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## Introduction and Objectives

- The Oncotype DX Genomic Prostate Score® (ODX-GPS™) is a gene expression assay that is prognostic of disease aggressiveness in men with clinically low- or intermediate-risk prostate cancer
- The results are used to guide treatment decisions, including whether to pursue active surveillance versus definitive treatment.
- The objective of this study was to describe sociodemographic and regional differences in the receipt of ODX-GPS testing and identify factors associated with its use, using SEER registry data

## Methods

- 111 434 men diagnosed with localized prostate cancer, with a Gleason score of 3+3 or 3+4, PSA ≤ 20 ng/mL, and stage T1c to T2c disease between 2013 and 2017 were linked with ODX-GPS data
- Multivariable logistic regression accounting for clustering by census tract was used to identify factors associated with receipt of ODX-GPS testing
- Sociodemographic factors included age, race, ethnicity, neighborhood socioeconomic status, (nSES, census tract pseudo-ID), health insurance, marital status, and census region,
- Covariates for adjustment included NCCN risk group and year of diagnosis

Table 1: Baseline Characteristics

	ODX-GPS Ordered	ODX-GPS Not Ordered
Number (Percent)	6014	105420
<b>Age at Diagnosis Category (y)</b>		
<55	689 (11.5)	12714 (12.1)
55-64	2414 (40.1)	42101 (39.9)
65-74	2477 (41.2)	42058 (39.9)
75+	434 (7.2)	8547 (8.1)
<b>Race and Ethnicity</b>		
American Indian or Alaska Native	13 (0.2)	263 (0.2)
Asian American	218 (3.6)	3922 (3.7)
Black	580 (9.6)	16314 (15.5)
Hispanic or Latino	394 (6.6)	9625 (9.1)
Native Hawaiian or Other Pacific Islander	11 (0.2)	279 (0.3)
Unknown	89 (1.5)	1174 (1.1)
Non-Hispanic White	4709 (78.3)	73843 (70.0)
<b>Neighborhood SES</b>		
Q1- Low	405 (6.7)	12295 (11.7)
Q2	511 (8.5)	13602 (12.9)
Q3	792 (13.2)	17254 (16.4)
Q4	1227 (20.4)	23035 (21.9)
Q5- High	2550 (42.4)	32743 (31.1)
Missing	529 (8.8)	6491 (6.2)
<b>US Census Region</b>		
South	505 (8.4)	18901 (17.9)
Midwest	434 (7.2)	7836 (7.4)
Northeast	3319 (55.2)	40778 (38.7)
West	1756 (29.2)	37905 (36.0)
<b>Insurance Status</b>		
Insured	5197 (86.4)	91682 (87.0)
Any Medicaid	263 (4.4)	6024 (5.7)
Uninsured	21 (0.3)	883 (0.8)
Unknown	533 (8.9)	6831 (6.5)
<b>Marital Status</b>		
Married	4239 (70.5)	73269 (69.5)
Unmarried	1207 (20.1)	23196 (22.0)
Unknown	568 (9.4)	8955 (8.5)
<b>NCCN Category</b>		
Very Low/Low	3778 (62.8)	48629 (46.1)
Favorable Intermediate	1617 (26.9)	30910 (29.3)
Unfavorable Intermediate	619 (10.3)	25881 (24.6)
<b>Diagnosis Year</b>		
2013	588 (9.8)	22105 (21.0)
2014	934 (15.5)	20229 (19.2)
2015	1349 (22.4)	20416 (19.4)
2016	1501 (25.0)	21350 (20.3)

Table 2: Adjusted Odds Ratios (95% CI) of Receiving ODX-GPS

	Number	OR	95% CI
<b>Age at Diagnosis Category (y)</b>			
<55	13403	1.00	
55-64	44515	1.01	(0.93, 1.10)
65-74	44535	1.07	(0.98, 1.16)
75+	8981	0.98	(0.86, 1.10)
<b>Race and Ethnicity</b>			
Non-Hispanic White	78552	1.00	
American Indian or Alaska Native	276	1.02	(0.59, 1.76)
Asian American	4140	0.91	(0.79, 1.06)
Black	16894	0.70	(0.64, 0.76)
Hispanic or Latino	10019	0.70	(0.62, 0.78)
Native Hawaiian or Other Pacific Islander	290	0.78	(0.42, 1.45)
<b>Neighborhood SES</b>			
Q1- Low	12700	1.00	
Q2	14113	0.97	(0.85, 1.12)
Q3	18046	1.09	(0.95, 1.24)
Q4	24262	1.17	(1.03, 1.33)
Q5- High	35293	1.62	(1.44, 1.83)
<b>US Census Region</b>			
South	19406	1.00	
Midwest	8270	2.08	(1.8, 2.41)
Northeast	44097	2.57	(2.3, 2.87)
West	39661	1.49	(1.33, 1.67)
<b>Insurance Status</b>			
Insured	96879	1.00	
Any Medicaid	6287	0.93	(0.82, 1.06)
Uninsured	904	0.56	(0.36, 0.87)
<b>Marital Status</b>			
Married	77508	1.00	
Unmarried	24403	1.01	(0.95, 1.08)
<b>NCCN Category</b>			
Very Low/Low	52407	1.00	
Favorable Intermediate	32527	0.64	(0.60, 0.68)
Unfavorable Intermediate	26500	0.30	(0.28, 0.33)
<b>Diagnosis Year</b>			
2013	22693	1.00	
2014	21163	1.74	(1.57, 1.93)
2015	21765	2.55	(2.31, 2.82)
2016	22851	2.73	(2.47, 3.02)

## Results

- 5.5% of eligible prostate cancer cases received ODX-GPS testing
- Of those, 78.3% were White, 9.6% were Black, 6.6% were Hispanic or Latino, and 3.6% were Asian American
- Black and Hispanic or Latino men had the lowest adjusted odds of receiving ODX-GPS testing (OR 0.70; 95% CI 0.64-0.76) (OR 0.70; 95% CI 0.62-0.78)
- Men living in the highest nSES quintile were 1.62 times as likely (95% CI 1.44-1.83) to have received ODX-GPS
- Uninsured men had nearly half the odds (OR 0.56; 95% CI 0.36-0.87) of receiving ODX-GPS testing compared to insured men in the adjusted model
- The odds of ODX-GPS testing were significantly higher among men residing in the Northeast, West, and Midwest census regions compared to the South

## Strengths

- This large, population-based study included a racially and ethnically diverse group of men with prostate cancer
- Evaluating the implementation of evidence-based medicine allows the healthcare system to better serve patients

## Conclusions

- We identified disparities in receipt of ODX-GPS testing among men with low/intermediate prostate cancer by race, ethnicity, nSES, insurance status, and census region
- Concerted efforts should be made to ensure that this tool is equitably available to eligible men with prostate cancer