Advancing Cancer Research Together

NCRI Breast Group Strategic Priorities 2022-2025

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NCRI Partners

NCRI is a UK-wide partnership between research funders working together to maximise the value and benefits of cancer research for the benefit of patients and the public. A vital strength of the NCRI is our broad membership with representation across both charity and government funders and all four nations in the United Kingdom.

Foreword

“The NCRI Breast Group has a strong track record of developing impactful, practice-changing research in breast cancer over the last decade, borne of our strong multidisciplinary membership and our partnership with patients. The group has continued to develop new studies to address some of the major challenges in breast cancer despite the challenges of the last few years, with some major projects now funded and in set up. Despite this, there remain many unanswered questions. It was fantastic to have so many colleagues from all aspects of breast cancer research, together with our patient advocates, attending our recent series of strategy meetings. We are very grateful to all those involved for their contributions, which have contributed to the development of these priorities for the NCRI Breast Group over the coming years. We look forward to working together across the NCRI Network to address these, to improve outcomes and quality of life for all our breast cancer patients now and in the future.”

Mr Stuart McIntosh, Chair of NCRI Breast Group

NCRI Breast Group strategy discussion sessions 2021

The NCRI Breast Group strategy sessions held in November 2021 attracted participants from various sectors and disciplines, including NCRI Consumer Forum members, early career researchers and NCRI Partners. The introductory session allowed for discussion of the overarching challenges, opportunities, and gaps in breast cancer research. The subsequent sessions addressed specific issues and areas of unmet need in the field. In a series of sessions, experts exchanged ideas on the priorities of future research in this field. Each session involved researchers from wide-ranging disciplines encouraging cross-cutting collaboration to meet the most pressing needs in breast cancer today.

Strategy session contributors

Mr Stuart McIntosh, Queen's University Belfast
Dr Jean Abraham, Cambridge University Hospitals NHS Foundation Trust
Dr Anne Armstrong, The Christie NHS Foundation Trust
Professor John Bartlett, Edinburgh Cancer Centre
Dr Indrani Bhattacharya, Institute of Cancer Research (ICR)
Professor Judith Bliss, Institute of Cancer Research (ICR)
Professor Janet Brown, University of Sheffield
Dr Malcolm Brown, Queen's University Belfast
Professor David Cameron, University of Edinburgh
Professor Ramsay Cutress, University of Southampton
Professor Janet Dunn, University of Warwick
Dame Lesley Fallowfield, Brighton & Sussex Medical School
Professor Debbie Fenlon, Swansea University
Dr Melanie Flint, University of Brighton
Dr Helena Harder, University of Sussex
Dr Catherine Harper-Wynne, Maidstone, and Tunbridge Wells NHS Trust - Kent Oncology Centre
Mrs Sue Hartup, Leeds Teaching Hospital NHS Trust
Professor Valerie Jenkins, University of Sussex
Dr Lyndsay Hughes, King's College London (KCL)
Dr Sheeba Irshad Kanth, King's College London (KCL)
Dr Christiana Kartsonaki, University of Oxford
Mr Baek Kim, Leeds Teaching Hospital NHS Trust
Professor Cliona Kirwan, University of Manchester
Professor Chris Lord, Institute of Cancer Research (ICR)
Professor Iain Lyburn, Gloucestershire Hospitals NHS Foundation Trust
Dr Marjory Maclennan, Western General Hospital
Ms Mairead MacKenzie, Independent Cancer Patients' Voice (ICPV)
Dr Iain Macpherson, Beatson West of Scotland Cancer Centre
Dr Hannah Markham, University of Southampton NHS Foundation Trust
Dr Sophie Merreck, Guy's and St Thomas' NHS Foundation Trust
Dr Adrienne Morgan, Independent Cancer Patients' Voice (ICPV)
Miss Szeyi Ng, Institute of Cancer Research (ICR)
Professor Carlo Palmieri, University of Liverpool
Dr Catherine Pembroke, Velindre Cancer Centre
Mr Kieran Prior, Cancer Research UK (CRUK)
Dr Professor Emad Rakha, University of Nottingham
Dr Tim Rattay, University of Leicester
Professor Keith Rogers, Cranfield University
Mrs Janice Rose, National Cancer Research Institute
Dr Rebecca Roylance, University College London (UCL)
Dr Kienan Savage, Queen's University Belfast
Professor Valerie Speirs, University of Leeds
Professor Rob Stein, University College London (UCL)
Ms Lesley Stephen, Independent Cancer Patients' Voice (ICPV) and METUP UK
Mrs Hilary Stobart, , Independent Cancer Patients' Voice (ICPV)
Professor Nick Stone, University of Exeter
Dr Carolyn Taylor, University of Oxford
Mrs Lesley Turner, Independent Cancer Patients' Voice (ICPV)
Dr Nicholas Turner, Institute of Cancer Research (ICR)
Professor Andrew Tutt, Institute of Cancer Research
Dr Simon Vincent, Breast Cancer Now
Dr Caroline Wilson, Weston Park Cancer Centre
Dr Duncan Wheatley, Royal Cornwall Hospital NHS Trust
Dr Sally Wheelwright, University of Sussex

