

O'Brien BA, Cohen RJ, Ryan A et al. A new pre-operative nomogram to predict minimal prostate cancer: accuracy and error rates compared to other tools for selecting active surveillance patients. J Urol 2011 (in press).

Supplementary Table 2: The incidence of tumors with adverse characteristics among patients predicted to have minimal prostate cancer thus considered eligible for active surveillance.

	Median 95% CI width ¹ for probabilities	No. (%) that met the criteria	No. (%) that met the criteria and had the following characteristics at prostatectomy:								High risk ³ disease	MPCa ⁴
			Positive surgical margins	Extracapsular extension	Seminal vesicle invasion	Gleason 4/5 ² > 0%	Gleason 4/5 ≥ 50%	Tumor volume ≥ 2.0 mL	Tumor volume ≥ 4.0 cc			
Epstein criteria⁵ (n = 2284)	N/A	173 (7.6%)	10 (5.8%)	3 (1.7%)	0 (0.0%)	58 (33.5%)	9 (5.2%)	42 (24.3%)	10 (5.8%)	24 (13.9%)	49 (28.3%)	
PRIAS criteria⁶ (n = 2525)	N/A	286 (11.3%)	22 (7.7%)	4 (1.4%)	0 (0.0%)	110 (38.5%)	16 (5.6%)	74 (25.9%)	21 (7.3%)	49 (17.1%)	81 (28.3%)	
MPCa nomogram (n = 2525)												
Probability cutoff:												
≥ 5%	13.2 (± 6.6)	630 (25.0%)	65 (10.3%)	30 (4.8%)	1 (0.2%)	303 (48.1%)	52 (8.3%)	214 (34.0%)	88 (14.0%)	171 (27.1%)	143 (22.7%)	
≥ 10%	14.5 (± 7.3)	515 (20.4%)	50 (9.7%)	24 (4.7%)	0 (0.0%)	224 (43.5%)	39 (7.6%)	154 (30.0%)	54 (10.5%)	122 (23.7%)	138 (26.8%)	
≥ 15%	15.5 (± 7.8)	413 (16.4%)	35 (8.5%)	12 (2.9%)	0 (0.0%)	160 (38.7%)	25 (6.1%)	103 (25.0%)	35 (8.5%)	79 (19.1%)	129 (31.2%)	
≥ 20%	16.1 (± 8.1)	318 (12.6%)	25 (7.9%)	9 (2.8%)	0 (0.0%)	111 (35.0%)	20 (6.3%)	70 (22.0%)	22 (7.0%)	53 (16.7%)	109 (34.3%)	
≥ 25%	16.9 (± 8.5)	241 (9.5%)	16 (6.6%)	5 (2.1%)	0 (0.0%)	74 (30.7%)	15 (6.2%)	51 (21.2%)	14 (5.8%)	38 (15.8%)	89 (36.9%)	
≥ 30%	17.7 (± 8.9)	176 (7.0%)	11 (6.3%)	5 (2.8%)	0 (0.0%)	49 (27.8%)	10 (5.7%)	32 (18.0%)	9 (5.1%)	23 (13.1%)	73 (41.5%)	
≥ 35%	18.8 (± 9.4)	126 (5.0%)	4 (3.2%)	3 (2.4%)	0 (0.0%)	31 (24.6%)	4 (3.2%)	20 (15.9%)	3 (2.4%)	10 (7.9%)	54 (42.9%)	
≥ 40%	19.9 (± 10.0)	77 (3.0%)	2 (2.6%)	2 (2.6%)	0 (0.0%)	14 (18.2%)	2 (2.6%)	9 (11.7%)	3 (3.9%)	6 (7.8%)	39 (50.6%)	
≥ 45%	20.9 (± 10.5)	48 (1.9%)	0 (0.0%)	2 (4.2%)	0 (0.0%)	10 (20.1%)	2 (4.2%)	6 (12.5%)	2 (4.2%)	3 (6.3%)	22 (45.8%)	
≥ 50%	22.0 (± 11.0)	26 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (19.2%)	0 (0.0%)	2 (7.7%)	1 (3.8%)	1 (3.8%)	13 (50.0%)	
MPCa nomogram (n = 2525)												
Probability group:												
0.0 - 4.9%	0.04 (± 0.02)	1895 (75.0%)	434 (22.9%)	534 (27.7%)	126 (6.6%)	1823 (96.2%)	761 (40.2%)	1430 (75.5%)	801 (42.3%)	1341 (70.8%)	9 (0.5%)	
5.0 - 19.9%	10.0 (± 5.0)	312 (12.4%)	40 (12.8%)	21 (6.7%)	1 (0.3%)	192 (61.5%)	32 (10.3%)	144 (46.2%)	66 (21.2%)	118 (37.8%)	34 (10.9%)	
20.0 - 34.9%	14.5 (± 7.3)	192 (7.6%)	21 (10.9%)	6 (3.1%)	0 (0.0%)	80 (41.7%)	16 (8.3%)	50 (26.1%)	19 (9.9%)	43 (22.4%)	55 (28.6%)	
35.0 - 49.9%	17.7 (± 8.8)	100 (4.0%)	4 (4.0%)	3 (3.0%)	0 (0.0%)	26 (26.0%)	4 (4.0%)	18 (18.0%)	2 (2.0%)	9 (9.0%)	41 (41.0%)	
50.0 - 71.0%	22.0 (± 11.0)	26 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (19.2%)	0 (0.0%)	2 (7.7%)	1 (3.8%)	1 (3.8%)	13 (50.0%)	

¹ Confidence interval (CI) widths are calculated for each patient in the group by subtracting the lower 95% CI limit from the upper 95% CI limit associated with the nomogram-predicted probability of minimal prostate cancer for that patient. The median CI width for each group of patients is shown. For example the group of patients with probabilities of 5% or higher had a median CI width of 13.2%, indicating a median possible error rate of approximately 6.6% above or below the estimated probabilities.

² Percent of tumor with Gleason patterns 4 or 5.

³ High risk disease is defined as tumors having one or more of the following adverse characteristics: positive surgical margins, extracapsular extension, seminal vesicle invasion, $\geq 50\%$ Gleason patterns 4 or 5, or tumor volume ≥ 4.0 cc.

⁴ MPCa = minimal prostate cancer: total tumor volume < 0.5 cc, organ-confined, with no Gleason pattern 4 or 5.³

⁵ The contemporary Epstein biopsy criteria for predicting MPCa (PSA density < 0.15 , 2 or less biopsy cores positive for cancer, no core with $> 50\%$ cancer involvement and no Gleason pattern 4 or 5).¹² Their performance was assessed on 2284 patients in the current study with data available for percent of cancer involvement in individual biopsy cores.

⁶ The inclusion criteria for the PRIAS trial (PSA < 10 ng/mL, PSA density < 0.2 , clinical stage $< T3$, 2 or less biopsy cores positive for cancer, Gleason score ≤ 6).⁴ Their performance was assessed on 2525 patients from the current study.