

Feasibility of deep learning-accelerated ultrafast T1-weighted VIBE Dixon imaging of the pelvis for screening of metastases in prostate MRI

ELECTRONIC SUPPLEMENTARY MATERIAL

Supplemental Table S1 Non-inferiority analysis of diagnostic confidence for DL-accelerated T1-weighted VIBE Dixon sequences compared to the standard sequence

Non-Inferiority Analysis for Diagnostic Confidence

Comparison	Endpoint	Test median [IQR]	STD median [IQR]	HL difference (95% CI)	p-value (non-inf.)	Non-Inf.	<i>n</i> _{det}
T1 _{DL} <i>versus</i> T1 _{STD}	Lymph nodes	5.00 [0.25]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	0/54
T1 _{DL} <i>versus</i> T1 _{STD}	Bone	5.00 [0.33]	5.00 [0.00]	-0.167 (-0.167, 0.000)	< 0.001	Yes	3/54
T1 _{DL} <i>versus</i> T1 _{STD}	Bleeding	4.50 [0.67]	5.00 [0.33]	-0.333 (-0.500, -0.167)	0.007	No*	8/54
T1 _{DL FAST} <i>versus</i> T1 _{STD}	Lymph nodes	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	0/54
T1 _{DL FAST} <i>versus</i> T1 _{STD}	Bone	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	0/54
T1 _{DL FAST} <i>versus</i> T1 _{STD}	Bleeding	5.00 [0.33]	5.00 [0.33]	0.000 (0.000, 0.167)	< 0.001	Yes	0/54
T1 _{DL CE} <i>versus</i> T1 _{STD CE}	Lymph nodes	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	0/54
T1 _{DL CE} <i>versus</i> T1 _{STD CE}	Bone	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	1/54
T1 _{DL FAST CE} <i>versus</i> T1 _{STD CE}	Lymph nodes	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	1/54
T1 _{DL FAST CE} <i>versus</i> T1 _{STD CE}	Bone	5.00 [0.00]	5.00 [0.00]	0.000 (0.000, 0.000)	< 0.001	Yes	0/54

Non-inferiority was assessed using paired Hodges-Lehmann median differences with bootstrap 95% confidence intervals (10,000 resamples) and one-sided Wilcoxon signed-rank tests. A prespecified non-inferiority margin of $\Delta = 0.5$ Likert units was applied. *CI* Confidence interval, *DL* Deep learning, *HL* Hodges-Lehmann. *Non-Inf.* Non-inferior (lower 95% CI > -0.5 and one-sided $p < 0.05$). *n*_{det} Patients with ≥ 1 -point deterioration, *STD* Standard (sequence), *T1* T1-weighted (sequence). *Lower CI bound equals but does not exceed $-\Delta$ (difference).