

RTOG 1106 Dry Run/Benchmark Patient Summary & FAQ

Patient Summary:

The dry run/benchmark patient is a 77 year old gentleman with significant comorbidities. He has Stage 3B T3N3M0 NSCLC of the right upper lobe with positive right hilar, mediastinal, and supraclavicular nodes. He has received no previous chemotherapy or radiation therapy and has good performance status.

The case is to be planned per protocol instructions for Arm 2, the experimental arm, of RTOG 1106.

Frequently Asked Questions:

Q1: Are patients with N3 disease/supraclavicular nodes eligible for the study?

A1: Yes, these nodes should be included in the CT1GTV or PT1GTV, as noted on imaging.

Q2: Why are there so many datasets?

A2: This dry run/benchmark is meant to be a true credentialing case for the RTOG 1106 study and therefore is designed to be a full imaging dataset from a patient being treated under the protocol. For the purpose of this dry run, please consider the patient will be treated free breathing with no motion control. As such, the patient received a 4DCT (10 phases plus an untagged/average scan for dose calculations) for ITV delineation, a contrast CT scan to aid in GTV delineation (if needed), and a PET/CT. The same image set is given for the adaptive phase of treatment. We realize that contouring on all 4DCT phases may be a bit cumbersome and if it's not feasible in your planning system, you may use the most extreme phases of the 4DCT (generally the 0% and 50% phases) to create an ITV and make sure it encompasses the tumor motion.

Q3: Should the CT and PET GTV contours be completely independent?

A3: Yes, the CT contours should be done without any knowledge of the PET imaging and vice versa. For example, if there is an enlarged node on CT that isn't PET avid, then it should be included in the CT1GTV, but not in the PT1GTV.

Q4: What is the priority in areas of OAR/PTV overlap or when the PTV is in very close proximity to a normal tissue with a maximum dose limit?

A4: The normal tissue limits should be the top priority. It is considered an acceptable deviation in the protocol to underdose the PTV in areas of overlap or close proximity with OARs. In this situation, we'd like the minimum dose to the PTV in the overlap region to be as close as possible to the maximum dose allowed in the overlapping OAR.

Q5: My final mean lung dose is < 20 Gy. Is this acceptable?

A5: Yes, we don't expect every case to be limited by the MLD or be right at 20 Gy. Depending on the other OARs, tumor location, and PTV reduction in the adaptive plan, the MLD may end up being < 20 Gy. As long as you use the maximum allowable dose based on your screening plan, your final MLD can end up being < 20 Gy. If your screening plan is not conformal and doesn't aim to reduce MLD, then you may see a very large discrepancy. In this situation, the screening plan should be reevaluated to see if it could have been improved (which would have resulted in a lower MLD and higher dose bin).

Q6: Are there any special submission instructions?

A6: Please follow the submission guidelines outlined in Section 12 of the protocol (which is available on the RTOG webpage). You will submit your digital RT data to TRIAD. For information regarding TRIAD installation, upload, or other TRIAD issues, please contact the IROC Philadelphia-RT office (formerly RTOG RT Quality Assurance) at (215) 574-3219 or, you can contact TRIAD-Support@acr.org. Being that this is a Dry Run, there would be no T1 Radiotherapy Form to complete. The case should be labeled as a dry run on the DDSI digital data submission form and choose 'Benchmark' in TRIAD.