Background
• There has been a surge in novel therapy (e.g., abiraterone (ABI), enzalutamide (ENZ)) of metastatic castration resistant prostate cancer (mCRPC) before and after docetaxel-based chemotherapy.
• ENZ, as a CYP3A4 inducer, has the potential to interact with other drugs.
• ABI, as CYP17 inhibitor, required prednisone which affect fluid and electrolytes.
• There is no preference of treatment sequences in patients with mCRPC, and real-world drug-drug interactions (DDIs) with ENZ remains unknown.

Objectives
• To evaluate the treatment pattern by lines of therapy (LOT) in patients with mCRPC.
• To describe the incidence and characteristics of co-prescribing ENZ and other medications with DDIs.

Methods
Study design and data source
• Retrospective cohort study
• SEER-Medicare database (2011-2019)

Study cohort and Design
• Patients with ≥1 mCRPC prescription between 2012-2019.
• The index date: the initiation date of mCRPC treatment
• Required ≥12 months of continuous enrollment in Medicare Part A, B, D, and with no mCRPC drug use and without HMO enrollment pre-index
• Patients were followed from index date until the earliest occurrence of death, disenrollment or the end of the study period.

Analyses
• All agents required a refill to be included in treatment pattern assessment
• Treatment sequences and number of patients was assessed up to three LOTs at regimen levels.
• Potential ENZ-related DDIs were determined within each LOT, defined as >7 days of concomitant use with another medication.

   - We evaluated DDIs duration in days, as well as prescriber and pharmacy.
   - Interacting drugs (risk category D or X) included warfarin, apixaban, rivaroxaban, torsemide, nifedipine, felodipine

Results
• In total, 3,566 new users of mCRPC drugs were included (LOT1: 91.3%, LOT2: 43.6%, LOT3: 41.8%).
• The mean age was 77 years and the median NCI comorbidity index was 0-1.
• The most commonly used agents were ABI, ENZ, and docetaxel.
• The most common DDIs were predominately anticoagulants.
• Interacting drugs were written by different prescribers 84%-100% and dispensed by different pharmacies (98%-100%) depending on interacting agent.

Conclusion
• ABI and ENZ are the most commonly used first line treatments for mCRPC.
• To prevent DDIs, future studies are needed to enhance the digital network as well as continuing education of health providers.