

LATTICE Radiation Therapy (LRT) Worksheet

Patient demographic information

Patient diagnostic information

LRT Objective:

- Palliation
- Immune modulation (immediate adjuvant conventional RT NOT recommended)

Others: _____

Combined treatment modality: _____

Target volume and lattice geometry estimate

Volume (cc)	Vertex separation D (cm)	Lattice Inward margin (cm)	k	m	GTV (cc)	# of vertex Int (k*GTV+m)	Vertex Diameter d (cm)	Vertex Volume (V _i) # π d ³ /6	V _i /GTV (%)
50-200	2.0	1.0	0.1500	1.0					
100-300	2.0	1.5	0.1000	-1.5					
200-500	3.0	1.5	0.0393	2.0					
400-6000	4.0	2.0	0.0180	1.0					
600-6000	5.0	2.0	0.0108	2.5					
1000-6000	5.0	3.0	0.0078	0.0					

Example

200-500	3.0	1.5	0.0393	2.0	300.0	13	1.0	6.8068	2.3%
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Prescription

Vertex (peak) D_p (Prescribed Dose covering 95% of the vertices):

Valley (V_i) D minimum :
 D mean(95-100) (average of lower 5% of V_i)*:
 V (D≤5Gy) :

GTV Margin dose:

PTV Margin dose:

Others:

Treatment technique:

Linac: IMRT VMAT Photon Energy _____ Number of field/arc _____

Cyberknife: Number of beams _____ Tracking Mode _____

Particle Beam: Ion type _____ Delivery Mode _____

Immobilization Technique: _____

Treatment Alignment Technique: _____

Motion Management: _____

LRT Dose-volume Data Reporting

Vertices

Number of vertices used	Average vertex diameter (cm)	Total vertices volume (cc)	Average Distance between vertices center-center (cm)	Dmax(Gy)	V(D _p)%	Total vertices Volume to GTV Ratio	V(D _p)/GTV

Lattice Volume

V _i (cc)	Dminimum	Dmean(95-100)*	V(≤5 Gy)	VPDR Dmean(95-100)/D _p

GTV

Dmax	Dmin	D(90)	D(50)	D(20)	D(10)	D(5)	EUD _{a=10}

DVHs of the target and all relevant critical structures