

Disclaimer: Dosimetric guidelines contained herein are not endorsed by University of Michigan for use outside of University of Michigan. Document provided for example only.

Special Medical Physics Consultation – Previous Treatment Evaluation

Guidelines: The special medical radiation physics consultation for evaluation of previous treatment is appropriate when a patient has received radiation to a site relevant to the current treatment. Some examples of why this consultation may be performed are the following: evaluation of treatment overlap, design of field borders, determination of dose fractionation / total dose, and / or determination of tailored dose constraints.

Blue: Physician input

Green: Physicist input

Summary of SMPC Findings:

Physicist(s) performing SMPC:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	All SMPC composite dose limits met (describe in comments if No)
<input type="checkbox"/> Yes <input type="checkbox"/> No	MD peer review requested to evaluate SMPC results (describe in comments if Yes) If requested this peer review is in addition to Chart Rounds
Comments: (Concisely summarize the results of the SMPC here as needed, adding screenshots if useful. This information will be reviewed in Chart Rounds.)	

Prior radiation therapy courses:

Course End Date	Target Area	Target Dose [Gy]	# of Fx	Outside Institution
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Narrative description of previous treatment(s):

Please enter relevant previous treatment information. Outside records, including those in MiChart, should be scanned into ARIA prior to dropping the special medical physics consult task.

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Physician request/medical necessity:

Please describe purpose of evaluation and areas of particular concern:

<input type="checkbox"/>	Assess treatment overlap
<input type="checkbox"/>	Give guidance on dose limits
<input type="checkbox"/>	Create a plan sum for composite doses
<input type="checkbox"/>	Other:


Proposed dose fractionation for new treatment:

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Physician objectives for composite EQD_{2Gy} doses from summed plan that includes discounted prior doses and final plan for this course. Note:

- Volumetric limits cannot be assessed without composite plans. Biocorrected DVH's may be requested for further information.
- Report metric values both with and without tissue repair discount factors
- $\alpha/\beta = 2.5$ unless a different value is requested


Serial

	OAR Name	Constraint Metric is D0.1[EQD2Gy] unless otherwise noted Report D0.1cc[Gy] and D0.1cc[EQD2Gy] unless other metrics listed	Tissue Recovery Factor (TRF) Multiply prior dose by (1-TRF) to reflect unrecovered dose damage For >3 years, 50% discount suggested			
			< 3 mo	3-6 mo	6 mo - 1 yr	1 - 3 yrs
<input type="checkbox"/>	Body If relevant to document max overlap dose outside of other OARs	Report only	0	0.1	0.25	0.5
<input type="checkbox"/>	PTV If relevant to consider if other OARs intersecting current target should be contoured for evaluation	Report only	0	0.1	0.25	0.5
<input type="checkbox"/>	Bladder	85	0	0.1	0.25	0.5
<input type="checkbox"/>	Bowel_Small	54	0	0	0.25	0.4
<input type="checkbox"/>	BrachialPlex	70	0	0.1	0.25	0.5

<input type="checkbox"/>	Brain	Report only <i>Report V100EQD2Gy[cc] and V37EQD2Gy[%]</i>	0	0.1	0.25	0.5
<input type="checkbox"/>	Brainstem	64	0	0.1	0.25	0.5
<input type="checkbox"/>	Bronchus	70	0	0.1	0.25	0.5
<input type="checkbox"/>	CaudaEquina	60	0	0.1	0.25	0.5
<input type="checkbox"/>	Cochlea	45	0	0.1	0.25	0.5
<input type="checkbox"/>	Colon Colon_Sigmoid Bowel_Large	70	0	0.1	0.25	0.5
<input type="checkbox"/>	Duodenum	54	0	0	0.25	0.25
<input type="checkbox"/>	Esophagus	70	0	0.1	0.25	0.5
<input type="checkbox"/>	GreatVes Aorta	100	0	0.1	0.25	0.5
<input type="checkbox"/>	Heart A higher dose limit may be considered in SBRT cases	70 <i>Report D0.1cc[Gy], Mean[EQD2Gy], and V5EQD2Gy[%]</i>	0	0.1	0.25	0.5
<input type="checkbox"/>	Kidneys	CV23EQD2Gy[cc] ≥ 200 <i>Report Mean[EQD2Gy] and V18EQD2Gy[%]</i>	0	0	0	0
<input type="checkbox"/>	Larynx	Report only	0	0.1	0.25	0.5
<input type="checkbox"/>	Musc_Constrict_S	Report only	0	0.1	0.25	0.5
<input type="checkbox"/>	Musc_Constrict_I	Report only	0	0.1	0.25	0.5
<input type="checkbox"/>	OpticChiasm	54	0	0.1	0.25	0.5
<input type="checkbox"/>	OpticNrv	54	0	0.1	0.25	0.5
<input type="checkbox"/>	Rectum	80	0	0.1	0.25	0.5

<input type="checkbox"/>	Retina	50	0	0.1	0.25	0.5
<input type="checkbox"/>	SacralPlex	70	0	0.1	0.25	0.5
<input type="checkbox"/>	SpinalCord	50	0	0.1	0.25	0.5
<input type="checkbox"/>	SpinalCord (< 2mm from target)	55	0	0.1	0.25	0.5
<input type="checkbox"/>	Stomach	54	0	0	0.25	0.4
<input type="checkbox"/>	Trachea	70	0	0.1	0.25	0.5
<input type="checkbox"/>						

Parallel

	OAR Name	Constraint	Tissue Recovery Factor (TRF) Multiple prior dose by (1-TRF) to reflect unrecovered dose damage			
			< 3 mo	3-6 mo	6 mo - 2 yr	> 2 yr
<input type="checkbox"/>	Lungs-GTV or Lungs-ITV	CV16EQD2Gy[cc] ≥ 1000 <i>Report NTCP, V20EQD2Gy[%], Mean[EQD2Gy], and Mean[Gy]</i>	0	0	.25	.5
<input type="checkbox"/>	Liver	CV32EQD2Gy[cc] ≥ 700 <i>Report DC700cc[EQD2Gy], and Mean[EQD2Gy]</i>	0	0	.5	1
<input type="checkbox"/>	Liver-GTV	Report only <i>Report NTCP and Mean[EQD2Gy]</i>	0	0	.5	1
<input type="checkbox"/>						

Physicist recommendations prior to planning:

When needed, work with dosimetry to construct plan sum representing prior dose. Indicate particular issues to be mindful of when planning for this course.

Comments:		
New allowed doses based on initial assessment:		
OAR Name	# of Fx	Total Dose (Gy)

Physicist analysis after completion of final plan:

Use DVHAnalysis to assess Dose Metrics indicated by physician on composite plan if available. If plan sums were not possible, provide narrative indicating estimations of requested doses where possible.

Comments:

Final Physician Acknowledgement:

Approval of this document acknowledges the work performed. Additional comments may be added below if desired.
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Physicist: <Signed By> <Signed date time>

Physician Approval: <Approved By> <Approved date time>
Electronically signed by controlled access password