Independent quinquennial review contributors

The work of the NCRI Breast Group is periodically reviewed by an international panel of experts in the field. The comments of these panel members contributed to the direction of the group's strategic priorities.

Professor Meriel Jenney, Paediatric Oncologist, Cardiff and Vale Health University Health Board
Dr Ian Lewis, Head of Strategy and Initiatives, NCRI
Dr Emma Pennery, Clinical Director, Breast Cancer Now
Professor Hervé Bonnefoi, Medical Oncologist at the l'Université de Bordeaux, France
Mr Michael Jenkinson, NCRI Brain Group Chair
Dr Gillian Rosenberg, Head of Groups, NCRI

Session 1: Strategy introduction

Chair: Stuart McIntosh

Speakers:

- **Stuart McIntosh**, Queen's University Belfast – Welcome and introduction
- **Nicola Keat**, NCRI – Introduction
- **Abbie Fearon**, NCRI – NCRI Strategy and breast cancer research spend analysis
- **Cliona Kirwan**, University of Manchester – Patient and public priorities for breast cancer research
- **Kieran Prior**, CRUK – CRUK strategy and funding opportunities
- **Simon Vincent**, Breast Cancer Now – BCN strategy and funding opportunities

Session 2: Metastatic mechanisms

Chair: Carlo Palmieri

Speakers:

- **Carlo Palmieri**, University of Liverpool – Welcome and introduction
- **Nicola Keat**, NCRI – NCRI's new operating model and transition plan
- **Carlo Palmieri** – University of Liverpool- Current work in metastatic breast cancer and opportunities for the NCRI Breast Group
- **Lesley Stephen**, Independent Cancer Patients' Voice (ICPV) and METUP UK – Patient priorities in metastatic breast cancer
- **Indrani Bhattacharya**, ICR, and Catherine Pembroke, Velindre Cancer Centre – Discussion of SABR studies

Session 3: Breast cancer symptom management

Chair: Lesley Turner, Anne Armstrong

Speakers:

- **Lesley Turner**, ICPV and Anne Armstrong, The Christie NHS Foundation Trust – Welcome and introduction
- **Nicola Keat**, NCRI – NCRI's new operating model and transition plan
- **David Cameron**, University of Edinburgh - Breast International Group Update
- **Lesley Turner**, ICPV and Anne Armstrong, The Christie NHS Foundation Trust – Current work on breast cancer symptom management and opportunities for NCRI Breast Group

Session 4: Early disease breast cancer

Chair: Judith Bliss

Speakers:

- **Judith Bliss**, ICR - Welcome and Introduction, Portfolio recap and interactions with UKBI
- **David Cameron**, University of Edinburgh - Breast International Group Update
- **Andrew Tutt**, ICR - Integration of routine genomics
- **Stuart McIntosh**, Queen's University Belfast – Risk adapted trials in the era of personalised medicine
- **Catherine Harper-Wynne**, Maidstone and Tunbridge Wells NHS Trust - Kent Oncology Centre - Lifestyle & exercise interventions – summary of UK activities
- **Judith Bliss**, ICR - Risk and Prevention - Discussion

