Biomarker testing patterns among patients newly diagnosed with prostate cancer in a community oncology network

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Key Takeaway



Biomarker testing patterns and time-to-treatment initiation varied widely among patients newly diagnosed with prostate cancer in the community setting, where most patients receive their cancer care

Conclusions



The study findings provide insights into the frequency of biomarker testing among patients newly diagnosed with prostate cancer receiving care in a large community setting



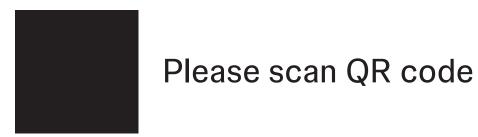
Despite guideline recommendations for biomarker testing, only a small percentage of patients overall received it, with slightly higher rates among those diagnosed with stage IV cancer



To realize the potential benefits of targeted therapies, there is a need to improve biomarker testing rates to better determine which patients are eligible for targeted treatment



The findings suggest that opportunities exist to increase biomarker testing education for healthcare providers in the community setting and to design tailored interventions to increase testing among patients with prostate cancer



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this study. MC has no conflicts to declare. RSP is an employee of Texas Oncology PA; has leadership role at Texas Oncology PA; owns shares of Amgen, Actinium Pharmaceuticals, TGTX, BMS (all stops) less than \$25k in individual value) and has received travel and accommodation expenses from Texas Oncology, US Oncology.

Background

- Prostate cancer guidelines recommend that clinicians order biomarker testing for patients with metastatic prostate cancer¹
- Tumor biomarker testing is performed to identify potential actionable mutations that can inform appropriate treatment strategies as well as determine a patient's eligibility for clinical trial participation
- The study aimed to evaluate biomarker testing patterns among US patients newly diagnosed with prostate cancer who received care in the community setting

Methods

- A retrospective database analysis of patients receiving care in a large oncology practice in the West South Central region of the United States was conducted
- The database inputs consisted of iKnowMed (electronic medical records), ELLKAY CareEvolve (Genetic HL7 interface), and the oncology network's Molecular Data Warehouse, which covered approximately 1.7 million unique patients with various cancer types
- The analysis included patients newly diagnosed with prostate cancer between January 1, 2018, and June 30, 2022
- Descriptive statistics were used to report baseline demographics and to determine the percentage of patients with metastic disease who received biomarker testing during the study period

Results

- The cohort consisted of 18,706 patients aged ≥18 years who were newly diagnosed with prostate cancer
- Mean age at diagnosis was 71.0 years (standard deviation [SD] 9.1); 46.4% of patients were non-Hispanic White, 12.6% were Hispanic, 7.1% were Black or African American, and 0.8% were Asian (Table 1)
- The primary insurance coverage for the majority of patients was commercial (59.8%), followed by Medicare/Medicaid (39.8%)
- Fewer patients were diagnosed in early (I and II) than in late (III and IV) stages of the disease, 32.4% and 38.3%, respectively

