

APPENDIX

Supplementary Table 1. Sequence parameters for multiparametric MRI of the prostate protocol performed with pelvic surface coil^a at 3 Tesla^b											
	Imaging plane	Field of view (mm)	Matrix size	Slice thickness /gap (mm)	TR/TE (msec)	Echo train length	Flip angle	Acceleration factor	Receiver bandwidth (Hz/Voxel)	Acquisition time (min)	Number of signals averaged
T1 TSE ^c	Axial	350 x 350	320 x 320	5.0/1.0	720/ 8-14	3	111	N/A	244	4 min	2
T1 3D dual echo GRE ^d	Axial	240 x 240	292 x 224	4.0/1.0	4.8/1.1-1.3 TE12.2-2.5 TE2	N/A	12	2	558	Breath Hold	1
T2 TSE	Coronal Sagittal Axial	220 x 220	320 x 256	4.0/0 3.0/0 3.0/0	3890-5250/ 105-125	27-35	111	N/A	122	4 min 4 min 4 min	1-2
DWI ^e	Axial	280 x 280	128 x 80	3-5.0/0	4200/ 90	1	90	2	1950	5 min	4-10

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T1 GRE ^f dynamic contrast	Axial	220 x 220	128 x 128	4.0/0	4.3/1.3	N/A	12	2	488	6 min	1
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^aIntegrated pelvic surface coils (4–16 channels) with activated spine coils (8–12 channels). ^bClinical 3 Tesla systems: TRIO TIM (Siemens Medical, Malvern, PA, U.S.) and Discovery 750W (General Electric, Milwaukee, WI, U.S.). ^cTurbo/fast spin echo. ^dGradient recalled echo. ^eDWI=diffusion-weighted imaging performed with spectral fat suppression echo planar imaging with tri-directional motion probing gradients and B values of 0, 500, 1000 with automatic apparent diffusion coefficient map generation. ^fDynamic fast spoiled 2D GRE performed with a temporal resolution of 10 seconds after injection of 0.1 mmol/kg of gadobutrol (Gadovist, Bayer Inc. Toronto, ON) at a rate of 3 ml/sec.

Supplementary Table 2. Prostate cancer radiological estimation of change in sequential evaluation (PRECISE) MRI scoring system	
PRECISE score	Assessment of likelihood of radiological progression
1	Resolution of previous features suspicious on MRI
2	Reduction in volume and/or conspicuity of previous features suspicious on MRI
3	Stable MRI appearance: No new focal/diffuse lesions
4	Significant increase in size and/or conspicuity of features suspicious for prostate cancer
5	Definitive radiologic stage progression