Fundamental principles of the NCRI and overarching work of the NCRI Breast Group

The NCRI has four fundamental principles which run through all our work: to facilitate cross-funder and cross-sector collaboration; to coordinate high-quality research development and delivery; to support early career researchers, and to ensure Consumer involvement throughout our activities. These principles run through the strategic priorities of all NCRI Groups. A dynamic mix of people, ideas and ways of thinking are needed to achieve these aims. The NCRI is committed to building a diverse, equal and inclusive environment for all those involved. Crucially, steps to engage with and recruit a more diverse group of patients in, for example, clinical trials will be outlined in the implementation plans of any relevant project set up by NCRI Groups.

As well as group-specific strategic priorities, proposal guidance meetings are embedded within the activities of each NCRI Group. These meetings are vital in facilitating coordinated research and will be held regularly to support the wider breast cancer research community. By reviewing proposals relating to a breadth of tumour types and providing expert feedback, proposal guidance meetings allow the group broad oversight of the research portfolio and identify areas of unmet need that require more focus.

The NCRI Strategy Advisory Group (SAG) regularly reviews our fundamental principles and scientific priority areas to ensure we have an agile strategy that develops as we evolve as an organisation and as gaps or opportunities emerge.

NCRI Breast Group strategic priorities 2022

The NCRI Breast Group have identified several key strategic areas in which we wish to focus our efforts over the next three years. These can be grouped into several areas of overarching strategic focus, plus some additional areas identified as important to the group's broader strategy.

Strategic area 1: Personalised medicine and risk-adapted studies

In this key area, the group will seek to build on its successful portfolio of risk-adapted studies in breast cancer. Within this aim, we will seek to not only develop studies examining risk-adapted treatments (including the use of genomic medicine) but will also look to further our understanding of patient attitudes to risk, such that treatment can be personalised to the patient as well as their disease.

Priority 1: Developing the group's portfolio of risk-adapted studies

This priority seeks to continue to build on the group's expertise and success in developing risk-adapted studies in early breast cancer. The group have a broad portfolio of risk-adapted studies, particularly in low-risk and HER2 positive disease. However, there remains scope for additional work to develop the portfolio in this area further. Two areas that have been identified for further work include de-intensification of treatment in good prognosis screen-detected disease and treatment escalation in patients with a non-complete response to neoadjuvant therapies, and the group will seek to develop national studies to address these areas over the coming years.

Priority 2: Explore patients' attitudes to risks of disease recurrence versus therapy toxicities

Improved understanding of tumour biology and monitoring of treatment response means that we have increasing opportunities to adapt an individual's level of treatment according to their risk. However, this means there is a clear need to understand the attitudes of our patients to risks of disease recurrence and the risks of treatment toxicities and long-term effects, particularly in the context of trials which seek to reduce treatment intensity. This priority aims to explore patient attitudes to these risks (either within existing studies or new research) with a view to developing recommendations for further research in this area.

Priority 3: Leverage our increasing understanding of breast cancer genomics to inform patient treatment

An increased understanding of breast cancer genomics provides multiple opportunities in both patient research and treatment. In this working group, we would seek to address several key questions, including:

- How can we best use genomic information provided as part of routine care to inform the design of future clinical trials? This priority would specifically seek to develop and design a precision medicine trial in breast cancer underpinned by genomic medicine.
- How can we best implement this information into clinical practice? Through this priority, we aim to provide guidance on the development and delivery of molecular tumour boards in breast cancer to ensure the effective implementation of this information into routine care.

Strategic area 2: Metastatic breast cancer

Increasing numbers of patients are living with metastatic breast cancer, and there is an urgent need to develop the portfolio of trials and studies to improve our understanding of disease biology and current treatment patterns to improve patient outcomes. The group has identified several critical areas of focus for this work.

