FACILITY OUESTIONNAIRE

Section 1: Contact Information

☐ Initial Submission ☐ Revised as of ☐☐/☐☐/☐☐

Principal Investigator:

Surname: _____ **First Name:** _____

Title: _____ **Email:** _____

Tel: _____ **Fax:** _____

Co-Investigators: Please attach additional contact details pages as needed

Name: _____ **Email:** _____

Name: _____ **Email:** _____

Name: _____ **Email:** _____

Name: _____ **Email:** _____

Radiation Oncology Facility Name and Address:

_____

_____

_____

Physicist:

Surname: _____ **First Name:** _____

Email: _____ **Tel:** _____ **Fax:** _____

Radiation Therapist

Surname: _____ **First Name:** _____

Email: _____ **Tel:** _____ **Fax:** _____

Trial Coordinator:

Surname: _____ **First Name:** _____

Email: _____ **Tel:** _____ **Fax:** _____

FACILITY OUESTIONNAIRE

Section 2: Treatment and Simulation Techniques

The answers to the following questions should correspond to how you intend to simulate/plan/treat patients:

1. Does your centre use, or intend to use IMRT techniques for RAVES patients? ☐ Yes ☐ No

2. Specify treatment planning CT slice thickness:_____ mm

3. Do you use IV contrast: ☐ Yes ☐ No *If yes, briefly describe protocol*:_____

_____

4. If you use contrast in the bladder, do you adjust the heterogeneity correction for the bladder to account for lack of contrast during treatment (e.g. a "bulk correction" applied)? ☐ Yes ☐ No

5. Do you routinely use MRI to assist with treatment planning? ☐ Yes ☐ No

   If yes, do you fuse these images with CT when planning? ☐ Yes ☐ No

6. Do you use a bladder filling protocol? ☐ Yes ☐ No *If yes, briefly describe protocol*:_____

_____

_____

7. Do you use a rectal filling protocol? ☐ Yes ☐ No *If yes, briefly describe protocol*:_____

_____

_____

8. Do you use: ☐ Blocks ☐ MLC?

   If MLC, give leaf width:_____ mm

   Block/MLC Margin: _____cm

FACILITY OUESTIONNAIRE

Section 2: Treatment and Simulation Techniques, *continued*

9. What beam arrangements do you typically use?

Gantry Angle (deg)	Field size (cm)	Radiation energy	Weight

10. What patient position do you use? ☐ Prone ☐ Supine

11. What immobilisation device do you use:

☐ Alpha cradle ☐ Hip fix ☐ Ankle support ☐ Knee support

☐ Foot blocks ☐ Pelvic cradle ☐ Other: _____

Section 3: Treatment Planning System Details

12. What type of treatment planning system do you use?

☐ Eclipse ☐ Plato ☐ Theraplan ☐ Xio

☐ Oncentra ☐ Pinnacle ☐ Other: _____

13. Is heterogeneity accounted for in 3D Plan? ☐ Yes ☐ No

14. Describe the method used for independent monitor unit calculation (i.e. independent of primary or normal planning system) _____

_____

_____

_____

_____

FACILITY OUESTIONNAIRE

Section 4: Quality Assurance for 3DCRT techniques
If your site is planning to use IMRT, please also complete Section 6.

Accuracy Study:

Have you completed the RADAR set-up accuracy study?

☐ No ☐ Yes If yes, when: ☐☐/☐☐/☐☐

Port film/image policy: To verify patient positioning

1. Which mode does your site use? ☐ EPI ☐ Film ☐ kV orthogonal imaging

   ☐ MVCBCT ☐ kVCBCT ☐ Ultrasound (e.g. BAT) ☐ Other: *specify*_____

2. What is your frequency of imaging?_____

3. What protocol do you use to correct patient positioning error? ☐ on-line* ☐ off-line

   ** An on-line correction protocol is defined as a protocol where the patient position is corrected prior to treatment based on imaging acquired immediately prior to treatment, i.e. image, shift, treat.*

4. What is your threshold level for making a correction to the patient position? _____ mm

5. What image matching software do you use? ☐ At treatment console using linac proprietary software

   ☐ Varis ☐ Aria ☐ Impac ☐ Mosaiq ☐ Other:_____

6. What is your reference image source? ☐ DRR ☐ Other:_____

Section 5: Submission Notes

Form completed by:_____ **Date:** ☐☐/☐☐/☐☐

FACILITY OUESTIONNAIRE

Section 6: IMRT

To be completed by sites treating RAVES patients with inverse planned IMRT.
If RAVES patients will not be treated with IMRT, do not complete this section.

