

Training needs assessment for real time adaptive radiotherapy (TRANSfER)

This is a research study and part of a HEE/NIHR senior clinical lecturer award which is investigating the skills and knowledge of therapeutic radiographers and subsequent gaps that would allow radiographer-led real time adaptive radiotherapy.

For the purposes of this questionnaire:

Offline adaptive radiotherapy is considered as workflows where the tumour and/or organs at risk are recontoured (if necessary) and replanned offline.

Online adaptive radiotherapy is considered as workflows where intrafraction motion is compensated for. (eg. plan of the day or tracking).

Real-time adaptive radiotherapy is considered as workflows with the potential to contour tumour and/or organs at risk and replanned online.

You must be a UK registered therapeutic radiographer to undertake this questionnaire.

Please answer all the questions as honestly as possible to enable us to compile a complete picture of your training requirements and it is not a requirement that you undertake any form of adaptive radiotherapy currently. We are interested in hearing your thoughts and views on the current and future skills of therapeutic radiographers.

By completing this questionnaire you are consenting to the information being held and processed by the Royal Marsden Hospital and St. Georges, University of London. The information you provide will be kept confidential, anonymous and used only for research purposes.

This questionnaire comprises of five sections and has been adapted from the Hennessy Hicks training needs analysis model.

If you have any questions please do hesitate to contact the lead research radiographer and HEE/NIHR senior clinical lecturer Helen McNair: Helen.McNair@rmh.nhs.uk (<mailto:Helen.McNair@rmh.nhs.uk>)

* Required

Section 1

This section is about yourself and your current position

1. Please enter the name of the hospital you are currently employed by. If you work at a satellite centre or work cross-site and/or multiple trusts, please include this information. *

2. Please enter the county that your place(s) of work is (are) located in. *

3. What is your current job title? If you are in split roles or have multiple job titles, please include these here. *

4. How long have you been in your current job? If you are in split roles or have multiple job titles, please use the role you have been in the longest. *

0-2 years

3-4 years

5-6 years

7-8 years

9-10 years

11+ years

5. How long have you been qualified as a therapeutic radiographer? *

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21+ years

6. Do you have any post-graduate qualifications or accreditation certificates? *

- Yes
- No

7. Please select all that apply *

- MSc Module
 - PgDip
 - PgCert
 - MSc
 - PhD
 - Accreditation certificate (SOR, IPEM, RCR etc)
 -
- Other

Section 2

Listed below are roles that you may or may not participate in. Please select all that apply to YOU in YOUR current role. There will be space at the end of this section for additional comments on aspects of your current role(s) that have not been covered by the questionnaire.

8. Do you participate in the pre-treatment pathway? *

Yes

No

9. Pre-treatment - Please select all that apply? *

Planning CT scan

Planning MRI scan

Mould room

Simulator

Ultrasound

PET/CT

Cannulation

Administration of intravenous and or/intramuscular drugs

Other

10. In your department, do you have the option to rotate through planning and dosimetry? *

Yes

No

11. Do you participate in planning and checking radiotherapy plans (including VS)? *

Yes

No

12. Planning- Please select all that apply *

Virtual simulation

Conformal

IMRT/VMAT

SBRT

Adaptive

Brachytherapy

Proton therapy

Tomotherapy

SRS

Other

13. Do you participate in the setup and/or treatment delivery (including record and verify) of the patient in the treatment position? *

Yes

No

14. Setup of patient in treatment position and/or treatment delivery - Please select all that apply. *

C-Arm Linac

Superficial unit

Cyberknife

Tomotherapy

Adaptive MR Linac

Adaptive C-Arm Linac

Gammaknife

Brachytherapy

Proton therapy

Other

15. Do you participate in image verification of the patient position? *

Yes

No

16. Image verification of patient position - Please select all that apply *

MV - single or pair

KV - single or pair

CBCT - MV or KV

Fluro

MRI

CT

Ultrasound

Other

17. Are you in a role where you can you triage and refer patients for radiotherapy? *

Yes

No

18. Please give a brief description of this role. *

19. Are you in a role where you can consent patients for radiotherapy? *

Yes

No

20. Please give a brief description of this role. *

21. Are you in a role which includes treatment review and/or follow-up review? *

Yes

No

22. Please give a brief description of this role. *

23. Are you in a role where you can you prescribe pharmacy products to patients? *

Yes

No

24. Please give a brief description of this role. *

25. Are you in a role involved with research and/or trials? *

Yes

No

26. Please select all that apply. *

Audit

Service Evaluation

Trial radiographer

Trial co-investigator

Trial principle investigator

Research radiographer

Other

27. Are you in a role involved with the development and education of therapeutic radiographers and students? *

Yes

No

28. Please give a brief description of this role. *

29. Are you in a role involved with the development and education of healthcare professionals? (Including registrars and AHPs etc but excluding therapeutic radiographers and students) *