Priority 1: To understand and evaluate the current patterns of care in the UK regarding the management of oligometastatic breast cancer and to develop a study for oligometastatic breast cancer

By addressing this priority, we aim to examine and understand the current variations in the treatment of oligometastatic breast cancer, including what and how ablative techniques are used across the UK. In addition, a pragmatic UK wide study for oligometastatic disease with in-built translational research will be developed.

Priority 2: To develop a study to better understand the molecular basis for the development of CNS disease

By addressing this priority, we aim to identify possible molecular risk factors for developing CNS disease, enabling the identification of at-risk patients earlier in their disease course. This will include the development of a prospective translational study to seek out possible early genomic drivers of CNS disease using primary and secondary breast cancer material.

Priority 3: To develop a CNS screening study in patients with metastatic breast cancer

By addressing this priority, we will explore and determine the benefits to patients of detecting asymptomatic disease by regular CNS screening. This priority will explore if outcomes can be improved by changing from the current approach to CNS monitoring in metastatic breast cancer based on clinical signs and symptoms to one that is radiologically driven.

Strategic area 3: Symptom management

Patient-centred research focussing on key topics in the management of symptoms in patients treated for breast cancer has been a long-standing priority for the NCRI Breast Group. Recent strategy meetings highlighted several areas where there was an ongoing need to identify research gaps which would be required to be addressed by the group.

Priority 1: To investigate patient adherence to treatment regimens with a specific remit to look at endocrine therapies

This priority aims to better understand the barriers associated with adherence to treatment in breast cancer patients, focusing on groups shown to have a higher prevalence of reduced adherence to treatment protocols. We will seek to identify whether there are any specific research gaps which the group could address.

Priority 2: To identify research gaps around urogenital symptoms/sexual health

Urogenital symptoms and sexual health remain a significant issue for women treated for breast cancer and contribute to adherence issues with endocrine therapy. We aim to identify specific research gaps around these issues and potential new interventions which could be the basis for subsequent studies.

Priority 3: To investigate sleep disturbance in breast cancer patients to understand what the breast group can do compared to other support centres and charities

This priority will focus on a critical issue for patients around fatigue and sleep disturbance. We will work to understand the science behind sleep disturbances for breast cancer patients, and we will ensure cross-cutting work with the NCRI Living with and Beyond Cancer (LWBC) Group and other interested parties. We will determine whether there are issues specific to breast cancer patients and whether these can form the basis of a research study to improve the quality of life in patients treated for breast cancer.

Strategic area 4: Early breast cancer clinical trials portfolio

A key part of the group's activity will be to continue its highly successful development of the clinical trial portfolio in early breast cancer. In addition to the studies highlighted in the areas above, the following topics will form part of the group's focus as it develops further studies.

Priority 1: To coordinate and develop a national clinical trial examining the effect of lifestyle and exercise on patients with breast cancer

There are several UK groups interested in the impact of lifestyle choices (such as diet and exercise) on prevention and symptom management in both early and late-stage breast cancer. The group will seek to coordinate the current research ongoing in this area, to develop and deliver a national study to determine the benefits of such lifestyle changes on breast cancer outcomes.

Priority 2: To develop a study addressing the safety and efficacy of neoadjuvant endocrine therapy in pre-menopausal women with early breast cancer

This priority seeks to address a topic raised in the NICE research recommendations in 2018 to generate evidence to determine whether neoadjuvant endocrine therapy is safe in this patient population.

Strategic area 5: Understanding immuno-biology of breast cancers

In this key area, we will seek to specifically increase our understanding of the immunobiology of breast cancers, building also on the prioritises set out by the BSI-NCRI Cancer Immunology Group. Several areas have already been identified where the collaborative nature of the group can accelerate impactful future research in this area.

Priority 1: To coordinate and develop a national initiative to facilitate immune profiling of breast cancers

Increased tumour infiltrating lymphocytes (TILs) are predictive and prognostic for improved outcomes in breast cancers. Increased tumour mutational burden can be immune-activating. There are several UK groups interested in immune profiling local and peripheral microenvironments in different populations of breast cancers. The NCRI Breast Group will seek to coordinate the current research ongoing in this area, including biobanking, sharing of methodologies, to build up a meta-data to provide a detailed picture of the tumour and its microenvironment in breast cancers and the impact of current treatments.

