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Real World Treatment Sequence and Survival in Localized or Locally Advanced Prostate Cancer and Postprogression Disease States

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Key Takeaway

Patients who did not progress and remained in the LPC/LAPC disease setting had better OS than those who progressed

Conclusions

- The most likely progression was BCR
- The burden of subsequent treatment after definitive RP/RT is very high and thus enhanced local control is critical
- Patients who did not require subsequent treatment achieved better OS

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Poster

Supplementary material

https://www.congresshub.com/Oncology/AUA2024/Apalutamide/Freedland

The QR code is intended to provide scientific information for individual reference, and the information should not be altered or reproduced in any way.

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Disclosure
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Introduction

- Radical prostatectomy (RP) or radiotherapy (RT) are recommended for patients diagnosed with localized prostate cancer (LPC) or locally advanced prostate cancer (LAPC), but patients, especially those with high-risk LPC/LAPC, are still at risk of progression[1]
- Real-world subsequent disease trajectories for high-risk LPC/LAPC after primary RT or RP need to be evaluated
- This retrospective real-world study assessed subsequent treatment sequence, disease state/progression, and overall survival (OS) in patients diagnosed with LPC/LAPC who have undergone primary RP or RT

Methods

Data sources

- The US Optum Claims and Electronic Health Record (EHR) databases were searched from 2008 to 2022, with a 1-year lookback period

Patients

- Included patients were those diagnosed with LPC/LAPC who started on RP or RT
  - Patients were considered diagnosed with LPC/LAPC if they received RP or RT within 180 days of PC diagnosis or prior to progression to nonmetastatic castration-resistant PC (nmCRPC), metastatic CRPC (mCRPC), or metastatic castration-sensitive PC (mCSPC), if earlier than 180 days from PC diagnosis

Outcomes

- Treatment sequences from definitive RP or RT to subsequent treatments, which included:
  - Androgen deprivation therapy (ADT)
  - Androgen receptor pathway inhibitor (ARPI)
  - Chemotherapy
  - Other (see Figure 1 footnote a)
- Progressive disease states:
  - Death
  - Biochemical recurrence (BCR) based on subsequent treatment for disease recurrence
  - nmCRPC, mCRPC, mCSPC
    - Definitions of nmCRPC, mCRPC, and mCSPC were based on diagnosis codes and drugs. Details of definitions can be accessed via the QR code
- OS, defined as the time from the index date (LPC/LAPC state based on RT, RP start date) to death or the last available date

Results

Patients

- Records from 62,529 (Claims) and 62,314 (EHR) patients with LPC/LAPC who started with definitive RP or RT were retrieved (Supplementary Figure 1). Patients with RP were younger and had longer time to progression (Table 1)

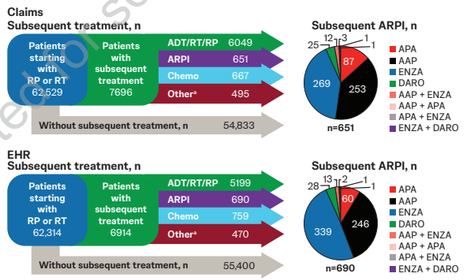
Table 1: Patient characteristics

Characteristic, years	Subsequent treatment (n)			
	No		Yes (overall)	
	Claims (54,833)	EHR (55,400)	Claims (7696)	EHR (6914)
Patients starting with RP				
Median follow-up	1.9	3.0	3.4	4.3
Median age	64	63	67	64
Median time from diagnosis to progression	1.9	3.0	0.7	0.8
Patients starting with RT				
Median follow-up	2.2	2.6	4.0	4.1
Median age	71	70	73	70
Median time from diagnosis to progression	2.2	2.5	1.6	1.7

Treatment sequence

- Median follow-up was 2.7 years (Claims) and 3.0 years (EHR); ≈1600 patients had >10 years of follow-up
- The most common subsequent treatments in both databases were ADT, RT, or RP alone or in combination (Figure 1); 99% (both databases) was ADT and/or RT, 5%/6% were ARPIs (Claims/EHR), and 8%/10% were chemotherapy (Claims/EHR)
- The most common ARPI was enzalutamide, followed by AAP and apalutamide