Yes

No

30. Please give a brief description of this role. *

31. Please describe if you have any additional roles that have not been mentioned above or have any advanced or specialist training. (eg SABR radiographer, IGRT specialist radiographer, site-specific radiographer)

32. If you were concerned with an on-treatment patient's plan, due to contour/PTV/OAR change etc, could you refer for the current plan to be assessed or reviewed? *

Yes

No

33. Could you undertake the described assessment or review above? *

Yes

No

34. Could you authorise a decision, (rescan and/or replan or continue treatment) based on the assessment undertaken above? *

Yes

No

35. Have you had experience using a decision tool to assess images e.g. traffic light protocol. *

Yes

No

36. Please select all sites that you have used a decision tool for. *

Brain

H&N

Lung

Breast

Upper GI

Bladder

Lower GI

Prostate

Cervix

Endometrium

Other

37. Can you select a plan from a library of plans for patients on treatment? *

Yes

No

38. Please select all that apply. *

Bladder

Cervix

Other

Section 3

This section is about certain skills/competencies and their training methods that have been identified as essential for real-time adaptive radiotherapy. This section will ask your opinion on how important a skill is to your current role and the future of the therapeutic profession, how well you perform or would like to perform a skill, and the suitability of training methods for this. For this section offline is considered a setting where the patient is not 'on-the-bed' receiving treatment and online is considered a setting where the patient is 'on-the-bed' receiving treatment.

39. Currently in your place of work, do therapeutic radiographers acquire MRIs? *

Yes

No

40. Looking at the options below, please answer the statements about the acquisition of MRIs for treatment planning and treatment verification purposes. *

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. Have you had training in MRI acquisition? *

Yes

No

42. Please select all the training methods you have had for MRI acquisition. *

- Workshops and/or courses (up to 1 day in length)
 - Workshops and/or courses (over 1 day in length)
 - Guided reading (protocols, web-based module etc.)
 - Clinical practice
 -
- Other

43. How confident are you at MRI acquisition? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

44. Would you like training in MRI acquisition? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training and it is not required
- No - I already have training in this activity but it is sufficient

45. Looking at the options below, please indicate the suitability of training methods for MRI acquisition. *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

46. Please use this box to express any other suitable training methods and comments about MRI acquisition for therapeutic radiographers.

47. Currently in your place of work, are therapeutic radiographers responsible for MRI safety? *

Yes

No

48. Looking at the options below, please answer the statements about MRI safety. *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

49. Have you had any training in MRI Safety? *

- Yes
- No

50. Please select all methods of training you have had for MRI Safety. *

- Workshops and/or courses (up to 1 day in length)
- Workshops and/or courses (over 1 day in length)
- Guided reading (protocols, web-based module etc.)
- Clinical practice
-
- Other

51. How confident are you at performing MRI Safety? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

52. Would you like training in MRI Safety? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

53. Looking at the options below, please indicate the suitability of training methods for MRI safety. *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

54. Please use this box to express any other suitable training methods and comments about MRI safety for therapeutic radiographers.

55. Currently in your place of work, do therapeutic radiographers match and/or fuse CT to CBCT? *

Yes

No

56. Is this in an offline or online setting? *

Offline

Online

Both

57. Looking at the options below, please answer the statements about the matching and/or fusion of CT to CBCT. *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

58. Have you had training in matching and/or fusing CT to CBCT? *

- Yes
- No

59. Please select all methods of training you have had for matching and/or fusing CT to CBCT. *

- Workshops and/or courses (up to 1 day in length)
 - Workshops and/or courses (over 1 day in length)
 - Guided reading (protocols, web-based module etc.)
 - Clinical practice
 -
- Other

60. How confident would you be matching and/or fusing CT to CBCT in a real-time setting? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

61. Would you like training in matching and/or fusing CT to CBCT? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

62. Looking at the options below, please indicate the suitability of training methods for CT to CBCT matching and/or fusion. *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

63. Please use this box to express any other suitable training methods and comments about CT to CBCT matching and/or fusion for therapeutic radiographers.

