

Submitting IGRT Data to the ITC

The preferred method for sending information for credentialing for IGRT is using the DICOM format. The required information is the planning CT dataset plus the daily IGRT datasets. It is also important to include the treatment planning information. This information can be sent as either DICOM or RTOG format. You will also be asked to send the patient shift information for each IGRT dataset in the form of a spreadsheet documenting the changes. The DICOM and planning information will be used to repeat the image fusion process so that a comparison with your shifts can be made.

In some cases, it will not be possible to send the information using the required image transfer formats. This is because some manufacturers use a proprietary format. In this case, the verification process will use “screen-captured” images. The exact details of this process are harder to describe because they are somewhat dependent on the area of the body being treated. The institution should discuss the details of this process with the physicist PI named on the protocol. The general idea of using screen-captured images is to use features of the image registration software to demonstrate the results of the registration process. That is, split screen or spyglass features can be used to demonstrate these results.

The number of IGRT datasets to be sent forward for each patient is usually 5. This number can vary for different protocols. For example, SBRT protocols that use 3 fractions require this number of daily IGRT datasets. Protocols that use many more fractions will use the 5 fractions. In this case, the 5 fractions should be sequential to guard against institutions sending only their best results.

For most protocols, a single up-front patient is needed in order to enter an institution’s first patient on the study. This patient should be selected to best agree with the patients to be treated on the protocol. In addition, the first patient entered on the protocol should be sent for review before entering the second patient. Additionally, the second patient should be sent before entering the third patient. At this point, the institution can enter any number of additional patients.

In order to complete the IGRT credentialing your institution must submit the following to ITC:

- Planning CT with structures, dose and RT plan in DICOM RT format for a single patient treated for a patient treated on or similar to the protocol requirements
- IGRT localization images both before and after corrections
 - Cone-beam CT (CBCT) in DICOM RT format or
 - Two orthogonal images with corresponding DRR’s in DICOM RT format (if available) and screen-captures of the registration of these images
- Completed IGRT spreadsheet documenting patient positioning shifts

After this data has been transmitted to the ITC you must complete a DDSI for the ITC and then email the ITC at itc@wustl.edu

After the IGRT review is completed your site will receive an approval letter from RTOG to enroll patients onto the study.