

Radiation therapist perceptions on how artificial intelligence may affect their role and practice

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Radiation Therapist perceptions on how artificial intelligence may affect their role. A survey of opinions.

1. Please read the participant information sheet attached. By selecting yes and completing the survey, you consent to participate in this research.

https://curtin-my.sharepoint.com/:w:/g/personal/263863k_curtin_edu_au/Ebk8RvpYqL5GpY18quY8ZekB9x6RIM4MJERbLQCiOa6YQ?e=AtpdUL

Yes

No

2. How many years have you been practising as a Radiation Therapist?

<5 years

5-10 years

11-20 years

>20 years

3. Gender: How do you identify?

Male

Non-binary

Female

Prefer to self-describe, below

Self-describe:

4. What is your current role?

- Radiation Therapist
- Senior Radiation Therapist
- Management
- Academic
- Other (please specify)

5. What location do you practice in?

- Metropolitan Australia
- Regional Australia
- Both

6. What State do you practice in?

- Australian Capital Territory New
- South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania
- Victoria
- Western Australia

7. What provider do you work for?

- Public
- Private
- Both

8. What areas of RT are you proficient in?

- CT Simulation
- CT Fusion / Contouring
- Dosimetry
- Treatment
- Quality Assurance
- Other (please specify)

9. What knowledge do you have of AI?

- None
- Little
- Moderate
- High

10. How did you gain that knowledge?

11. Are you interested in learning more about AI?

- Yes
- No

Other (please specify)

12. If you answered yes, what aspects of AI are you interested in learning more about?

- Theory of AI
- Clinical application of AI
- Ethical implications of AI
- Not Applicable
- Please explain your answer in your own words.

13. What support would be beneficial to aid you in utilising AI technologies safely and efficiently?

- Face-to-face Workshops
- Online Workshops
- Self-paced material on an online platform
- Other (please specify)

14. Please indicate to what extent your hospital/practice use Artificial Intelligence in the following Radiation Therapy tasks?

Somewhat Automated with

	Manual	automated	manual intervention	Fully automated	Unsure
Image registration and reconstruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image fusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OAR contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan set up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan optimisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality assurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image matching and analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

15. Please indicate to what extent AI has affected the productivity of these Radiation Therapy tasks?

	Decreased productivity	No change	Increased productivity	Not applicable
Image registration and reconstruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image fusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OAR contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan set up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan optimisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality assurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image matching and analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

16. Please indicate to what extent AI has affected the quality of these Radiation Therapy tasks?

	Decreased quality	No change	Increased quality	Not applicable
Image registration and reconstruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image fusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OAR contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target contouring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan set up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan optimisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plan evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality assurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image matching and analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

17. If you do use AI, have you been provided with sufficient knowledge/ training to be able to utilise AI technologies safely and efficiently?

- Yes
- No
- Somewhat
- None of the above

Please explain your answer in your own words.

18. How do you feel about the use of AI in radiation therapy?

(This is a very general question, please use the text box to elaborate)

- Apprehensive
- Neutral
- Optimistic

Please explain your answer in your own words.

19. How do you feel AI in radiation therapy will affect job satisfaction?

- It will reduce job satisfaction
- It will not impact on job satisfaction
- It will increase job satisfaction
- Please explain your answer in your own words.

20. How do you feel AI will affect the patient's treatment pathway?

(This is a very general question, please use the text box to elaborate)

- Negatively
- Mixed feelings
- Positively

Please explain your answer in your own words.

21. Do you think AI will affect your current role?

(This is a very general question, please use the text box to elaborate)

- Yes
- No
- Unsure

Please explain your answer in your own words.

22. Is there anything else you would like to add to this topic?