Section 6 is used to facilitate credentialing and registration of your radiotherapy centre for use of Intensity Modulated Radiation Therapy (IMRT) inverse planned techniques. Please fill out all that applies to your institution. The questionnaire also requires some quality assurance information which will help to interpret trial data. Please provide measured information NOT the manufacturer's specification. All information will be handled confidentially and only used in the context of the RAVES 08.03 trial. If you have any questions or concerns please do not hesitate to contact Annette Haworth: Annette.haworth@petermac.org.

External IMRT Audit or Intercomparison Program Experience

Are you participating in any IMRT audit or intercomparison program? ***Tick all that apply***

☐ RPC IMRT program ☐ TROG 08.01: PROFIT. Please state date: _____

☐ Other: _____

Please attach results to this form.

A. IMRT Equipment

1. IMRT planning system : _____
2. Smallest field size used for commissioning: _____
3. Photon dose calculation algorithm: _____
4. Dose calculation matrix typically used: _____ mm x _____ mm x _____mm
5. Inhomogeneity correction used: ☐ none ☐ bulk density ☐ pixel
6. Data export capability: ☐ RTOG format ☐ DICOM RT ☐ structures
   ☐ dose objects ☐ DRR ☐ fluence maps ☐ MLC leaf positions
   ☐ other (specify): _____

FACILITY OUESTIONNAIRE

B. Treatment unit(s) used for IMRT: *Please copy this page if more than two units are in use*

1. **Linear accelerator 1:** Vendor: _____ Model: _____

Install date): _____ Treatment couch (model): _____

Couch top: ☐ carbon fibre ☐ other: _____

Multi-leaf collimator vendor: _____ Model: _____

Leaf width at isocentre for the central leaves: _____

Measured reproducibility of leaf position: _____ +/-_____ mm (2SD) ____

Measured leakage under closed leaf: _____% interleaf: _____% of CAX dose

Electronic portal imaging: Vendor: _____ Model: _____

Ability to export EPI: ☐ DICOM ☐ Bitmap ☐ other (specify): _____

Which mode does your site intend to use? ☐ EPI ☐ Film ☐ kV orthogonal imaging

☐ MVCBCT ☐ kVCBCT ☐ Ultrasound (eg BAT) ☐ Other: *specify*_____

2. Linear accelerator 2: Vendor: _____ Model: _____

Install date): _____ Treatment couch (model): _____

Couch top: ☐ carbon fibre ☐ other: _____

Multi-leaf collimator vendor: _____ Model: _____

Leaf width at isocentre for the central leaves: _____

Measured reproducibility of leaf position: _____ +/-_____ mm (2SD) ____

Measured leakage under closed leaf: _____% interleaf: _____% of CAX dose

Electronic portal imaging: Vendor: _____ Model: _____

Ability to export EPI: ☐ DICOM ☐ Bitmap ☐ other (specify): _____

Which mode does your site intend to use? ☐ EPI ☐ Film ☐ kV orthogonal imaging

☐ MVCBCT ☐ kVCBCT ☐ Ultrasound (eg BAT) ☐ Other: *specify*_____

3. Will more than two treatment units be used for IMRT? ☐ Yes ☐ No

If yes, indicate number of additional units: _____ and photocopy this page as needed.

FACILITY OUESTIONNAIRE

C. IMRT process

1. What form of IMRT do you use?

☐ Physical compensators ☐ SMLC (step and shoot)

☐ DMLC (sliding window) ☐ other _____

2. 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? _____

_____

_____

_____

D. IMRT Quality Assurance

1. How do you verify that the treatment unit delivers the planned dose for individual patients (relevant to the RAVES trial)? ***Tick all measurements that apply***

☐ Each individual field at the treatment gantry angle

☐ Each individual field at a fixed gantry angle (e.g. 0 deg)

☐ All fields as a composite dose evaluation at the treatment gantry angles

☐ All fields as a composite dose evaluation at a fixed gantry angle (e.g. 0 deg)

☐ Measurements not made (MU check only)

