Section 1: Radiation Oncology Facility Information

1. Please enter the details of your facility

Facility Name

Site (if applicable)

Questionnaire completed by

Contact phone number

Contact email

Date completed

Section 2: Treatment Technique

Treatment delivery techniques (check all that are used) Please note that IMRT, VMAT and TomoTherapy techniques require completion of a separate facility questionnaire, found at https://www.surveymonkey.com/s/TROG_FQ_IMRT_VMAT_TOMO.

2. Technique

- [ ] Cone Based Linac SRS System
- [ ] Conformal Dynamic Arcs Linac SRS System
- [ ] BrainLab Elements on a Linear Accelerator
- [ ] CyberKnife
- [ ] GammaKnife
- [ ] Other (please specify)

3. For each treatment and immobilisation technique combination used, please state the CTV to PTV margin employed with justification for the margin size:

4. Immobilisation technique (please select all that apply)

- [ ] Stereotactic Frame Based System
- [ ] Frameless Stereotactic Immobilisation System
- [ ] Other

Please provide details

Section 3: Radiation Oncology Planning and Treatment Information

5. How many CNS patients were treated at your facility with SRS/SRT in the last year?

Intra-Cranial Brain Tumour Lesions

Intra-Cranial Vascular Lesions

Extra-Cranial Spinal Lesions

6. Indicate the maximum number of lesions your centre treats:

In a single patient

In a single session

7. Treatment Planning Equipment: CT scanner

Manufacturer and model

Software version

CT acquisition parameter for SRS: kV

CT acquisition parameter for SRS: FOV

CT acquisition parameter for SRS: Slice thickness

CT acquisition parameter for SRS: Reconstruction protocol

8. Treatment Planning Equipment: MRI scanner

Manufacturer and model

Software version

MRI acquisition parameter for SRS: Coil

MRI acquisition parameter for SRS: Voxel size

MRI acquisition parameter for SRS: Please email protocol with detailed parameters

9. Treatment Planning Equipment: PET scanner

Manufacturer and model

Software version

CT Component

Section 4: SRS Treatment Planning

10. Treatment Planning System used for SRS/SRT

Manufacturer and model

Software version

Dose calculation algorithm

Typical dose grid spacing in cm

Plan data export in DICOM-RT format possible

MRI image registration algorithm used; eg. rigid, deformable, other: Please specify

PET image registration algorithm used; eg. rigid, deformable, other: Please specify

Please indicate if image registrations can be exported in DICOM format from your TPS

11. Do you have an additional treatment planning system?

- ◯ Yes (Go to Question 10)
- ◯ No

12. Additional Treatment Planning System used for SRS/SRT

Manufacturer and model

Software version

Dose calculation algorithm

Typical dose grid spacing in cm

Plan data export in DICOM-RT format possible

MRI image registration algorithm used; eg. rigid, deformable, other: Please specify

PET image registration algorithm used; eg. rigid, deformable, other: Please specify

13. Do you use any additional (3rd party software) software for the purpose of image registration?

Manufacturer and model

Software version

Plan data export in DICOM-RT format possible

MRI image registration algorithm used; eg. rigid, deformable, other: Please specify

PET image registration algorithm used; eg. rigid, deformable, other: Please specify

Section 5: Treatment Unit and Image Guidance for SRS/SRT techniques

14. Treatment Unit for SRS/SRT techniques

Manufacturer and model

Year of installation

15. For the above treatment unit please indicate nominal beam energies. Where applicable please indicate whether flattening filter free energies.

16. Please indicate the MLC leaf thickness used for SRS/SRT

17. Image guidance for SRS/SRT techniques (tick all that apply)

- [ ] Stereotactic 2D X-Ray Projection Images (e.g. Varian OBI, BrainLab Novalis System)
- [ ] CyberKnife 2D-2D Image Match System
- [ ] 3D-3D Image Match System (e.g. Onboard MVCT or KV/MV CBCT)
- [ ] Fiducial Based Image Match (e.g. infrared or implanted markers)
- [ ] Other (please specify)

18. What are your SRS/SRT Image Guidance Action Levels?

19. Please indicate couch movement capabilities:

- ◯ Translation Only
- ◯ Translation and Rotation

Other (please specify)

20. Do you have an additional treatment unit for SRS/SRT?

- ◯ Yes (If yes, please answer Q16)
- ◯ No

Section 5: Additional Treatment Unit and Image Guidance for SRS/SRT techniques

21. Additional Treatment Unit for SRS/SRT techniques

Manufacturer and model

Year of installation

22. For the above treatment unit please indicate nominal beam energies. Where applicable please indicate whether flattening filter free energies.

