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Defining intermediate-risk prostate cancer suitable for active surveillance with PSA 10-20 ng/ml: pathological outcome analysis of a population-level dataset

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Introduction

- NCCN prostate cancer guidelines use GG 2 or PSA 10-20 ng/mL as features that define favorable intermediate-risk disease
- Active surveillance (AS) may be an option for some men within this risk category
- We used the new SEER-WW database
- Cohort was restricted to ≤ 80 years, cT1-2cN0M0, PSA ≤ 20 ng/mL, biopsy GG ≤ 2 , percent positive cores (PPC) $\leq 33\%$ and underwent RP (n=29,120)
- The primary outcome was adverse pathology, defined as any pathologic upgrading (\geq GG 3) or any upstaging to non-organ confined disease (\geq pT3a)
- Multivariable logistic regression was performed to determine predictors of adverse pathology at RP

Results

	Grade Group 1		Grade Group 2	
	PSA <10 ng/mL (N=15301)	PSA 10-20 ng/mL (N=1731)	PSA <10 ng/mL (N=8367)	PSA 10-20 ng/mL (N=1149)
Age at diagnosis, years	59.7 ± 7.0	61.8 ± 6.8	61.5 ± 6.9	62.9 ± 6.8
Race				
White	12649 (82.7%)	1330 (76.8%)	6813 (81.4%)	889 (77.4%)
Black	4030 (26.3%)	259 (15.0%)	1038 (12.4%)	176 (15.3%)
Others/Unknown	883 (5.8%)	142 (8.2%)	516 (6.2%)	84 (7.3%)
Clinical T stage				
T1	11271 (73.1%)	1298 (75.0%)	5872 (70.2%)	860 (74.8%)
T2	4030 (26.3%)	433 (25.0%)	2495 (29.8%)	289 (25.2%)
PSA, ng/mL	5.1 ± 1.9	13.1 ± 2.7	5.4 ± 1.9	12.9 ± 2.6
% positive cores	17.1 ± 8.0	16.6 ± 8.1	19.2 ± 7.7	18.9 ± 7.9
Insurance				
Insured	14723 (96.2%)	1619 (93.5%)	8072 (96.5%)	1060 (92.3%)
Medicaid	422 (2.8%)	85 (4.9%)	204 (2.4%)	69 (6.0%)
Uninsured	156 (1.0%)	27 (1.6%)	91 (1.1%)	20 (1.7%)
Marital status				
Married	12729 (83.2%)	1341 (77.5%)	6783 (81.1%)	874 (76.1%)
Single	2572 (16.8%)	390 (22.5%)	1584 (18.9%)	275 (23.9%)
Pathologic upgrading at RP				
No	14410 (94.2%)	1530 (88.4%)	7002 (83.7%)	875 (76.2%)
Yes	891 (5.8%)	201 (11.6%)	1365 (16.3%)	274 (23.9%)
Pathologic upstaging at RP				
No	14149 (92.5%)	1478 (85.4%)	6969 (83.3%)	828 (72.1%)
Yes	1152 (7.5%)	253 (14.6%)	1398 (16.7%)	321 (27.9%)
Adverse pathology				
No	13470 (88.0%)	1349 (77.9%)	6027 (72.0%)	672 (58.5%)
Yes	1831 (12.0%)	382 (22.1%)	2340 (28.0%)	477 (41.5%)

Odds ratios of PSA level and biopsy grade group predicting adverse pathology

		Univariate (OR, 95% CI)	Multivariable OR* (OR, 95% CI)
PSA, ng/mL	10-20 vs. <10	1.99 (1.82-2.17)	1.87 (1.71-2.05)
Biopsy grade group	2 vs. 1	2.82 (2.64-3.00)	2.56 (2.40-2.73)

Men diagnosed with **GG1** and a **PSA 10-20 ng/ml** may be suitable for active surveillance