POSTER # EE52

Healthcare Resource Utilization and Costs in Men With Prostate Cancer Treated With Androgen Deprivation Therapy Using Real-World Data

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Background

- Prostate cancer is the most frequently diagnosed non-melanoma-related cancer in men in the US and is associated with a significant economic and clinical burden[1,2]
- Androgen deprivation therapy (ADT) is the foundational treatment for advanced prostate cancer, but it has been associated with an increased risk of major adverse cardiac events (MACE), especially in men with preexisting cardiovascular disease (CVD)[3-5]
- In patients with metastatic castration-sensitive prostate cancer receiving systemic prostate cancer therapy, all-cause healthcare costs have been estimated at >$5000 per-patient-per-month (PPPM)[6]
- However, literature regarding healthcare resource utilization (HCRU) and costs during ADT use in real-world settings is limited

Objective

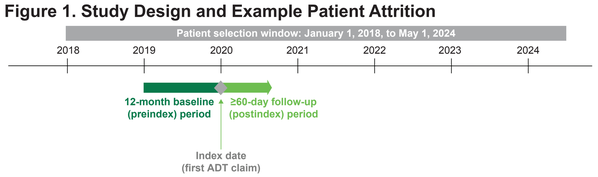
- To evaluate all-cause HCRU and cost trends in real-world practice before and after the initiation of ADT for men with prostate cancer

Methods

Study Design and Participants

- Men ≥40 years old with prostate cancer who newly initiated ADT between January 2018 and May 2024 were identified in the Merative™ MarketScan® Commercial and Medicare databases
  - These databases provide detailed information on the complete record of healthcare encounters and associated costs derived from inpatient, outpatient, and outpatient pharmacy claims
- Men with ≥1 claim for ADT on or after January 1, 2018, were eligible for the study; the first claim for ADT was considered the index date
- All patients were required to have continuous enrollment with medical and pharmacy benefits for ≥12 months in the preindex and ≥60 days in the postindex period; the variable postindex period was defined by the duration of continuous ADT, which had to be ≥60 days (**Figure 1**)
  - ADT medications include GnRH agonists (leuprolide, triptorelin, goserelin, histrelin) and GnRH antagonists (degarelix, relugolix)
- The end of continuous eligibility was defined as the first discontinuation of the index ADT (>90-day gap in therapy, claim for a nonindex ADT), end of continuous enrollment, death, or the end of study data (June 2024)

Figure 1. Study Design and Example Patient Attrition



ADT, androgen deprivation therapy.

Assessments and Outcomes

- Baseline demographic and clinical characteristics were assessed on the index date or during the preindex period
- All-cause preindex and postindex HCRU and cost trends were evaluated in the overall population and in subgroups based on baseline CVD status or type of ADT

Statistical Analysis

- The analyses are descriptive in nature, and there are no formal comparisons between groups
- All-cause preindex and postindex HCRU and costs were analyzed and presented as PPPM to address the variable follow-up period
  - Total mean healthcare costs were defined as inpatient + outpatient + outpatient pharmacy costs
- Results are reported for the following subgroups
  - Men initiating therapy with a GnRH agonist (leuprolide, histrelin, triptorelin, goserelin)
    - Patients who initiated degarelix but switched to an agonist within 60 days (consistent with treatment practice) were classified as agonist users
  - Men initiating therapy with a GnRH antagonist (degarelix [who were persistent for >60 days], relugolix)
    - Subset of antagonist users initiating therapy with relugolix
  - Men with and without evidence of preexisting CVD at baseline
    - Preexisting CVD was defined as ≥1 claim with a diagnosis or procedure for myocardial infarction, cerebrovascular accident/stroke, arterial thromboembolism, unstable angina, or revascularization in any site of care during the baseline period

Results

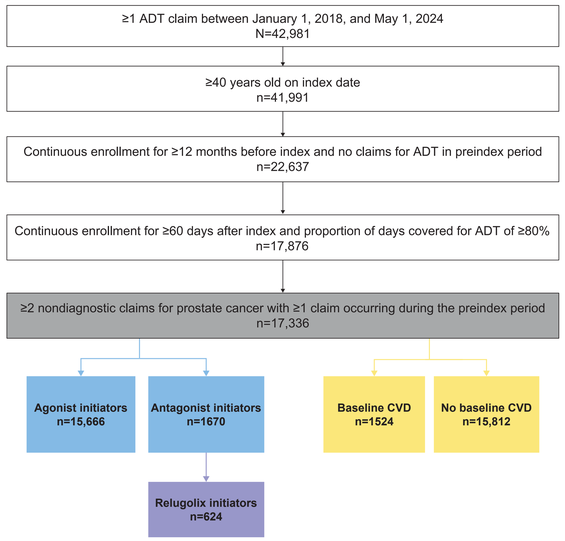
Patient Disposition

- A total of 42,981 men had ≥1 ADT claim between January 1, 2018, and May 1, 2024; of those, 17,336 men were included in the analysis (**Figure 2**)
- Of 17,336 men newly initiating ADT, 90.4% (n=15,666) received a GnRH agonist, and 9.6% (n=1670) received a GnRH antagonist; 3.6% of all patients (n=624) received relugolix

Demographics and Baseline Clinical Characteristics

- The overall median age was 69 years (**Table 1**)
  - Median age was 75 years for men with baseline CVD and 68 years for men without baseline CVD
- Men treated with GnRH antagonists vs agonists were younger (median 65.5 vs 69.0 years, respectively), more likely to be commercially insured (48.3% vs 40.6%), and had a shorter median follow-up (126 vs 189 days)

Figure 2. Patient Attrition



ADT, androgen deprivation therapy; CVD, cardiovascular disease.

