**Breast cancer find reduces radiotherapy: Single high-powered shot given during surgery could help 20,000 patients avoid weeks of daily treatment**

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* **Yet it would save women up to six weeks of daily trips to hospital**
* **Some 50,000 women in Britain are diagnosed with breast cancer each year**

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A single shot of radiotherapy given during surgery could save 20,000 breast cancer patients weeks of gruelling treatments, according to experts.

High powered intrabeam radiotherapy, delivered during surgery while a patient is still under anaesthetic, takes as little as 20 minutes.

Yet it would save women up to six weeks of daily trips to hospital to receive repeated bouts of lower-strength conventional radiotherapy.

Some 50,000 women in Britain are diagnosed with breast cancer each year.

Around 75 per cent of these women undergo surgery to remove the tumour - and afterwards receive radiotherapy to make sure the cancer does not return.

Currently, this involves daily trips for between three and six weeks, each time undergoing treatment which irradiates the whole breast.

The alternative method - single dose targeted intraoperative radiotherapy, or TARGIT for short - is delivered directly into the breast tissue during surgery, avoiding the need for the follow-up treatments.

A trial of 485 patients, led by experts at Great Western Hospitals in Swindon found that this would save the average patient 305 miles of travelling, including those in London. For patients outside London the travel distance rose to 753 miles.

NHS rationing watchdog NICE last year refused an application for the TARGIT system to be used in English hospitals, despite international data which showed it was at least as good as conventional radiotherapy.

They are awaiting the results of further trials to prove that breast cancer will not return later.

The authors of the new report, published last night in the journal BMJ Open, called for officials to bear in mind the practical impact on patients, when they eventually come to make their final decision.

They calculated that if TARGIT became widely available across the UK, it could save 5 million miles in journeys, 170,000 hours of travel time, and 1200 tonnes of carbon dioxide emissions —equivalent to a forest of 100 hectares—every single year.

They wrote: ‘The management of breast cancer has changed over the decades. However, the requirement of patients to travel to receive these specialist services is often forgotten by policy-makers.

‘Introducing TARGIT as an option for appropriate patients in the UK will contribute significantly to saving patients time, cost, fuel and CO2 emissions.’

Baroness Delyth Morgan, chief executive at Breast Cancer Now, said: ‘While this study suggests intraoperative radiotherapy could be more cost-effective for patients and the environment, what we really need is greater evidence of its clinical effectiveness.

‘If intraoperative radiotherapy was actually proven to work, it could allow some patients to be safely spared multiple cycles of radiotherapy after surgery.

'As such, delivering targeted radiotherapy during surgery – instead of after – could help minimise the impacts of unnecessary travel to and from specialist hospitals for patients.

‘This technology is currently undergoing appraisal by NICE.

‘However, with current uncertainties in the clinical evidence, NICE reported in November that more research is needed before it can be considered for use on the NHS. We now await further results from clinical trials.’

Samia al Qadhi, chief executive of Breast Cancer Care, added: ‘These fascinating findings add further weight to the benefits of a single dose of radiotherapy during surgery, instead of treatment over several weeks.

‘For some women with breast cancer this innovative treatment offers a winning combination. It can dramatically reduce the number of hospital visits, and the stressful travel often involved, while being just as effective as traditional radiotherapy.

‘We look forward to seeing whether there will be steps taken for this treatment to become more widely available.’

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