23. Please indicate the MLC leaf thickness used for SRS/SRT

24. Image guidance for SRS techniques (tick all that apply)

- [ ] Stereotactic 2D X-Ray Projection Images (e.g. Varian OBI, BrainLab Novalis System)
- [ ] CyberKnife 2D-2D Image Match System
- [ ] 3D-3D Image Match System (e.g. Onboard MVCT or KV/MV CBCT)
- [ ] Fiducial Based Image Match (e.g. infrared or implanted markers)
- [ ] Other (please specify)

25. What are your SRS/SRT Image Guidance Action Levels?

26. Please indicate couch movement capabilities:

- ◯ Translation Only
- ◯ Translation and Rotation

Other (please specify)

Section 6: Staff training

27. Describe any local staff training for IGRT target matching

28. Describe any external IGRT training completed by staff for IGRT target matching

29. Please provide a copy of local information and QA protocols by email to qa@trog.com.au.

PROTOCOLS/INFORMATION REQUIRED:
- Immobilisation technique, including photo
- IGRT QA including tolerances and action levels
-Treatment machine-specific QA for SRS/SRT
- Patient-specific QA

Please complete the question below to indicate that the above information has been emailed to qa@trog.com.au

- ◯ Yes, local information and QA protocols emailed
- ◯ No, local information and QA protocols not emailed

Section 7: External Dosimetry Audit, Physics QA Procedure and SRS/SRT Service Audit

EXTERNAL DOSIMETRY AUDIT

Please provide details of all external audits for SRS techniques by recognised bodies within the last 5 years.

30. Level 1 Audit Details

Auditing body and country

Date of audit report

Postal OR site visit

Report emailed to qa@trog.com.au (Yes/No)

31. SRS/SRT Specific Dosimetric Audit Details

Auditing body and country

Date of audit report

Postal OR site visit

Anatomical site

Report emailed to qa@trog.com.au (Yes/No)

32. Any other external dosimetric audit not listed above:

Auditing body and country	
Date of audit report	
Postal or site visit	
Anatomical site	
Report emailed to qa@trog.com.au (yes/no)	

PHYSICS QA

33. Please describe your isocentre verification method and any end to end test that incorporates TPS-IGRT verification.

Solberg TD, Medin PM, Mullins J Li S. (2008) Quality assurance of immobilization and target localization systems for frameless stereotactic cranial and extracranial hypofractionated radiotherapy. Int J Radiat Oncol Biol Phys, 71. S131-5.

34. Define/describe the frequency of your isocentre verification procedures.

35. Is the isocentre position verification performed for all beam energies used for SRS/SRT?

36. Please provide a copy of and describe your small field commissioning protocol

37. List the detectors used to detect small field (</= 2cm) output factors:

1.

2.

3.

4.

38. Describe correction factors applied to these detectors and provide references where appropriate

39. For each SRS/SRT dataset, provide a list of measured output factors for field sizes </=2cm

40. What QA is performed on your CT scanner with acquisition parameters detailed above? What is the frequency? What are typical results and tolerances?

41. What QA is performed on your MR scanner with the acquisition parameters specified above? What are typical results and tolerances?

SRS/SRT FACILITY AUDIT

42. Has your facility undergone an external review of your SRS/SRT service (eg. Novalis Certification)?

- ◯ Yes
- ◯ No

Please Comment

43. If yes (Q.34), please provide:

Audit Description

Date of Audit

44. If yes (Q.34). please provide details of audit outcome:

- ◯ Pass
- ◯ Conditional Pass
- ◯ Fail

If a conditional pass, please identify the issues that are under review:

Section 8: Additional Relevant Information

45. Please provide any further information which may be relevant to your participation in TROG trials

TROG values your participation in their research and is grateful for your support in completing this questionnaire. All data will be handled confidentially and only for the purpose of TROG clinical trials.

Please notify qa@trog.com.au when you have completed the survey and attach any relevant reports as requested in the questionnaire.