Table 1. Demographics and Baseline Characteristics[a]

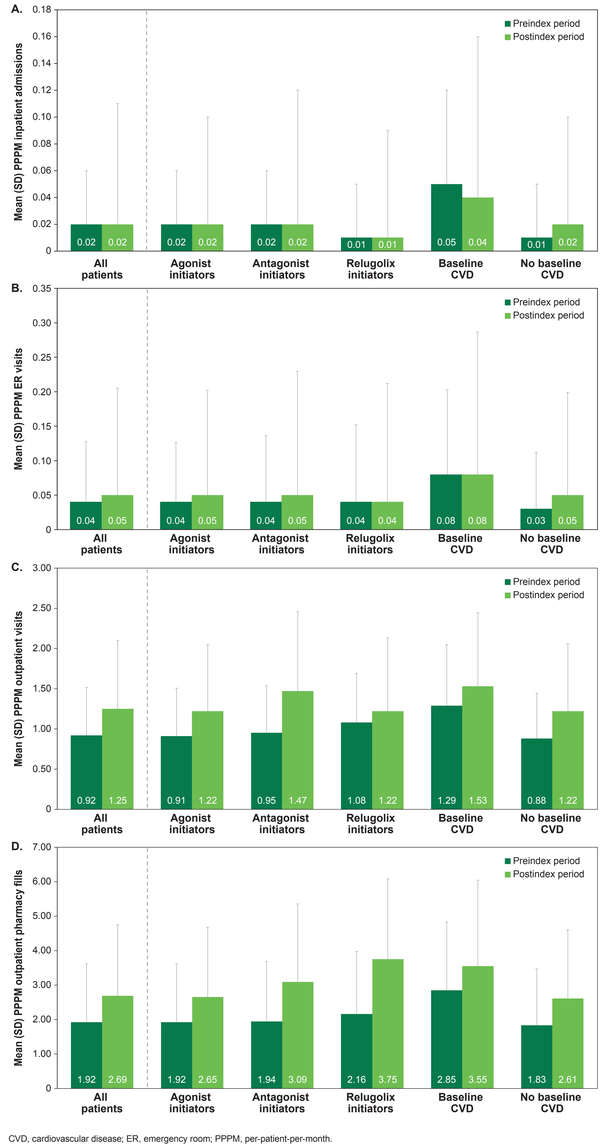
	All patients (N=17,336)	Agonist initiators (n= 15,666)	Antagonist initiators (n=1670)	Relugolix initiators[b] (n=624)	Baseline CVD (n=1524)	No baseline CVD (n=15,812)
Age, mean (SD), years	69.2 (10.1)	69.3 (10.1)	68.1 (10.3)	66.1 (9.8)	73.6 (9.6)	68.8 (10.0)
Median	69.0	69.0	65.5	63.0	75.0	68.0
Age group, n (%), years						
40-54	935 (5.4)	821 (5.2)	114 (6.8)	52 (8.3)	29 (1.9)	906 (5.7)
55-64	6292 (36.3)	5591 (35.7)	701 (42.0)	310 (49.7)	330 (21.7)	5962 (37.7)
65-74	4374 (25.2)	4024 (25.7)	350 (21.0)	115 (18.4)	371 (24.3)	4003 (25.3)
≥75	5735 (33.1)	5230 (33.4)	505 (30.2)	147 (23.6)	794 (52.1)	4941 (31.2)
Payer, n (%)						
Commercial	7170 (41.4)	6364 (40.6)	806 (48.3)	361 (57.9)	355 (23.3)	6815 (43.1)
Medicare Advantage	5372 (31.0)	4834 (30.9)	538 (32.2)	195 (31.3)	673 (44.2)	4699 (29.7)
Medicare Supplemental	4794 (27.7)	4468 (28.5)	326 (19.5)	68 (10.9)	496 (32.5)	4298 (27.2)
Duration of follow-up, mean (SD), days	318 (301)	331 (308)	197 (192)	244 (186)	315 (294)	318 (302)
Median	185	189	126	180	187	184
Preindex CVD-related conditions, n (%)	1524 (8.8)	1361 (8.7)	163 (9.8)	65 (10.4)	1524 (100)	0
Arterial thromboembolism	713 (4.1)	640 (4.1)	73 (4.4)	28 (4.5)	713 (46.8)	0
Cerebrovascular accident/stroke	530 (3.1)	477 (3.0)	53 (3.2)	22 (3.5)	530 (34.8)	0
Myocardial infarction	230 (1.3)	199 (1.3)	31 (1.9)	14 (2.2)	230 (15.1)	0
Unstable angina	174 (1.0)	159 (1.0)	15 (0.9)	5 (0.8)	174 (11.4)	0
Revascularization[c]	159 (0.9)	137 (0.9)	22 (1.3)	9 (1.4)	159 (10.4)	0
NCI-CCI, mean (SD)	1.4 (1.7)	1.4 (1.7)	1.4 (1.7)	1.3 (1.6)	3.2 (2.2)	1.2 (1.6)
Median	1.0	1.0	1.0	1.0	3.0	1.0
30-day patient out-of-pocket ADT costs, mean (SD) USD[d]	57 (469)	43 (470)	186 (438)	324 (620)	40 (155)	59 (489)
Median, USD	2	1	30	58	0	2

