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Supplementary Table 1 Summary of patient clinical parameters

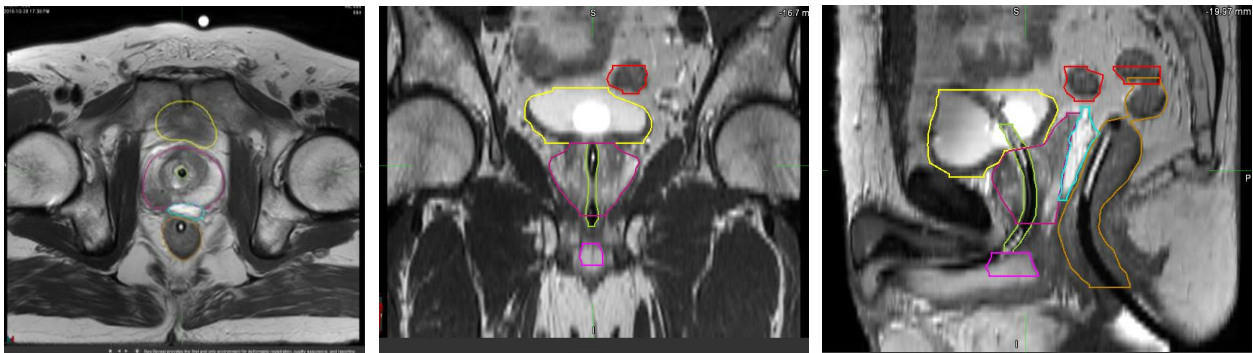
# OF PATIENTS		585
AGE		67.8 (44 - 90)
CLINICAL T STAGE	T1/T1a/T1c	2/4/263
	T2/T2a/T2b/T2c	9/75/41/26
	T3/T3a/T3b	3/66/49
	T4/T4a	16/1
	Tx	5
	*unknown	12
INITIAL PSA		15.6 (0.05 - 1659)
GLEASON SCORE	6	32
	7 (3+4)	232
	7(4+3)	161
	8(4+4, 3+5)	67
	9	84
	5+5	3
	*unknown	6
PROSTATE VOLUME (CC)		45.6 (11 - 142)
DOSE PRESCRIPTION	800x5/750x5/600x5/500x5	318
	270x26	18
	180x40/180x25+180x15	249

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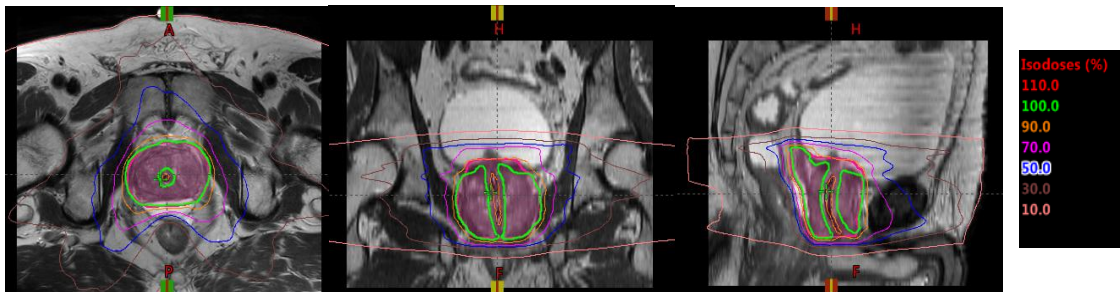
*unknown T stage or Gleason score due to metastatic or recurrent disease

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Contours drawn on a T2w MRI for an example patient