64. Currently in your place of work, do therapeutic radiographers match and/or fuse MRI to CT/MRI? *

Yes

No

65. Is this in an offline or online setting? *

Offline

Online

Both

66. Looking at the options below, please answer the statements about MRI to CT/MRI matching and/or fusion. *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

67. Have you had training in MRI to CT/MRI matching and/or fusion? *

- Yes
- No

68. Please select all methods of training you have had for MRI to CT/MRI matching and/or fusion. *

- Workshops and/or courses (up to 1 day in length)
- Workshops and/or courses (over 1 day in length)
- Guided reading (protocols, web-based module etc.)
- Clinical practice
-

Other

69. How confident are you at performing MRI to CT/MRI matching and/or fusion? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

70. Would you like training in this MRI to CT/MRI matching and/or fusion? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

71. Looking at the options below, please indicate the suitability of training methods for MRI to CT/MRI matching and/or fusion *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

72. Please use this box to express any other suitable training methods and comments about MRI to CT/MRI fusion and/or matching for therapeutic radiographers.

73. Currently in your place of work, do therapeutic radiographers undertake contouring OARs on CT? *

Yes

No

74. Is this in an offline or online setting? *

Offline

Online

Both

75. Currently in your place of work, do therapeutic radiographers undertake contouring target volumes on CT? *

Yes

No

76. Is this in an offline or online setting? *

- Offline
- Online
- Both

77. Looking at the options below, please answer the statements about CT contouring. *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

78. Have you had training in CT contouring? *

- Yes
- No

79. Please select all methods of training you have had for CT contouring. *

- Workshops and/or courses (up to 1 day in length)
 - Workshops and/or courses (over 1 day in length)
 - Guided reading (protocols, web-based module etc.)
 - Clinical practice
 -
- Other

80. How confident are you at performing CT contouring? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

81. Would you like training in CT contouring? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training but it is sufficient

82. Looking at the options below, please indicate the suitability of training methods for CT contouring. *

	Higly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

83. Please use this box to express any other suitable training methods and comments about contouring on CT for therapeutic radiographers.

84. Currently in your place of work, do therapeutic radiographers undertake contouring OARs on MRI? *

Yes

No

85. Is this in an offline and offline setting? *

Offline

Online

Both

86. Currently in your place of work, do therapeutic radiographers undertake contouring targets on MRI? *

Yes

No

87. Is this in an offline or online setting? *

Offline

Online

Both

88. Looking at the options below, please answer the statements about MRI contouring.

*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

89. Have you had training in MRI contouring? *

- Yes
- No

90. Please select all training methods you have had for MRI contouring. *

- Workshops and/or courses (up to 1 day in length)
 - Workshops and/or courses (over 1 day in length)
 - Guided reading (protocols, web-based module etc.)
 - Clinical practice
 -
- Other

91. How confident are you at MRI contouring? *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

92. Would you like training in MRI contouring? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

93. Looking at the options below, please indicate the suitability of training methods for MRI contouring. *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

94. Please use this box to express any other suitable training methods and comments about MRI contouring for therapeutic radiographers.

95. Currently in your place of work, do therapeutic radiographers undertake radiotherapy planning? (Please exclude VS planned direct and parallel opposed planning) *

Yes

No

96. Is this in an offline or online setting? *

Offline

Online

Both

97. Looking at the options below, please answer the statements about radiotherapy planning. (Please exclude VS planned direct and parallel opposed planning) *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

98. Have you had training in radiotherapy planning? (Please exclude VS planned direct and parallel opposed planning) *

- Yes
- No

99. Please select all training methods you have had for this radiotherapy planning. (Please exclude VS planned direct and parallel opposed planning) *

- Workshops and/or courses (up to 1 day in length)
- Workshops and/or courses (over 1 day in length)
- Guided reading (protocols, web-based module etc.)
- Clinical practice

Other

100. How confident are you at undertaking radiotherapy planning? (Please exclude VS planned direct and parallel opposed planning) *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

