-sensitive PC (mCSPC; n=3), and mCRPC (n=2). The sample size in RCTs ranged from 51 to 313 and the total number of patients included is 824.
- In nmCRPC patients, darolutamide plus ADT provided a significant benefit in PFS with a hazard ratio (HR) of 0.13 (95% CI: 0.05-0.33), whereas apalutamide plus ADT provides a better survival, compared with placebo.
- In mCSPC patients, abiraterone acetate (AA) plus prednisone conferred benefits for both OS and PFS with HR of 0.61 (95% CI: 0.27-1.42) and 0.32 (95% CI: 0.167-0.620), respectively.
- In mCRPC patients, enzalutamide provided benefits in OS and PFS with HR of 0.63 (95% CI: 0.36-1.10) and 0.33 (95% CI: 0.19-0.56), respectively. (Fig. 2)
- Overall incidence rate of adverse events (AE) was above 60%; however, the incidence of grade >=3 was low. No new safety signals were observed in Asian patients. (Table 1)

Figure 2: Forest plots for Hazard ratio of a. Progression-free survival & b. Overall survival

Fig. 2a

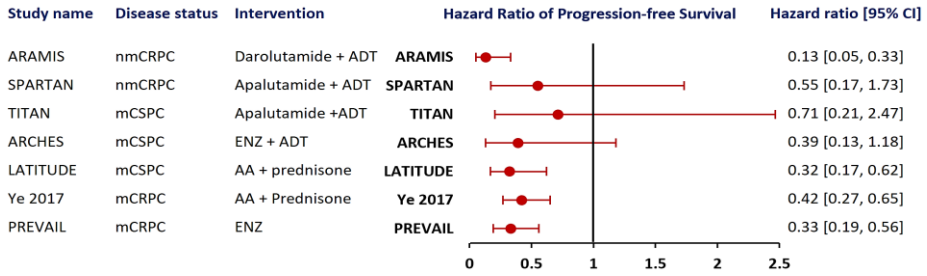


Fig. 2b

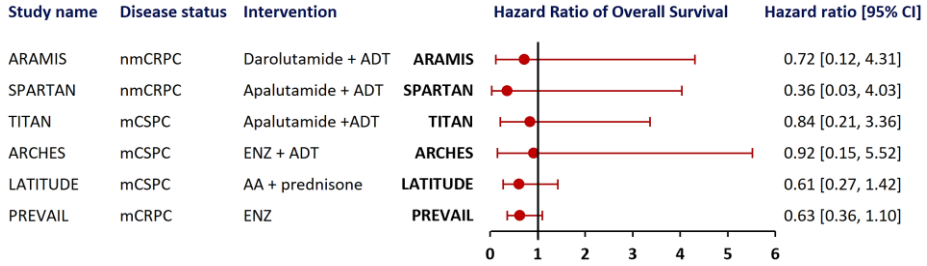
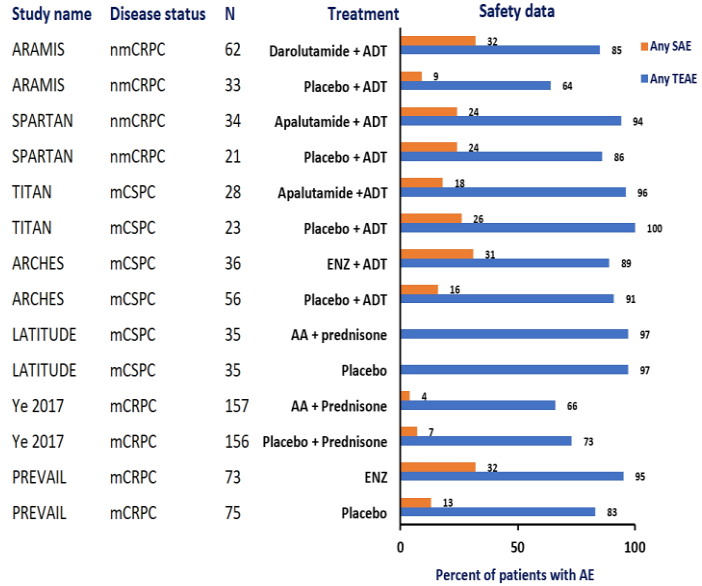


Table 1: Safety results of seven RCTs



AA, Abiraterone Acetate; ADT, androgen deprivation therapy; ADT, androgen-deprivation therapy; ENZ, Enzalutamide; NR/NYR, Not reported/Not yet reached; NE, Not estimable; nmCRPC, Non-metastatic castration-resistant prostate cancer; mCSPC, Metastatic castration-sensitive prostate cancer; mCRPC, Metastatic castration-resistant prostate cancer; TEAE, Treatment emergent adverse events; SAE, Serious adverse events.

Conclusion

- Among all the treatments, androgen receptor inhibitors showed significant benefit in OS and PFS in patients with mCRPC and nmCRPC, whereas abiraterone acetate plus prednisone showed better efficacy in mCSPC patients. This SLR provides evidence that could help physicians to make better treatment decisions in the management of PC.

Conflict of Interest

Gutta D, Shah R, Kalsey MS, Gautam R, Rai MK are employees of EVERSANA India.

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