

11–13 February 2019
Hilton Birmingham Metropole
Birmingham

Fifth Biennial Early Diagnosis Research Conference



10 years on:
accelerating early
diagnosis into practice

CRUK.org/edconf2019

Together we will beat cancer



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Welcome

Sara Hiom

Director, Early Diagnosis
and Health Professional
Engagement



On behalf of Cancer Research UK, I'm delighted to welcome you to our fifth biennial Early Diagnosis Research Conference here in Birmingham.

Cancer Research UK's ambition is to accelerate progress so that 3 in 4 people survive cancer by 2034, up from 2 in 4 when we launched our strategy in 2014. We believe early diagnosis will play a key part in reaching this goal, which is why CRUK also set a goal to see 3 in 4 patients diagnosed at stages I & II (accompanied by an absolute reduction in late stage) also by 2034.

This is only 15 years away now and it is our collective responsibility to constantly review what is required to achieve these ambitions. Certainly, we need to ensure that the right environment, resource and tests necessary for earlier diagnosis are widely accessible to those who need them.

The theme of this year's conference is *10 years on: accelerating early diagnosis evidence into practice*. We will be celebrating the culmination of over a decade's research and implementation of evidence into policy and practice, as well as looking to the horizon for innovation that will drive progress towards 3 in 4 over the coming years.

This conference creates a unique opportunity to bring together our ever-growing multidisciplinary community and we are grateful to you all for the part you play in tackling late diagnosis and improving outcomes for cancer patients.

We encourage you to make the most of the networking and debating opportunities on offer, and to explore new avenues for collaboration and research funding available. We look forward to a lively, engaging and memorable event and, as ever, we welcome your feedback.

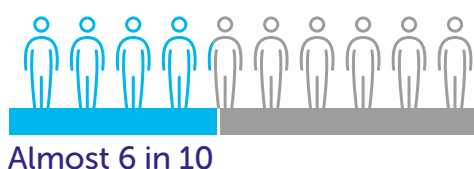
Early diagnosis is key to achieving 3 in 4 by 2034

The latest survival by stage data, which is available for patients diagnosed in England, reinforces the difference that avoiding late stage diagnosis makes to patient outcomes and their experience of care.

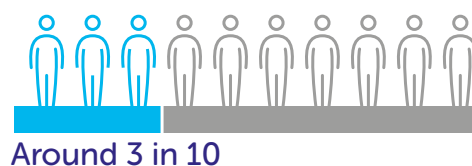
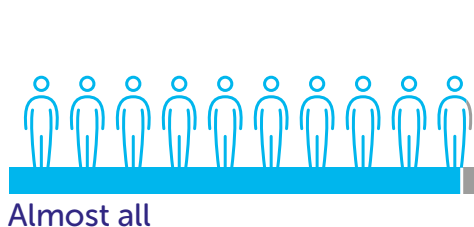
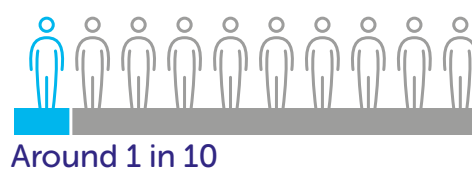
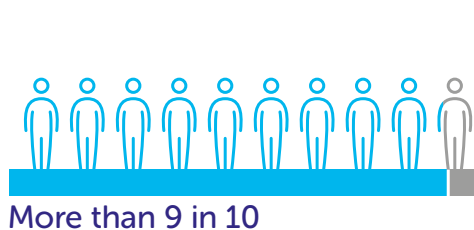
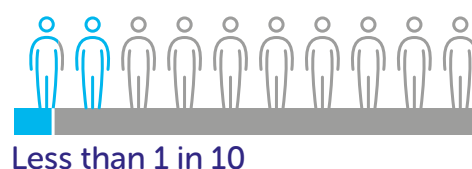
Cancer survival by stage at diagnosis

Proportion of people surviving their cancer for five years or more

Diagnosed at earliest stage



Diagnosed at latest stage



Earliest stage = stage 1; latest stage = stage 4.

Data is age-standardised net survival for adults (aged 15 to 99 years) in England in 2012-2016 followed up to 2017.

Source: Cancer survival in England, ONS/PHE, 2019. Breast cancer data is for females only.

10 years on: accelerating early diagnosis evidence into practice

Looking back on a decade of progress

Since increased focus on early diagnosis research in the early 2000s, our understanding of the burden of late stage disease and the challenges and opportunities for diagnosing cancer at an earlier stage, via symptomatic as well as asymptomatic diagnosis, has grown enormously.

At the outset it was clear that reducing late stage disease would require a multifaceted approach, and over the last ten years we've worked closely with others to drive the translation of evidence and insight into policy and practice.

Investment in targeted activities has encouraged the public to seek help for symptoms sooner and caused more patients to be urgently referred. The introduction of more effective screening technologies has improved population screening. Primary care research has underpinned the development of guidance to support GPs, ensuring that patients can receive the attention they need in a timely and effective manner.

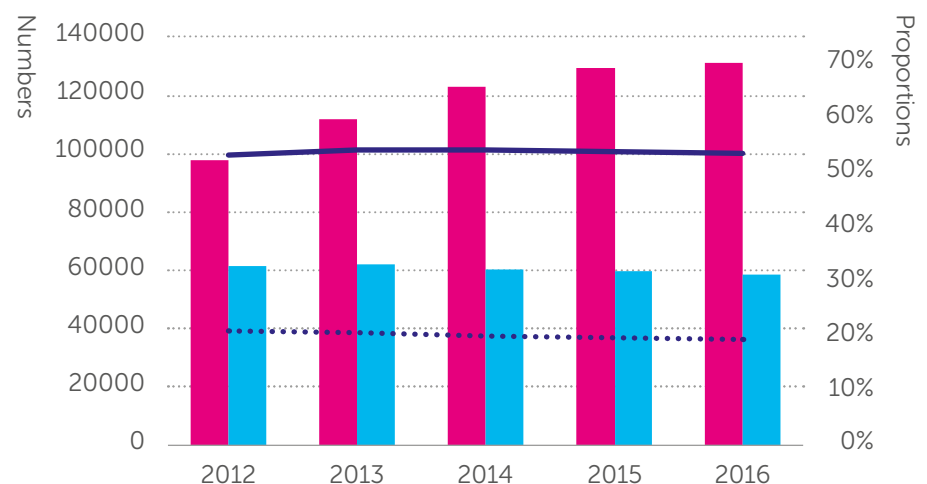
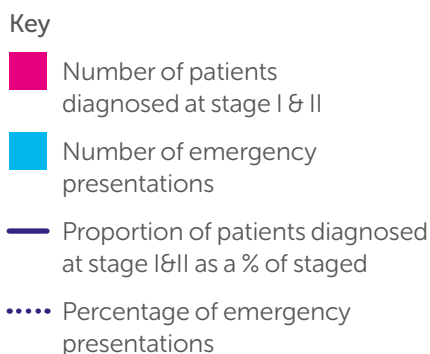
This research has been made possible by major improvements in data and intelligence over the last decade.

The publication of national staging data shines a light on areas of need and provides a baseline from which to measure improvement. The Routes to Diagnosis methodology allows us to identify the way in which cancer patients are diagnosed and the impact this has on survival, showing us how critical it is to avoid emergency presentations.

The International Cancer Benchmarking Partnership has highlighted the contribution of stage at diagnosis to international survival differences and explored a number of other potential contributory factors. This included the finding that GPs in the UK have a lower propensity to refer patients for tests at the earliest opportunity than counterparts in comparable countries.

Our understanding of cancer diagnosis in primary care has been boosted by studies investigating symptomology of patients prior to a diagnosis. This has helped to inform cancer referral guidelines and supported policy to increase GP direct access to tests.

Early diagnosis trends in England



The National Cancer Diagnosis Audit (NCDA), which includes data on the full diagnostic pathway for thousands of cancer patients, has emphasised the key role of primary care, shedding light on the extent and causes of avoidable delays. These include challenges in patient delay as well as securing diagnostic tests and results in a timely fashion.

'Wasting the doctor's time' was reported as a greater barrier to help-seeking in the UK compared to our international counterparts. Insight such as this have fed into the development of national public awareness activity, including Detect Cancer Early in Scotland and Be Clear on Cancer in England, which has reported positive impact on awareness, GP attendances with relevant symptoms, urgent cancer referrals and, in some instances, more cancers diagnosed at an earlier stage.

Funding a health service that is resourced to deliver is crucial when seeking to achieve earlier diagnosis of cancer. We've published reports attempting to estimate the impact of early diagnosis interventions on diagnostic capacity, adding further weight to the importance of optimal workforce planning.

Our original 'NAEDI hypothesis' from 2009 still holds true today, illustrating the multiple strands of activity needed to address late diagnosis, but developments in research and data have allowed refinements, which were captured in the 2015 update.

The timely and equitable implementation of evidence across this framework is crucial to securing better outcomes for patients, and Cancer Research UK continues to develop and support a variety of initiatives that will help improve diagnosis across the pathway.

From improving public awareness of the signs and symptoms of cancer through to the Accelerate, Coordinate, Evaluate (ACE) programme's assessments of innovative practice, such as multidisciplinary diagnostic centres (MDCs) and our Early Diagnosis Advisory Group policy-relevant funding committee, we are delighted to have supported innovative excellence in the field, building collaborations and facilitating partnerships to increase our understanding.

But despite the many significant developments we have seen, nearly half of patients of known stage are diagnosed with later stage disease, and almost 1 in 5 newly diagnosed cancer patients in England still receive their diagnosis via an emergency route. We must redouble our efforts so that fewer patients are diagnosed with late stage disease, more have the option of potentially curative treatments and all have an improved experience.



