

*The College of Radiographers will use the application details that you provide for purposes associated with the industry partnership scheme, such as education, the administration of events, research, promotion and fundraising. Our lawful basis for processing your information is to manage your funding application and fulfil our legitimate interest as a professional body. Some of your information will be shared with the Society of Radiographers. We will retain all information you submit for the duration of the application process and, should you be successfully awarded funding, the duration of the funding period. Thereafter, your information will be retained as verification of your application and for reference in relation to the industrial partnership scheme. For detailed information about how we use your information please see <http://www.sor.org/privacy-statement>*

## College of Radiographers Industry Partnership Scheme

### Application guidelines

#### Contents

Introduction .....	3
Section 1 Principle Investigator .....	5
Section 2 Co-investigators .....	5
Section 3 Research category.....	5
Section 4 Further information .....	5
Section 5 Title of project (25 words maximum) .....	5
Section 6 Lay summary of the project (250 words maximum).....	5
Section 7 How will this research advance the profession of radiography? (100 words maximum) .....	6
Section 8 How does the project fit with the strategic research priorities identified by the CoR? (100 words maximum) .....	6
Section 9 Category of researcher .....	6
Section 10 Description of the project.....	7
10 a) Principal aim of the study .....	8
10 b) to d) Primary research question, secondary research questions, and expected outcomes .....	8
10 e) Review of the literature .....	8
10 f) Methodology .....	9
10 g) Ethical considerations .....	9
10 h) Patient and public involvement .....	10
10 i) Potential impact of the study .....	10

10 j)	Dissemination strategy .....	10
10 k)	Gantt chart .....	10
Section 11	References .....	10
Section 12	Ethical approval.....	11
Sections 13 and 14	Budget and justification of resources .....	11
Section 15	About you, your team and your host institution .....	11
Section 16	Name and signature of project contact .....	12
Section 17	Signature(s) of Head(s) of Department(s).....	12
Section 18	Return of application form .....	12
References	.....	14
Appendix I	Themed Research Priorities .....	15
	<i>Accuracy and Safety</i> .....	15
	<i>Technological innovations</i> .....	17
	<i>Patient and Public Experience</i> .....	19
	<i>Service and Workforce Transformation</i> .....	21
	<i>Education and Training</i> .....	24

## Introduction

The College of Radiographers Industry Partnership Scheme (CoRIPS) research grant will be awarded twice per year, in April and October.

Applications for this grant are considered on a first come first served basis, with a maximum of **ten** applications being assessed per round.

Bids up to £5,000 for small projects and up to £10,000 for one larger project will be considered. Matched funding or other institutional contributions would be advantageous. Applicants are reminded that the College expects patient and public involvement to be factored in from the very first stages of research proposal development.

The main focus of each project must be in one of the following programme areas, which are aligned to the CoR Research Priorities (see Appendix I for further detail):

- Accuracy and Safety
- Technological Innovations
- Public and Patient Experience
- Service and Workforce Transformation
- Education and Training

Applicants are encouraged to read the publication *Getting into Research: A Guide for Members of the Society of Radiographers*<sup>1</sup> which provides valuable research guidance that will assist with your funding application.

This guidance document is intended to assist with completion of the CoRIPS application form.

Each section of the form will be covered as listed below and must be completed in full.

### **Before applying, please consider the following conditions of this grant:**

- This funding is **not** for audit or service evaluation.
- This funding is **not** for support with university fees.
- Applications for retrospective funding of completed projects, whether self-funded or otherwise will **not** be supported.
- Applicants must have been in full continuous membership (excluding time in student membership) with the Society of Radiographers for a minimum of one year if funds requested are less than £5,000 and for a minimum of two years if requesting funds greater than £5,000.

- Applicants must hold current registration with the Health and Care Professions Council (HCPC) or appropriate voluntary register.
- Funding of a literature review will only be considered if there will be a specific outcome from the review, it will be part of a larger project proposal and it will lead on to future work.
- Unfortunately, we are unable to fund applicants who have previously received CoRIPS funding. However, former awardees may perform a Co-Investigator role to the Principle Investigator.

There are two grant calls per year, one in April and one in October. The deadline for submissions will be **5pm on the last Friday of April, and 5pm on the first Monday of October each year.**

## **NIHR Clinical Research Network**

The Society and College of Radiographers is a National Institute for Health Research (NIHR) non-commercial Partner. This means the studies that we fund may be eligible to access NIHR Clinical Research Network (CRN) support.

The NIHR CRN supports researchers and the life sciences industry in planning, setting up and delivering high quality research to the agreed timelines and study recruitment target, for the benefit of patients and the NHS, including relevant research in public health and social care in England.

In partnership with your local R&D office, we encourage you to involve your local CRN team in discussions as early as possible when planning your study to fully benefit from the support the NIHR CRN offers as outlined in their Study Support Service. To find out more about how you can apply for this additional support to help deliver your study, please visit [www.supportmystudy.nihr.ac.uk](http://www.supportmystudy.nihr.ac.uk)

### **Section 1 Principle Investigator**

Complete all details for the Principle Investigator (PI) applying for this grant.

### **Section 2 Co-investigators**

Provide details of any co-investigators for the proposed research project.

### **Section 3 Research category**

Please indicate which category of funding you are bidding for and state the CoR Research Priorities that best match your submission. See [Appendix I](#) for details of themed priorities.

### **Section 4 Further information**

Answer questions 4.1 to 4.6 and provide further information where necessary.