TABLE 1: Patient demographics and clinical characteristics

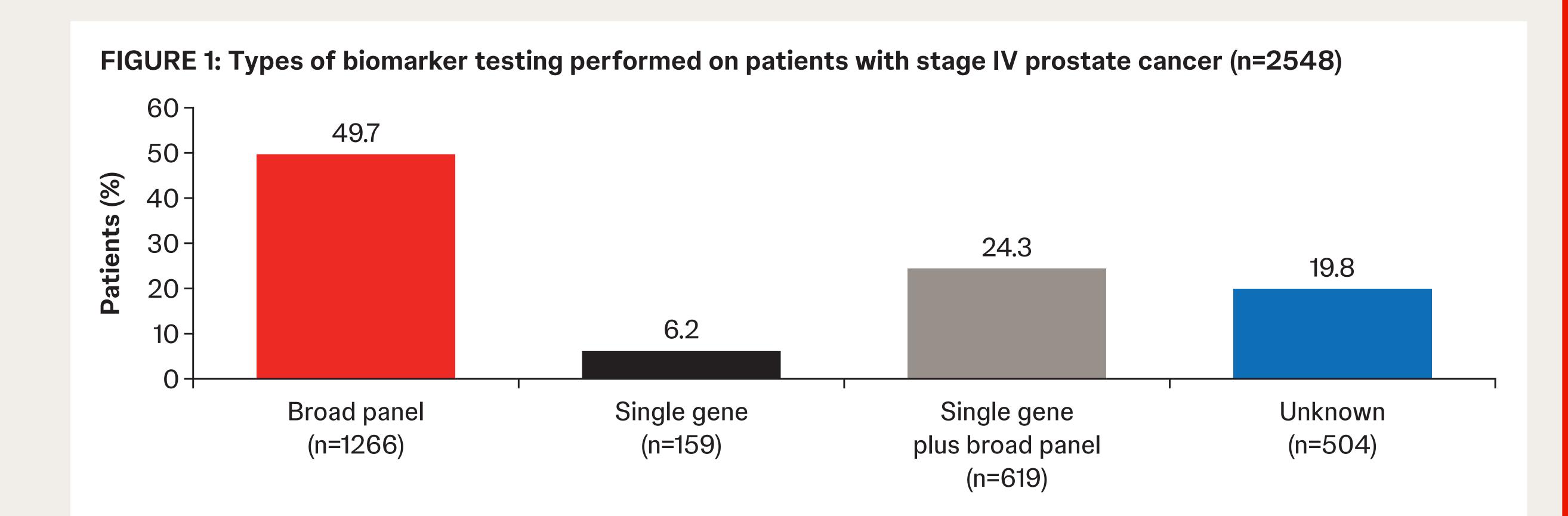
Characteristic	N=18,706	Characteristic	N=18,706
Mean age at diagnosis, years (SD)	71.0 (9.1)	ECOG PS score, n (%)	
Race/ethnicity, n (%)		0	10,611 (56.7)
Hispanic ^a	2362 (12.6)	1	3124 (16.7)
Non-Hispanic Asian	152 (0.8)	2–5	543 (2.9)
Non-Hispanic Black or African American	1331 (7.1)	Missing	4428 (23.7)
Non-Hispanic Other ^b	4794 (25.6)	Karnofsky Performance Scale score, n (%)	
Non-Hispanic White	8670 (46.4)	90–100	10,992 (58.8)
Unknown/declined to inform	1397 (7.5)	70–80	2842 (15.2)
Provider location ^c , n (%)		0–60	444 (2.4)
Rural	92 (0.5)	Missing	4427 (23.7)
Urban	18,614 (99.5)	Histopathology, n (%)	
Primary insurance coverage, n (%)		Adenocarcinoma	2489 (13.3)
Commercial	11,185 (59.8)	Small cell carcinoma	29 (0.2)
Medicare/Medicaid	7445 (39.8)	Squamous cell carcinoma	2 (0.01)
Unidentified or self-pay	76 (0.4)	Missing	16,186 (86.5)
Disease stage at diagnosis, n (%)		Comorbidities ^d , n (%)	
	1464 (7.8)	Other cancer	2568 (13.7)
	4594 (24.6)	Hypertension	2332 (12.5)
	2656 (14.2)	Nutrition deficiency	1454 (7.8)
IV	4510 (24.1)	Hyperlipidemia	1269 (6.8)
Missing	5482 (29.3)	Diabetes	938 (5.0)

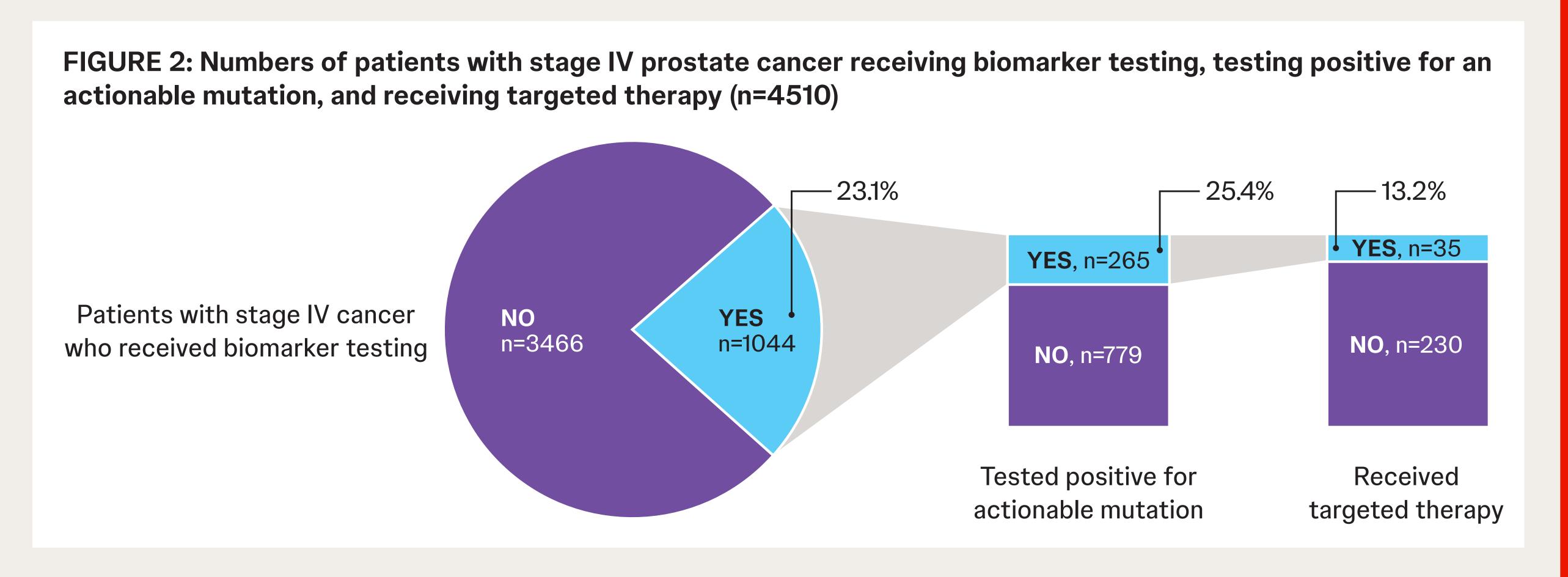
ludes Hispanic or Latino American Indian/Alaska Native. Hispanic Asian, Hispanic Mhite Hispanic multi-race, Hispanic Native Hawaiian/Other Pacific Islander, Hispanic other, and Hispanic White des Non-Hispanic American Indian/Alaska Native, Non-Hispanic multi-race, and Non-Hispanic Native Hawaiian/Other Pacific Islander