Addressing late diagnosis across the pathway



Age | Sex | Ethnicity | Socio-economic status

Difficulty accessing primary care

Low public awareness

Barriers to help-seeking

Negative beliefs about cancer

Delays in primary care interval

Late presentation to a GP

Low uptake of screening

Access to diagnostics and 1°/2° care interface factors

Late presentation to hospital services

Emergency presentations

Delays in secondary care interval

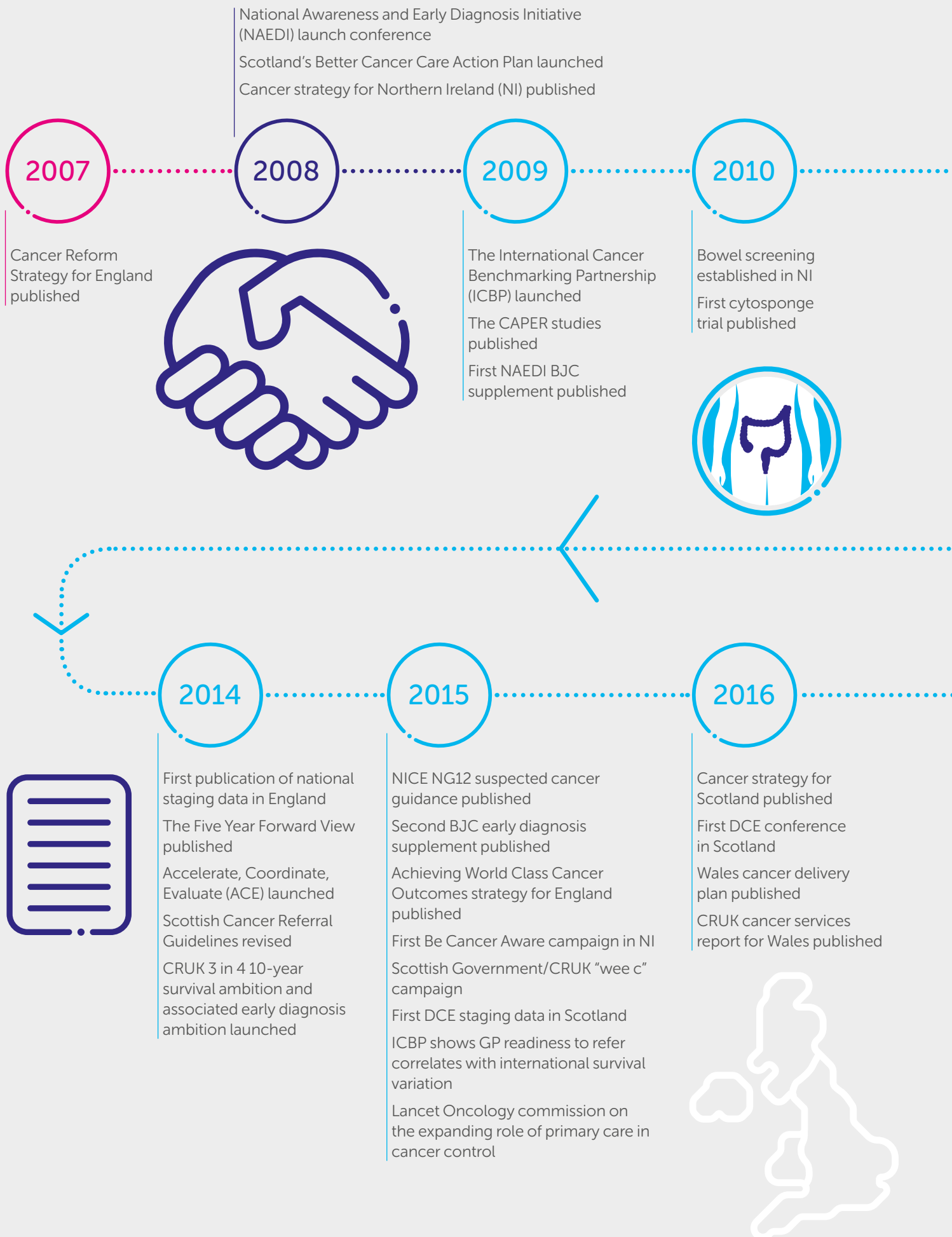
More advanced disease at diagnosis

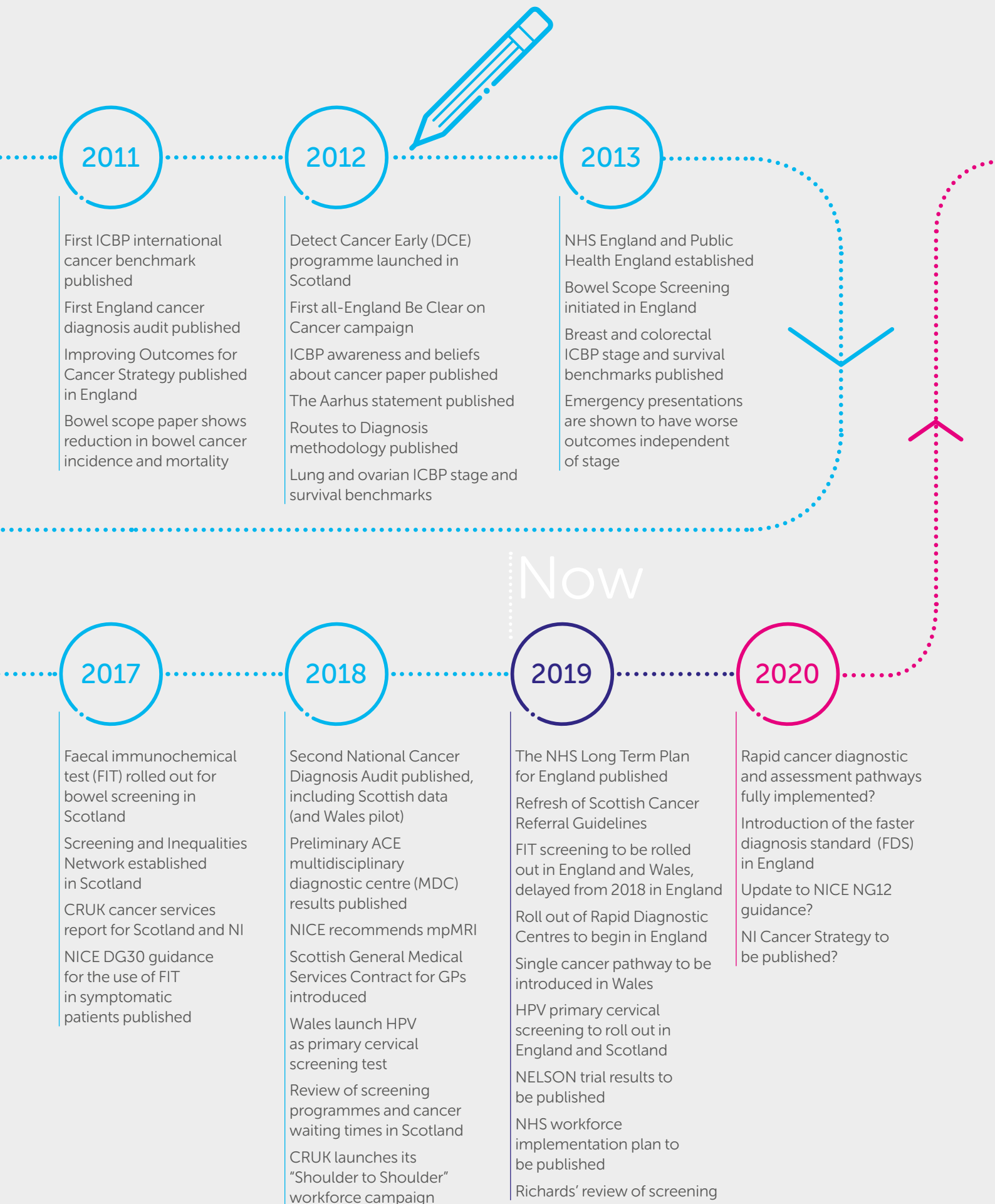
Treatment
Access to treatment
Other factors

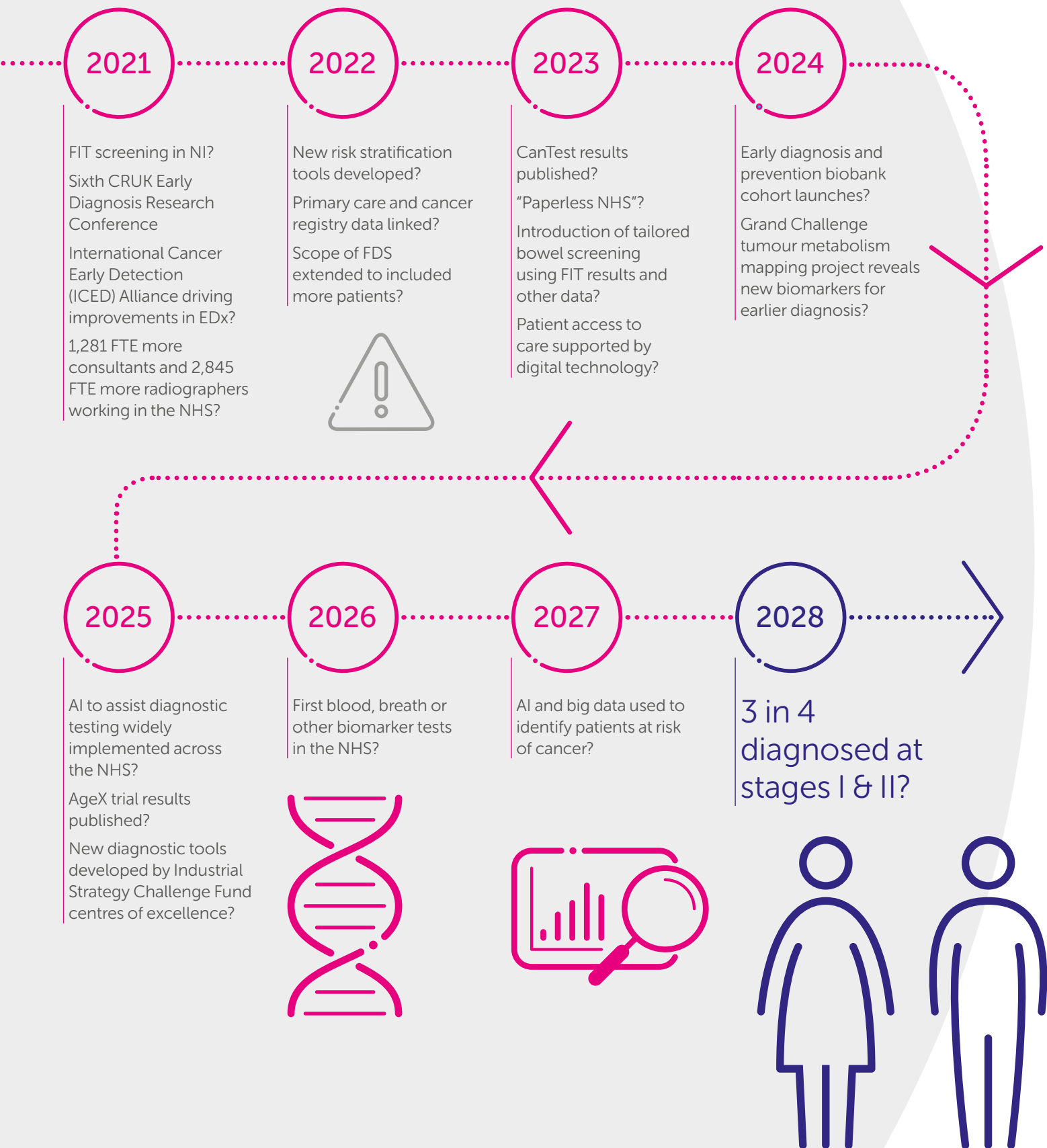
Poor survival rates

Premature mortality

Avoidable deaths







What does the future hold?

