

Instructions in red with respect to development of the form in the online database:

- Form to be entered one time per subject post-treatment.
- Numerical values formatted xx.x unless otherwise specified.
- Specified numeric ranges are inclusive.
- This form can be separated into sections. The user should be able to click on a link to go directly to any of these sections to begin data entry.
 - Simulation
 - Targets
 - Treatment Planning
 - Treatment Delivery and Image Guidance
- It is possible that different users at an institution will fill out this form. For example, a physicist and dosimetrist may fill out different parts of the form.

Simulation

1. Which lung has the primary tumor?
₁ Right ₂ Left
2. Select the primary method used to assess the motion of the tumor and organs-at-risk during **simulation**.
₁ 4DCT ₄ Motion not assessed
₂ Slow CT ₅ Other. Please specify: _____
₃ Scans at multiple breath hold states

Targets

3. How was motion accounted for during the treatment of this patient? Check all that apply.
₁ ITV approach: no motion control technique was applied, but the target volumes were designed to account for breathing motion (using 4DCT, scans at multiple breath hold states, slow CT, etc.)
₂ Voluntary breath hold without a device
₃ Breath hold with a device (ABC, SDX, etc.)
₄ Gating of radiotherapy (RPM, AlignRT, etc.)
₅ Abdominal compression
₆ Motion was not taken into account while designing volumes or by a motion management technique
₇ Other. Please specify: _____
4. What was the reason for not considering motion in accordance with the MROQC target delineation guidelines? [If Q3 = "Motion was not taken into account..."]
₁ 4DCT not available at time of simulation
₂ Use of slow CT was not feasible, due to time constraints or experience with technique
₃ Physician preference
₄ Other. Please specify: _____
5. Was motion considered in the delineation of target volumes? [If Q4 = "Other. Please specify:"]
₁ Yes
₂ No

6. Was a GTV or IGTV structure contoured?
₁ Yes
₂ No
7. Select the name of the GTV structure: [If Q6 = "Yes"] [Drop-down menu: GTV, GTVp, IGTV, Other. Please specify:]
8. Was a CTV or ICTV structure contoured?
₁ Yes
₂ No
9. Select the name of the CTV structure: [If Q8 = "Yes"] [Drop-down menu: CTV, CTVp, CTV_High, ICTV, Other. Please specify:]
10. What is the approximate margin between the GTV structure and CTV structure in cm? [If Q6 = "Yes" and Q8 = "Yes"] _____ cm
11. Was a PTV structure contoured?
₁ Yes
₂ No
12. Select the name of the primary PTV structure: [If Q11 = "Yes"] [Drop-down menu: PTV, PTVp, PTV_High, Other. Please specify:]
13. What is the approximate margin between the CTV structure (or GTV structure if CTV structure was not defined) and primary PTV structure in cm? [If Q11="Yes"] _____ cm
14. Enter the dose prescribed to the primary PTV structure (Gy): _____ [between 1 and 90]
15. Choose the number of additional PTVs (spatially distinct or boosted volume) [Drop-down menu: 0-4]
16. For each additional PTV:
[The user should be able to complete this process for as many PTVs as were indicated in Q15]
- a. Enter the name of the additional PTV structure: _____
- b. Enter the dose prescribed to the additional PTV structure (Gy): _____ [between 1 and 90]

Treatment Planning

17. Do any of these structures overlap with a 2 cm expansion of any PTV? Check all that apply.
- | | |
|--|--|
| <input type="checkbox"/> ₁ Spinal cord | <input type="checkbox"/> ₆ Great vessels |
| <input type="checkbox"/> ₂ Heart | <input type="checkbox"/> ₇ Proximal bronchial tree |
| <input type="checkbox"/> ₃ Esophagus | <input type="checkbox"/> ₈ Other structure of interest. Please specify: _____ |
| <input type="checkbox"/> ₄ Brachial plexus | <input type="checkbox"/> ₉ No, the PTV is greater than 2 cm from all other structures |
| <input type="checkbox"/> ₅ Chest wall / Rib | |
18. Select the number of plans treated _____ [Drop-down menu: 1-10]

19. For each plan, specify:

[The user should be able to complete this process for as many plans as were indicated in Q18]

a) Planning type

- ₁ Forward planning
₂ Inverse planning

Note: Inverse planning assumes computer-assisted plan optimization using an objective function.

b) Dose **delivered** with this plan (Gy) _____ [between 1 and 90]

c) Number of fractions **delivered** with this plan _____ [between 1 and 40]

d) Reason for plan

- ₁ Initial
₂ Planned Boost
₃ Planned Adaptation
₄ Unplanned Modification

e) If not initial, what was the reason? [if Q19d = "Planned Adaptation" or "Unplanned Modification"]

- ₁ Minimize dose to critical structures (e.g. off-cord or off brachial plexus boost)
₂ Patient anatomy change (e.g. lung inflation, pleural effusion change)
₃ Change in motion management strategy
₄ Other. Please specify: _____

f) Was this plan considered SBRT?

- ₁ Yes
₂ No

g) Did the patient receive all of the planned dose?

- ₁ Yes
₂ No

h) If no, enter **planned** dose for primary target: _____ Gy [If Q19g = "No"] [between 1 and 90]

i) If no, enter **planned** number of fractions: _____ [If Q19g = "No"] [between 1 and 40]

Treatment Delivery and Image Guidance

20. What type of imaging was used to verify this patient's setup?

- ₁ kV/MV portal
₂ CT (CBCT or TomoTherapy CT)
₃ Films
₄ Video-based system
₅ Other. Please specify: _____

21. For each imaging type, specify how often the patient was imaged during treatment. [Provide drop-down menu for each response selected in Q20]

- ₁ Daily ₃ Less than daily but more than weekly
₂ Weekly ₄ Other. Please specify: _____