CVD, cardiovascular disease; NCI-CCI, National Cancer Institute Adapted Charlson Comorbidity Index; USD, US dollar.
[a]Demographics were measured on the index date; clinical characteristics were measured during the 12-month preindex period.
[b]Subset of antagonist initiators.
[c]Revascularization included coronary artery bypass grafts and percutaneous coronary intervention.
[d]Based on patient out-of-pocket costs on the index claim standardized to a 30-day supply.

Healthcare Resource Use

- During the preindex period, 15.5% of all patients had an inpatient admission, and 25.5% had an emergency room (ER) visit
- Inpatient admissions and ER visits were similar in the preindex and postindex periods (**Figure 3A,B**)
  - Men with baseline CVD had more inpatient admissions and ER visits than men without baseline CVD
  - Inpatient admissions and ER visits were similar between men initiating GnRH agonists and GnRH antagonists
- Nearly all patients (>96% across all subgroups) had ≥1 outpatient visit and filled ≥1 prescription at an outpatient pharmacy during both the preindex and postindex periods
  - There was a trend toward more PPPM outpatient visits and prescription fills in the postindex period (**Figure 3C,D**)

Figure 3. Number of PPPM Preindex and Postindex (A) Inpatient Admissions, (B) ER Visits, (C) Outpatient Visits, and (D) Prescription Fills by Subgroup

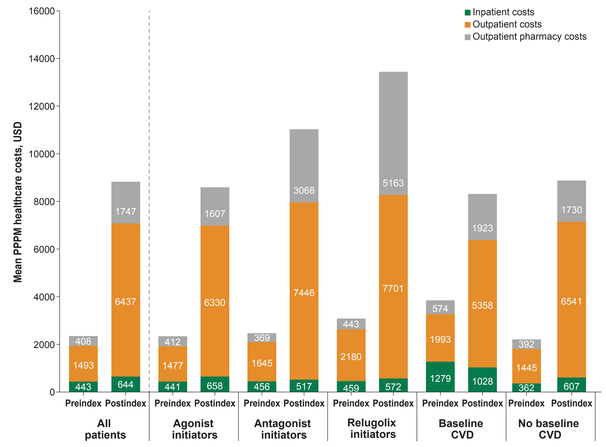


CVD, cardiovascular disease; ER, emergency room; PPPM, per-patient-per-month.

Healthcare Costs

- The total mean healthcare costs for all patients were 3.8-fold higher in the postindex period compared with the preindex period (**Figure 4**)
  - Outpatient services accounted for ~73% of the total healthcare costs in the postindex period
  - Outpatient pharmacy accounted for ~20% of the cost in the postindex period, with relugolix initiators incurring a numerically higher cost than other ADTs
- Patients with baseline CVD had the highest inpatient costs in both the preindex and postindex periods

Figure 4. Healthcare Costs in the Preindex and Postindex Periods by Subgroup



CVD, cardiovascular disease; PPPM, per-patient-per-month; USD, US dollar.

Conclusions

- In real-world clinical practice, utilization of acute care services was largely steady before and after ADT initiation across all subgroups
- Although use of inpatient and ER services was similar in GnRH agonist and antagonist initiators in this analysis, men with baseline CVD had numerically higher HCRU than those without baseline CVD
- Management of baseline CVD may help decrease HCRU and healthcare costs for men receiving treatment for prostate cancer

References **1.** Siegel RL, et al. *CA Cancer J Clin*. 2026;76(1):e70043. **2.** Cancer Trends Progress Report. 2022. National Cancer Institute, NIH, HHS, Bethesda, MD, October 2022. Accessed March 25, 2026. https://progressreport.cancer.gov. **3.** Sharifi N, et al. *JAMA*. 2005;294(2):238-244. **4.** Hu JR, et al. *Arterioscler Thromb Vasc Biol*. 2020;40(3):e55-e64. **5.** Davis MK, et al. *J Oncol*. 2015;2015:820403. **6.** Kaye DR, et al. *J Manag Care Spec Pharm*. 2024;30(7):684-697.

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