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## Targeted Physical Therapies



40% of patients whose cancers are cured receive radiotherapy, while surgery remains the intervention with the greatest prospect of cure as a standalone treatment.

This theme focuses on research into image-guided radiotherapy to reduce the incidence of treatment-related side effects and image-guided surgery to optimise tumour and regional lymph node resections.

Research into high-intensity focused ultrasound, which has significant potential for patients who are not able to undergo surgery and for whom radiotherapy may not be possible, is another focus of this theme.

### Theme aims

- To develop real-time image-guided treatments that allow increased effectiveness in removing primary tumours and loco-regional lymph node metastases while simultaneously reducing damage to surrounding normal tissues
- To reduce treatment-related side effects for radiotherapy
- To enhance patient experience, optimise patient recovery times, improve quality and safety of minimally invasive surgery and improve surgical outcomes
- To integrate these approaches with new immunotherapies, testing the ability of highly targeted, localised treatments to trigger systemic anti-tumour effects

## Theme Lead

Professor Kevin Harrington [5] (pictured above): expertise in head and neck cancer and melanoma



[6]

## Harnessing the power of radiotherapy [6]

The ICR and The Royal Marsden are developing radiotherapy techniques to improve outcomes and reduce side effects

Find out more [6]



[7]

## **MR Linac in place** <sup>[7]</sup>

The MR Linac machine is now in place at The Royal Marsden's site in Sutton

Find out more <sup>[7]</sup>

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**Source URL:** <https://www.cancerbrc.org/our-research/targeted-physical-therapies>

### **Links**

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[5] <https://www.royalmarsden.nhs.uk/our-consultants-units-and-wards/consultant-directory/professor-kevin-harrington>

[6] <https://www.cancerbrc.org/advance/harnessing-power-radiotherapy>

[7] <https://www.cancerbrc.org/news-events/news/mr-linac-place>