Early diagnosis is a key tenet of the CRUK strategy to accelerate improvements in cancer survival and deliver better outcomes for patients. It has also recently featured prominently in national health policy, in part due to the sustained influencing of CRUK and partners over the years, with the NHS Long Term Plan for England including an ambition that 3 in 4 cancer diagnoses will be at an early stage by 2028, exceeding the ambition of our own target by six years.

We anticipate that many of the current interventions we'll hear about during the conference, such as improvements to the bowel screening programme, lung health checks, changes to referral guidelines and multidisciplinary or 'rapid diagnostic' centres (M/RDCs), will play a crucial part in improving the proportion of patients diagnosed at an early stage. But they're unlikely to take us all the way to 3 in 4.

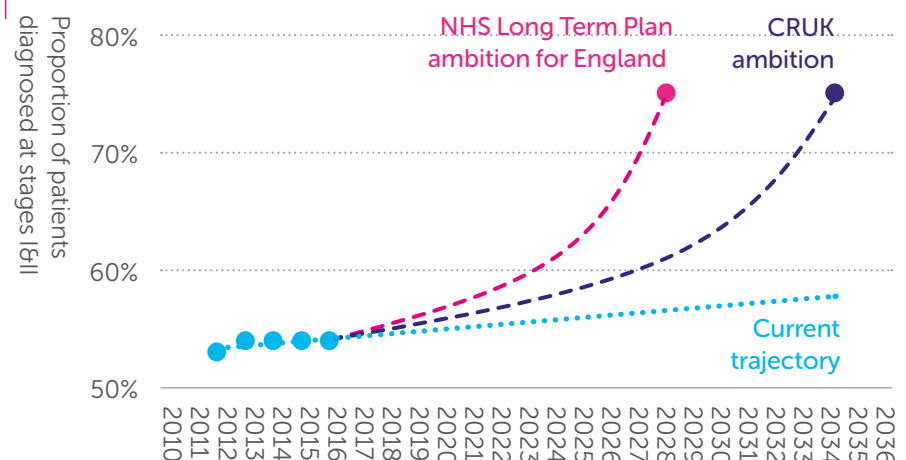
The swift translation of current early diagnosis research into practice, coupled with significant advances in, and rapid translation of, early detection research, will be crucial to realising our ambition and making the difference to patients' lives.

There is already exciting research in the pipeline. The CanTest programme is exploring development and implementation of new and improved tests in primary care practice. Lung screening trials at home and abroad show great promise, while more tailored approaches to bowel screening, using FIT results alongside other key factors, should ensure that more patients are diagnosed at an early stage through the programme.

We are also delighted to announce that 2019 will see the Cancer Research UK Early Detection (EDx) programme begin its boldest initiative yet; the creation of an International Cancer Early Detection Alliance. This will unite six of the world's foremost centres of excellence in EDx research, in the US and UK, in a collaborative virtual institute and further build the research pipeline, to generate the interventions of the future.

We hope that this Alliance will catalyse a leap forward in the field and accelerate the impact of EDx science on health.

The scale of our ambition: Getting to 3 in 4 patients diagnosed early



Our strategic priorities

Cancer Research UK is uniquely placed to help drive the reduction in late stage disease. We are a significant funder of high quality research, which forms the basis of our thought leadership and robust understanding of the evidence. We work hard to build strong, fruitful relationships across a multidisciplinary network to drive the adoption of evidence into policy and practice for patient benefit.

A robust and impactful research pipeline is crucial to fully realise the impact we strive for. As part of our commitment to early diagnosis, we have implemented a major new programme of investment in discovery and translational Early Detection research, investing £16m in discovery and validation of signatures of early and pre-cancer, and development of technologies and translational research to show clinical proof of principle, in 2018.

Our relationships with key stakeholders help us prepare the ground for new interventions and focus our policy and information activities where we can have the most impact in the short-to mid-term. Our current priorities include the appropriate recognition, management and referral of patients, particularly for lung and bowel cancer, as well as improving pathways for those with non-specific symptoms and optimal implementation of faecal immunochemical test (FIT) screening for bowel cancer.

Our influencing work continues to ensure that the diagnostic workforce is at the top of the agenda, for without it, we will not be able to deliver on the change that is needed.

In generating evidence and delivering the change that is needed, we recognise a crucial need to draw together a community across the disciplines, and to attract the brightest minds. Working in partnership and collaboration to accelerate research and impact is vital, and we are delighted to be working with you all to achieve shared goals and deliver the improvements in outcomes that patients deserve.





Biographies



Sara Hiom



Sara Hiom trained at UCL and worked in biomedical research at the Medical Research Council's National Institute for Medical Research before

joining Cancer Research UK in 2000. Since then she has built expertise, developed and led teams within the charity in prevention, screening, early diagnosis, evaluation and analysis, primary care and clinical leadership. Sara directs delivery of Cancer Research UK's early diagnosis strategy with an aim of reducing late stage diagnosis and improving survival and patient experience.

Sara has led Cancer Research UK's involvement in the International Cancer Benchmarking Partnership, the Marmot Review of breast cancer screening and key innovations such as the ACE Programme (Accelerate, Coordinate, Evaluate) within the NHS. She chairs the National Cancer Diagnosis Audit and is a Trustee of the British Thoracic Oncology Group (BTOG).

Dr Jodie Moffat



Dr Jodie Moffat has been the Head of Early Diagnosis at Cancer Research UK since the team's inception in 2013. The team sits within the Policy and

Information (P&I) Directorate and drives the distillation of early diagnosis evidence and its translation into policy and practice.

After joining CRUK in 2008, one of Jodie's first projects was the launch event for the National Awareness and Early Diagnosis Initiative (NAEDI) and she continued to play a key role in the Initiative over the years that followed. In 2012, Jodie spent a year seconded to the Department of Health to develop and implement the evaluation framework for the early Be Clear on Cancer awareness campaigns and the clinical decision support tools for use in primary care settings. The author of a number of peer-reviewed papers, on awareness and behaviour, inequalities and screening, Jodie is passionate about evidence-led decision-making.

Jodie oversees EDAG, the early diagnosis policy relevant funding committee at CRUK, chairs the Early Diagnosis Programme in P&I and sits on a number of external groups including the Bowel Screening Research Advisory Committee, the Be Clear on Cancer Steering Group, the NHS England Lung Cancer Clinical Expert Group and the National Cancer Diagnosis Audit Steering Group.

Prior to joining CRUK, Jodie undertook a PhD in earlier diagnosis of lung cancer, and also spent three years working in the NHS as a therapy radiographer.

Early career researchers: showcase of research into early diagnosis

Chair **Dr Katriina Whitaker**



Dr Katriina Whitaker is Lead for Cancer Care in the School of Health Sciences at the University of

Surrey. She was awarded a Cancer Research UK postdoctoral research fellowship (2012-2015) to explore cancer symptom appraisal in everyday life. Her ongoing programme of work focuses on early diagnosis and cancer, with a particular interest in healthcare-seeking and health inequalities.

Katriina is a Chartered Psychologist and was made a Fellow of the British Psychological Society in 2017. She chairs the Early Diagnosis sub-group of the NCRI's Primary Care Clinical Studies Group (CSG) and is an expert panel member for Cancer Research UK's Early Diagnosis Review Panel.

Chair **Dr Fiona Reddington**



Dr Fiona Reddington is Head of Population, Prevention and Behavioural Research Funding at Cancer

Research UK and oversees the research portfolio in the areas of population research, prevention and early diagnosis.

Fiona obtained her BSc (Pharmacology) at University College Dublin and her PhD (Neurophysiology) from King's College London (UMDS). From there, she joined the NHS as a project manager and managed a Cancer Centre at University College London.

Management roles at a national cancer network and the NCRI Informatics Initiative followed where Fiona was part of the team to win the inaugural Times Higher Research project of the Year award.

Dr Paula Bradley



Dr Paula Bradley is a part-time GP trainee enrolled on a PhD at the University of Sunderland. Before GP

training, Paula was an Ear Nose and Throat surgical trainee and her main career interest was the management of head and neck cancer. Paula's PhD combines this interest with that of primary care.

Before medicine Paula studied Modern History with Economics at the University of Manchester followed by an access to medicine course in King's Lynn and Medical School in Newcastle Upon Tyne. Her early medical jobs took her to New Zealand, Bristol and the North West before settling back in Newcastle. She completed a Master of Clinical Research at Newcastle during full time higher surgical training. She has published work in the arena of head and neck cancer, contributing to both peer-reviewed articles and book chapters.

Paula's PhD is a mixed methods study questioning whether there is a need for, and evidence to support the development of risk assessment tools for symptoms suspicious of head and neck cancer for use in primary care.

The PhD has a multidisciplinary supervisory team including academics from both primary and secondary care and has been accepted onto the CRUK funded and Royal College of General Practitioners (RCGP) supported CanTest portfolio of work which aims to "assess the accuracy, safety, cost effectiveness and suitability of a range of diagnostic methods and tools, for both patients and doctors, to lower diagnostic waiting times and reducing the burden of referrals".

Dr Robert Kerrison



Dr Robert Kerrison is a Research Associate at the Department of Behavioural Science and Health, University

College London. He specialises in the development and evaluation of behavioural interventions for cancer screening. His previous research has led to the implementation of text message reminders for breast and cervical screening in London.

More recently, he has focused on understanding and addressing reasons for non-attendance in bowel cancer screening, with a special focus on more socioeconomically deprived and ethnically diverse areas. His current research seeks to test the impact of locally-tailored interventions in Hull and North West London. He is currently funded by a Yorkshire Cancer Research project grant, on which he is a co-applicant.

Dr Cathrine Wildenschild Nielsen



Dr Cathrine Wildenschild Nielsen is a postdoctoral researcher at the Research Centre for

Cancer Diagnosis in Primary Care (CaP), Research Unit for General Practice in Aarhus, Denmark.

Cathrine studied Health Science at Aarhus University. She joined the 'Snart-Gravid' ('Soon Pregnant') research team at the Department of Clinical Epidemiology, Aarhus University Hospital in 2012 to undertake a PhD in maternal characteristics and fecundability. In 2017, she became a postdoctoral researcher at CaP, focusing on projects concerning diagnostic pathways of cancer in general practice. Her research interests include methods to improve early diagnosis of cancer. Contact Cathrine on cwni@ph.au.dk.

Dr Marije van Melle



Dr Marije van Melle studied Medicine at the University of Utrecht, the Netherlands. After graduating in 2006, she

worked as a resident doctor for four years. Afterwards, she did a Master's in "Evidence Based Practice" at the University of Amsterdam (Amsterdam Medical Center), in which she obtained her degree and title of Clinical Epidemiologist in 2013.

