Early cancer detection in high-risk individuals

Joanna Williams PhD

The Christie NHS Foundation Trust
Manchester, UK

Organisation of European Cancer Institutes, OECI
17th June 2026

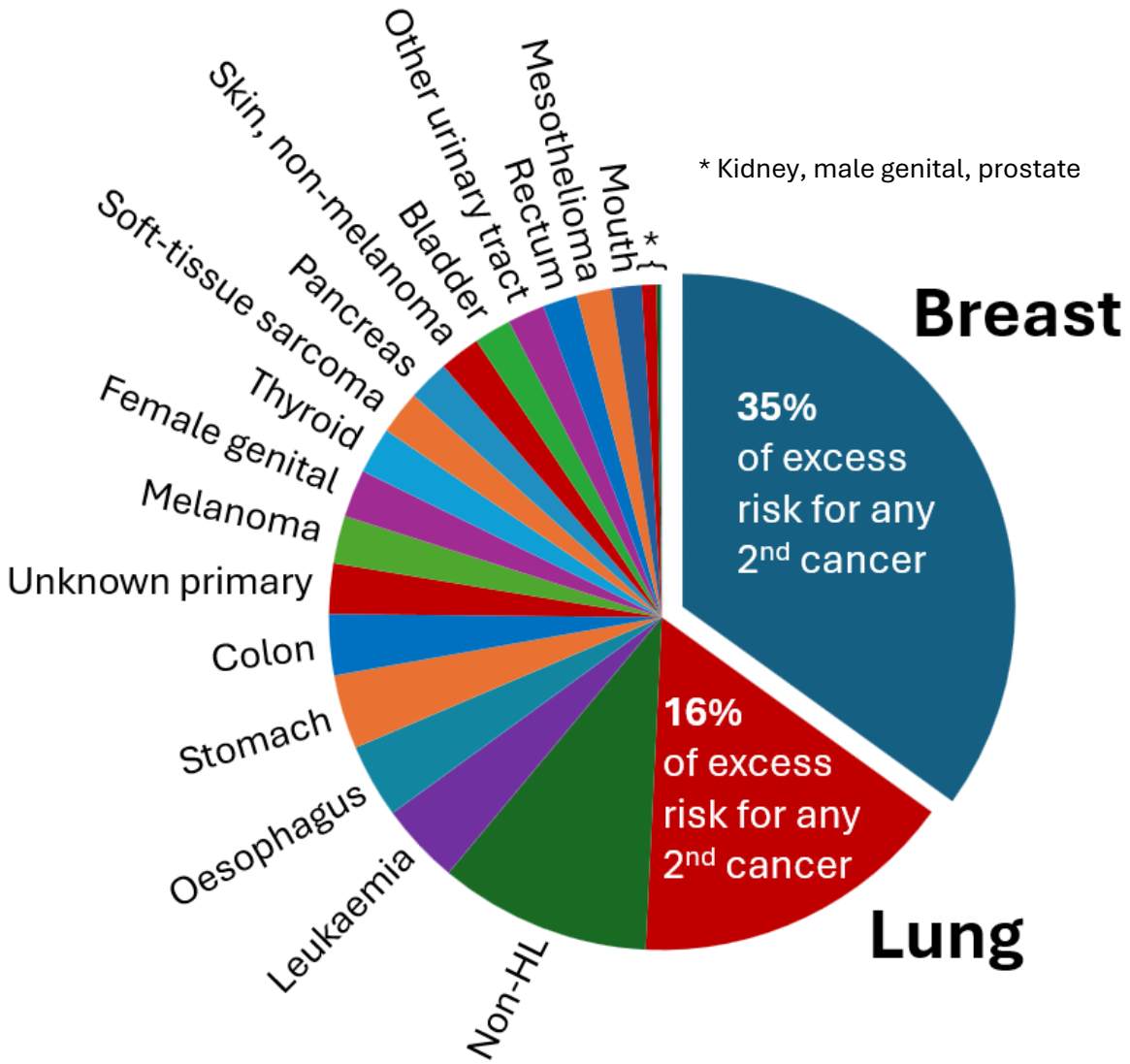
NHS
The Christie
NHS Foundation Trust

Living With and Beyond Cancer

UK population LWBC

2025 → 3.5 million

2030 → 4 million



N Engl J Med. 2015 Dec 24;373(26):2499-511. doi: 10.1056/NEJMoa1505949.

