

- [Twitter](#) [1]
- [Facebook](#) [2]
- [LinkedIn](#) [3]

## Related articles

Image not found

[https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files\\_brc/s3fs-public/styles/image\\_related\\_content/public/17.09.19\\_News\\_PACEB%20Ra](https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files_brc/s3fs-public/styles/image_related_content/public/17.09.19_News_PACEB%20Ra)

[5]

### [Radiotherapy can be used in hard-to-treat bladder cancer](#) [5]

Image not found

[https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files\\_brc/s3fs-public/styles/image\\_related\\_content/public/17.09.19\\_News\\_PACEB%20Ra](https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files_brc/s3fs-public/styles/image_related_content/public/17.09.19_News_PACEB%20Ra)

[Whole-body MRI scans do not increase anxiety in those with the highest inherited cancer risk](#)

[6]

### [Whole-body MRI scans do not increase anxiety in those with the highest inherited cancer risk](#) [6]

Image not found

[https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files\\_brc/s3fs-public/styles/image\\_related\\_content/public/17.09.19\\_News\\_PACEB%20Ra](https://shared-d7-royalmarsden-publicne-live.s3-eu-west-1.amazonaws.com/files_brc/s3fs-public/styles/image_related_content/public/17.09.19_News_PACEB%20Ra)

[Gut bacteria ?fingerprint? predicts radiotherapy side effects](#)

[7]

### [Gut bacteria ?fingerprint? predicts radiotherapy side effects](#) [7]

## Our impact: Targeted Physical Therapies

Supporting research into targeted therapies such as radiotherapy, surgery and high-intensity focused ultrasound, this theme aims to increase cure rates and decrease the incidence of treatment-related side effects.

Significant progress has been made in the field of targeted physical therapies, with the development of new, more accurate technologies and new protocols which are changing the way patients are treated on an international scale.

### [MR Linac: ground-breaking new technology in clinical trials](#)

In 2018, The Royal Marsden and The ICR became the [first in the UK, and the fourth in the world, to install an MR Linac machine](#) [8] and is now being used in clinical trials to treat patients.

The MR Linac generates magnetic resonance images (MRI) whilst simultaneously delivering a beam of x-ray radiation that can be adapted to the shape of the tumour. This will be particularly effective for patients whose tumours change position as a result of functions such as breathing, bladder-filling or bowel changes, as the radiation beam can be altered throughout treatment and avoid surrounding tissue and organs. It is proposed that these patients will receive a more accurate and effective dose of radiation and are likely to experience fewer side effects.

The [PRISM trial](#) [9], led by Dr Alison Tree, is currently underway to find out whether treatment with the MR Linac is an effective and feasible option for prostate cancer patients.

### **[New radiotherapy options for elderly prostate cancer patients](#)**

The [CHHiP phase III trial](#) [10], led by Professor David Dearnaley, was designed to find out whether treating prostate cancer patients with a shorter course of radiotherapy made up of large doses, known as hypofractionated radiotherapy, could improve tumour control and reduce side effects. In addition to improving outcomes for patients, this new method of therapy was also estimated to reduce the number of treatment appointments by 200,000 per annum and save the NHS between £20million and £30 million per annum.

An analysis of elderly patients taking part in the CHHiP trial found this method of treatment to be safe and effective in this patient group. The CHHiP trial results contributed to the [2017 NHS England Guidance on the use of hypofractionated radiotherapy in the treatment of localised prostate cancer](#) [11] leading to a change of NHS clinical standards, lowering the number of doses in course of treatment from 37 to 20.

## **[Our research: Targeted Physical Therapies](#) [12]**

Using advanced imaging technologies to guide treatments more effectively while reducing the damage to surrounding healthy tissue

[Find out more](#) [12]

---

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

### **Links**

[1] <https://twitter.com/intent/tweet?url=https%3A%2F%2Fwww.cancerbrc.org%2Fprintpdf%2F476>

[2]

<https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fwww.cancerbrc.org%2Fprintpdf%2F476>

[3]

<http://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.cancerbrc.org%2Fprintpdf%2F476>

[4] <https://plus.google.com/share?url=https%3A%2F%2Fwww.cancerbrc.org%2Fprintpdf%2F476>

[5] <https://www.cancerbrc.org/news-events/news/radiotherapy-can-be-used-hard-treat-bladder-cancer>

[6] <https://www.cancerbrc.org/news-events/news/whole-body-mri-scans-do-not-increase-anxiety-those-highest-inherited-cancer-risk>

[7] <https://www.cancerbrc.org/news-events/news/gut-bacteria-%E2%80%98fingerprint%E2%80%99-predicts-radiotherapy-side-effects>

[8] <https://www.icr.ac.uk/news-features/mr-linac>

[9] <https://www.bepartofresearch.nih.ac.uk/trial-details/trial->

detail?trialId=25212&location=&distance=

[10] <https://www.icr.ac.uk/our-research/centres-and-collaborations/centres-at-the-icr/clinical-trials-and-statistics-unit/clinical-trials/chhip>

[11] <https://www.england.nhs.uk/wp-content/uploads/2017/10/clinical-policy-hypofractionated-external-beam-radiotherapy.pdf>

[12] <https://www.cancerbrc.org/our-research/targeted-physical-therapies>