

PARABLE

PARABLE: Proton beam therapy in patients with Breast cancer: evaluating early and Late Effects

Introduction to the PARABLE study

PARABLE is a research study looking at Proton Beam Therapy (PBT) to treat breast cancer. PBT is a type of radiotherapy that uses protons rather than x-rays. People eligible for the study will be those who have been diagnosed with early or localised breast cancer. They will have had their tumour removed by surgery and now need to have radiotherapy to their breast.

People can join the study if they have a '2% or more' risk of developing heart problems later in life from their radiotherapy. The study will see if PBT reduces this very small risk of heart problems, whilst not increasing other short term side effects.

192 people from different parts of the UK will take part in the trial. Half of the people will have PBT at an NHS proton centre in Manchester or London. The other half will have tailored radiotherapy at their local hospital. Tailored radiotherapy is the most targeted and modern radiotherapy available. For each person in the trial the decision whether or not they are to receive PBT is chosen at random, by a computer. This process is called 'randomisation'.

Both types of radiotherapy are given once a day on weekdays over a 3-week period. Everyone who takes part in the study will receive the best possible care and regular monitoring by their clinical team.

More information about the PARABLE study can be found at <https://go.icr.ac.uk/parable>

The article below was written by a PARABLE participant who had PBT at the NHS proton centre in London.

PARABLE is led by researchers at The University of Cambridge, The Institute of Cancer Research (ICR), London, and The Royal Marsden NHS Foundation Trust. It is sponsored by ICR and managed by the Cancer Research UK-funded ICR Clinical Trials and Statistics Unit (ICR-CTSU).

The trial is funded by a National Institute for Health and Care Research (NIHR) (Efficacy and Mechanism Evaluation programme NIHR131120) and Medical Research Council partnership.

A PARABLE participants' experience

Navigating a Cancer Diagnosis: A Personal Journey Through Proton Beam Therapy for Breast Cancer

I was 34 years old when I was first diagnosed with Breast Cancer in March 2023. I was the last appointment on a Friday evening and it is a day I will never forget. Following my diagnosis, and the subsequent whirlwind of emotions, I had a newfound determination that I would do everything I could to try and beat this cancer. After consulting with my excellent healthcare team at Addenbrooke's Hospital in Cambridge, they collectively decided that my treatment would comprise of chemotherapy and then surgery to remove the cancer, after which radiotherapy would be a vital component of my treatment plan, aimed at targeting any remaining cancer cells. It was at this point in my treatment plan, that I was informed that I might be eligible for the Parable Trial and Proton Beam Therapy (as opposed to standard radiotherapy), subject to my having a radiotherapy planning scan to assess if I was eligible or not. Proton Beam Therapy is a cutting edge technology now increasingly used in cancer treatment as it is a targeted therapy, reducing damage to the tissue in any surrounding vital organs. However, Proton Beam Therapy (PBT) is currently only available in London and Manchester in the UK, and as luck would have it, I was found to be eligible for the trial and randomised to proton beam therapy at UCLH in London.

Before I began my PBT sessions, I was slightly apprehensive as this was a new type of cancer treatment and it meant I would need to relocate for 3 weeks to a different city (in my case – London). However, the team at the Cambridge centre sat down with me to explain everything – right from what to expect before, during and after treatment as well as the logistics and the accommodation (which was lovely and spacious) that was offered as part of the trial. As it turned out, I didn't need to worry at all!

Before the start of my treatment, the team at the hospital called to explain exactly what I could expect. For my planning session, they checked my range of movement for my shoulder (as this was post-surgery) and even created a vacuum bag that moulded around me, so that I was both comfortable and could remain in the same position for each treatment session.

For my first session, I was amazed at how modern and comfortable the building at UCLH was. I met my doctor who briefed me about the treatment and also my trial co-ordinator who showed me around the building. The treatment room was like nothing I had ever seen, equipped with state-of-the-art technology and the PBT machine was 3 floors high! The treatment itself was painless - I would lie on a treatment table as the PBT machine rotated around me, precisely targeting the affected area with proton beams. I remember the team who administered the treatment being very accommodating, and ensuring I was comfortable throughout. They would even ask me if I had any music requests that I wanted to listen to during the treatment so that I had something to focus my mind on. Gradually, going in for each treatment session became something I started to look forward to. Not just because I knew each session was helping me heal, but it also allowed me to connect with others who shared similar journeys.

Over the course of the sessions, I experienced a few mild side effects. In the second week there was some skin darkening, a common occurrence in radiotherapy, but regular skin care helped with this. I also started to experience some mild stiffness in my shoulder, however I met with the UCLH physiotherapy and occupational therapy team every week who helped me get the right exercises for this. I also had a weekly clinical review with the doctor who monitored any side effects I had and advised me accordingly. In the third week, the fatigue (another common side effect) started to set in, but this was manageable and just prompted me to cut back slightly on my exercising and prioritize rest and self-care.

The three weeks of treatment flew by and as the last session approached, it came with a mix of relief and gratitude. The journey through PBT marked a significant step toward my remission. Before my last session, I was invited for an end-of-treatment seminar by Macmillan where I realised how easy it was to focus on the physical effects of cancer, and the emotional and practical toll of cancer treatment can often be overlooked. This is where the Macmillan team helped as they covered support and advice ranging from self-care, to travelling abroad and even returning to work. These were things I hadn't given much thought to whilst going through treatment, but their advice helped tremendously and I know I can still reach out to them if I have questions.

Closing Thoughts:

A cancer diagnosis is never easy, and it can take its toll, not just for patients but for their families too. Every patient's experience is unique, emphasising the importance of personalised care and innovative approaches to treatment. This was my experience at Addenbrooke's Hospital, in collaboration with UCLH, as part of the Parable Trial. I knew that I was in the best hands and that they were working with me to try and beat this disease.

Hopefully, my experience with PBT exemplifies the promising strides in breast cancer treatment. Beyond the medical procedures, I found a team of dedicated expert individuals who supported me along this journey, enabling me to stay optimistic and who, everyday, provide hope to the numerous patients going through cancer treatment.

Thank Yous:

I would like to thank Dr Charlotte Coles for recommending the Parable Trial and a very special thank you to Poppy Howe and Kylie Sheppard for their support and advice throughout. I would like to thank Dr Naseef for looking after me during the course of the trial and for being so approachable. I would like to also thank Dr Tom Richards for enrolling me in the trial at UCLH. A special thank you to the PBT team at UCLH for taking such good care of me throughout. Lara for introducing me to the centre in London and for being so responsive. The admin team for sorting out the logistics that made the process so seamless and the Reception team for always being so welcoming to the patients and cheering them up.