Second Cancer Risk Up to 40 Years after Treatment for Hodgkin's Lymphoma

Michael Schaapveld [1], Berthe M P Aleman, Anna M van Eggermond, Cécile P M Janus, Augustinus D G Krol, Richard W M van der Maazen, Judith Roesink, John M M Raemaekers, Jan Paul de Boer, Josée M Zijlstra, Gustaaf W van Imhoff, Eefke J Petersen, Philip M P Poortmans, Max Beijert, Marnix L Lybeert, Ina Mulder, Otto Visser, Marieke W J Louwman, Inge M Krul, Pieternella J Lugtenburg, Flora E van Leeuwen

OECI excellent practice

Exemplar service:

- In **women** treated **with radiotherapy (RT) to breast tissue at a young age** there is a **very high risk (VHR) of breast cancer** and associated mortality in later life

- In response to this we have **implemented a new national programme which has changed practice**

Screening for breast cancer after radiotherapy

2003

- National Patient Notification Exercise (PNE)
- Recommendation for **annual screening** if received **RT to breast tissue at a young age**

2009

- Research showed **screening is effective at detecting early-stage breast cancer**
  - ➢ But VHR screening uptake only 58% (Howell et al 2009)

2013

- Publication of **national VHR breast screening guidelines** in England
- Women eligible if received **RT to breast tissue when aged 10-35 years**

The at-risk population: *'Case finding'*

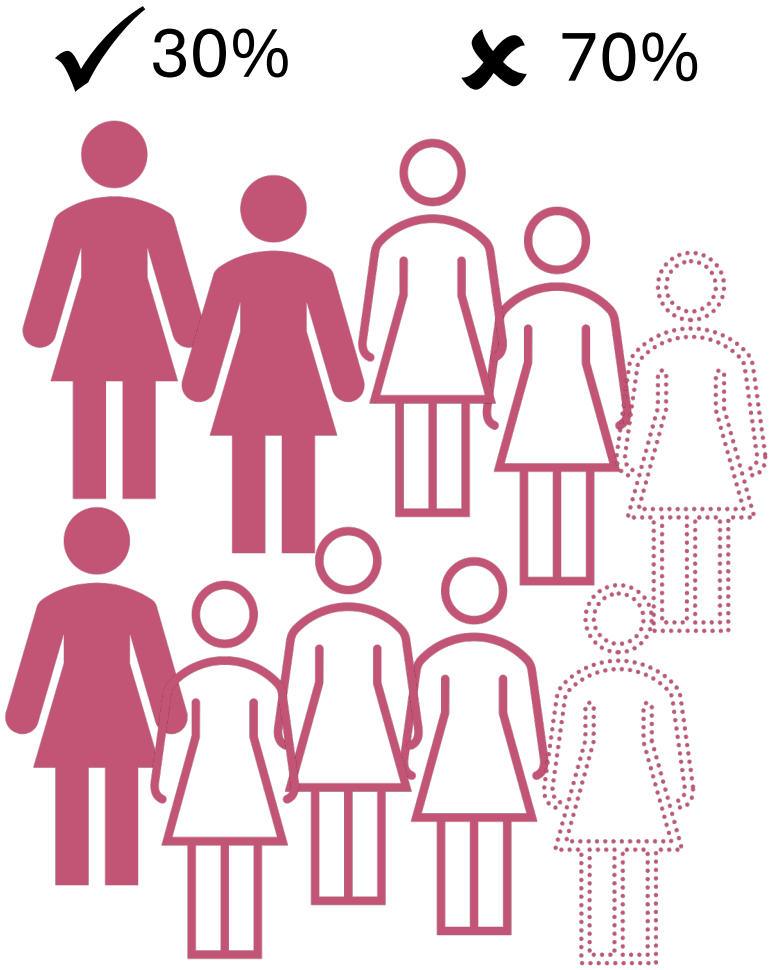
Women at increased risk of breast cancer after radiotherapy treatment at a young age