101. Would you like training in radiotherapy planning? (Please exclude VS planned direct and parallel opposed planning) *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

102. Looking at the options below, please indicate the suitability of training methods for radiotherapy planning. (Please exclude VS planned direct and parallel opposed planning) *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

103. Please use this box to express any other suitable training methods and comments about radiotherapy planning for therapeutic radiographers. If there is a particular type of radiotherapy planning (brachytherapy, SBRT etc), please include it here. (Please exclude VS planned direct and parallel opposed planning)

104. Currently in your place of work, do therapeutic radiographers assess/check and approve radiotherapy plans? (Please exclude VS planned direct and parallel opposed planning) *

Yes

No

105. Is this in an offline or online setting? *

Offline

Online

Both

106. Looking at the options below, please answer the statements about assessing/checking and approving radiotherapy plans. (Please exclude VS planned direct and parallel opposed planning) *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to the successful performance of your current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to or continue to perform this activity well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to the future of the radiotherapy profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

107. Have you had training in assessing/checking and approving radiotherapy plans? (Please exclude VS planned direct and parallel opposed planning) *

Yes

No

108. Please select all training methods that you have had for assessing/checking and approving radiotherapy plans. (Please exclude VS planned direct and parallel opposed planning) *

Workshops and/or courses (up to 1 day in length)

Workshops and/or courses (over 1 day in length)

Guided reading (protocols, web-based module etc.)

Clinical practice

Other

109. How confident are you at assessing/checking and approving radiotherapy plans?
(Please exclude VS planned direct and parallel opposed planning) *

- Extremely confident
- Confident
- Somewhat confident
- Not confident

110. Would you like training in assessing/checking and approving radiotherapy plans?
(Please exclude VS planned direct and parallel opposed planning) *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

111. Looking at the options below, please indicate the suitability of training methods for
assessing/checking and approving radiotherapy plans. (Please exclude VS planned
direct and parallel opposed planning) *

	Highly unsuitable	Somewhat unsuitable	Somewhat suitable	Highly suitable
Workshops and/or courses (up to 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workshops and/or courses (over 1 day in length)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided reading (protocols, web-based module etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

112. Please use this box to express any other suitable training methods and comments about assessing and approving radiotherapy plans for therapeutic radiographers. If there is a particular type of radiotherapy plan assessing/checking and approving (brachytherapy, SBRT etc), please include it here. (Please exclude VS planned direct and parallel opposed planning)

Section 4

This section will ask you about your experience and thoughts on adaptive radiotherapy. For the purposes of this questionnaire:

Real-time adaptive radiotherapy is considered as workflows with the potential to contour tumour and/or organs at risk and replanned online.

113. Currently in your place of work, do you undertake real-time adaptive radiotherapy? *

Yes

No

114. How confident are you at performing real-time adaptive radiotherapy? *

Extremely confident

Confident

Somewhat confident

Not confident

115. Section 3 covered key skills identified required for therapeutic radiographers for real-time adaptive radiotherapy. Are there any key skills that were not mentioned that you think are essential for real-time adaptive radiotherapy?

116. Would you like training in real-time adaptive radiotherapy? *

- Yes - I have no training
- Yes - I already have training in this activity but would like more
- No - I have no training
- No - I already have training in this activity but it is sufficient

117. Please use this box to express any other suitable training methods comments about real-time adaptive radiotherapy for therapeutic radiographers.

Section 5

This section is asking you to rank a selection of skills.

118. Please rank these skills in order of importance to you in your current role (the most important skill to be placed at the top). *

MRI acquisition

MRI fusion

MRI contouring

MRI safety

Online radiotherapy planning

Offline radiotherapy planning

Online assessment and approval of radiotherapy plans

Offline assessment and approval of radiotherapy plans

CT fusion

CT contouring

119. Please rank these skills in order of importance to you for the future of therapeutic radiography (the most important skill to be placed at the top). *

MRI acquisition

MRI fusion

MRI contouring

MRI safety

Online radiotherapy planning

Offline radiotherapy planning

Online assessment and approval of radiotherapy plans

Offline assessment and approval of radiotherapy plans

CT fusion

CT contouring

120. Please use the box below if you have any comments that you would like the researchers to know.

121. Are you happy to be contacted for further research and interviewing for the TRANSfER study? *

Yes

No

122. Please leave your name and email address below. *

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