

IMRT Facility Questionnaire

Please type this form.

The following items are required before you can enter cases on each RTOG IMRT protocol supported by the Image-Guided Therapy QA Center (ITC):

1. Submit this completed Facility Questionnaire for the IMRT protocol

Image-guided Therapy Center
4511 Forest Park Ave., Suite 200
St. Louis, MO 63108

E-mail: itc@castor.wustl.edu

Phone: 314-747-5414

FAX: 314-747-5423

2. Contact the ITC (itc@castor.wustl.edu) and request an FTP account for digital data submission
3. Submit and successfully complete a protocol specific Dry-Run test
4. A successful phantom experiment may also be required depending on the specific protocol requirements

RTOG Protocol #: _____ **RTOG Institution #:** _____

Institution Name: _____

If Affiliate, Name of Member Institution: _____

Date Questionnaire Submitted: ____ / ____ / ____

Physicist: _____ e-mail: _____

Address: _____

Telephone: _____ Fax: _____

Research Associate: _____ e-mail: _____

Telephone: _____ Fax: _____

Dosimetrist: _____ e-mail: _____

Telephone: _____ Fax: _____

Responsible Radiation Oncologist(s) _____

Telephone: _____ e-mail: _____

1. a. What treatment machine(s) do you use for IMRT treatments? _____

b. Photon energy(s)? _____

2 a. What form of IMRT do you use?

SMLC (step and shoot)

Serial tomotherapy (MIMiC)

DMLC (sliding window)

other _____

b. MLC/device used to deliver IMRT: vendor _____

_____ (#) leaves with _____ cm leaf width at isocenter

_____ Nomos MIMiC in _____ 1cm mode _____ 2cm mode

Other : _____

3. What is your IMRT planning system? _____ Version No. _____

4. Is your treatment planning system capable of transferring a patient's beams to a QA phantom for verification purposes?

yes

no

If no, how do you verify the dose distribution _____

5. What sites do you treat with IMRT?

head and neck

prostate

other (please specify) _____

6. If you treat head and neck (H&N) patients with IMRT:

a. The total number of H&N patients treated with IMRT at your institution is _____

b. Number of H&N patients treated with IMRT in the past 12 months at your institution _____

c. The usual fraction size is _____ cGy

d. The usual number of fractions is _____

e. How are your H&N patients immobilized for IMRT?

head-cup and mask

talon

foam-immobilization mold and mask

other _____

A bite block is routinely used yes no

f. What PTV margins do you usually use for H&N IMRT patients? _____ mm

g. To what isodose line are IMRT treatments for H&N patients commonly prescribed (relative to maximum dose)?

95%

90%

85%

80%

other _____

h. How do you verify field positioning relative to the patient's anatomy?

orthogonal films

beam films using a jaw setting that encloses all segments

other (please be specific) _____

i. How frequently is position verification performed for H&N patients?
 first treatment only weekly other _____

j. How do you verify that the field intensity patterns are delivered as planned?

7. If you treat prostate patients with IMRT:

a. The total number of prostate patients treated with IMRT at your institution is _____

b. Number of prostate patients treated with IMRT at your institution in past 12 months is _____

c. The usual fraction size is _____ cGy

d. The usual number of fractions is _____

e. How are your prostate patients immobilized for IMRT?

knee sponge only thermoplastic cast
 knee sponge and foot holder foam-immobilization mold

other _____

f. What PTV margins do you usually use for prostate patients? _____ mm

g. To what isodose line are IMRT treatments for prostate patients commonly prescribed (relative to maximum dose)?

95% 90% 85% 80% other _____

h. How do you verify field positioning relative to the patient's anatomy?

orthogonal films
 beam films using a jaw setting that encloses all segments

other (please be specific) _____

i. How frequently is position verification performed for prostate patients?

first treatment only weekly other _____

j. How do you verify that the field intensity patterns are delivered as planned?

8. Other than prostate or H&N, what site do you most commonly treat with IMRT? _____

a. The total number of patients treated to this site with IMRT at your institution is _____

b. The number of these patients treated with IMRT at your institution in past 12 months is _____

c. The usual fraction size is _____ cGy

d. The usual number of fractions is _____

e. How are patients immobilized for these treatments? _____

f. What PTV margins do you usually use for this site? _____ mm

g. To what isodose line are IMRT treatments for these patients commonly prescribed (relative to maximum dose)?

95% 90% 85% 80% other _____

h. How do you verify field positioning relative to the patient's anatomy?

orthogonal films

beam films using a jaw setting that encloses all segments

other (please be specific) _____

i. How frequently is position verification performed for these patients?

first treatment only

weekly

other _____

j. How do you verify that the field intensity patterns are delivered as planned?

9. How do you verify that the treatment unit delivers the planned dose for individual patients?

a. Absolute dose

point(s) measurement with

ion chamber (chamber size _____)

diode

TLD

XV film

EDR2 film

radiochromic film

Other: _____

b. Relative dose

isodose distribution with

XV film

EDR2 film

radiochromic film

Gel dosimetry

other _____

in _____ (#) axial planes

& in _____ (#) sagittal planes

& in _____ (#) coronal planes

c. Type of QA phantom:

anthropomorphic phantom Vendor: _____

geometric phantom: _____ (material)

shape: square Cylinder other _____

size of phantom _____ cm X _____ cm X _____ cm

d. For this measurement

- the patient's beams are transferred to the QA phantom by the planning system.
- the patient's beams are not transferred to the QA phantom in software, but an anthropomorphic phantom is used to simulate approximate patient geometry for dose measurements.

e. What agreement between planned and measured doses for individual patients is considered acceptable at your institution?

For absolute dose in target volume (high dose) region _____

For absolute dose in critical normal tissue region _____

For absolute dose in low dose region _____

For relative dose in high dose gradient region _____

For relative dose in low dose gradient region

in high dose region (target) _____

in low dose region _____

f. Are your monitor unit calculations checked by an independent program?

no yes Vendor: _____

10. Are your IMRT treatments monitored by a record and verify system?

no yes What system? _____

11. Treatment Machine Calibration

a. Calibration Protocol: TG-21 TG-51 Other: _____

Frequency of calibration checks: _____
