

**Supplemental Fig. 1:** Receiver operating characteristic curves for simultaneous <sup>68</sup>Ga-PSMA-11 PET/MRI, preoperative MSKCC nomogram and a model containing both modalities for detection of lymph node metastases (A), ECE (B) and SVI (C).

## Supplemental Table 1. <sup>68</sup>Ga-PSMA-11 PET/MR protocol – Imaging parameters for multiparametric

Sequence	Technique	Repetition Time/Echo Time (msec)	Flip Angle (degrees)	Section thickness (mm)	Feld of View (mm)	Matrix	Parallel Imaging Factor	No. of signals acquired	Time (min:sec)
T2 weighted	3D turbo spin echo	1700/101	135	1	230	320x290	2	1.5	8:01
DW imaging *	axial single- shot echo- planar	5200/93	-	3.6	260	160x120	2	8	6:32
DCE imaging <sup>†</sup>	Axial 3D spoiled gradient echo	6.06/2.01	12	3.6	180	128x88	2	-	4:59

magnetic resonance imaging on the 3-T Siemens Biograph mMR

\* Performed by using *b* values of 0, 400 and 800 sec/mm<sup>2</sup>.

<sup>†</sup> Performed by using a temporal resolution of 5.5 seconds and 55 acquisitions after contrast agent injection during a total imaging time of 5 minutes 5 seconds, with the start of the first acquisition corresponding with the start of the contrast agent injection.