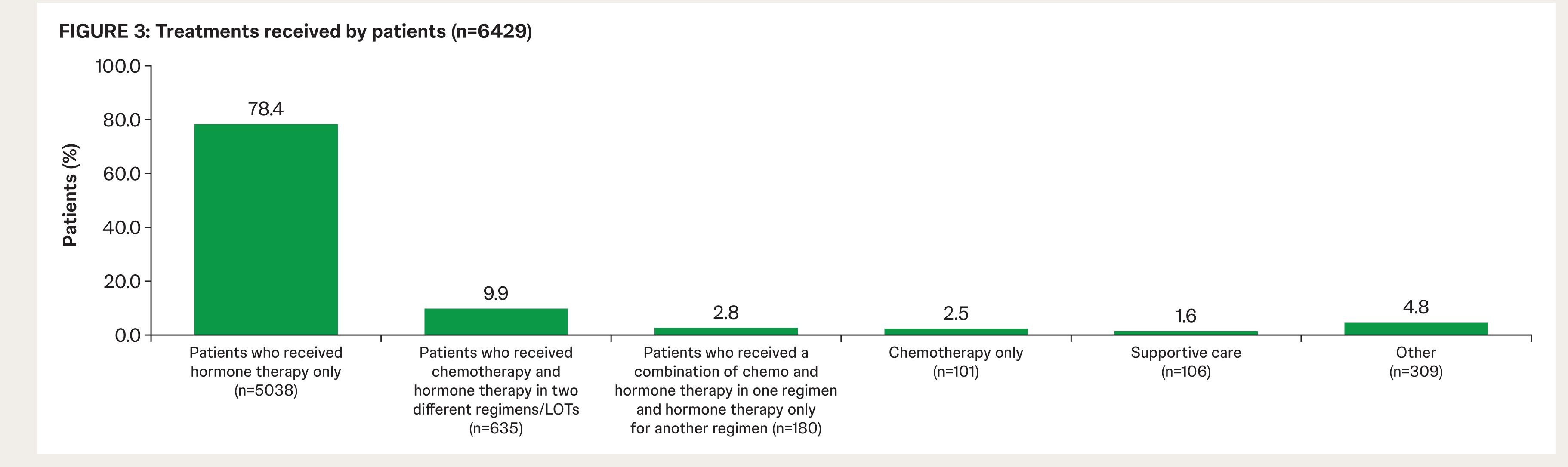
^cProvider location for two respondents was unknown. Comorbidities occurring in ≥5% of patients.

ECOG PS, Eastern Cooperative Oncology Group performance status; SD, standard deviation.

- Biomarker testing was performed for 2548 (13.6%) of patients with prostate cancer. Among all patients diagnosed with stage IV prostate cancer (n=4510), 1044 (23.2%) received biomarker testing
- The mean (SD) time from disease diagnosis to first biomarker testing was 266 (381) days, from the first biomarker testing to receipt of test results was 32 (101) days, and from biomarker testing to treatment initiation was 178 (394) days
- Of all biomarker testing, 6.2% were single gene tests, 49.7% were broad panel tests, and 24.3% were single gene plus broad panel tests; for 19.8%, the type of test was unknown (Figure 1)
- Among the patients with stage IV prostate cancer who received biomarker testing (n=1044), 265 (25.4%) tested positive for an actionable mutation and, of these, 35 (13.2%) received a targeted therapy (Figure 2)
- For patients with stage I through IV prostate cancer who initiated treatment within the oncology network (n=6429), hormone therapy was the most common treatment received by patients with prostate cancer (n=5038, 78.4%), followed by chemotherapy, hormone therapy maintenance (n=635, 9.9%). Patients may have received supportive care as a part of these regimens (Figure 3)







Reference

1. NCCN Clinical Practice Guidelines in Oncology. Prostate cancer. Version 4.2024; May 17, 2024.