### **Section 5 Title of project (25 words maximum)**

This is the proposed title of your research project. It should be well-defined and reflective of the aims of the project.

### **Section 6 Lay summary of the project (250 words maximum)**

A brief summary explaining the proposed research project to be understood by those without prior knowledge of the subject area.

**Section 7      How will this research advance the profession of radiography? (100 words maximum)**

Consider what impact the research will have: does it have the potential to change practice/improve outcomes? What will the overall contribution be to developing knowledge in radiography associated technologies, service delivery, education, or patient care?

**Section 8      How does the project fit with the strategic research priorities identified by the CoR? (100 words maximum)**

Consider how the proposed research fits with the themes covered in *The College of Radiographers Research Priorities for the Radiographic Profession*<sup>2</sup> and the *SCoR Research Strategy 2016-2021*<sup>3</sup>.

**Section 9      Category of researcher**

Please make sure you select a category of researcher that reflects your experience. For example, novice researchers would be considered as practitioners who have not previously been successful in any grant application. Experienced researchers would be considered as researchers who have previously had successful grants from any funding body that total in excess of £40,000.

At least one option must be selected.

## Section 10 Description of the project

### What are the panel looking for?

- A well-organised proposal that is simple and logical.
- Demonstration of patient and service user involvement. (See [section 10h](#), Patient and public involvement)
- Full consideration of research ethics. (See [section 10g](#), Ethical considerations)
- Research that is topical and relevant within the current NHS/social care environment political context. Does it fit with national and CoR Research Priorities? State the research priorities that fit with your project.
- A well-designed study. Consider the scientific quality of your proposal; is it robust?
- Potential for follow-on projects.
- Potential to change practice or to improve outcomes.
- A demonstrated ability to do the work – the panel will have greater confidence in the proposal if the research team has evidence of a good track record. This doesn't mean that you have to be an experienced researcher. If you are a novice researcher make contact with a local academic department that has research experience (or an experienced research practitioner within your institution) and ask if someone would consider mentoring you through the study. If you can't find a suitable individual, contact the SCoR Research Group who can put you in touch with a suitable person. You can add a small cost to the budget to cover the mentoring.
- Quality of presentation – typos, formatting, etc. This is crucial; if the application form is littered with spelling mistakes and typographical errors, the panel may have limited confidence in your ability to complete the proposed research to a high standard.
- Demonstration of innovation.
- Value for money – can your project produce results efficiently? The budget should be reasonable, believable and justified, with rational arguments for including consumables, equipment and other items. Personnel costs need to be considered carefully; do they meet the guidelines set out here? Have you obtained agreement from your employer that they will match the costs of staff time?

### **10 a) Principal aim of the study**

Indicate the over-arching aim of the study. Include a brief introduction stating clearly what you propose to do and comment on the context. Demonstrate that your aim is achievable and appropriately defined for the research topic.

### **10 b) to d) Primary research question, secondary research questions, and expected outcomes**

Identify the key research question that is to be answered and outline any secondary research questions where relevant. In this section you should try to address the following questions:

- What is the issue/problem/initiative to be studied?
- Why is it a problem or of interest? Why now?
- How will it contribute to developing knowledge in radiography associated technologies, service delivery, education, or patient care? Does it fit the CoR Research Priorities for the profession?
- What are the proposed outcomes of the study?

### **10 e) Review of the literature**

In this section, provide a review of the literature surrounding your research topic, identifying current gaps in knowledge; references should be up to date and reflect current practice or innovative approaches.



## **10 f) Methodology**

In this section identify the epistemological stance of the study and/or any overriding philosophical perspectives.

Indicate what research approach or mix of approaches best investigates the questions proposed. Describe them and explain why they are the most suitable approaches. In this section also provide details of the following:

- Recruitment strategy
- Sampling approach
- Sample size (including power calculation if appropriate)
- Study design (i.e. pragmatic, randomised controlled trial, retrospective review of images, etc.)
- Data collection method (with brief rationale and indication of tools to be used where appropriate, i.e. Quality of Life tools or outcome measures such as geometric inaccuracies in set-up, or image quality, etc.)
- Data analysis (for quantitative studies identify the statistical analysis that will be used, for qualitative studies identify how the qualitative data will be analysed, i.e. content analysis/framework analysis, etc. and why). It is important to link the data analysis to the research questions posed (or any hypotheses stated)
- How reliability and validity of data will be assessed/assured (or for qualitative studies how credibility or trustworthiness of data will be assured)
- Ethical implications of the study – identify any ethical issues of the study and how these will be covered. Further explanation should be provided in section 10g.
- Indicate how service users have or will complement the study design or the research process. Further explanation should be provided in section 10h.

## **10 g) Ethical considerations**

Ethical considerations are an incredibly important part of the research process. The College of Radiographers would expect ethics to have been fully considered and any relevant approval applications started prior to, or in tandem with, application for CoRIPS funding. An application for funding will be enhanced by already having ethical approval in place or by clearly demonstrating that this is being worked towards.

Where ethical approval is imperative to the project, any successfully secured CoRIPS funding will not be released until approval has been granted.

#### **10 h) Patient and public involvement**

Service user/patient input and the patient or service user voice is a fundamental requisite for any research proposal. With this in mind, it is imperative that you plan from the design stage to have user involvement in your research.

There are many resources that can help with this essential feature. Applicants are encouraged to refer to the publication *Getting into Research: A Guide for Members of the Society of Radiographers*<sup>1</sup> as a starting point.

