IROC RI QA Center Questionnaire for Stereotactic Radiosurgery (SRS) with a Gamma Knife

Return the completed form to:
IROC Rhode Island QA Center (QARC)
Building B, Suite 201
640 George Washington Highway
Lincoln, RI 02865-4207

This questionnaire, with the requested information, must be submitted to IROC RI QA Center before patients can be placed on a stereotactic protocol. The data will be used by IROC RI QA Center in the review and verification of protocol treatments.

Check the applicable boxes and write in the requested information. Wherever it says "Describe", you may submit a published paper, an internal report, the vendor’s descriptive literature, or provide a short description. Use additional pages, if necessary.

Please complete a sample RS-1 patient dosimetry summary form for a non-protocol patient treated in your institution.

If you have questions, please call the IROC RI QA Center Protocol Dosimetrist at 401-753-7600 or fax 401-753-7601 or email Physics@QARC.org.

I. General

Institution ________________________________________________________________

Physicist who can answer questions about dosimetry, quality assurance, and dose calculations for stereotactic irradiation:

Name ___________________________ Telephone ____________________________

Address __________________________ Fax ________________________________

Email ______________________________

Will you treat pediatric patients?  Yes ☐  No ☐

If yes, will you routinely anesthetize pediatric patients during the radiosurgery procedure?  Yes ☐  No ☐

If yes, please include a letter documenting the method of anesthesia that will be employed during the procedure.

How long has your institution been performing SRS? _____________________________

Number of SRS cases treated at your institution in the past six months: _________________
II. Equipment

A. Date of Gamma Knife installation: ____________________________
   Date of most recent source replacement: _______________________

B. Head-frame/ Fixation device

   Used for:  CT ☐  MR ☐  Treatment ☐  
   ☐ Commercial system, manufacturer, model: _______________________
   ____________________________
   ☐ System not commercially available. Describe: _______________________
   ____________________________
   ____________________________
   ____________________________

C. Treatment planning system

   Version Number of GammaPlan: ____________________________
   Have you performed any in-house modifications?  Yes ☐  No ☐
   Please describe: ____________________________________________
   ____________________________
   ____________________________
   ____________________________

D. What is the limit, if any, of the number of isocenters? ________________
   Please describe the guidelines used to select the number of isocenters. ________________
   ____________________________
   ____________________________
   ____________________________
   ____________________________

Can the system provide isodoses in three orthogonal planes?  Yes ☐  No ☐
Can the system generate dose-volume histograms for target volume?  Yes ☐  No ☐
   for volumes of interest (normal tissue)?  Yes ☐  No ☐
Can the system perform image fusion?  Yes ☐  No ☐
Is image fusion routinely used for your SRS treatments?  Yes ☐  No ☐
What image set is routinely used for definition of target volumes and normal tissues?
   CT ☐  MR ☐  Fused (i.e. both) ☐
What image set is routinely used for dose calculation?  CT ☐  MR ☐
III. Dose Calculations

A. Please describe the calibration procedure used for this unit when new sources are installed.

B. What routine calibration checks do you perform?

C. How frequently?

IV. Quality Assurance

A. Techniques to verify patient position

Describe:

B. Techniques to verify source “ON/ OFF” accuracy

Describe:

C. Techniques to verify the dose distribution

Frequency: Annual ✔ Periodically ☐

Describe:

D. When the Co-60 source is changed, what QA procedures do you follow, in addition to the calibration procedure described in IIIA?

Describe:

E. How do you verify the dose?

Describe: