

**Table S1.** Comparison of upgrading and upstaging in all of patients (n = 535).

Variable	No-upgrading (n=290, 54.2%)	upgrading (n=245, 45.8%)	<i>p</i> value	No-upstaging (n=273, 51.0%)	Upstaging (n=262, 49.0%)	<i>p</i> value
<b>Age, years</b>			0.205			0.359
Median (IQR)	67 (61-71)	67 (62-71)		67 (62-71)	67 (61.75-72)	
Mean ± SD	65.76 ± 6.77	66.56 ± 6.45		65.85 ± 6.65	66.41 ± 6.63	
<b>BMI, kg/m²</b>			0.418			0.110
Median (IQR)	24.34 (22.70-26.30)	24.22 (22.60-26.12)		24.22 (22.39-26.04)	24.49 (22.87-26.56)	
Mean ± SD	24.61 ± 2.88	24.37 ± 2.86		24.31 ± 2.86	24.70 ± 2.87	
<b>Serum PSA, ng/ml</b>			< 0.001*			< 0.001*
Median (IQR)	9.73 (6.95-15.42)	12.33 (8.47-19.42)		9.16 (6.73-13.60)	12.75 (8.66-20.17)	
Mean ± SD	13.31 ± 12.43	15.86 ± 11.68		12.33 ± 11.14	16.71 ± 12.76	
<b>Prostate volume, ml</b>			0.119			< 0.001*
Median (IQR)	40.80 (30.00-59.63)	38.80 (29.41-53.00)		44.10 (32.20-65.00)	36.00 (27.50-48.74)	
Mean ± SD	48.64 ± 27.09	44.58 ± 22.92		52.23 ± 28.51	41.11 ± 20.04	
<b>PSAD, ng/ml²</b>			< 0.001*			< 0.001*
Median (IQR)	0.22 (0.14-0.36)	0.32 (0.20-0.52)		0.20 (0.13-0.32)	0.34 (0.22-0.54)	
Mean ± SD	0.31 ± 0.30	0.42 ± 0.35		0.28 ± 0.27	0.45 ± 0.35	
<b>Number of biopsy cores</b>			0.430			0.809
Median (IQR)	13 (12-14)	13 (12-14)		13 (12-14)	13 (12-14)	
Mean ± SD	13.32 ± 2.37	13.16 ± 2.44		13.33 ± 2.62	13.16 ± 2.17	
<b>Number of positive cores</b>			0.376			< 0.001*
Median (IQR)	4 (2-7)	4 (2-6)		3 (1-5)	5 (3-8)	
Mean ± SD	4.55 ± 3.05	4.34 ± 3.09		3.57 ± 2.58	5.38 ± 3.26	
<b>Percent positive biopsy cores, %</b>			0.599			< 0.001*

Median (IQR)	31.41 (14.29-50.00)	28.57 (15.38-46.67)		23.08 (8.33-39.44)	38.46 (20.00-56.77)	
Mean ± SD	34.92 ± 24.11	33.20 ± 23.11		27.18 ± 19.61	41.36 ± 25.31	
<b>Max core involvement, %</b>			0.393			< 0.001*
Median (IQR)	70.0 (33.0-85.0)	60.0 (30.0-85.0)		50.0 (20.0-85.0)	80.0 (50.0-85.0)	
Mean ± SD	59.91 ± 29.76	57.23 ± 30.69		51.19 ± 30.38	66.49 ± 27.98	

IQR, interquartile range; SD, standard deviation; BMI, body mass index; PSA, prostate-specific antigen; DRE, digital rectal examination; PSAD; prostate-specific antigen density. \*statistically significant.

**Table S2.** Comparison of upgrading and upstaging in patients with NAPCa (n = 374).

Variable	No-upgrading (n=206, 55.1%)	upgrading (n=168, 44.9%)	<i>p</i> value	No-upstaging (n=215, 57.5%)	Upstaging (n=159, 42.5%)	<i>p</i> value
<b>Age, years</b>			0.506			0.694
Median (IQR)	66 (61.75-71)	67 (62-71)		67 (62-71)	66 (62-71)	
Mean ± SD	65.89 ± 6.60	66.46 ± 6.03		65.99 ± 6.36	66.36 ± 6.34	
<b>BMI, kg/m<sup>2</sup></b>			0.423			0.293
Median (IQR)	24.22 (22.27-26.21)	24.22 (22.32-25.61)		24.22 (22.05-25.95)	24.22 (22.86-26.31)	
Mean ± SD	24.39 ± 2.87	24.13 ± 2.89		24.13 ± 2.92	24.46 ± 2.83	
<b>Serum PSA, ng/ml</b>			<b>0.001*</b>			<b>&lt; 0.001*</b>
Median (IQR)	9.20 (6.67-14.97)	11.83 (7.94-17.83)		8.98 (6.36-14.79)	11.85 (8.12-18.17)	
Mean ± SD	12.16 ± 10.92	14.46 ± 10.30		12.16 ± 11.30	14.59 ± 9.66	
<b>Prostate volume, ml</b>			0.068			<b>&lt; 0.001*</b>
Median (IQR)	40.00 (29.93-60.45)	37.70 (28.00-51.70)		43.95 (31.40-60.15)	35.30 (25.00-44.15)	
Mean ± SD	49.18 ± 29.18	43.25 ± 22.76		50.91 ± 29.84	37.61 ± 18.75	
<b>PSAD, ng/ml<sup>2</sup></b>			<b>&lt; 0.001*</b>			<b>&lt; 0.001*</b>
Median (IQR)	0.21 (0.12-0.34)	0.31 (0.21-0.50)		0.18 (0.11-0.30)	0.35 (0.24-0.59)	
Mean ± SD	0.28 ± 0.27	0.43 ± 0.36		0.24 ± 0.24	0.48 ± 0.38	
<b>Number of biopsy cores</b>			0.416			0.574
Median (IQR)	13 (12-14)	13 (12-15)		13 (12-15)	13 (12-14.75)	
Mean ± SD	13.77 ± 2.80	13.86 ± 3.06		13.95 ± 2.28	13.63 ± 2.39	
<b>Number of positive cores</b>			0.414			<b>&lt; 0.001*</b>
Median (IQR)	5 (2-7)	4 (2-6)		3 (1-6)	5.5 (3-8)	
Mean ± SD	4.81 ± 2.97	4.20 ± 2.73		3.76 ± 2.63	5.52 ± 2.88	
<b>Percent positive biopsy cores, %</b>			0.610			<b>&lt; 0.001*</b>
Median (IQR)	33.33 (14.29-50.00)	27.62 (14.56-43.53)		23.08 (8.52-40.00)	39.69 (25.00-53.85)	