Applications will not be funded if there is no service user involvement.

#### **10 i) Potential impact of the study**

Identify the impact you perceive your study outcomes (outputs) will have on service delivery, patient care, service provision or development of the profession. How will the impact be measured?

#### **10 j) Dissemination strategy**

Indicate your dissemination strategy. There is an expectation of CoRIPS work submission to *Radiography* and presentation at UKIO Congress. Please provide details of all dissemination routes, including these platforms, and ensure that you discuss wider dissemination plans outside of UKIO and *Radiography*. Research outputs should be clear and in-line with those applicable to research assessment processes. National and/or international, a presentation of the work is paramount. In your strategy you should identify, by name, the journals, conferences or organizations that will be targeted. The resource *Measuring the impact of health research*<sup>4</sup> may be useful. The College has a role in dissemination, including publishing the final report on the College of Radiographers' website.

Please ensure you add costs to achieve the dissemination strategy in the budget (section 13).

#### **10 k) Gantt chart**

Applicants must include a simple Gantt chart of the stages of the study highlighting the key milestones. This may be provided as a separate document.

### **Section 11 References**

Include all citations referenced in the description of your project.

## **Section 12 Ethical approval**

**N.B.** Evidence must be provided of relevant ethical approval, or of submission for approval and an expected decision timeframe, at the time of application.

Complete sections 12.1 to 12.3 as necessary. At least one option for 12.1, 12.2, and 12.3 must be selected.

## **Sections 13 and 14 Budget and justification of resources**

In these sections please provide a detailed breakdown of the costs for the project. Include a rationale for the costs requested and what the amount is based upon (i.e. mileage assumed for travel costs, pay scale and time for personnel costs, etc.). Please ensure you include dissemination costs, i.e. conference presentation in the budget. It is crucial that care is taken over the costs requested, these must be justified and detailed calculations provided where appropriate. Please note the funds cannot be used to provide incentives for study participation (an exception to this is costing for user involvement where the INVOLVE guidelines<sup>5</sup> on payments for user activity should be used).

### **PLEASE NOTE THIS SCHEME DOES NOT SUPPORT UNIVERSITY FEES**

**N.B.** For novice researchers applying for funding, CoRIPS will fund 50% of the Principle Investigator's salary costs for the time required to work on the project as long as there is some indication that the host institution will be supporting time release to cover the rest of the staff time.

For those more experienced researchers, CoRIPS will **not** fund full salary costs for Professors or Readers working in academia where it is expected that a proportion of their workload is already allocated to research activity (this also applies to clinical practitioners employed in research roles). However, CoRIPS will fund costs towards research assistants in these cases, and a nominal amount for the PI to co-ordinate project meetings and oversee the project.

For other practitioners where research is not currently part of their work remit, CoRIPS will fund 50% of staffing costs for the project as long as the host institution demonstrates similar commitment to allow time release for undertaking the project.

## **Section 15 About you, your team and your host institution**

In this section please provide:

- A paragraph about yourself as the principal investigator and how your experience, background, and abilities will enable you to complete the research project.
- An outline of the roles that other investigators, senior researchers and/or mentors will take during the project
- Information about the role that the host institution will play in providing support for the project.

Please also attach a CV for yourself as principal investigator and all other investigators (maximum three pages per CV). CVs can either be entered directly into the application form or provided as separate files.

#### **Section 16 Name and signature of project contact**

Principle Investigator's name and signature.

#### **Section 17 Signature(s) of Head(s) of Department(s)**

Heads of participating departments should sign indicating their support for the application, agreement to the terms and conditions of the grant, and confirming that monies awarded will not be 'top-sliced'.

#### **Section 18 Return of application form**

Please return the completed application form in **Microsoft Word format** to [pande@sor.org](mailto:pande@sor.org)

Once your application has been submitted, you will be informed within approximately two months of the submission deadline whether you have been successful.

#### **Please note**

All successful grant holders must agree to publish the results of their work or research in *Radiography* (subject to the peer-review process) and to inform the College of all publications affiliated with the funded research.

All successful grant holders are expected to present the results of their work or research at the UKIO congress, the CoR Annual Radiotherapy Conference, or similar, and to inform the College of any other presentations regarding the funded research.

The College of Radiographers' support for the project must be acknowledged in any publication, poster or presentation.

Grant holders must accept the terms and conditions of any award granted.

## References

1. Society and college of Radiographers (2019). Getting into Research: A Guide for Members of the Society of Radiographers, 2nd ed. 978-1-909802-46-9. Available at: [https://www.sor.org/sites/default/files/document-versions/getting\\_into\\_research\\_-\\_a\\_guide\\_for\\_members\\_of\\_the\\_society\\_of\\_radiographers\\_1.pdf](https://www.sor.org/sites/default/files/document-versions/getting_into_research_-_a_guide_for_members_of_the_society_of_radiographers_1.pdf) [Accessed July 16, 2020]
2. Society and College of Radiographers (2017). The College of Radiographers Research Priorities for the Radiographic Profession. 978-1-909802-12-4. Available at: <https://www.sor.org/learning/document-library/college-radiographers-research-priorities-radiographic-profession> [Accessed September 3, 2018].
3. Society and College of Radiographers (2015). Research Strategy 2016-2021 Available at: <https://www.sor.org/learning/document-library/research-strategy-2016-2021> [Accessed August 24, 2018].
4. Lavis, J., Ross, S., McLeod, C., and Gildiner, A. (2003). Measuring the impact of health research. *J. Health Serv. Res. Policy* 8, 165–170.
5. INVOLVE Payment for involvement. Available at: <http://www.invo.org.uk/posttypepublication/payment-for-involvement/> [Accessed September 3, 2018].