In 2018 she obtained her PhD at the Julius Center (Utrecht Medical Center, Utrecht University) on transitional patient safety, aiming to measure and improve patient safety for patients transitioning between general practice and hospital (for instance, when referred, discharged, or simultaneously receiving hospital outpatient and primary care).

She joined the Cancer Group (Department of Public Health and Primary Care, University of Cambridge) in 2018 on the CanTest collaborative – an international team of primary care cancer researchers investigating ways of developing and implementing new, improved diagnostics and tools to help local GPs diagnose cancer earlier.

Marije's work focuses on colorectal cancer and routinely collected databases.

Bethany Wickramasinghe



Bethany Wickramasinghe is a Cancer Intelligence Analyst working in partnership with the

National Cancer Registration and Analysis service (NCRAS) at Public Health England and the Transforming Cancer Services Team for London (TCST) NHS.

Bethany works with linked national data including the Cancer Registry, undertaking population-level cancer research and analysis to support NHS cancer programmes and contribute to academic research. She works with a wide stakeholder network which has facilitated knowledge sharing and implementing local change.

Bethany is currently focused on early diagnosis and inequalities research. In 2018 she published a short report on the variation in cancer incidence by ethnicity across London in partnership with NCRAS and TCST.

Bethany holds an undergraduate degree in Psychology from the University of Southampton. In 2018 she combined her interests in mental health with those in population-level cancer research and was a named author in a published NCRAS study investigating risk of suicide after a cancer diagnosis.

Bethany previously worked at Macmillan Cancer Support where she evaluated cancer support services, analysed longitudinal trends in cancer populations, and contributed towards the organisation's strategy.

Hanna Skrobanski



Hanna Skrobanski completed her BSc in Psychology at the University of Roehampton in 2012,

and her MSc in Health Psychology at University College London (UCL) in 2013. Since completing her MSc, Hanna has worked at Cancer Research UK, where she was involved in the programme management of the 'Be Clear on Cancer' awareness campaign, and the International Cancer Benchmarking Partnership.

She has also worked as a Research Assistant at UCL's Department of Behavioural Science and Health, where she was involved in research which aimed to understand the effectiveness of various interventions in improving participation rates of the NHS Bowel Cancer Screening Programme (BCSP). As part of her role at UCL, she was also involved in monitoring Patient Reported Outcome Measures among patients taking part in the NHS BCSP. Hanna is now undertaking a PhD at the University of Surrey.

Her research aims to understand the role and training needs of primary care nurses regarding the early diagnosis of cancer.



Sharing insights: research and initiatives to improve public awareness and drive behaviour change

Chair Professor Yoryos Lyratzopoulos



Professor Yoryos Lyratzopoulos leads UCL's ECHO (Epidemiology of Cancer Healthcare

and Outcomes) Research Group and the UCL element of the CRUK-funded CanTest international research collaborative (<https://www.cantest.org>).

In recent years his research, which is funded by a Cancer Research UK Advanced Clinician Scientist Fellowship, has focused on studying variation in diagnostic pathways and timeliness in cancer patients; the use of tests or referrals; and cancer care experience.

He additionally works as a senior epidemiological advisor to the National Cancer Registration and Analysis Services of Public Health England and is affiliated to the University of Cambridge.

To January 2018 he has published 156 peer-reviewed papers; he is the first or last author in two thirds of these papers <http://tinyurl.com/lncqq7f>.

In 2016, he was awarded the Cancer Research UK 'Future Leaders' Prize.

Carolynn Gildea



Carolynn Gildea is a Senior Cancer Intelligence Analyst working in the National Cancer Registration and

Analysis Service, Public Health England. Carolynn studied Mathematics (BSc) at the University of Bath and Statistics (MSc) at the University of Lancaster before joining the former Trent Cancer Registry in 2009.

Her recent analytical work has focused on primary care activity relating to cancer, particularly on use of the urgent referral for suspected cancer pathway and the impact of Be Clear on Cancer campaigns on primary care attendances, diagnostics and referrals. She is also part of the team responsible for providing official cancer survival statistics.

Katie Connor



Katie Connor is a Senior Data and Research Analyst in the Cancer Intelligence team at Cancer

Research UK. She graduated with a Mathematics and Statistics degree from Newcastle University.

Since joining the team as an analyst in 2015, Katie has contributed to Cancer Research UK's early diagnosis focused work across a variety of projects, including evaluating a Be Clear on Cancer branded pilot campaign to improve the uptake of bowel screening in England. She has also led the analysis of the Cancer Awareness Measure survey, looking at public awareness of signs and symptoms of cancer, risk factors of cancer and perceived barriers to seeking help in primary care.

Dr Monica Koo



Dr Monica Koo is a postdoctoral Research Associate based in the Epidemiology of Cancer Healthcare and

Outcomes (ECHO) group, Department of Behavioural Science and Health at UCL. Monica studied Biomedical Sciences (BSc) and Public Health (MPH) at Imperial College London and joined UCL in 2015 to undertake a PhD in presenting symptoms and diagnostic timeliness funded by the Department of Health Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis.

Her research interests include optimising public health policies to support early diagnosis and improving diagnostic pathways. She is part of the UCL hub of the CanTest Collaborative, funded by the inaugural Cancer Research UK Catalyst award. Find Monica on Twitter: [@ammkoo12](#)

Natalia Calanzani



Natalia Calanzani is a Health Services Researcher with a BSc in Psychology and an MSc in International

Business. From 2010 until 2013 she undertook Palliative and End of Life Care research at the Cicely Saunders Institute, King's College London. From 2013 until 2015 she worked as a Research Fellow at the University of Edinburgh (UoE), helping to develop and evaluate an intervention aiming to improve bowel screening uptake in Scotland.

Natalia is particularly interested in research that can contribute to the development and implementation of health policy. She has written evidence-based reports for the National End of Life Care Intelligence Network (now part of Public Health England), Hospice UK and Marie Curie.

Natalia is currently in the final year of her PhD in Population Health Sciences at the UoE. She has investigated the role of health system level initiatives in promoting earlier cancer diagnosis. Her PhD study comprised a systematic review of initiatives worldwide, and a theory-based evaluation of the Detect Cancer Early Programme in Scotland. A comprehensive evaluation report with recommendations for policy will be made available in 2019.



Welcome reception

Jon Green



Jon Green quit a senior job in the corporate sector nearly 20 years ago to set up his own business. He wanted

to improve his work-life balance and spend more time with his family. He now gives motivational talks to people in business to help them realise that there is more to life than chasing a career and money.

When Jon was 55, he was invited to attend a pilot of the bowel scope screening programme and, as a result of the test, he was diagnosed with early stage bowel cancer. The diagnosis was a shock as he'd not had any symptoms. Jon had surgery and has since made a full recovery.

Jon lives in the East Midlands with his wife Sue, with whom he has two grown-up children. He enjoys travelling and is a keen rugby fan. Since being diagnosed with cancer, he's been an active supporter of Cancer Research UK, sharing his story to raise awareness of the importance of research.

Dr Jodie Moffat See page 15



Keynote speakers

Professor Harry De Koning



Professor Harry de Koning MD, PhD worked as an Assistant Professor in the Department of

Public Health of Erasmus University in Rotterdam from 1987 to 1999. He became an Associate Professor in 1999, and in 2008 he was appointed Professor of Public Health and Screening Evaluation.

His major scientific contributions are in the areas of: (1) design, management, and evaluation of large-scale multidisciplinary population-based randomised controlled trials to establish the efficacy of screening; (2) evaluation of active international screening programmes and tests to establish their effectiveness; and (3) guidance of public health policies through use of predictions of favourable and unfavourable effects of, and the cost of, screening, based on micro-simulation modelling of the natural history of disease and cost-effectiveness and cost-utility analyses.

Professor de Koning designed and is principal investigator of the NELSON lung cancer screening trial. This trial was the first to show that lung nodules detected by CT scanning can be managed safely with conservative follow-up schedules when including volume-doubling times in the algorithm.

He has 392 peer-reviewed international publications and an H-index of 60 in Scopus. His research focuses on quantifying the health benefits, unfavourable side-effects, impact on quality of life, and cost consequences of introducing screening programmes, resulting in recommendations and policy decision on whether and how to introduce new screening programmes. The strength of the research group, which currently comprises 35 members, lies in its multidisciplinary focus.

Dr Jem Rashbass



Dr Jem Rashbass studied medicine at University College London. He was a graduate student

of Professor Sir John Gurdon in Cambridge and then trained in diagnostic pathology.

Jem is now the National Director for Disease Registration and Cancer Analysis in Public Health England and the PHE Cancer Lead. In this role he is responsible for 350 staff in the National Cancer Registration and Analysis Service and the National Rare Disease and Congenital Anomalies Registration Service in England, and the data collection for the National Drug and Treatment Monitoring Service. He also manages the Data Release and Information Governance and Policy Offices for PHE.

Sara Hiom
See page 15

Professor Bob Steele, CBE



Professor Robert Steele, CBE obtained his initial surgical and academic training in Edinburgh, Hong Kong and

Aberdeen and was appointed as Senior Lecturer in Surgery at the University of Nottingham in 1990. He was then appointed Professor of Surgical Oncology at the University of Dundee in 1996 and as Professor of Surgery and Head of Academic Surgery in 2003.

His main interests are the treatment of, and screening for, colorectal cancer. Having led the UK demonstration pilot that was used to inform the decision to introduce national screening programmes throughout the UK, he is at present the Clinical Director of the Scottish Colorectal Cancer Screening Programme and has published extensively in this area. He has chaired several NHS Quality Improvement Scotland and Healthcare Improvement Scotland groups related to colorectal cancer and colorectal cancer screening and he chaired the Scottish Intercollegiate Guidelines Network (SIGN) group that developed the latest set of colorectal cancer guidelines.

He is a past member of the Council of the Royal College of Surgeons of Edinburgh, past Chair of the Health Improvement, Protection and Services (HIPS) Research Committee of the Scottish Government's Chief Scientist's Office, and past President of the Association of Coloproctology of Great Britain and Ireland. He is currently Editor of "The Surgeon", co-founder and co-director of the Scottish Cancer Prevention Network and Chair of the Board of Directors of the Scottish Cancer Foundation.

In 2016, he was appointed as Independent Chair of the UK National Screening Committee. In 2017 he was awarded an Honorary Membership of the Faculty of Public Health and was elected to the Fellowship of the Royal Society of Edinburgh. In 2018 he was elected to Fellowship of the Academy of Medical Sciences and was awarded a CBE in the Queen's Birthday Honours List.

