

Supplementary Materials

Table S1. Hypo-fractionated MRgRT fractionation protocol scheme. Abbreviations: Fx = fractions; AD = alternate days; D = daily.

Localization	Dose	Target Volume
Prostate Low Risk and Intermediate favorable risk Intermediate unfavorable risk and High risk Prostate Bed Reirradiation	36,50Gy in 5 fx (AD) 60 Gy in 20 fx(D) 40Gy in 5 fx (AD) 32,50 in 5 fx (AD) 30 in 5 fx (AD)	Prostate Prostate (Volumen > 100 cc) Prostate and 2cm Seminal Vesicles Prostate bed
Pancreas Reirradiation	30- 50Gy in 5 fx (D) 36 Gy in 15 fx (D) 25- 35 Gy in 5 fx (D)	Pancreatic tumor +/- clinical elective volume (vascular structure within 5 mm, clinical node positive,...) Pancreatic Tumor and/ or node
NSCLC Peripheral Tumor Central Tumor Ultra Central Tumor	45-60 Gy in 3 fx (AD) 48-50 Gy in 4 fx (AD) 50-60 Gy in 5 fx (AD) 28-34 Gy in 1 fx 50- 55 Gy in 5 fx (AD) 60 Gy in 8 fx (AD) 50 Gy in 10 fx (D) 60 Gy in 12 fx (D)	Lung Tumor
Liver	45-60 Gy in 3 fx (AD) 40- 50Gy in 5 fx (AD) 30 Gy in 10 fx (AD)	Liver Tumor
Adrenal gland	36Gy in 3 fx	Adrenal gland

Table S2. Organs at Risk Constraints protocol for five fractions.

Structure	Volume to dose	(Gy)	Max (Gy)	Mean (Gy)
Esophagus	≤5cc	32,5	38	
Heart	≤15cc	32	38	
Aorta	≤10cc	47	53	
Great Vessels	≤10cc	47	53	
Trachea	≤5cc	45	50	
Bronchus	≤5cc ≤0,04cc	45 50	50	
Chestwall	≤5cc	45	57	
Lung Total	≤950cc ≤37%	12,5 13,5		
Duodenum	<9cc <3cc <1cc	15 20 33		
Liver	<50%	12		
Stomach	<50% <1cc	12 33		
Spinal Cord	<1cc	8		
Kidney	<200cc	17,5		
Bowel (Pancreas)	<5cc	19		
Inferior Vena Cava			30	
Rectum	<50% <50% <20% <10% <5%	20 24 32 36 40	42	
Bowel (Prostate)	<30cc <1cc	20 30		

Bladder	<40% <5% <2%	20 40 39	42	
Femoral Head	<10cc	20		
Penile Bulb	<5%	24,8		<16
PRV Urethra			42	