## Appendix I Themed Research Priorities

The following tables have been compiled from information contained in *The College of Radiographers Research Priorities for the Radiographic Profession*<sup>2</sup> and represent themed priorities in order of rank, as determined by the Delphi method.

### *Accuracy and Safety*

Accuracy and Safety Themed Priorities (in order of priority)				
Rank	Priority topic	Mean	% agreement	CV (%)
2	Audit of survivorship and late effects after radiotherapy	4.65	98.1	11
3	Dose optimisation, in relation to image quality and methods for reduction for all modalities using ionising radiation	4.64	97.7	12
4	Adaptive radiotherapy, in relation to developing guidelines, improving treatment outcomes and reducing side effects	4.64	97.7	11
6	Ensuring standard procedures are evidence-based	4.60	88.8	16
7	Management of acute and late side effects of radiotherapy	4.59	97.8	12
8	IGRT - development of gold standard imaging regimes and image matching techniques, and consideration of dose	4.59	97.7	12
9	Outcome measures for radiographer led procedures previously radiologist led	4.56	91.8	14
11	Can the routine screening of vasa praevia at the anomaly ultrasound scan improve pregnancy outcomes?	4.52	100.0	11
12	Data collection of patient outcomes for as wide an amount of treatment fractionation, doses and treatment sites as possible	4.48	89.6	15

Accuracy and Safety Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
13	Why are we still failing our babies? Persistent poor antenatal US detection rates of serious congenital heart anomalies	4.46	92.3	14
17	Targeted radiotherapy based on functional imaging	4.44	95.3	13
20	Motion management - to improve treatment outcomes and minimise normal tissue toxicity	4.42	95.3	13
22	Radiobiology, including effects of fractionation regimes and implications of low dose bath	4.41	95.5	13
23	Impact of co-morbidities on late effects of radiotherapy	4.40	95.7	13
29	Development of image interpretation competencies for therapeutic radiographers	4.35	93.8	14
35	SABR, including benefits, imaging protocols, toxicity, accuracy and potential for use in further sites	4.33	95.2	13
45	Radiographer target delineation	4.30	88.4	16
46	Decision making in radiography	4.30	86.7	18
47	Patient safety - increasing safety culture, reassuring patients, improve practice and patient outcomes	4.29	89.4	16
51	The recruitment and retention of radiographers	4.27	88.2	17
52	Is tomosynthesis a viable alternative to CT - could we replace 4 or 5 projection scaphoid series with this, and so negate the need to treat patients who have negative imaging?	4.27	84.6	17
53	On-treatment imaging, which patients should we be imaging daily and when should we use cone beam CT and when MV	4.26	90.7	15
57	Cost and clinical effectiveness of radiographer led musculoskeletal services	4.25	87.5	16
58	Investigating the use of MR imaging for paediatric radiotherapy planning and treatment	4.24	92.7	14
61	Should there be a more standardised approach to both performing and reporting foetal doppler ultrasound?	4.24	84.0	17
62	Development of more individualised targeted radiotherapy in combination with other targeted therapies	4.24	83.3	17
64	Establishing the accuracy of radiographer reporting in clinical practice	4.23	87.7	19
65	Diagnostic reference levels need to be established for the full range of examinations for both paediatrics and adults	4.22	92.6	18
66	Patient bladder and bowel preparation for pelvic radiotherapy treatments	4.22	91.1	14
70	Effective communication of radiography findings, e.g. MRI scans, ultrasound imaging and x-rays	4.21	87.3	19
73	Potential new diagnostic tests and diagnostic test accuracy	4.20	86.8	16
75	Evaluation of the effectiveness of current and emerging imaging technologies	4.20	85.1	16
76	Radiographer reporting for breast MRI, both high risk screening and symptomatic cases - research to prove efficacy	4.20	81.7	17
85	Radiographers attitude to research and perceptions of their role in contributing to the evidence base	4.17	84.4	18



Accuracy and Safety Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
91	Long term review of impact of IMRT related to integral dose received during repeated cone beam CT imaging	4.14	86.0	21
94	Technique improvements for verification using on-treatment imaging	4.12	90.5	13
95	MRI planning	4.12	88.4	14
99	Effectiveness of different techniques for example - very complicated breast treatments with cardiac shielding versus deep inspiration breath hold technique	4.11	84.4	20
102	Impact of digital radiography on radiographic technique and implications for patient dose	4.11	81.3	19
103	Effectiveness of imaging and radiotherapy techniques and procedures in patients with a range of diseases, e.g. cardiothoracic, neurological, gynaecological or urological disease	4.11	80.5	19
104	Imaging in the obese population	4.11	80.0	18
112	Image quality optimisation in CT	4.07	86.0	17
113	Deep inspiration breath hold reproducibility	4.07	84.4	15
114	Image quality optimisation in computed and digital radiography	4.07	83.1	18
120	Optimising breast radiotherapy imaging	4.04	80.9	18
124	Whole brain radiotherapy - quality of life v side effects relating to prognosis	4.02	86.4	16
128	Radiographer commenting system	4.02	76.7	22
130	Molecular radiotherapy - to develop better patient-specific dosimetry and facilitate the patient pathway	4.00	80.0	16
131	Tomosynthesis in screening, particularly on mobiles	4.00	78.6	17

