Supplementary Material

Enhancing patient-specific deep learning based segmentation for abdominal magnetic resonance imaging-guided radiation therapy: a framework conditioned on prior segmentation

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Table S1: Details of the implementation settings as automatically chosen by the nnUNet framework [1].

Preprocessing	Z-Score Normalization
Patch size	[96, 160, 160]
Spacing	[3, 1.5, 1.5] mm (in S-I, A-P, L-R)
Convolutions per stage	2
Normalization	Instance Normalization
Activation Function	LeakyReLU
Loss Function	Dice Loss + Cross Entropy

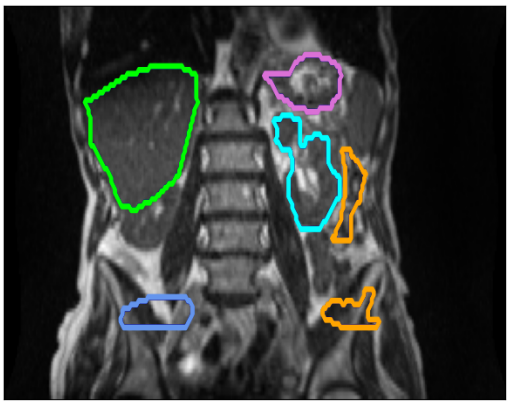

Fig. S1: Example of MR-Fx with corresponding S-Fx. The ROIs are countoured in the following way: bowel - orange; right kidney - blue; left kidney - cyan; liver - green; stomach: purple.

Table S2: Evaluation of the presented approaches (median (interquartile range)) when no rigid registration is performed.

	nnUNet-DC	nnUNet-DE
	DSC [%]	DSC [%]
	NSD [%]	NSD [%]
	HD_{95} [mm]	HD_{95} [mm]
Aorta	35 (63)	79 (12.84)
	23 (53)	73 (12)
	18.6 (21.6)	9.3 (7.6)
Bowel	69 (20)	75 (16)
	39 (19.52)	45 (15)
	20.6 (10.2)	18.4 (11.4)
Duodenum	38 (52)	65 (25)
	32 (39)	55 (28)
	19.5 (14.0)	16.5 (12.1)
Kidney left	79 (53)	90 (7)
	57.7 (56)	77 (18)
	11.4 (25.1)	6.4 (4.7)
Kidney right	80 (33)	90 (17)
	60 (38)	78 (32)
	11.0 (10.4)	7.6 (4.2)
Liver	87 (12)	91 (5)
	47 (28)	58 (16)
	18.3 (13.0)	15.5 (10.9)
Spinal Canal	51 (54)	76 (15)
	40.7 (55)	71 (20)
	13.9 (15.3)	15.5 (4.2)
Stomach	73 (30)	85 (14)
	56 (38)	73 (24)
	20.5 (15.7)	11.9 (10.2)
Average	63 (30)	80 (9)
	46 (29)	66 (13)
	11.7 (9.1)	7.0 (5.0)

References

[1] Isensee F, Jaeger PF, Kohl SA, Petersen J, Maier-Hein KH. nnU-Net: a self-configuring method for deep learning-based biomedical image segmentation. Nat. Methods 2021;18:203–211. https://doi.org/10.1038/s41592-020-01008-z.