Isodose lines displayed on a T2w MRI for an example patient

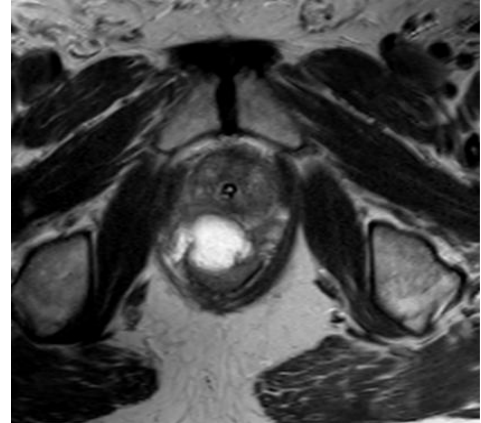
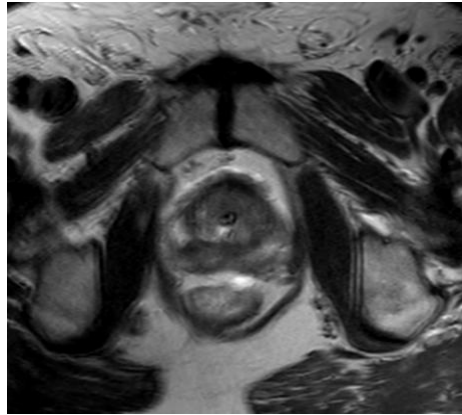


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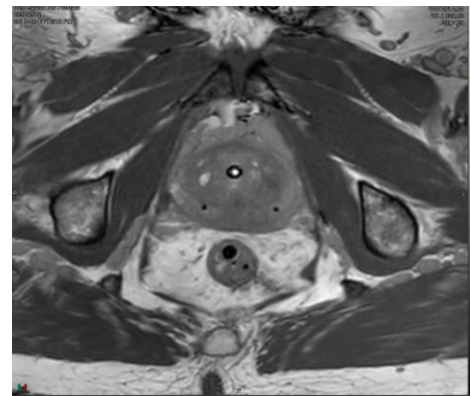
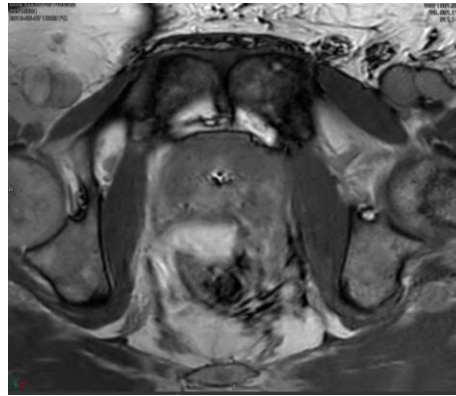
493 Supplementary Figure 1: Contours and dose distributions projected onto axial 2D T2w MRI for peer
494 review during chart rounds in an MR-only workflow

Blurry acquisition

2D T2w MRI



3D bFFE



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496 Supplementary Figure 2: Patient motion resulting in image blur on T2w MRI (top left) and 3D-bFFE MRI
497 (bottom left). Repeat acquisition (right column) improved the motion artifact.

