Authorization and Inspection of Linear Accelerators Used in Radiotherapy

Day 2, Exercise 2 – Prescription Worksheet

Written Directive							
Patient Name	Site	Total Dose	Dose/Fx	Fx #	Mode	Energy	Physician Approval

Prescription and Treatment Plan Review Checklist

Prescription

1. All required components of the written directive present?
2. Total dose, dose/fx, and fx # consistent?
3. Mode and energy consistent?
4. Physician's signature present?
5. Is the prescription reasonable for this site?

Treatment Plan and vs Prescription

6. Patient name, MRN, and DOB on treatment plan match the prescription?
7. Is correct site being treated?
8. Treatment intent matches prescription?
9. Total dose, dose/fx, and fx # match prescription?
10. Mode, energy, and dose specification match prescription?
11. MUs reasonable?
12. Are the organ and target contours reasonable?
13. Was the correct dose calculation algorithm used? Grid size and resolution?
14. Is target coverage objective met?
15. Are DVH constraints met (targets and critical organs)?

Day 2, Exercise 2 – Prescription Worksheet

Patient Name:	Wilhelm Roentgen	MRN:	000258	DOB:	3/27/1972
Diagnosis:	C01 – Malignant Neoplasm of Base of Tongue			Prior Tx:	None
Chemotherapy:	Concomitant Cisplatin			Intent:	Curative

Written Directive

Site	Technique	Total Dose	Dose/Fx	Fx #	Mode	Energy	Dose Spec
Base of Tongue	VMAT	70 Gy	2 Gy	35	Photon	6MV	PTV D95%
High Risk Nodal		63 Gy	1.8 Gy				
Low Risk Nodal		56 Gy	1.6 Gy				



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Marie Curie, M.D.

Approved on 3/29/2020 at 11:11

Patient Name:	Henri Becquerel	MRN:	371010	DOB:	12/15/1971
Diagnosis:	C61 – Malignant Neoplasm of Prostate			Prior Tx:	None
Chemotherapy:	No			Intent:	Curative

Written Directive

Site	Technique	Total Dose	Dose/Fx (Gy)	Fx #	Mode	Energy	Dose Spec
Prostate	VMAT	81 Gy	2 Gy	45	Electrons	6MV	PTV D95%
		54 Gy	30 Gy	1.8			
Lymph Nodes		45 Gy	1.8 Gy	25			

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Marie Curie, M.D.

Approved on 2/20/2020 at 20:20

Day 2, Exercise 2 – Prescription Worksheet

Treatment Plan Report

Patient Name: Wilma Roentgen MRN: 000258 DOB: 3/27/1970 Treatment Intent: Palliative	Total Dose: 70 Gy Dose per Fraction: 35 Gy Number of Fractions: 2 Dose specification: 95% Isodose Line

Treatment Field Information

Field Name: Field 1 Technique: VMAT Gantry Start/Stop: 179/181 degrees Gantry Direction: Clockwise Collimator Rotation: 30 degrees Table Rotation: 0 degrees Energy: 18MV MU: 325 X Field Size: 13 cm X1: 7 cm X2: 6 cm Y Field Size: 18 cm Y1: 9 cm Y2: 9 cm	Field Name: Field 2 Technique: VMAT Gantry Start/Stop: 181/179 degrees Gantry Direction: Counter-Clockwise Collimator Rotation: 330 degrees Table Rotation: 0 degrees Energy: 18MV MU: 336 X Field Size: 14 cm X1: 7 cm X2: 7 cm Y Field Size: 19 cm Y1: 10 cm Y2: 9 cm

Dose Statistics – Summation (Prostate Boost/SemVess Boost/Full PTV)

Organ	Max Dose (Gy)	Min Dose (Gy)	Mean Dose (Gy)	D95% (Gy)
PTV Primary_70	73.2	65.3		68.5
PTV High Risk_63	71.8	63.5		63.3
PTV Low Risk_56	68.9	54.5		58.4
Larynx	56.8	54.5	55.1	
Parotids	64.2	13.4	21.3	
Spinal Cord	44.6	0.6	6.6	
Brainstem	49.8	10.4	23.2	

Day 2, Exercise 2 – Prescription Worksheet

Treatment Plan Report

Patient Name: Henri Becquerel MRN: 371010 DOB: 12/15/1971 Treatment Intent: Curative	Total Dose: 90 Gy Dose per Fraction: 2 Gy Number of Fractions: 45 Dose specification: D95% = 90 Gy PTV_Prostate

Treatment Field Information

Field Name: Field 1 Technique: VMAT Gantry Start/Stop: 179/181 degrees Gantry Direction: Clockwise Collimator Rotation: 30 degrees Table Rotation: 0 degrees Energy: 6MV MU: 298 X Field Size: 10 cm X1: 5 cm X2: 5 cm Y Field Size: 12 cm Y1: 6 cm Y2: 6 cm	Field Name: Field 2 Technique: VMAT Gantry Start/Stop: 181/179 degrees Gantry Direction: Counter-Clockwise Collimator Rotation: 330 degrees Table Rotation: 0 degrees Energy: 6MV MU: 286 X Field Size: 10 cm X1: 5 cm X2: 5 cm Y Field Size: 11 cm Y1: 6 cm Y2: 5 cm

Dose Statistics – Summation (Prostate Boost/SemVess Boost/Full PTV)

Organ	Max Dose (Gy)	Min Dose (Gy)	Mean Dose (Gy)	D95% (Gy)
PTV_Prostate	92.1	88.4		90.3
PTV_SemVess	89.3	58.9		60.4
PTV_Nodes	62.0	43.6		50.8
Rectum	88.4	5.8	46.4	
Bladder	91.5	30.4	56.9	
R Femur	54.6	35.6	44.0	
L Femur	55.1	37.8	46.2	