Figure 1: Treatment sequence from primary to subsequent treatment

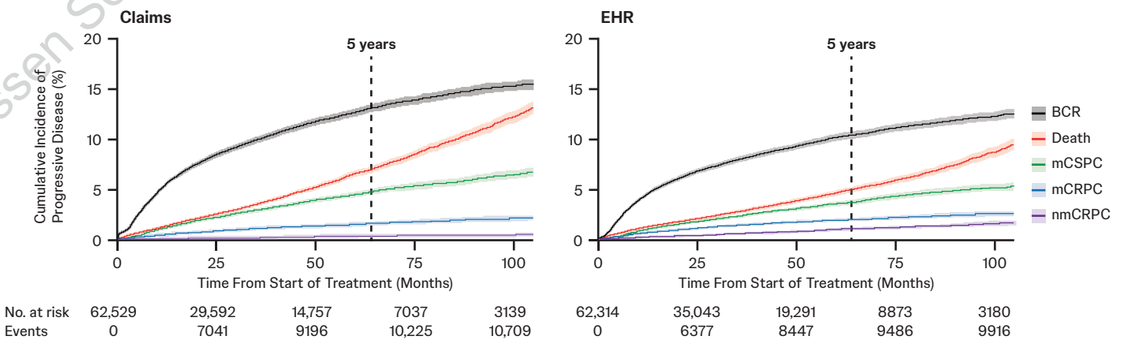


APA, apalutamide. AAP, abiraterone acetate plus prednisone; DARO, darolutamide; ENZA, enzalutamide.
[a]Bicalutamide, nilutamide, radium-223 dichloride, pembrolizumab, flutamide, sipuleucel, and olaparib.
Total treatment numbers may exceed patient numbers as patients can have multiple treatments.
All patients with ADT/RT/RP as subsequent treatment only received these treatments.

Progressive disease states

- BCR was the most common progression event, and the rates of mCRPC and mCSPC increased over time (Figure 2)
- Among patients receiving subsequent treatment from Claims/EHR, the next disease state during follow-up was BCR (72%/69%), nmCRPC (2%/5%), mCSPC (18%/13%), or mCRPC (8%/13%)
- Among patients receiving subsequent treatment, most (82% in Claims, 81% in EHR) had progressed within 3 years and almost all had progressed within 5 years (93% in Claims, 94% in EHR)

Figure 2: Cumulative incidences of progressive disease states

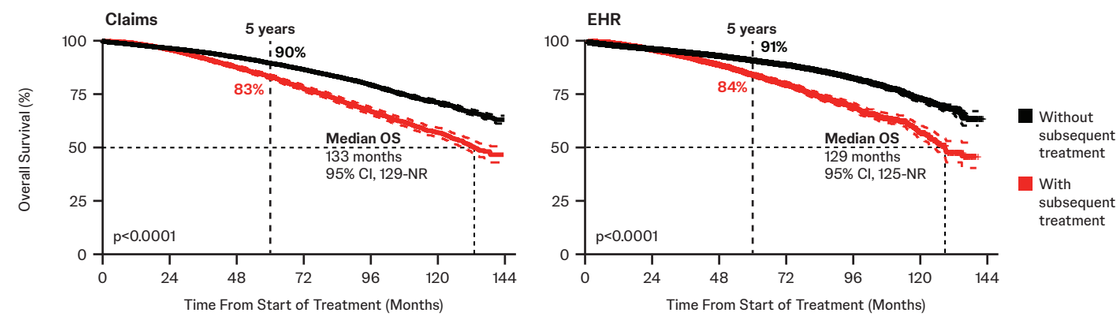


No. at risk	62,529	29,592	14,757	7037	3139	62,314	35,043	19,291	8873	3180
Events	0	7041	9196	10,225	10,709	0	6377	8447	9486	9916

OS by subsequent treatment

- OS was less favorable for patients who received subsequent treatment than for those who did not (Figure 3)
  - 5-year survival rates were lower among those who received subsequent treatment than among those who did not

Figure 3: OS[a] by presence of subsequent treatments



CI, confidence interval; NR, not reached.
[a]Analyzed by Kaplan-Meier methods.

Reference
1. National Comprehensive Cancer Network. Prostate cancer. Version 4.2023-September 7, 2023.

Prostate Cancer

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