Key questions:

1. Had all eligible women been identified?
2. Were they registered for annual screening?

No

Need a central, national list of the at-risk population



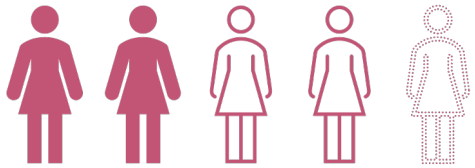
Breast screening **A**fter **R**adiotherapy **D**ataset
BARD

2015+

- Creation of a national list of at-risk women in England

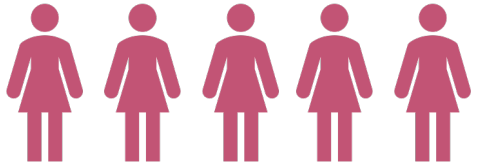
- **Linked data:** cancer diagnosis and RT treatment

>60 years 1962-2024



- **Identification** of at-risk cohort and their screening status

- **Direct referral** to the NHS VHR pathway



NHS

The BARD cohort

Criteria:
- Female
- Lymphoma diagnosis aged <36 years
- RT to breast tissue when aged 10-35 years

2003

PNE dataset

English national cancer registry

2009

Radiotherapy Dataset (RTDS)

RT providers

98%

BARD cohort
n = 4,635

Direct referral

NHS VHR screening

NHS

2%

Other:
- NHL pre-2003
- Non-lymphoma
- Outside of England
- Private healthcare setting

Individual clinicians

Data as of 18 May 2026

Impact on national policy

2020

- **Inclusion of BARD cohort referral process** in national NHS VHR guidelines
  - ➢ The Surveillance of women at very high risk of developing breast cancer - GOV.UK

2023

- Removal of GP responsibility to refer women aged 30-35 at RT
  - ➢ VHR referrals managed by a **unified BARD cohort pathway**

2025

- Removal of requirement to contact an at-risk woman's GP before referral
  - ➢ All women eligible for VHR screening **referred without prior GP approval**

Summary

BARD is a **data-led, clinician light** approach established to improve the service and experience for women at increased risk of breast cancer following radiotherapy

- Linkage of national datasets for direct patient benefit
  - ➢ Policy changing
  - ➢ Audit
  - ➢ Research

"The blueprint for surveillance of clinically identified high risk populations"

UK National Screening Director

"Maybe my story could have been different if it had been post-BARD rather than pre-BARD"

BARD patient representative

BARD next steps

Eligibility

Extend BARD cohort to include:

- Non-lymphoma diagnoses
- Irradiated aged <10 years
- Total Body Irradiation (TBI)

BARD next steps

Eligibility

Extend BARD cohort to include:

- Non-lymphoma diagnoses
- Irradiated aged <10 years
- Total Body Irradiation (TBI)

Research

Personalise breast cancer risk:

- Modern radiotherapy techniques
- Amount of radio-dense breast tissue involved in RT fields
- Integration with hormonal and genetic risk

Acknowledgements

Team members

- Clinicians
- NHS England colleagues
- Patient representatives

Funding

NHS The Christie NHS Foundation Trust

NHS England

NIHR | Manchester Biomedical Research Centre

BARD team, November 2025

Contact: Dr Joanna Williams joanna.williams17@nhs.net

Thank you

The Paterson Building
The Christie NHS Foundation Trust

Manchester, England