

# RPC WEBPAGE NEWSLETTER

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## **What is the availability of RPC phantoms for IMRT credentialing?**

Several clinical trials currently offered by the [RTOG](#) and other study groups allow, or are investigating, the use of IMRT. [Guidelines](#) published by the [NCI](#) advise that institutions be credentialed before they participate in these protocols. Two mechanisms for credentialing are available. [QARC](#) has developed an IMRT benchmark treatment plan that is accepted for certain protocols. The RPC provides a family of anthropomorphic phantoms that are required by the [RTOG](#) and accepted by [COG](#). The phantoms are shipped to an institution, which conducts imaging procedures, prepares a treatment plan, and delivers the plan to the phantom. The phantom is then returned to the RPC where the dosimeters are removed and analyzed.

The RPC has designed and constructed four phantom models to evaluate advanced treatment technologies that represent the head (brain), the head and neck, the thorax and the pelvis. Phantoms simulating the breast and the liver are under development. The head & neck phantom is required for RTOG H&N protocols 0022 and 0225 and may be used for the RTOG prostate protocol 0126 as well as the COG ACNS 0331 medulloblastoma protocol. The pelvis phantom may be used for the prostate protocol, and the lung phantom is a requirement for RTOG 0236, a new trial of stereotactic body radiation therapy (SBRT). The liver phantom under development will be used to credential institutions for RTOG 0245, a proposed trial of IMRT for treatment of liver tumors. Until development of the phantom is completed, the thorax phantom will be used, with different irradiation requirements than for the lung SBRT protocol.

To meet the demand for credentialing, the RPC has built several copies of each phantom model. At the moment, H&N and pelvis phantoms are available immediately to institutions needing them for credentialing. There is a short waiting list for the thorax phantom, but institutions should not have to wait more than several weeks, barring an unexpected increase in demand.

To help us minimize the wait for phantoms, the RPC asks that institutions carefully review the [requirements for credentialing](#) and the specific [procedures](#) for obtaining and irradiating the phantoms. Institutions are requested to anticipate the effort required and plan to return the phantom after no more than one week.

In addition, institutions are reminded that credentialing for most of these protocols requires that several requirements for electronic data submission be satisfied. An account must be obtained from the Image-Guided Therapy QA Center ([ITC](#)) in St. Louis, and a "dry-run" treatment plan (of a patient planned in compliance with the protocol) must be submitted. Finally, the RPC expects that institutions will submit the treatment plan performed for the phantom electronically to the [ITC](#). Doing so facilitates our evaluation of the dosimeters.

The procedures for electronic submission, and evaluation of the "dry-run" can be performed prior to, or concurrently with the phantom irradiation. However, institutions are discouraged from requesting the phantom if they anticipate difficulties or delays with meeting the electronic submission requirements.

For further information about the phantoms, or any of our other activities, visit the Radiological Physics Center web page at (<http://rpc.mdanderson.org>).

For previous issues of the RPC Newsletter, please visit the [FAQ](#) page.