Professor Sir Mike Richards



Professor Sir Mike Richards was a hospital physician for more than 20 years. After a variety of training posts, he

was a consultant medical oncologist between 1986 and 1995, and Professor of Palliative Medicine at Guy's and St Thomas' Hospitals between 1995 and 1999.

In 1999 Sir Mike was appointed as the first National Cancer Director at the Department of Health. In 2007, his role was extended to include end of life care. He led the development and implementation of the NHS Cancer Plan in 2000, the Cancer Reform Strategy in 2007 and Improving Outcomes: A strategy for cancer in 2011.

In July 2012 he was appointed as Director for Reducing Premature Mortality on the NHS Commissioning Board (now NHS England). In this role he led the development of a cardiovascular outcomes strategy.

He became Care Quality Commission's (CQC) first Chief Inspector of Hospitals in July 2013 and led the development and implementation of a new approach to hospital inspection, which assessed services on whether they are safe, caring, effective, responsive and well-led. Sir Mike retired from this role at the end of July 2017.

Sir Mike was awarded a CBE in 2001 and appointed a Knight Bachelor in 2010. He is an Honorary Fellow of the Royal College of Radiologists, the Royal College of Pathologists and the Royal College of Surgeons of Edinburgh.

Following his retirement from the CQC Mike has taken on the following roles:

- Non Executive Director, Department of Health, England
- Trustee, Cancer Research UK
- Senior Counsel, Incisive Health
- Senior Advisor, Health Care Strategy, PwC
- Visiting Research Fellow, The Health Foundation
- Commissioner, LSE-Lancet Commission on the Future of the NHS
- UK Special Healthcare Representative to the Kingdom of Saudi Arabia

Emerging evidence: a spotlight on lung cancer

Chair **Dr Mat Callister**



Dr Mat Callister is a Consultant Respiratory Physician in Leeds with an interest in thoracic malignancy.

His research interest is in the early diagnosis of lung cancer through symptom awareness and screening.

He was clinical lead for the NAEDI-funded Leeds Early Lung Cancer Campaign and is Chief Investigator of the Yorkshire Lung Screening Trial. He was co-chair of the British Thoracic Society Pulmonary Nodule Guideline and is a member of the NHS England Lung Cancer Screening Advisory Group and the British Thoracic Oncology Group Steering Committee.

Dr Hilary A Robbins



Dr Hilary A Robbins is a Scientist at the International Agency for Research on Cancer (IARC) in Lyon, France.

She holds a PhD in epidemiology, an MHS in biostatistics, and an MSPH in international health from Johns Hopkins University, and also completed a fellowship at the US National Cancer Institute.

Her research generates evidence for risk-tailored cancer screening strategies, particularly for lung cancer and HPV-related cancers. Current areas of emphasis include the development of risk models and biomarkers to optimise selection of smokers into CT screening and management of CT results.

Dr Samantha L Quaife



Dr Samantha L Quaife's research uses behavioural science to understand uptake of lung cancer screening

among high risk groups, as well as the psychological and behavioural impact of screening. Her academic training is in Health Psychology. She completed a Medical Research Council PhD studentship investigating the psychosocial and cognitive factors underlying socioeconomic and smoking-related inequalities in lung cancer screening participation.

She has since been awarded a Cancer Research UK Postdoctoral Fellowship and a Roy Castle Lung Cancer Foundation project grant to continue this work. Together these aim to directly inform engagement strategies and healthcare professionals' communication about lung cancer screening; to reduce inequalities in uptake and promote positive well-being and behaviour change among those who take part.

Samantha is part of a multidisciplinary team which delivered a NAEDI/Cancer Research UK-funded randomised controlled demonstration pilot of lung cancer screening (the 'Lung Screen Uptake Trial'). She is also part of the Trial Management Groups for two large lung cancer screening trials (SUMMIT Study and Yorkshire Lung Screening Trial) and is a Co-Investigator on smoking cessation studies in Yorkshire (YESS), Manchester and Oklahoma.



Dr Aradhna Kaushal



Dr Aradhna Kaushal is a Research Associate in the Research Department of Behavioural Science

and Health at UCL. She works in the Cancer Communication and Screening Group on projects for the Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis. She has recently completed a PhD in Epidemiology and Public Health, and also holds an MSc in Psychiatric Research, and a BSc in Psychology and Neuroscience.

Her research is primarily focused on promoting uptake of cancer screening, understanding delays in presentation of cancer symptoms and interventions to increase cancer awareness. In her current role, she is testing interventions to increase uptake of bowel scope screening and investigating how comorbid conditions may influence the interpretation of potential cancer symptoms and help-seeking from health professionals.

She has previously worked on the recently developed cervical cancer screening information materials, testing interventions to increase breast cancer awareness, and observational studies on the nature and duration of symptoms for those diagnosed with cancer through emergency presentations.

Dr Robert Rintoul



Dr Robert Rintoul is Reader in Thoracic Oncology in the Department of Oncology, University of

Cambridge and Honorary Respiratory Physician, Royal Papworth Hospital. He qualified in medicine from the Universities of St Andrews and Edinburgh and trained in respiratory medicine in London and Edinburgh. Dr Rintoul received his doctorate from the University of Edinburgh for work investigating mechanisms underlying resistance to chemotherapy in small cell lung cancer. He was appointed consultant in respiratory medicine specialising in thoracic oncology at Royal Papworth Hospital in 2005 before taking up his current post in 2017.

Robert is lead clinician for cancer at Royal Papworth Hospital NHS Foundation Trust and Director of the Papworth Clinical Trials Unit Collaboration. He is currently co-lead for the Aerodigestive Programme of the Cambridge Cancer Centre and he coordinates thoracic oncology research across Cambridge.

His research is focused around clinical trials, translational research and tissue banking in malignant mesothelioma and the early detection of lung cancer. He is Chief Investigator for several clinical translational studies examining biomarkers in lung cancer. In 2012, he founded Mesobank, the UK national bioresource for malignant mesothelioma (www.mesobank.com). His work is funded by the Cambridge Biomedical Research Centre, Cancer Research UK Cambridge Centre, UK National Institute for Health Research and the British Lung Foundation.

Dr Grace McCutchan



Dr Grace McCutchan is a post-doctoral Research Health Psychologist with an interest in cancer

inequalities. She has a long-standing interest in cancer after working in oncology clinics and with cancer psychological support services.

For her research, Grace works with individuals living in socioeconomically deprived communities to understand the psychosocial and behavioural influences on medical help-seeking for cancer symptoms and cancer prevention.

In her doctoral studies supervised by Professor Kate Brain, Grace conducted in-depth qualitative research to explore the barriers to cancer symptom presentation in highly deprived groups, and she developed a targeted community-based lung cancer awareness intervention to support early symptomatic help-seeking.

In 2017, she won the Early Diagnosis Research Conference patient poster prize for her PhD studies. In her current position as a Research Associate in the Division of Population Medicine, Cardiff University, Grace uses qualitative methods to explore barriers to early lung cancer detection, and she develops complex behaviour change interventions to engage high risk, highly deprived groups in early cancer detection and prevention.

Exploring and using national cancer data for patient gain

Chair **Dr Jem Rashbass**
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Dr Thomas Round



Dr Thomas Round is a GP at Bromley by Bow Health in East London and an academic in Primary Care and Public

Health Sciences at King's College London (KCL). He has active interests in health services research and in early cancer detection, having previously worked on a Cancer Research UK NAEDI grant.

He was awarded a National Institute for Health Research (NIHR) Doctoral Research Fellowship 2016-2020 investigating suspected cancer referral pathways from primary care, working in collaboration with colleagues at Public Health England.

He enjoys medical education and the translation of evidence into clinical practice, including as a module lead for KCL Masters in Public Health, and as clinical lead for the award winning Royal College of General Practitioners (RCGP) Essential Knowledge Updates (EKU) e-learning programme. He is a trustee and grants committee member for Barts Charity London and a member of the CRUK Early Diagnosis Advisory Group (EDAG) grants committee. He is also an active user of social media and twitter [@drtomround](#).

Dr Sean McPhail



Dr Sean McPhail studied natural science followed by a PhD in physics and several years of

research into quantum magnetism. After a career dogleg he has spent the last 12 years working in the cancer registration system in England, analysing cancer data and currently with the National Cancer Analysis Service (NCRAS). For the last year he has also been working part time as a Senior Research Associate in the Epidemiology of Cancer Healthcare & Outcomes (ECHO) group at University College London.

His research interests include the modes of presentation of cancer through application of the 'Routes to Diagnosis' classification method; use of data collected as part of the National Cancer Diagnosis Audit to better understand primary care referral processes; and the uptake, combination and variation in the delivery of cancer therapies, post diagnosis.

Recently he has been exploring how these interests can be combined in the improvement of our understanding of cancer patient pathways in their totality, both in England and internationally within the International Cancer Benchmarking Project.

Dr Ruth Swann



Dr Ruth Swann is a Senior Analyst on the National Cancer Diagnosis Audit, working for Health Data

Insight on the Cancer Research UK – Public Health England partnership.

Ruth completed a Master of Pharmacology degree at the University of Bath then went on to finish a PhD in cancer and radiation biology at the University of Manchester. After gaining experience working in cancer epidemiology at University College London and the University of Westminster, Ruth has continued her career in cancer research and is currently working as an analyst on the National Cancer Diagnosis Audit (NCDA). She carries out the main analytical work on the NCDA and her main interests include understanding the patient pathway through primary care to cancer diagnosis to find ways to achieve an earlier diagnosis for more patients.

'Zombie Apocalypse' Health Economics workshop

Dr Josephine French



Dr Jo French is a data scientist with Health Data Insight CIC, working in partnership with Public

Health England's National Cancer Registration and Analysis Service. She leads the analysis on the HDI-CRUK Pioneer Award, using machine learning techniques to investigate signals in national prescriptions data prior to cancer diagnosis. A core part of her work is in the adaptation and application of machine learning methods, mathematical techniques, and computational algorithms to the specific natures of health data and prescriptions data, and the interpretation of such methods.

Previously, Jo studied mathematics at Keble College, Oxford, going on to complete a DPhil in geometric representation theory, also at Keble. Specifically, her work studied a class of objects governing some of the algebra-geometric symmetries related to conformal field theory.

Dr Elisabeth Adams



Dr Elisabeth Adams is the founder and Managing Director of Aquarius Population Health – a consultancy

passionate about developing evidence to inform timely healthcare decisions.

She received her BSc Psychology (Hons) from the University of Michigan, going on to study an MSc in Infectious Disease Epidemiology at Oxford University and a PhD in Health Economics at the London School of Hygiene and Tropical Medicine.

Elisabeth has numerous peer-reviewed articles in influential journals – regularly collaborating with world expert clinicians. Her research in health economics and epidemiology has influenced local, regional and international policy.