☐ Other, please specify: _____

2. How do you verify absolute dose points? ***Tick all that apply***

☐ Ion chamber (chamber size) ☐ Diode ☐ TLD ☐ XV film

☐ EDR2 film ☐ Radiochromic film ☐ Other: _____

FACILITY OUESTIONNAIRE

D. IMRT Quality Assurance, *continued*

3. How do you verify relative dose? ***Tick all that apply***

Fluence distribution:

☐ EPI ☐ Radiographic film ☐ XV film

☐ Gel dosimetry ☐ Radiochromic film ☐ Other:_____

- in _____ (#) axial planes
- in _____ (#) sagittal planes
- in _____(#)coronal planes

4. What QA phantom(s) do you use? ***Tick all that apply***

☐ Anthropomorphic phantom: Vendor (if applicable): _____

☐ Geometric phantom: Material (if applicable): _____

Vendor (if applicable): _____

Shape: ☐ square ☐ cylinder ☐ other: _____

Size of phantom _____cm X _____cm X ___ cm

5. What QA procedures do you use? ***Tick all that apply***

☐ 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.

6. What agreement between planned and measured doses for individual patients is considered acceptable for post-prostatectomy patients at your institution (using the technique you intend to use for RAVES patients)?

- For absolute dose in target volume (high dose) region _____
- For absolute dose in critical normal tissue region (if applicable)_____
- For absolute dose in low dose region (if applicable)_____
- For relative dose in high dose gradient region _____

FACILITY OUESTIONNAIRE

D. IMRT Quality Assurance, *continued*

6. Agreement between planned and measured doses, continued:

   - For relative does in low dose gradient region:

     In high dose region (target) _____

     In low dose region (if applicable)_____

7. Other QA measures

   Are your monitor unit calculations checked by an independent program?

   ☐ Yes ☐ No

   If yes, which vendor: _____

   Are your IMRT treatments monitored by a record and verification system?

   ☐ Yes ☐ No

   If yes, which system: _____

E. IMRT port film/image policy: To verify patient positioning for RAVES patients

1. What PTV margins do you use for post-prostatectomy IMRT patients? _____mm
2. Which mode does your site use? ☐ EPI ☐ Film ☐ kV orthogonal imaging

   ☐ MVCBCT ☐ kVCBCT ☐ Ultrasound (e.g. BAT) ☐ Other: _____
3. What is your frequency of imaging? _____
4. What protocol do you use to correct patient positioning error? ☐ on-line* ☐ off-line

** An on-line correction protocol is defined as a protocol where the patient position is corrected prior to treatment based on imaging acquired <u>immediately</u> prior to treatment ie image, shift, treat.*

5. What is your threshold level for making a correction to the patient position?_____ mm
6. What image matching software do you use? ☐ At treatment console using linac proprietary software

   ☐ Varis ☐ Aria ☐ Impac ☐ Mosaiq ☐ Other: _____
7. What is your reference image source? ☐ DRR ☐ Other: _____

Please attach you patient position correction protocol to this questionnaire

FACILITY OUESTIONNAIRE

F. Experience in use of IMRT techniques

1. If you treat prostate and post-prostatectomy patients with IMRT:

a. The total number of prostate patients treated with IMRT at your local centre is:

☐ <10 ☐ 10-50 ☐ 50-100 ☐ 100-200 ☐ >200

b. The total number of post-prostatectomy prostate patients treated with IMRT at your local centre is:

☐ <10 ☐ 10-50 ☐ 50-100 ☐ 100-200 ☐ >200

c. Number of prostate patients treated with IMRT at your local centre in past 12 months is:

☐ <10 ☐ 10-50 ☐ 50-100 ☐ 100-200 ☐ >200

d. Number of post-prostatectomy prostate patients treated with IMRT at your local centre in past 12 months is:

☐ *<10* ☐ *10-50* ☐ *50-100* ☐ *100-200* ☐ *>200*

G. Additional comments which could be helpful in the context of the present trial:

_____

_____

H. Attachments

Please attach the following documents:

☐ Quality Assurance: Any forms used to document your QA procedures

☐ Quality Assurance: Your IMRT dosimetry QA protocol

☐ Quality Assurance: Results of your external independent dosimetry audit

☐ Image Policy: Your patient position correction protocol

Section 7: IMRT Submission Notes

Form completed by:_____ **Date:** ☐☐/☐☐/☐☐