### *Technological innovations*

Technological Innovation Themed Priorities (in order of priority)				
Rank	Priority topic	Mean	% agreement	CV (%)
1	Proton beam radiotherapy, including outcomes, patient experience, techniques, cost effectiveness, delivery, training and late effects	4.68	100.0	10
17	Targeted radiotherapy based on functional imaging	4.44	95.3	13
20	Motion management - to improve treatment outcomes and minimise normal tissue toxicity	4.42	95.3	13
22	Radiobiology, including effects of fractionation regimes and implications of low dose bath	4.41	95.5	13
25	The use of multi-modality imaging with radiotherapy planning and treatment	4.38	95.6	15
31	Technology advances, in relation to patient safety, value for money and accuracy	4.35	86.3	16
34	How can we reduce the number of imaging errors?	4.34	89.6	15
35	SABR, including benefits, imaging protocols, toxicity, accuracy and potential for use in further sites	4.33	95.2	13

Technological Innovation Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
37	Breast cancer diagnosis and treatment	4.33	86.7	16
38	Breast tomosynthesis, use in the evaluation of difficult to visualise breast lesions in the symptomatic breast clinic	4.32	92.0	15
42	Exploiting the potential of tomosynthesis	4.32	85.7	17
43	Minimising rectal toxicity in pelvic radiotherapy	4.31	95.6	13
52	Is tomosynthesis a viable alternative to CT - could we replace 4 or 5 projection scaphoid series with this, and so negate the need to treat patients who have negative imaging?	4.27	84.6	17
53	On-treatment imaging, which patients should we be imaging daily and when should we use cone beam CT and when MV	4.26	90.7	15
60	Comparison of breast MR and contrast enhanced tomosynthesis in the diagnosis of lobular carcinoma	4.24	84.0	17
62	Development of more individualised targeted radiotherapy in combination with other targeted therapies	4.24	83.3	17
69	Implementation of hypofractionated radiotherapy regimens in some disease groups	4.21	90.5	14
71	Investigating the relationship between %tumour change as shown by Cone Beam CT Scans during radiotherapy with overall survival, recurrence rate	4.20	93.3	15
72	Breast tomosynthesis for screening moderate & high risk family history patients	4.20	88.0	15
73	Potential new diagnostic tests and diagnostic test accuracy	4.20	86.8	16
75	Evaluation of the effectiveness of current and emerging imaging technologies	4.20	85.1	16
77	Emerging technology and techniques, in relation to quality of life studies and long-term side effects	4.19	86.0	17
84	How do radiological procedures impact upon the management of the patient?	4.17	86.1	17
88	Impact of in room MRI imaging on radiotherapy delivery	4.16	86.0	16
90	With the introduction of PET-CT, MR linacs and 4-dimensional computerised tomography do we need more diagnostic training in radiotherapy?	4.15	86.7	16
94	Technique improvements for verification using on-treatment imaging	4.12	90.5	13
95	MRI planning	4.12	88.4	14
99	Effectiveness of different techniques for example - very complicated breast treatments with cardiac shielding versus deep inspiration breath hold technique	4.11	84.4	20
102	Impact of digital radiography on radiographic technique and implications for patient dose	4.11	81.3	19
103	Effectiveness of imaging and radiotherapy techniques and procedures in patients with a range of diseases, e.g. cardiothoracic, neurological, gynaecological or urological disease	4.11	80.5	19
106	Has there been a measurable benefit to patients from the increase in use of imaging (CT/PETCT/MRI/etc)?	4.10	82.2	20
126	Adapting radiotherapy based on transit dosimetry	4.02	81.0	22
129	Utilisation of technology available in practice, e.g. gating and cone beam CT	4.00	83.7	20
130	Molecular radiotherapy - to develop better patient-specific dosimetry and facilitate the patient pathway	4.00	80.0	16

## Patient and Public Experience

Patient and Public Themed Priorities (in order of priority)				
Rank	Priority topic	Mean	% agreement	CV (%)
1	Proton beam radiotherapy, including outcomes, patient experience, techniques, cost effectiveness, delivery, training and late effects	4.68	100.0	10
2	Audit of survivorship and late effects after radiotherapy	4.65	98.1	11
3	Dose optimisation, in relation to image quality and methods for reduction for all modalities using ionising radiation	4.64	97.7	12
4	Adaptive radiotherapy, in relation to developing guidelines, improving treatment outcomes and reducing side effects	4.64	97.7	11
5	How to implement individualised patient-specific radiotherapy	4.60	92.0	14
7	Management of acute and late side effects of radiotherapy	4.59	97.8	12
10	Impact of 24-7, extended day and 7 day week working	4.53	92.0	14
11	Can the routine screening of vasa praevia at the anomaly ultrasound scan improve pregnancy outcomes?	4.52	100.0	11
12	Data collection of patient outcomes for as wide an amount of treatment fractionation, doses and treatment sites as possible	4.48	89.6	15
14	Identification of patients' priorities from a radiotherapy service - what is important for them	4.46	92.1	14
15	Impact of advanced & consultant practitioners on patient care and service delivery	4.46	91.7	15
16	Impact of NHS spending restrictions on radiotherapy service delivery	4.46	89.5	15
18	Advanced practitioner roles and consultant radiographer roles - making a difference to the service provided to patients	4.43	92.7	15
19	Survivorship - radiographer led self-referral late effects clinics	4.43	90.7	15
22	Radiobiology, including effects of fractionation regimes and implications of low dose bath	4.41	95.5	13
23	Impact of co-morbidities on late effects of radiotherapy	4.40	95.7	13
26	Patient partnerships in radiotherapy, in relation to improvement of physical, social, psychological and spiritual support	4.38	91.4	15
31	Technology advances, in relation to patient safety, value for money and accuracy	4.35	86.3	16
32	Raising awareness and up to date knowledge and understanding of radiotherapy among primary care and other health professionals - particularly GPs	4.34	90.6	16
35	SABR, including benefits, imaging protocols, toxicity, accuracy and potential for use in further sites	4.33	95.2	13
37	Breast cancer diagnosis and treatment	4.33	86.7	16
40	Impact of advanced & consultant level practice roles	4.32	87.5	17
41	Improving patient pathways	4.32	87.2	16
43	Minimising rectal toxicity in pelvic radiotherapy	4.31	95.6	13
44	MDT care of patients during and after radiotherapy, to provide better outcomes	4.31	93.1	14
47	Patient safety - increasing safety culture, reassuring patients, improve practice and patient outcomes	4.29	89.4	16