Over the last 20 years, she has conducted research across a broad range of disease areas including infectious diseases, oncology, and long-term conditions. She is a co-principal investigator on many grant-funded research projects, and collaborates across the clinical, academic, commercial and charity sectors.

Late breaking abstract showcase

Chair Professor Bob Steele, CBE

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Dr Georgia Woodfield



Dr Georgia Woodfield graduated from the University of Edinburgh Medical School in 2009 and is now a

specialist registrar in gastroenterology in North West London. She is currently taking three years out of her training programme to do a PhD in Breath Testing for Colorectal Cancer, supervised by Professor George Hanna and Dr Amanda Cross at Imperial College London, based at St Mary's Hospital London. Georgia is particularly interested in the endoscopic diagnostic and therapeutic side of gastroenterology, and also has a MSc in Medical Education.

Her PhD involves two large clinical studies looking at breath testing for cancer; COBRA (Colorectal BREath Analysis), and Breath MAGIC (Models for Assessment for GI Cancers).

COBRA is a study of 1,400 patients looking at the diagnostic accuracy of breath testing for early detection of colorectal cancer and colorectal polyps using mass spectrometry, nearing completion. Breath MAGIC is a 1,000 patient study, now completed, investigating the feasibility and acceptability of breath testing in a primary care setting, as well as possible models for implementation of breath testing into clinical practice.

Mr Michael Machesney



Mr Michael Machesney is a Consultant Surgeon at Whipps Cross Hospital, Chair of the NHS England

Clinical Expert Group for Colorectal Cancer, Network Clinical Director for Barts Health NHS Trust and Colorectal Cancer Pathway Director for the UCLH Cancer Collaborative.

Michael is also the Chief Investigator of the quantitative faecal immunochemical test (qFIT) pilot, one of the largest national research study evaluating the efficacy of the faecal immunochemical test in ruling out bowel cancer.

James Croft



James Croft joined the UCLH Cancer Collaborative in April 2018 as a Research Nurse recruiting

patients for the quantitative faecal immunochemical test (qFIT) pilot from hospital sites across North and East London. He then moved into the role of Clinical Research Co-ordinator at the collaborative in September 2018 to draw together the findings of the qFIT study as well as a number of projects in the Collaborative's colorectal portfolio. These projects range from primary care engagement to innovations in colorectal diagnostics.

Previously James worked as an endoscopy staff nurse at North Middlesex University Hospital in Edmonton, working on all types of endoscopic procedures, both diagnostic and therapeutic. James has also worked in St Bartholomew's Hospital in the city of London which is a specialist centre for oncology and cardiology.

James is currently in the final stages of a Master's degree through the Open University's Advancing Healthcare Practice programme investigating primary care implementation strategies. On completion of his masters he looks to continue research in the area of quality improvement and innovations in care and practice. Prior to qualifying as a nurse James worked for the civil service and served in the Royal Navy where he was awarded the Operational Service Medal for Afghanistan.

Targeted breast screening and care: developments and insights to shape the future for patients with breast cancer

Chair **Professor Sir Mike Richards**
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Dr Louise Donnelly



Dr Louise Donnelly is a Health Psychology Research Fellow based at the Nightingale Centre and Prevent

Breast Cancer Research Unit, Manchester University NHS Foundation Trust (MFT).

Louise completed her PhD in Health Psychology at Aston University in 2009 and shortly after joined Professor Gareth Evans' research team in Manchester, which is currently working collaboratively with Professor David French at Manchester University.

Louise established and coordinates the Patient and Public Involvement and Engagement (PPIE) activities within the breast cancer risk and prevention team at MFT. Specialising in qualitative methodology and analysis, her research interests include reproductive and health behaviour decision making in the context of breast cancer risk reduction and screening. Find Louise on Twitter: [@DonnellyGorman](#)

Professor Gareth Evans



Professor Gareth Evans has established a national and international reputation in clinical and

research aspects of cancer genetics, particularly in neurofibromatosis and breast/colorectal cancer. He has published 742 peer-reviewed research publications; 273 as first or senior author. He has published over 120 reviews and chapters and has had a book published by Oxford University Press on familial cancer. He has an ISI web of knowledge H-index of 100 and Google Scholar of 136 having only published his first article in 1990. In the last seven years he has raised over £50 million in grants for multicentre and local studies – approximately £42 million to Manchester.

He is Chief Investigator on two NIHR programme grants (2009–2014–£1.59 million) (2017–2020–£1million) on breast cancer risk prediction and also has an NIHR Research for Patient Benefit grant as Chief Investigator (2011). He has supervised 13 successful doctoral theses and is currently supervising five. He has led a successful bid for a Nationally funded Neurofibromatosis Type 2 service (£7.5 million pa) that started in 2010 and is involved in the national complex Neurofibromatosis Type 1 service. He is overall cancer lead (three themes) and Cancer Prevention Early detection theme lead on the successful all Manchester NIHR Biomedical research centre bid (2017– 2022–£28.5million).

He is lead clinician on the NICE familial breast cancer guideline group and until recently a trustee of Breast Cancer Now and the Neuro Foundation. He is on the editorial board of Journal of the National Cancer Institute and is a board member of the Science Strategy Committee of Breast Cancer Now.

Professor David French



Professor David French is Professor of Health Psychology at the University of Manchester. He

has published over 140 articles in peer-reviewed journals, including seven in the BMJ. He has received research funding of over £80 million from bodies including the European Commission, MRC and NIHR. He is co-principal investigator with Prof Gareth Evans for the PROCAS2 NIHR programme grant, developing an evidence base to inform a decision to implement risk stratified screening within the NHS breast screening programme. He is PI on a related grant funded by Breast Cancer Now to consider how best to recommend to women identified as being at low risk for breast cancer that they should extend their screening intervals.

He is a Scientific Advisory Group member for the updating of MRC/ NIHR guidance on Development and Evaluation of Complex Interventions (third edition). He has served on several NIHR and MRC research funding panels. He was co-Editor for the official journal of the British Psychological Society: *British Journal of Health Psychology* for five years (2013-2017). He was elected Fellow of the European Health Psychology Society in 2012.

Panel debate: Accelerating innovation and advancements in research

Chair **Dr David Crosby**



Dr David Crosby Head of Early Detection Research at Cancer Research UK.

David began life as a baby, before becoming a pharmacologist, completing a PhD studying cell signalling in platelets. He spent time in academia, lecturing in clinical pharmacology. He then moved into industry, identifying and evaluating new clinical development opportunities for Linde Gas Therapeutics, the world's largest medical gasses company.

He then moved into the public sector, joining the UK government research finding agency, the Medical Research Council, where he oversaw various science areas and research funding programmes (including inflammation, cardiovascular and respiratory research), most recently leading the MRC-NIHR methodology research programme, and MRC's strategy and investments in experimental medicine.

He has led several strategic reviews of research areas and consequent development of new research initiatives. He is now developing and implementing a new strategy and programme of research investments at CRUK which aims to accelerate progress towards earlier detection and treatment of cancer, through an integrated multidisciplinary approach, driven by improvements in health outcomes.



Keynote speakers

Professor Willie Hamilton, CBE



Professor Willie Hamilton, CBE, MD, FRCP, FRCGP, is Professor of Primary Care Diagnostics at

University of Exeter. http://medicine.exeter.ac.uk/people/profile/index.php?web_id=Willie_Hamilton

The major part of his work is in cancer diagnostics in the symptomatic patient – the one sitting in the GP's consulting room. He leads the DISCOVERY team, with staffing varying from 6–10, plus 3–4 PhD students, all supported by his grant awards. These grants total over £30m, including CRUK's first Catalyst award.

He has over 250 publications, including the 2010 and 2015 overall Research Paper of the Year for studies on ovarian cancer and on the public appetite for cancer testing. He was also the cancer category winner in 2013, 2014, 2016 and 2017. His recent paper, on the risk of cancer with thrombocytosis, was the most downloaded and read paper in 2017 in the British Journal of General Practice.

He was clinical lead on the NICE guidance on suspected cancer, NG12, published in 2015. This governs around £1bn of annual NHS spending. One of his textbooks, 'Cancer Diagnosis in Primary Care' won a rather minor BMA award. Do please buy it – he gets 50p in royalties on every sale.

Cally Palmer, CBE



Cally Palmer was appointed as National Cancer Director for England in October 2015. She is responsible

for leading the implementation of the Independent Cancer Taskforce Strategy for improving cancer care in England and more recently the development of the Long Term Plan for Cancer.

Cally is also Chief Executive of The Royal Marsden NHS Foundation Trust, a Trustee of the Institute of Cancer Research and a Trustee of The Royal Marsden Cancer Charity. She has an MSc in management with distinction from the London Business School and was awarded a CBE in 2006 for her contribution to the NHS.

Mr John Butler



Mr John Butler is a consultant gynaecological oncologist at The Royal Marsden Hospital. He

qualified from Imperial College and University College London in 2000 and completed his training in obstetrics and gynaecology in North West London and completed his sub-speciality training in gynaecological oncology at The Royal Marsden Hospital, St Bartholomew's Hospital and Toronto.

His clinical interests are in radical gynaecological cancer surgery including pelvic exenteration, fertility preserving surgery, and minimal access surgery. His main research interests are in international comparisons of cancer outcomes and he was appointed as clinical advisor to the Chief Medical Officer (CMO) of England and National Cancer director in 2009 and was lead author for the CMO's 2014 annual report chapter on women's cancers.

Since 2009 he has been the lead clinician to the International Cancer Benchmarking Partnership (www.icbp.org.uk) an innovative global partnership of clinicians, academics, data experts and policymakers. He is also a member of Cancer Research UK Clinical Advisory Panel, the Early Diagnosis Advisory Group and a Trustee of the Lady Garden Foundation.

Optimising recognition and referral across the patient pathway

Chair Professor
Willie Hamilton, CBE
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Dr Georgia Black



Dr Georgia Black is a Senior Research Associate in the Department of Applied Health Research at University College London. Georgia's research programme covers patient communication and safety in early diagnosis of cancer, as well as exploring access and inequalities. As part of NIHR Collaborations for Leadership in Applied Health Research and Care North Thames, Georgia leads a project about the use of ethnography for healthcare improvement.

Alexander Thomson



Alexander Thomson is an Royal College of Physicians registered Physician Associate working in the

Gastroenterology department of Epsom and St Heliers Hospitals. He studied Genetics at Cardiff University (BSc Hons) and worked in Dual Labelled Probe DNA synthesis and purification before re-training to become a Physician Associate at St George's, University of London (PgDIP).

After a brief stint working in general practice he was brought in to run and manage the multidisciplinary diagnostic centre early cancer diagnosis project at Epsom and St Helier Hospitals. Following completion of the project he moved into the Upper GI team where he has been working to reduce time to diagnosis and time to treat in upper GI two-week rule patients in order to bring the Trust into line with the upcoming 28-day cancer diagnosis targets. He has also had a supportive role in process improvement and digitisation of the lower GI two-week rule pathway within the Trust.