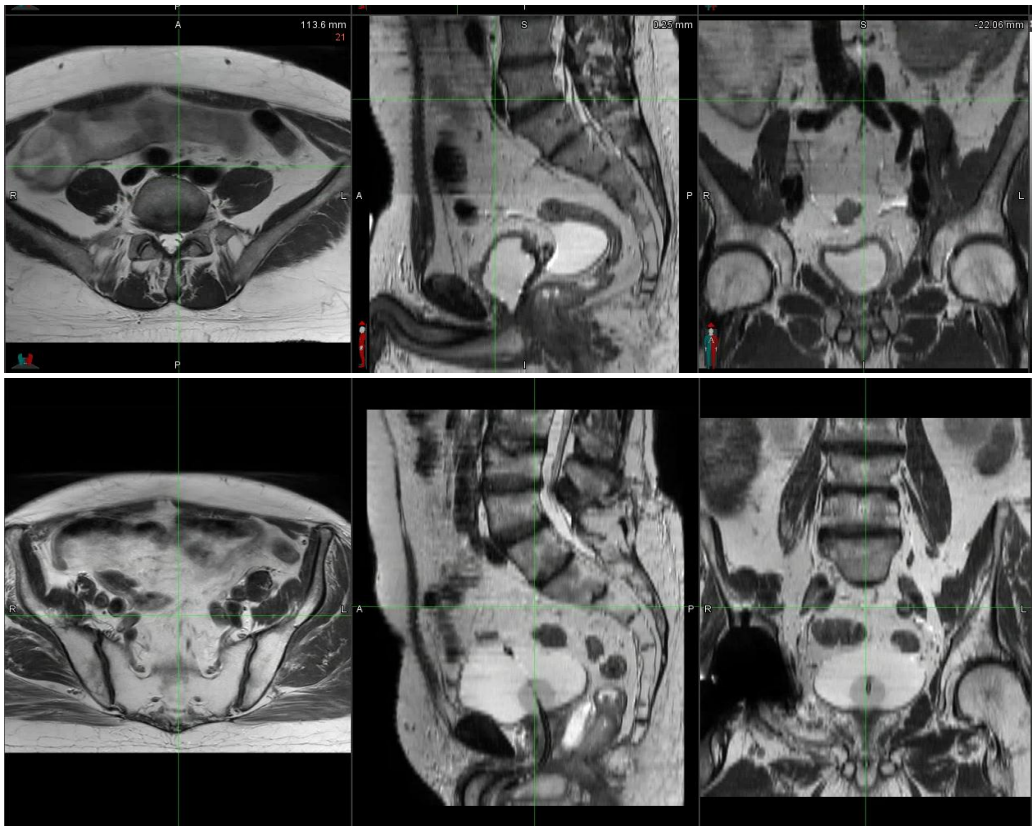
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Before



After



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501 Supplementary figure 3: Effect of B1 inhomogeneity on large FOV T2w TSE acquisition. Before: A
502 single acquisition with two stacks resulting in inhomogeneity due to dielectric effect. After: Acquiring
503 two stacks separately using adaptive inhomogeneity on each individual stack. The stacks were combined
504 using Philip's Mobiview™ software.

Initial bowel check



bowel check after using rectal catheter



505

506 Supplementary figure 4: Example of significant changes to bowel gas challenge during MR-only
507 simulation despite repeated use of a rectal catheter. (a): initial bowel check. (b): bowel check after rectal
508 catheter implementation. (c): Bowel gas after second rectal catheter implementation

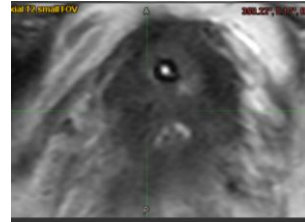
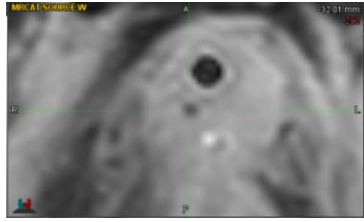
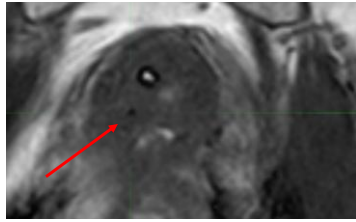
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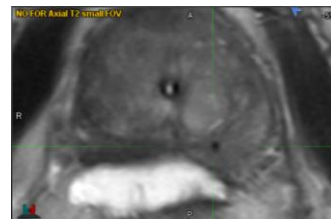
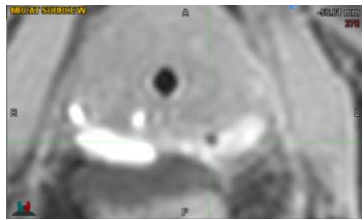
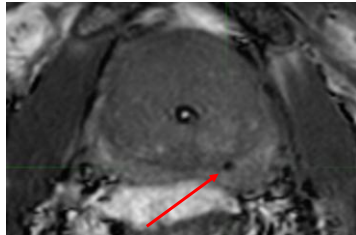
Gold seed MRI

MRCAT source W

T2w MRI



0.9x5 mm
markers



1.1x5 mm
markers

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512 Supplementary Figure 5: Visibility of various size gold seed fiducial markers on different MRIs

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