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#### Support, Positioning and Organ Stabilisation during Breast Cancer Radiation Therapy : SuPPORT 4 All Study

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Support, Positioning and Organ Stabilisation during Breast Cancer Radiation Therapy: SuPPORT 4 All Study

> Professor Heidi Probst On behalf of the SuPPORT 4 All Project Team





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## DISCLOSURE

## • I have no financial relationships to declare.

Today in the UK 125 women will be told they have breast cancer

60

Globally around 1.5 million are diagnosed with the disease annually



Around 80% will survive the disease beyond 5 years, survival projected to reach 1.7 million by 2040

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night



#### **Sheffield** Hallam University | Why is breast immobilisation needed now?

- Greater use of IMRT/3D conformal, SIB or partial breast irradiation techniques are used where greater precision is needed.
- Use of IMN irradiation requiring movement of the non-irradiated breast out of the field.
- Concerns over dose to organs at risk (specifically heart in those treated for a left breast cancer) and
- Unsatisfactory techniques for women with large, pendulous or relaxed breasts.

Contents lists available at ScienceDirect

#### Radiography

journal homepage: www.elsevier.com/locate/radi

**Review** article

## A systematic review of methods to immobilise breast tissue during adjuvant breast irradiation

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#### ABSTRACT

Greater use of 3D conformal, Intensity Modulated Radiotherapy (IMRT) and external beam partial breast irradiation following local excision (LE) for breast cancer has necessitated a review of the effectiveness of immobilisation methods to stabilise breast tissue.

To identify the suitability of currently available breast (rather than thorax) immobilisation techniques an appraisal of the literature was undertaken. The aim was to identify and evaluate the benefit of additional or novel immobilisation approaches (beyond the standard supine, single arm abducted and angled breast board technique adopted in most radiotherapy departments). A database search was supplemented with an individual search of key radiotherapy peer-reviewed journals, author searching, and searching of the grey literature. A total of 27 articles met the inclusion criteria.

The review identified good reproducibility of the thorax using the standard supine arm-pole technique. Reproducibility with the prone technique appears inferior to supine methods (based on data from existing randomised controlled trials). Assessing the effectiveness of additional breast support devices (such as rings or thermoplastic material) is hampered by small sample sizes and a lack of randomised data for comparison.

Attention to breast immobilisation is recommended, as well as agreement on how breast stability should be measured using volumetric imaging.

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CrossMark



# Time to Change our Thinking

Mahe MA, Classe JM, Dravet F, Cussac A, Cuilliere JC. Preliminary results for prone-position breast irradiation. International Journal of Radiation Oncology\*Biology\*Physics 2002 Jan 1;52(1):156-60.

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## Aim of the study

To refine, produce and test a support bra for immobilising breast tissue during breast irradiation for women that have been diagnosed with breast cancer (and have undergone removal of the tumour leaving an intact breast).

The primary endpoint is a support bra that is technically acceptable to health-care professionals (HCPs) and aesthetically acceptable to patients.

Key requirements

- 1. Accuracy
- 2. Reproducibility
- 3. Reducing side effects of RT
- 4. Improve dignity



## Work programme





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- Participants were sent a diagram of the radiotherapy pathway and asked to write on it their experiencesthis formed the focus of the discussions in the first part of each co-design workshop.
- Design images were used to promote discussion.
- Physical prototypes to promote free discussion.
- Audio recorded (7 hours of audio recorded discussions).



## It is good to have an end to journey toward; but ITIS THE JOURNEY

#### that matters, in the end.

Ernest Hemingway

SYMPHONY OF LOVE Photo by Unsplash

## Tell us about your radiotherapy Journey

## It is good to have an end to journey toward; but ITIS THE JOURNEY

#### that matters, in the end.

Ernest Hemingway

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Categories from users	Sub Categories
Information needs	Knowledge of Treatment
	Mis-information
	Timing of Information
	Preconceptions of RT
Exposure	Issues of Modesty
	Wearing a gown in a public place
Emotional experience	Feeling embarrassed
Interactions with HCPs	Staff attitudes
	Feeling a burden
Finding your voice	Being listened to
	Disempowered
Technology focused care	Impersonal
	Systems and processes including having confidence in staff and the process
	Improving the efficiency of practice
Choice	Communication issues
	Feeling oppressed
	Having to have tattoos
Fear	Fear about treatment accuracy, minimising errors
	Feeling frightened
The waiting room experience	Inappropriate entertainment
Getting to radiotherapy	Physically getting there to the radiotherapy centre
	The emotional journey-what has come before (including chemotherapy,
	surgery the end of a long process)
Impact of side effects	Skin reactions
	Finding a comfortable bra to wear during RT period
The changed self	Lost self confidence
	Change to personal image/body image
	Wanting to feel normal

# Finding your voice-Being Listened to

MANN

https://www.flickr.com/photos/47910063@N06 - مريم عبدالغفار

## Finding your voice being listened to

"I had the same experience actually and I noticed that it was swelling and I was told it's a normal reaction that it was lymphedema and then I didn't actually realise until three years later when I got really bad cellulitis septicaemia actually as a result of it and was totally being ignored and it wasn't discussed as a side effect in the initial information giving."

# Exposure

# Exposure

"you go for the sessions you know it was a bit of a shock the first time when there were four people in the room, you know and you've got nothing on."

"you're naked aren't you and you've also, you're kind of maimed aren't you you've had surgery so it's not just the exposing yourself, you're exposing yourself with a new not so pleasant aspect of it, because you haven't got used to it have you and you're different."

Categories	Sub categories
Feedback on the prototype	Bra design
	Bra challenges
	HCP worries
	Reference to other immobilisation methods
	Bra changing the patient experience
Technical Challenges	Delays to treatment start
	Differences between patient types
	Impact of a non-standard approach to RT
	Lateral beam difficulties for women with larger breasts
	Reproducibility of existing technique
	Technical issues with positioning on board
	Treating IMN
	Treating photon boosts
	Use of bolus



cc: Kaptain Kobold - https://www.flickr.com/photos/95492938@N00

CEREA

# Technical challenges

"We found with some of the casts if you mould it too tight it pushes the breast tissue up and it ends up going above as well."

"We can't do deep inspiration with Orfit because the board, they can't take the deep breath in because we are restricting them already "

"If you're wearing a bra and there's identifying skin changes, infection, changes in seroma I guess, things like that could be an issue."

## If you want to go fast, go alone. If you want to go far, **GO TOGETHER**.

African Proverb



Photo by Nisha Gill

## If you want to go fast, go alone. If you want to go far, **GOTOGETHER**.

African Proverb



# The power of joint working

c: symphony of love - https://www.flickr.com/photos/85608594@N00

## **RTOG Patient skin scoring**



#### **Breast Oedema**

#### SizE, Look, FeeL- SELF assessment



## WHAT IS NEXT



# Currently- Healthy Volunteer 3D Surface scanning Clinical Feasibility Study



#### PROJECT BACKGROUND



Today in the UK around 130 women will be told they have breast cancer, globally around 1.5 million women are diagnosed with the disease annually. The main treatment for breast cancer is surgery, where surgery has involved removal of the lump only retaining the whole breast, radiotherapy will be given to the breast after surgery. With over 80 percent of women surviving breast cancer beyond five years it is important that the treatments given

Support Positioning and Organ Registration during Breast cancer Radiation Therapy: The SuPPORT 4 ALL study

<u>www.support4all.org.uk</u> follow us on twitter @SuPPORT4A





# Any questions?

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