Dr Sarah Price



Dr Sarah Price is a postdoctoral research fellow at University of Exeter College of Medicine and Health,

where she works in Professor Willie Hamilton's group.

She was lead researcher for a Cancer Research UK study investigating the diagnostic intervals for 22 cancer sites, and the impact of revising NICE suspected-cancer referral guidelines on diagnostic interval and other outcomes. She is now funded by the Department of Health Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis, and is developing robust measures of the timeliness of cancer diagnosis for studies of observational data.

Her developing research interests include cancer diagnosis in complex patients, and the health economics of cancer diagnostics. For rare sightings of Sarah on Twitter: [@SarahDotPrice](https://twitter.com/SarahDotPrice)

Panel debate: Accelerating shifts in stage

Dr Sam Merriel



Dr Sam Merriel a GP in North Somerset, and Clinical Senior Research Fellow at the University of Exeter. He

is currently undertaking a PhD, funded by Cancer Research UK as part of the CanTest Catalyst Award, which is titled 'Multi-parametric magnetic resonance imaging (mpMRI) for prostate cancer diagnosis in primary care'. Sam is exploring the safety, acceptability, and cost effectiveness of mpMRI as a potential 'rule out' test for clinically significant prostate cancer.

His research interests also include the prevention and early diagnosis of cancer in primary care, and the application of genetic testing in general practice.

Sam has served as a member of an active surveillance expert reference group for Prostate Cancer UK, and the National Cancer Research Institute's Screening, Prevention and Early Diagnosis advisory group.

Dr Henry Jensen



Dr Henry Jensen is a postdoctoral researcher at the Research Unit for General Practice and at the Research Centre

for Cancer Diagnosis in Primary Care (CaP) at Aarhus University in Denmark. He received his MSc in health sciences from Aarhus University in 2006. In the early years of his academic career, he focused on quality improvement of screening programmes for cervical and breast cancer in Denmark.

Henry gained a PhD from Aarhus University in 2015 focusing on how the time to diagnosis and tumour stage at diagnosis has changed for cancer patients diagnosed through a general practice route across the time of the implementation of urgent referrals to standardised cancer pathways in Denmark.

Henry has continued to explore how cancer patient pathways affect patients in terms of survival, mortality and the patients' perception of the provided healthcare. He has become increasingly interested in seeking epidemiological explanations for delayed cancer diagnosis, trying to identify potential links between variations in healthcare seeking, referral routes, prognosis of patients and patient satisfaction.

Chair Professor Greg Rubin



Professor Greg Rubin is Emeritus Professor of General Practice and Primary Care at Newcastle University.

With over 200 peer-reviewed publications, his current research is in the diagnosis and management of cancer in primary care and at the interface with secondary care, and the configuration of health services to enable this.

He is a senior adviser to the NIHR-funded Policy Research Unit for Cancer Awareness, Screening and Early Diagnosis, and chairs the Cancer Research UK-funded CanTest Collaborative (www.cantest.org). He has provided advice to DH and CRUK on the implementation of cancer strategy, was the Royal College of General Practitioners' first Clinical Lead for Cancer (until 2014) and is the clinical lead for the English National Cancer Diagnosis Audit.

In 2017 he was awarded the Cancer Research UK Jane Wardle Prevention and Early Diagnosis Prize for world-leading research in the field of prevention and early diagnosis of cancer.

Spotlight on cancer pathways

Chair **Gregor McNie**



Gregor McNie is Cancer Research UK's Head of External Affairs (Devolved Nations). With a

background in third sector leadership, policy, and fundraising, he works to maximise CRUK's Policy & Information Directorate's impacts in Scotland, Wales and Northern Ireland. In Scotland he also leads a lot of the charity's stakeholder relations, acts as its media spokesperson and is Chair of the Scottish Cancer Coalition.

Professor **Tom Crosby, OBE**



Professor Tom Crosby, OBE, is a Consultant Oncologist in Velindre Cancer Centre, specialising in upper GI

cancer since 2008.

As clinical lead for the Wales Cancer Network, Tom lead the development of the Cancer Delivery Plan 2016-20, Peer Review of Cancer Services in Wales and the Cancer Implementation Group's prioritisation programme including the development of Cancer Prevention, Early Diagnosis, Person Centred Care and Cancer Information Subgroups. He is also helping to lead the development a new Cancer Research Strategy for Wales. He currently leads a priority initiative in Wales: the Single Cancer Pathway which looks to transform patient pathways from referral, through diagnosis to treatment.

Tom is a leader in upper GI oesophageal chemo-radiotherapy research, service and development in the UK. He is Chief Investigator to the series of UK Multi-centre SCOPE trials (SCOPE1, NeoSCOPE and SCOPE2). He is currently Chair of the NCRI Oesophagogastric Cancer Subgroup and co-lead applicant on the ambitious stratified medicine programme in oesophageal cancer known as Oelixir.

He was lead of the inaugural Royal College of Radiologists Site Oriented e-Network and is the current Welsh and Oncology Lead for the UK National Oesophago-Gastric Cancer Audit.

Tom has been an examiner for the Royal College Radiologists Part 2 Exam and is the Chair of the Cardiff FRCR 2 Course and a lead author of the textbook *Practical Clinical Oncology* (Cambridge University Press).

Tom is currently the clinical lead for the Transformation of Cancer Services Programme in South East Wales. This ambitious programme will seek to develop a new world class Velindre Cancer Centre and redesign the clinical service model to meet the demands of future care and improve outcomes for patients.

Tom has recently been recognised for his service to cancer services in Wales and the UK with the award of an honorary Professorship by Cardiff University and an OBE in the New Year's Honours list.

Margaret Kelly



Margaret Kelly is a nurse by profession and has worked in Cancer Services since 2007. She has

recently taken up a secondment from NHS Lanarkshire to the Scottish Government working on delivering the Effective Cancer Management Framework across NHS Scotland.

With over 39 years of experience in the health service, Margaret has a wealth of knowledge and experience covering a range of specialties, but is extremely enthusiastic on improving the experience for patients who are referred with an urgent suspicion of cancer. Her desire is 'what really matters' to patients, carers and their families.

Like many others, Margaret has family experiences of this and she is passionate about ensuring patients move seamlessly and timely through the pathway.

Waiting on any part of the cancer journey is a very painful and anxious time and she is determined to ensure that cancer waits are met wherever possible for NHS Scotland.

David Fitzgerald



David Fitzgerald became the Programme Director for the NHS Cancer Programme in January

2018. He joined NHS England after four years in the Cabinet Office Implementation Unit, where he led the social policy team which advised the Prime Minister on the delivery of her top priorities in areas including health, education, skills, housing and welfare.

From 2008 to 2013, David worked at the Department for Education, first as bill manager for the Apprenticeships, Skills, Children and Learning Bill and then as head of Childcare Funding Division, where he led the implementation of the coalition government's commitment to extend free childcare to two-year olds from lower income families.

Before that, David spent 12 years at the Department for Culture, Media and Sport where he worked on arts, sport and gambling policy, and as Private Secretary to the Arts Minister.

Spotlight on cervical screening

Chair Dr Richard Roope



Dr Richard Roope, MA, MBBS, MSc, FRCGP, AFOM, MFMLM, is a Portfolio GP working in Primary Care

and Cancer Management. Richard studied at Gonville & Caius College, Cambridge and The Royal London Hospital, qualifying in 1987. He has been a GP at the same Practice in south Hampshire since 1991. He started working within cancer services in Hampshire and Wessex in 2002. In 2014 he was appointed as the Royal College of General Practitioners and Cancer Research UK Cancer Champion for Cancer and, in 2015, as one of the Senior Clinical Advisors for Cancer Research UK.

He is a member of the Cancer Research UK Clinical Advisory Panel and several national steering committees, including the National Cancer Advisory Group, England's Be Clear on Cancer Steering Group, and is currently on a NICE committee developing the clinical guidance update for colorectal cancer. In 2015, he was elected to Fellowship of the RCGP for contributions to cancer management. In his leisure time, he sings in a choir and enjoys long distance cycling, sometimes raising money for Cancer Research UK.

Professor Jo Waller



Professor Jo Waller is a Professorial Research Fellow in behavioural science and co-leads the Cancer

Communication & Screening Group in the Department of Behavioural Science and Health at UCL.

Jo's background is in health psychology and she currently holds a Cancer Research UK Career Development Fellowship which aims to use behavioural science to maximise the impact of cervical cancer control policies. Jo has worked in the field of cancer behavioural science for nearly 20 years, combining qualitative and quantitative methodological approaches to understanding knowledge, attitudes, behaviour and psychological impact across various cancer screening and early diagnosis contexts.

She sits on the national advisory committees for the breast and cervical screening programmes in England and is a member of Cancer Research UK's Early Diagnosis Advisory Group. She was awarded Cancer Research UK's Jane Wardle Prevention and Early Diagnosis Prize in 2016.

Mairead Ryan



Mairead Ryan is a Research Assistant at the Department of Behavioural Science and Health at UCL.

As part of the Cancer Screening and Communication research group, she is examining methods of increasing uptake for the NHS cervical screening programme. Building on previous research, which found that screening non-participants are not a homogeneous group, Mairead is researching the impact of various interventions targeting specific groups of the screening population.

Prior to this, Mairead contributed to the delivery of a large multicenter randomised controlled trial at UCL Great Ormond Street Institute of Child Health and conducted qualitative research exploring dementia care in the Department of Clinical Health Psychology at Imperial College Healthcare NHS Trust. Mairead holds an MSc in Health Psychology from UCL and a BA in Psychology from Trinity College Dublin.

Dr Laura Marlow



Dr Laura Marlow is a senior research fellow in the Department of Behavioural Science and Health, UCL.

She has worked in cervical cancer prevention for nearly 15 years and has been funded by Cancer Research UK throughout this time. Her work includes exploring HPV vaccine acceptability, identifying inequalities in HPV knowledge and establishing predictors on non-attendance at cervical screening.

With a particular interest in ethnic inequalities, Laura's post-doctoral fellowship explored participation in cancer detection/prevention behaviours among women from ethnic minority backgrounds. Laura now works on a project that aims to use behavioural science to increase participation in cervical cancer prevention programmes.

Robert Music



Rob Music has 27 years' experience working for a range of healthcare charities. He joined Jo's Cervical Cancer Trust,

(the lead UK cervical cancer charity) in September 2008, bringing a range of skills including senior management, service development, fundraising, strategy and communications. Other charities he has worked for include Help the Aged, Endometriosis UK and The Stroke Association.