Priority 2: To coordinate and develop a national initiative for the identification of atypical responders/exceptional survivors of metastatic breast cancers

Research into factors affecting treatment response or survival in cancer patients frequently involves a statistical mean with little attention to outliers who respond considerably better or worse than average. Rigorous studies of normal and atypical responses to treatment in breast cancers are needed to strengthen understanding of the role of non-tumour factors within these tumours. By providing a link between NCRI Partners, and the investigators of the translational "outlier" study in the UK, we hope to create a network of investigators facilitating the identification of atypical responders/survivors of metastatic breast cancers. The study will involve collecting personal data (a questionnaire, medical records), blood, tumour and lymph node tissue, stool for microbiome analysis, and personal fitness device data. Understanding patient populations that are highly unusual patients who have exceptionally favourable or atypically poor responses to treatment and overall survival, with the expectation that patients at the extremes may provide insights that could ultimately improve the outcome of individuals with more typical disease trajectories.

Additional strategic priorities

Priority 1: To undertake a review of endpoints used in UK breast cancer trials to provide recommendations to guide the choice of endpoints promoting relevance to patients alongside scientific sensitivity

The purpose of any cancer trial is to evaluate therapies designed to improve the duration and quality of survival of cancer patients. For many trials, however, the choice of primary and secondary endpoints is based on historical practice or assumptions of regulatory acceptability. The sensitivity of some of these endpoints and their relevance for patients is sometimes overlooked. Contemporary methods for data ascertainment, including increased opportunities to collect data directly from patients, opens up the potential for a more holistic assessment of treatment effects utilising tools relevant to patient experience. Greater awareness of the limitations of traditional endpoints such as response rate, Progression-Free Survival (PFS) and invasive disease-free survival (iDFS) provides the opportunity to consider a more standardised approach to disease outcome assessment and explore associations with intermediate biological endpoints currently being foreseen as potential surrogates. This working group would focus on reviewing endpoints currently in use in UK trials and propose a framework for future trials consideration. Additionally, given the importance of long-term follow-up, particularly within early breast cancer trials, long-term follow-up data within current UK studies will be evaluated and approaches to gathering long-term follow-up data will be considered. Patient partners will be critical to this work.

Priority 2: To assess the barriers resulting in a lack of diversity in breast cancer clinical trials and propose solutions to improve equality, diversity and inclusion

This priority aims to establish the reasons behind a lack of diversity in clinical trials and provide solutions to increase the participation of a diverse cohort of patients in future studies. This is a cross-cutting priority of the NCRI Groups, and so the first stages of this priority will be to assess the steps that could be taken to improve the inclusion of patients from a range of backgrounds into clinical trials from their design inception and delivery.

Overarching strategic priorities

Priority 1: To continue to support and enable the co-development of studies involving patient advocates and the clinical/scientific research community

The NCRI Breast Group has a long and successful record of working in partnership with patient advocates in the design and development of studies. This has often been noted in the review of studies developed through the group. This close relationship remains integral to our activity. In all of our group activities in the future, we will ensure that patient advocates remain a key part of our Working Groups and the Executive Group to continue that partnership.

Priority 2: To strengthen links with international groups

The NCRI Breast Group already has good links with international organisations, including the Breast International Group (BIG), with UK representation on the Executive Board, including the Chair. The NCRI Breast Group will remain apprised of strategically important trials coming through BIG, with the aim of opening appropriate BIG-led trials within our network. Furthermore, we will seek to explore opportunities to lead an international trial through BIG within the constraints of existing funding structure challenges. This priority aims to expand our network to develop a truly collegiate breast research consortium and be embedded within the group's strategy.

Next steps

Working groups addressing each specific strategic priority are currently being formed. These groups will comprise the experts needed to address each research question. The progress of these working groups will be published in the group's annual reports and triennial review. These can be found on the NCRI website. Members of the NCRI Breast Network will also be updated periodically on the group's progress.

Please get in touch if you have any questions or comments regarding this report or if you are interested in joining one of our networks, our Consumer Forum or our ECR Forum.

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