Patient and Public Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
48	Efficacy of diagnostic pathways	4.28	86.8	17
49	Radiographer led assessment and discharge for minor injuries - evaluation of its effectiveness	4.28	84.6	17
54	Effectiveness of radiographer communication skills in imaging and radiotherapy in the context of new roles and responsibilities	4.26	89.2	16
55	Patient involvement, to improve patient experience and guide practice	4.26	87.5	16
56	Work force/recruitment/attrition rates for radiotherapy students. How can we ensure more students are attracted to radiography (particularly therapy) and retained?	4.25	88.3	16
61	Should there be a more standardised approach to both performing and reporting foetal doppler ultrasound?	4.24	84.0	17
62	Development of more individualised targeted radiotherapy in combination with other targeted therapies	4.24	83.3	17
63	Impact of independent prescribing by radiographers	4.24	82.6	17
65	Diagnostic reference levels need to be established for the full range of examinations for both paediatrics and adults	4.22	92.6	18
66	Patient bladder and bowel preparation for pelvic radiotherapy treatments	4.22	91.1	14
67	Extending the role of radiographers into triage and discharge in emergency departments	4.22	86.7	18
68	Service delivery models - optimum use of equipment and staff resources, and assessment of the patient experience	4.22	83.3	17
69	Implementation of hypofractionated radiotherapy regimens in some disease groups	4.21	90.5	14
70	Effective communication of radiography findings, e.g. MRI scans, ultrasound imaging and x-rays	4.21	87.3	19
71	Investigating the relationship between %tumour change as shown by Cone Beam CT Scans during radiotherapy with overall survival, recurrence rate	4.20	93.3	15
72	Breast tomosynthesis for screening moderate & high risk family history patients	4.20	88.0	15
73	Potential new diagnostic tests and diagnostic test accuracy	4.20	86.8	16
76	Radiographer reporting for breast MRI, both high risk screening and symptomatic cases - research to prove efficacy	4.20	81.7	17
77	Emerging technology and techniques, in relation to quality of life studies and long-term side effects	4.19	86.0	17
78	Dementia and the challenges within radiography	4.19	84.1	18
79	Radiographer (or practitioner)-led services/service transformation	4.19	83.0	17
80	Promoting patient and public involvement in radiotherapy services	4.18	92.2	16
82	Evaluating the impact of centralising paediatric radiotherapy into 2 centres (when proton centres open in 2018-19)	4.18	85.0	18
84	How do radiological procedures impact upon the management of the patient?	4.17	86.1	17
86	Increase the radiotherapy clinical trials portfolio	4.17	79.6	22
88	Impact of in room MRI imaging on radiotherapy delivery	4.16	86.0	16

<b>Patient and Public Themed Priorities (in order of priority) <i>continued</i></b>				
Rank	Priority topic	Mean	% agreement	CV (%)
89	Improving the publicity around radiotherapy in an effective way	4.16	80.0	18
96	Radiographer-led breast symptomatic clinics	4.12	82.5	17
97	Understanding patient perceptions of the clinical service provided by radiographers within the clinical imaging and radiotherapy services	4.12	81.6	19
104	Imaging in the obese population	4.11	80.0	18
106	Has there been a measurable benefit to patients from the increase in use of imaging (CT/PETCT/MRI/etc)?	4.10	82.2	20
118	Capturing and using patient experience across the age range and across all modalities	4.05	80.0	17
119	The patient voice and feedback - quality of care	4.05	76.0	19
124	Whole brain radiotherapy - quality of life v side effects relating to prognosis	4.02	86.4	16
125	What is the role of diet and exercise, and are survivorship courses effective?	4.02	83.0	17
130	Molecular radiotherapy - to develop better patient-specific dosimetry and facilitate the patient pathway	4.00	80.0	16

