

**Supplementary Table 4. AUC of ROC for Decipher risk scores for metastasis-free survival within five years of RP in the validation group stratified by Gleason score and age factors.**

Gleason score	Age 40 - 78	Age ≤ 55	Age 56 - 70	Age ≤ 70	Age > 70
6 to 10	(n* = 75, 60, 421) 0.80 (0.75, 0.86)	(n = 16, 7, 79) 0.90 (0.79, 0.98)	(n = 46, 47, 298 ) 0.80 (0.73, 0.86)	(n = 62, 54, 377 ) 0.82 (0.77, 0.88)	(n = 13, 6, 44 ) 0.69 (0.52, 0.85)
7 to 10	(n = 75, 59, 357) 0.79 (0.74, 0.84)	(n = 16, 7, 60 ) 0.89 (0.78, 0.97)	(n = 46, 46, 257) 0.78 (0.71, 0.85)	(n = 62, 53, 317) 0.81 (0.75, 0.81)	(n = 13, 6, 40) 0.68 (0.48, 0.83)
7	(n = 32, 26, 252) 0.79 (0.71, 0.86)	(n = 6, 6, 48) 0.90 (NA <sup>^</sup> )	(n = 22, 19, 184 ) 0.75 (0.64, 0.84)	(n = 28, 25, 232) 0.78 (0.70, 0.86)	(n = 4, 1, 20 ) 0.80 (NA <sup>^</sup> )

\*n: number of patients with early metastasis in five year of RP, late metastasis after five year of RP , and without metastasis at last follow up, respectively; <sup>^</sup> NA, due to few metastatic patients, not able to calculate 95% confidence interval by a bootstrap method