APPENDIX V

Stereotactic Body Radiation Therapy (SBRT)
Facility Questionnaire

The following items are required before you can enter cases on the stereotactic body radiation therapy protocols supported by the Advanced Technology QA Consortium (ATC):

1. Submit this completed Facility Questionnaire for the RTOG 0236 protocol.

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

   E-mail: itc@castor.wustl.edu
   Phone: 314-747-5415
   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

I. Radiation Oncology: RTOG #: _____ RTF #: _____ NCI #: _____

Facility Name:_____

Address:_____

_____

Is this Facility also known by other name (s)? If so, please provide:

_____

II. PERSONNEL CONTACT INFORMATION

A. Responsible Radiation Oncologist

Name:_____Phone:_____

Address:_____Fax:_____

_____

_____

E-mail _____

B. Physicist

Name:_____

Phone:_____

Address:_____

_____

Fax :_____

E-mail_____

C. Dosimetrist

Name:_____

Address: _____
(if different)

_____

_____

City:_____ State:_____ Zip Code: _____

Phone # :_____ FAX # :_____

E-mail Address: _____

D. Research Associate (Data Manager)

Name:_____

Address: _____
(if different)

_____

_____

City:_____ State:_____ Zip Code: _____

Phone # :_____ FAX # :_____

E-mail Address: _____

III. Stereotactic Body radiation Therapy (SBRT) Equipment (to be used for protocol patients)

A. CT scanner (vendor and model): _____

B. **Treatment planning system** (vendor and model):_____

C. **Treatment Unit:** documentation of linac model, energies to, be used, and description of collimation to be used to define conformal fields (e.g. multileaf, Cerrobend) and/or IMRT system (note that some protocols may not allow IMRT).

1. Vendor/Model _____

_____

D. **Immobilization/Repositioning System:** Documentation of immobilization and repositioning system to be used. Following the recommendations outlined in the specific protocol, submit a copy of patient motion study (set-up uncertainty, organ movement) if smaller margins for the Planning Target Volumes than specified by the protocol are to be used. (Note that some protocols may require a motion study independent of the margins required.)

- ☐ Relocatable frame-based immobilization systems
- ☐ Wall/floor mounted KV energy x-ray repositioning devices
- ☐ Cone-beam tomographic imaging device in the treatment suite
- ☐ CT-on-rails in the treatment suite
- ☐ Other:_____

Please describe your system in detail:_____

_____

_____

E. **Respiration Control System:** Documentation of respiration control system to be used.

- ☐ Treatment beam gating
- ☐ Abdominal compression devices
- ☐ Tumor tracking devices
- ☐ Facilitated breath-hold equipment
- ☐ Other:_____

Please describe your system in detail:_____

_____

_____

F. **Treatment Verification System:** Describe the verification technique (using the level of detail given in the example below) you intend to use for simulating and verifying treatments for patients on this protocol. In addition to the required CT scanning that must be done, what system will you use for the periodic imaging?
(EXAMPLE: Simulation will be carried out according to the description given in section 6.4.1 of the RTOG 0236 protocol. Check images will be obtained with an EPID system one time during each week of treatment and compared to DRRs made from the CT data gathered during the initial simulation. We insert an imaging session between the simulation CT and the first day of treatment. We adjust the patient's marks based on the results of the images obtained during this portal imaging session. We routinely change the patient's

position if we see any deviations on weekly portal images. We save all images. That is, if a change in the patient's setup is made, we save the "before" and "after" images.)

Please describe your verification technique in detail:_____

_____

_____

_____

_____

_____

G. Credentialing for Immobilization/Localization and Respiration Control: Required for RTOG 0236. Describe how the data submitted here were gathered. The procedure below is recommended, but does not have to be followed if it violates you departmental policy. However, if you have modified your procedure from the one described on the ATC website, give the details of the changes here.

(RECOMMENDED PROCEDURE: The simulation CT study will be carried out according to the procedure described in section 6.4.1 of the RTOG 0236 protocol. Do not adjust the patient setup information between simulation and treatment unless such a change is based on at least four imaging sessions carried out for the first four treatment fractions. During the course of treatment, do not change the patient's setup unless a systematic deviation persists for at least four treatment fractions. Clearly document any changes that are made in the patient's setup information, and provide "before" and "after" images.

Description:_____

_____

_____

_____

_____

a. What software do you use to measure the distances from your landmarks and the field edge?_____
_____

b. Describe in words the landmarks you used for making the distance measurements. What code did you use to identify these landmarks (e.g., first landmark coded as #1, etc.)? Use attached Data page for RTOG 0236

IV. Isocenter Verification

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

☐ orthogonal films or electronic portal images
☐ beam films using a jaw setting that encloses all segments
☐ other (please be specific)_____

_____

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

☐ first treatment only ☐ weekly ☐ other _____

2. For protocols that allow IMRT, how do you verify that the field intensity patterns are delivered as planned? _____

_____

_____

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

1. Absolute dose:

☐ point(s) measurement with:

☐ ion chamber (chamber size____) ☐ diode ☐ TLD

☐ XV film ☐ EDR2 film ☐ radiochromic film

☐ other: _____

2. 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

V. Quality Assurance Procedures: (attach additional sheets if necessary)

VI. Other dosimetry and QA procedures:

A. Describe any calculations done to verify the accuracy of the computer generated Treatment plan:

B. Describe any other procedures followed to assure that the dose calculations are in Accordance with the requirements of the protocol:

C. Describe any other quality assurance procedures pertinent to these SBRT procedures:

D. Did your answer in Section III subsection D above include the added uncertainty due to respiratory motion? Or, do you believe that your method of breath control is complete? Please add supporting data to your response to Section III subsection D to account for respiratory motion:

Data Page
RTOG 0236

Patient Name:_____

Simulation Information

Landmark Code	Landmark Name	Date: x_1	y_1
A			
B			
C			

Daily Portal Imaging

Landmark Code	Landmark Name	Fraction #	Date: x_1	y_1	Date: x_2	y_2	Date: x_3	y_3	Date: x_k	y_k
A										
B										
C										

For Office Use Only

☐ Approved

☐ Approved following completion of requirements

☐ Not approved