### *Service and Workforce Transformation*

<b>Service and Workforce Transformation Themed Priorities (in order of priority)</b>				
Rank	Priority topic	Mean	% agreement	CV (%)
6	Ensuring standard procedures are evidence-based	4.60	88.8	16
8	IGRT - development of gold standard imaging regimes and image matching techniques, and consideration of dose	4.59	97.7	12
9	Outcome measures for radiographer led procedures previously radiologist led	4.56	91.8	14
10	Impact of 24-7, extended day and 7 day week working	4.53	92.0	14
11	Can the routine screening of vasa praevia at the anomaly ultrasound scan improve pregnancy outcomes?	4.52	100.0	11
14	Identification of patients' priorities from a radiotherapy service - what is important for them	4.46	92.1	14
15	Impact of advanced & consultant practitioners on patient care and service delivery	4.46	91.7	15
16	Impact of NHS spending restrictions on radiotherapy service delivery	4.46	89.5	15
18	Advanced practitioner roles and consultant radiographer roles - making a difference to the service provided to patients	4.43	92.7	15
19	Survivorship - radiographer led self-referral late effects clinics	4.43	90.7	15
21	Future of the profession - is the current model fit for purpose?	4.42	86.6	18
24	Evaluating the education and workforce requirements to meet future service needs	4.39	87.1	18
25	The use of multi-modality imaging with radiotherapy planning and treatment	4.38	95.6	15
26	Patient partnerships in radiotherapy, in relation to improvement of physical, social, psychological and spiritual support	4.38	91.4	15

Service and Workforce Transformation Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
27	Develop the role of advanced and consultant practitioners into new areas	4.38	89.4	16
28	Addressing poor recruitment and retention of sonographers	4.36	90.2	16
30	Patient experience, in relation to improving quality of life, comfort, anxiety and quality of care	4.35	90.7	15
33	Radiotherapy research - how can we promote a culture of research into an often fragmented infrastructure?	4.34	90.0	17
36	How to improve the research culture in our profession	4.33	89.7	17
39	What will the imaging service demands be by 2020 and how will we meet them?	4.32	87.7	18
40	Impact of advanced & consultant level practice roles	4.32	87.5	17
41	Improving patient pathways	4.32	87.2	16
44	MDT care of patients during and after radiotherapy, to provide better outcomes	4.31	93.1	14
45	Radiographer target delineation	4.30	88.4	16
48	Efficacy of diagnostic pathways	4.28	86.8	17
49	Radiographer led assessment and discharge for minor injuries - evaluation of its effectiveness	4.28	84.6	17
50	Role development - scope of practice, clinical and cost effectiveness	4.27	90.4	15
51	The recruitment and retention of radiographers	4.27	88.2	17
54	Effectiveness of radiographer communication skills in imaging and radiotherapy in the context of new roles and responsibilities	4.26	89.2	16
56	Work force/recruitment/attrition rates for radiotherapy students. How can we ensure more students are attracted to radiography (particularly therapy) and retained?	4.25	88.3	16
57	Cost and clinical effectiveness of radiographer led musculoskeletal services	4.25	87.5	16
59	How can radiographers maximise their potential as experts in imaging and become the experts with regards to adaptive radiotherapy techniques?	4.24	87.3	17
63	Impact of independent prescribing by radiographers	4.24	82.6	17
67	Extending the role of radiographers into triage and discharge in emergency departments	4.22	86.7	18
68	Service delivery models - optimum use of equipment and staff resources, and assessment of the patient experience	4.22	83.3	17
70	Effective communication of radiography findings, e.g. MRI scans, ultrasound imaging and x-rays	4.21	87.3	19
74	Health economics and radiographer reporting/advanced practice	4.20	85.9	18
76	Radiographer reporting for breast MRI, both high risk screening and symptomatic cases - research to prove efficacy	4.20	81.7	17
78	Dementia and the challenges within radiography	4.19	84.1	18
79	Radiographer (or practitioner)-led services/service transformation	4.19	83.0	17
80	Promoting patient and public involvement in radiotherapy services	4.18	92.2	16

Service and Workforce Transformation Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
81	Training and educational needs for advanced radiotherapy and imaging	4.18	86.4	16
82	Evaluating the impact of centralising paediatric radiotherapy into 2 centres (when proton centres open in 2018-19)	4.18	85.0	18
83	Identifying future skills set needs for radiographers, creating methods to obtain these and assessing effectiveness of education strategies	4.18	81.1	18
84	How do radiological procedures impact upon the management of the patient?	4.17	86.1	17
85	Radiographers attitude to research and perceptions of their role in contributing to the evidence base	4.17	84.4	18
86	Increase the radiotherapy clinical trials portfolio	4.17	79.6	22
87	Effectiveness of the extended role of the radiographer in diagnostic imaging and radiotherapy	4.16	86.2	16
92	Research radiographers - benefit to profession & NHS	4.14	84.0	19
93	Explore different schemes and initiatives to increase radiography research capacity in the UK	4.14	82.6	18
96	Radiographer-led breast symptomatic clinics	4.12	82.5	17
97	Understanding patient perceptions of the clinical service provided by radiographers within the clinical imaging and radiotherapy services	4.12	81.6	19
98	Investigating extension of reporting roles to more areas of imaging and to more radiographers	4.11	84.6	17
100	The career of sonography - is a change in training required to address staff shortfall?	4.11	83.3	20
101	Advanced practice - to improve service and encourage leadership and decision making skills	4.11	82.3	18
107	Identify the need for more clinical research radiographer posts within the UK	4.10	82.0	17
109	Barriers to chest x-ray reporting by radiographers	4.09	83.3	17
115	Role extension in radiography - what are the key obstacles and solutions?	4.06	81.1	18
116	Referral patterns, unnecessary referrals and increases in referrals	4.06	75.0	22
117	Radiographer decision making - to ensure an autonomous workforce	4.05	83.1	21
121	Radiographer performed mammography image interpretation	4.04	80.0	21
122	Optimising diagnostics requesting and reducing the burden of waste	4.04	76.1	20
123	Radiographer research capability - why do we lag behind other professions?	4.03	78.9	20
127	Review of the 4-tier structure	4.02	77.3	23
128	Radiographer commenting system	4.02	76.7	22
131	Tomosynthesis in screening, particularly on mobiles	4.00	78.6	17
132	Evaluation of different staffing models and effective service delivery models	4.00	78.0	19
133	The move to 'commenting' (PCE) and the need to audit performance and set minimum standards	4.00	75.8	21

