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Table 1: Dose constraints applied to OARs

Organ at risk	Dose constraint
Spinal cord	$D_{0.05\text{cm}^3} < 45 \text{ Gy}$
PRV Spinal cord	$D_{0.05\text{cm}^3} < 50 \text{ Gy}$
Spinal canal	$D_{0.05\text{cm}^3} < 50 \text{ Gy}$
Lungs	Mean < 20 Gy
Lungs	$V_{20\text{Gy}} < 35\%$
Oesophagus	$D_{1\text{cm}^3} < 70 \text{ Gy}$
Heart	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Heart	$V_{50\text{Gy}} < 20\%$
Trachea	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Bronchi	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Aorta	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Connective tissue*	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Thoracic wall	$D_{1\text{cm}^3} < 74 \text{ Gy}$
Plexus Brachialis	$D_{1\text{cm}^3} < 74 \text{ Gy}$

* delineated as all mediastinal tissue not otherwise defined as OAR. PRV is an abbreviation of planning risk volume.

Table 2: Dose parameters for selected OARs for standard and dose-escalated treatment plans

Organ at risk	Parameter	Standard plan (S)	Escalated plan (E)	E-S	p-value*
		Median (IQR)	Median (IQR)	Median (IQR)	
Lung	Mean [Gy]	13.7 (12.1-16.9)	13.9 (11.9-16.8)	-0.1(-0.4-0.21)	0.302
Heart	Mean [Gy]	7.2 (2.6-12.2)	7.6 (2.6-11.5)	-0.1(-0.3-0)	0.060
Heart	V _{50Gy} [%]	1.61 (0-4.8)	1.73 (0-5.4)	0(-0.2-0.2)	0.85
Heart	D _{1cm3} [Gy]	57.0(20.4-64.5)	57.9(20.1-66.2)	0.6(-0.1-2.3)	0.008
Oesophagus	V _{35Gy} [%]	26.6 (15.1-36.1)	24.9 (12.2-36.0)	0(-1.5-0.3)	0.195
Oesophagus	D _{1cc} [Gy]	65.8 (60.4-66.6)	67.2 (59.6-68.5)	1.3(0-2.9)	0.0037
Bronchi	D _{1cm3} [Gy]	68.1 (67.3-68.9)	72.5 (69.6-73.3)	4.1(2.6-4.8)	<0.001
Connective tissue	D _{1cm3} [Gy]	67.6 (66.8-68.2)	71.0 (69.4-72.1)	3.4(2.8-4.3)	<0.001
Thoracic wall	D _{1cm3} [Gy]	66.7(66.2-67.4)	72.5(70.0-73.8)	5.8(3.6-7.1)	<0.001
Trachea	D _{1cm3} [Gy]	66.1(46.0-67.5)	67.8(42.5-70.8)	1.6(-0.3-4.0)	0.0152
Aorta	D _{1cm3} [Gy]	66.9 (62.2-67.9)	69.0(63.4-72.0)	3.6(2.0-4.6)	<0.001

* The p-values were calculated using Wilcoxon Signed Rank test. IQR is an abbreviation for interquartile ranges where the first to third quartile is used. E-S shows the median values of the difference between the escalated and standard plans for each patient.