Mean ± SD	36.00 ± 23.41	30.83 ± 20.14		27.81 ± 20.20	41.16 ± 22.29	
<b>Max core involvement, %</b>			0.324			<b>0.007*</b>
Median (IQR)	70.0 (35.0-85.0)	50.0 (20.0-70.0)		50.0 (20.0-75.25)	70.0 (40.0-85.0)	
Mean ± SD	59.34 ± 29.27	50.20 ± 30.22		50.27 ± 30.46	61.63 ± 28.25	

NAPCa, non-apex prostate cancer; IQR, interquartile range; SD, standard deviation; BMI, body mass index; PSA, prostate-specific antigen; DRE, digital rectal examination; PSAD; prostate-specific antigen density. \*statistically significant.

**Table S3.** Comparison of upgrading and upstaging in patients with APCa (n = 161).

Variable	No-upgrading (n=84, 52.2%)	upgrading (n=77, 47.8%)	<i>p</i> value	No-upstaging (n=58, 36.0%)	Upstaging (n=103, 64.0%)	<i>p</i> value
<b>Age, years</b>			0.215			0.384
Median (IQR)	67 (60.25-71)	68 (62-72)		67 (62-71)	67 (62-71)	
Mean ± SD	65.44 ± 7.22	66.77 ± 7.36		65.36 ± 7.65	66.48 ± 7.09	
<b>BMI, kg/m<sup>2</sup></b>			0.647			0.665
Median (IQR)	24.61 (23.38-26.79)	24.86 (22.90-26.66)		24.47 (23.38-26.47)	24.91 (23.03-27.06)	
Mean ± SD	24.61 ± 2.88	24.37 ± 2.86		24.98 ± 2.57	25.08 ± 2.90	
<b>Serum PSA, ng/ml</b>			<b>0.024*</b>			<b>&lt; 0.001*</b>
Median (IQR)	10.86 (7.74-16.83)	13.30 (9.44-25.09)		9.38 (7.55-13.02)	13.89 (9.51-24.86)	
Mean ± SD	16.13 ± 15.28	18.95 ± 13.86		12.97 ± 10.59	20.00 ± 15.97	
<b>Prostate volume, ml</b>			0.929			0.146
Median (IQR)	42.28 (30.78-56.75)	41.40 (31.05-60.88)		45.90 (33.60-67.30)	41.30 (30.00-57.00)	
Mean ± SD	47.34 ± 21.22	47.47 ± 23.17		50.83 ± 23.76	45.47 ± 20.99	
<b>PSAD, ng/ml<sup>2</sup></b>			0.182			<b>0.002*</b>
Median (IQR)	0.25 (0.18-0.44)	0.35 (0.18-0.55)		0.23 (0.16-0.30)	0.35 (0.22-0.54)	
Mean ± SD	0.39 ± 0.35	0.42 ± 0.31		0.31 ± 0.29	0.43 ± 0.33	
<b>Number of biopsy cores</b>			0.900			0.237
Median (IQR)	13 (12-13)	13 (12-14)		12 (12-13)	13 (12-14)	
Mean ± SD	13.21 ± 2.37	12.86 ± 1.77		13.03 ± 2.01	13.05 ± 2.17	
<b>Number of positive cores</b>			0.633			<b>0.007*</b>
Median (IQR)	5 (3-7.75)	5 (2-7)		4 (2-6)	6 (3-8)	
Mean ± SD	5.37 ± 3.23	5.17 ± 3.32		4.29 ± 2.73	5.83 ± 3.42	
<b>Percent positive biopsy cores, %</b>			0.764			<b>0.005*</b>
Median (IQR)	38.46 (20.56-53.85)	37.50 (16.67-53.85)		30.77 (16.67-42.79)	42.86 (22.22-69.23)	

Mean ± SD	41.44 ± 25.20	40.13 ± 37.50		32.82 ± 20.01	45.32 ± 26.54	
<b>Max core involvement, %</b>			0.642			<b>0.005*</b>
Median (IQR)	85.0 (42.5-85.0)	85.0 (50.0-85.0)		65.0 (30.0-85.0)	85.0 (50.0-85.0)	
Mean ± SD	66.13 ± 28.23	65.25 ± 28.70		57.59 ± 30.09	70.28 ± 26.42	

APCa, apex prostate cancer; IQR, interquartile range; SD, standard deviation; BMI, body mass index; PSA, prostate-specific antigen; DRE, digital rectal examination; PSAD; prostate-specific antigen density. \*statistically significant.