## Education and Training

Education and Training Themed Priorities (in order of priority)				
Rank	Priority topic	Mean	% agreement	CV (%)
1	Proton beam radiotherapy, including outcomes, patient experience, techniques, cost effectiveness, delivery, training and late effects	4.68	100.0	10
5	How to implement individualised patient-specific radiotherapy	4.60	92.0	14
6	Ensuring standard procedures are evidence-based	4.60	88.8	16
7	Management of acute and late side effects of radiotherapy	4.59	97.8	12
8	IGRT - development of gold standard imaging regimes and image matching techniques, and consideration of dose	4.59	97.7	12
9	Outcome measures for radiographer led procedures previously radiologist led	4.56	91.8	14
13	Why are we still failing our babies? Persistent poor antenatal US detection rates of serious congenital heart anomalies	4.46	92.3	14
19	Survivorship - radiographer led self-referral late effects clinics	4.43	90.7	15
21	Future of the profession - is the current model fit for purpose?	4.42	86.6	18
24	Evaluating the education and workforce requirements to meet future service needs	4.39	87.1	18
25	The use of multi-modality imaging with radiotherapy planning and treatment	4.38	95.6	15
26	Patient partnerships in radiotherapy, in relation to improvement of physical, social, psychological and spiritual support	4.38	91.4	15
27	Develop the role of advanced and consultant practitioners into new areas	4.38	89.4	16
28	Addressing poor recruitment and retention of sonographers	4.36	90.2	16
29	Development of image interpretation competencies for therapeutic radiographers	4.35	93.8	14
32	Raising awareness and up to date knowledge and understanding of radiotherapy among primary care and other health professionals - particularly GPs	4.34	90.6	16
34	How can we reduce the number of imaging errors?	4.34	89.6	15
36	How to improve the research culture in our profession	4.33	89.7	17
39	What will the imaging service demands be by 2020 and how will we meet them?	4.32	87.7	18
50	Role development - scope of practice, clinical and cost effectiveness	4.27	90.4	15
51	The recruitment and retention of radiographers	4.27	88.2	17
56	Work force/recruitment/attrition rates for radiotherapy students. How can we ensure more students are attracted to radiography (particularly therapy) and retained?	4.25	88.3	16
60	Comparison of breast MR and contrast enhanced tomosynthesis in the diagnosis of lobular carcinoma	4.24	84.0	17
71	Investigating the relationship between %tumour change as shown by Cone Beam CT Scans during radiotherapy with overall survival, recurrence rate	4.20	93.3	15
76	Radiographer reporting for breast MRI, both high risk screening and symptomatic cases - research to prove efficacy	4.20	81.7	17
77	Emerging technology and techniques, in relation to quality of life studies and long-term side effects	4.19	86.0	17



Education and Training Themed Priorities (in order of priority) <i>continued</i>				
Rank	Priority topic	Mean	% agreement	CV (%)
78	Dementia and the challenges within radiography	4.19	84.1	18
79	Radiographer (or practitioner)-led services/service transformation	4.19	83.0	17
81	Training and educational needs for advanced radiotherapy and imaging	4.18	86.4	16
83	Identifying future skills set needs for radiographers, creating methods to obtain these and assessing effectiveness of education strategies	4.18	81.1	18
85	Radiographers attitude to research and perceptions of their role in contributing to the evidence base	4.17	84.4	18
86	Increase the radiotherapy clinical trials portfolio	4.17	79.6	22
87	Effectiveness of the extended role of the radiographer in diagnostic imaging and radiotherapy	4.16	86.2	16
89	Improving the publicity around radiotherapy in an effective way	4.16	80.0	18
90	With the introduction of PET-CT, MR linacs and 4-dimensional computerised tomography do we need more diagnostic training in radiotherapy?	4.15	86.7	16
92	Research radiographers - benefit to profession & NHS	4.14	84.0	19
93	Explore different schemes and initiatives to increase radiography research capacity in the UK	4.14	82.6	18
100	The career of sonography - is a change in training required to address staff shortfall?	4.11	83.3	20
101	Advanced practice - to improve service and encourage leadership and decision making skills	4.11	82.3	18
105	MR linacs - what is the training requirement for therapeutic radiographers?	4.11	77.8	19
111	Education at all levels - how is it evolving to meet challenges of new technologies and techniques?	4.08	80.4	19
112	Image quality optimisation in CT	4.07	86.0	17
114	Image quality optimisation in computed and digital radiography	4.07	83.1	18
120	Optimising breast radiotherapy imaging	4.04	80.9	18
123	Radiographer research capability - why do we lag behind other professions?	4.03	78.9	20
128	Radiographer commenting system	4.02	76.7	22
132	Evaluation of different staffing models and effective service delivery models	4.00	78.0	19
133	The move to 'commenting' (PCE) and the need to audit performance and set minimum standards	4.00	75.8	21