Since joining Jo's, he has overseen positive change including a 900% increase in income, the development of new support services, a major rebrand and award-winning, high-profile awareness and information campaigns. Additionally, the charity has built positive relationships and partnerships with key funders, media, policy, charities and health influencers across the UK and worldwide, whilst Rob sits on a number of influential committees.

Emerging evidence from MDCs in the UK

Chair **Dr Henry Jensen**
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Clare Pearson



Clare Pearson is the Senior Cancer Analyst for the ACE (Accelerate, Coordinate, Evaluate) programme, working

as part of the CRUK-PHE (Cancer Research UK – Public Health England) partnership.

After working in university administration for 12 years, Clare completed a BSc in Physiology and MSc in Epidemiology at Imperial College in October 2012. She subsequently worked as a Research Assistant in Epidemiology at Imperial College and King's College London prior to joining CRUK in August 2016.

Clare is based at PHE, within the National Cancer Registration and Analysis Service (NCRAS) team and has worked on projects related to the ACE programme and the diagnostic pathway. The primary focus of her work is using national datasets (cancer registrations, diagnostic imaging and others) to investigate diagnostic pathways. She is interested in using routine data to improve understanding of diagnostic pathways and identify variation, to ultimately reduce inequalities and provide evidence to target early diagnosis initiatives.

Dave Chapman



Dave Chapman has a background in service improvement and change management across

local government and healthcare sectors, having worked in Children's Services, Special Educational Needs and Disabilities, and Adult Social Care for over 10 years. During that time, he has led the implementation of a range of national legislative change projects, including the development of strategic plans and performance frameworks.

Immediately prior to joining Cancer Research UK in October 2017, Dave led a two-year review of cancer services on behalf of NHS Darlington CCG and Macmillan Cancer Support, focusing on improvements to early detection and diagnosis of lung cancers and the development of cancer commissioning tools.

Since being in post with Cancer Research UK, Dave has led on the national evaluation of the Multidisciplinary Diagnostic Centre (MDC) model for patients presenting with non-specific but concerning symptoms.

Dr Brian Nicholson



Dr Brian Nicholson's academic interests include cancer, global health, and evidence-based diagnosis. He

is a Clinical Researcher based at the Nuffield Department of Primary Care Health Sciences at the University of Oxford. He works as a GP in Oxford City, and as the Macmillan GP Facilitator for Oxfordshire working with Oxfordshire CCG and Thames Valley Strategic Clinical Network to improve local pathways for cancer diagnosis.

His research aims to improve diagnosis for patients with non-specific or vague symptoms of cancer. In particular investigating weight loss as a feature of cancer in GP patients (NIHR - LOWCAN), novel multidisciplinary models of care (ACE – SCAN), and the role of safety-netting in preventing missed opportunities for diagnosis (CRUK – CASNET).

He evaluates how GPs can safely use existing and novel tests to diagnose primary and recurrent cancer, including circulating DNA, carcinoembryonic antigen (CEA), faecal immunochemical testing (FIT), and cancer antigen 125 (CA125). He collaborates with secondary care colleagues across a number of cancer sites including myeloma, testicular cancer, colorectal cancer and ovarian cancer.

He has received funding from NIHR, NIHR SPCR, CRUK, Macmillan, and NHS England. He sits on the NCRI Primary Care Clinical Studies Groups for early diagnosis and survivorship, the International Cancer Benchmarking Partnership (ICBP) clinical advisory committee, and CRUK Population Research Committee.

Dr Gareth Davies



Dr Gareth Davies is a Consultant Interventional Radiologist, Associate Medical Director of the

Wales Cancer Network, Clinical Lead of the Wales Detecting Cancer Earlier Programme, board member of the International Cancer Benchmarking Programme and member of the Clinical Advisor Panel of CRUK.

Dr Heather Wilkes



Dr Heather Wilkes has been a GP in Briton Ferry, South Wales, for over 24 years. As a generalist she has

been involved in many clinical and service provision areas during this time to try and improve outcomes for the local population.

For the last 5-6 years she has been involved in developing cancer services with roles as co-chair of the Cancer Commissioning Group and Lead MacMillan GP for Abertawe Bro Morgannwg University Health Board (ABMUHB), also providing primary care input to Swansea University research projects such as Raman CRC study.

She is clinical and project lead for the RDC (Rapid Diagnosis Clinic) at Neath Port Talbot Hospital, ABMUHB, developed with funding and support from Wales Cancer Network (WCN), 1000 Lives and MacMillan Cymru.

Dr Bernadette Sewell



Dr Bernadette Sewell is a Senior Lecturer of Health Economics at the Swansea Centre for Health Economics,

Swansea University. Her main areas of research include the cost-effectiveness of cancer treatments, diagnostic tests, healthcare and public health interventions, as well as health technology assessment of new medicines and technologies as part of the appraisal and endorsement process by the All Wales Medicine Strategy Group and Health Technology Wales.

In the last 10 years, she led health economic evaluations alongside various large randomised controlled trials and the economic modelling for NICE guidelines CG164 (familial breast cancer) and NG52 (non-Hodgkin's lymphoma). She recently led the health economic evaluation of the Rapid Diagnosis Centre for cancer at Neath Port Talbot Hospital funded by CRUK, which contributed to the adoption of the service by the Health Board upon completion of the pilot programme.

Using local data to drive progress

Chair **Lucy Elliss-Brookes**



Lucy Elliss-Brookes has worked in cancer intelligence for 20 years and currently leads a team of highly

skilled cancer analysts and managers responsible for measuring cancer outcomes across England and the UK, supporting national public health and healthcare policies aimed at reducing mortality from cancer.

She is also enabling and supporting a range of cancer epidemiology projects involving Public Health England analysis staff and academic partners, as well as establishing analytical partnerships with a number of cancer charities.

James Jones



James Jones is a senior information analyst with the East Midlands Academic Health Science Network and

for the last couple of years has worked as the data lead for the East Midlands Cancer Alliance where his current work includes evaluating the faecal immunochemical test (FIT) colorectal cancer pathway in two STPs. His previous work includes the evaluation of the upper GI straight to test pathway in the region as part Cancer Research UK's ACE programme (findings published in the BMJ Open Quality).

James is also the co regional branch lead for the Association of professional health care Analysts (AphA) and a member of the Health Foundation's Q Community. James has also worked at Nottingham University Hospitals in the Information Services and Data Quality teams.

James won the UK and Ireland Association of Cancer Registries Infographic and Data Visualisation Competition in 2018 for his work on the East Midlands Cancer Alliance Data Hub.

Lucy Young



Lucy Young is a senior cancer analyst in the Cancer Alliance Data, Evidence and Analysis Service (CADEAS), a

partnership between NHS England and Public Health England.

She leads on analytical projects with a particular focus on pathway analysis, cancer waiting times, and working with the London Cancer Alliances. Current projects include median pathway analysis by patient demographics and route to diagnosis, using cancer registry data for colorectal, lung and prostate cancers (2013-2016); delivery of timely cancer waiting times data to the Cancer Alliances; and scoping of health economics analysis to support the Cancer Alliances.

Prior to joining CADEAS, Lucy worked as a senior cancer analyst on the National Cancer Intelligence Network Transforming Cancer Services Team (NCRAS-TCST) partnership, and as a senior epidemiologist at GlobalData. Lucy graduated from King's College London with a Public Health MPH and a Biomedical Science BSc Hons.

Natalia Calanzani

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Considering the impact of early diagnosis: recurrences and secondary cancers

Chair **Dr Rosie Loftus**



Dr Rosie Loftus trained at Birmingham University and has been a GP Principal in Kent since 1989. She worked

as a Clinical Assistant at the Heart of Kent Hospice for a number of years and has been a Macmillan GP since 2001.

She became Macmillan GP Adviser to the London, Anglia and South East Region in July 2002 and was Macmillan's Lead GP Adviser from 2003-2013. She was appointed Macmillan's Joint Chief Medical Officer (CMO) in 2014, a role she shared with Professor Jane Maher, reflecting the need for specialists and generalists to work together more effectively.

Rosie is now Macmillan's sole CMO after Jane stepped down from the role in December 2018. As CMO, Rosie advises on medical strategy and leads a cross-sector community of 200 Macmillan GPs, together with Consultant Advisors. She is also a member of the National Cancer Transformation Board.

Dr Christine Campbell



Dr Christine Campbell is an experienced health services researcher, based at the University of

Edinburgh as a Reader in Cancer and Primary Care. Areas of research interest are public understanding of cancer, cancer diagnosis (symptomatic and through screening), inequalities in cancer outcomes, and the role of primary care in screening provision and symptomatic diagnosis.

Her current research portfolio includes UK and international studies examining influences on screening participation, and the role of primary care in screening provision and symptomatic diagnosis. She teaches on the Masters of Public Health course at the University of Edinburgh, and supervises undergraduate and postgraduate students. Current PhD projects include the role of national cancer initiatives in promoting early cancer diagnosis, and cervical cancer screening approaches in low resource settings.

She was involved in the UK's NCRI Primary Care Clinical Studies Group from 2005 to 2017. She sits on the Advisory Panel of the Scottish Cancer Prevention Network and the Executive Group of the Cancer and Primary Care Research International Network (Ca-PRIN), and is a member of the Scottish Parliament Cross Party Group on Cancer.

Helen Johnson



Helen Johnson is a Urology Oncology Clinical Nurse Specialist based at The Christie Hospital

in Manchester which is the largest single site cancer centre in Europe. She has been working in urology specialist practice since 2006 and has a special interest in urological cancer after care. She has been leading on redesigning after care pathways across the city which has included setting up community-based clinics, developing nurse-led services and researching and auditing primary care prostate cancer monitoring procedures.

She is an advocate for developing the next generation of nurse specialists and has recently been awarded The Urology Foundation's 'urology nurse of the year' award for her contribution to educational development of urology nurses and influencing prostate cancer after care.

Danny Kazzazi



Danny Kazzazi is currently studying Medicine at University College London Medical School (second

Year), where he took an interest in surgery and the efficacy of investigative tools. During a summer internship at his local hospital, he had the opportunity to work with Professor Lynda Wyld on the subject of MRI efficacy.

He was the first student to orally present at the British Association of Surgical Oncology's annual conference in Glasgow last year.

At university, he helps to run the Surgical Society as media coordinator, and is one of the organisers for their annual international conference. He plays an active role in the Medical School Teaching Sub Committee as a second-year representative for their clinical module. In his spare time, he plays for the university's medic football team and is an avid Arsenal fan. He also enjoys travelling in his time off.

Dr Henry Jensen

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FIT in symptomatic: emerging evidence and opportunities

Chair Dr Lance Saker



Dr Lance Saker is a GP partner and Public Health consultant working in London. He has worked dually

in clinical and non-clinical roles since qualifying. After many years as a GP in a busy inner city practice in Camden, he moved recently to a partnership in Barnet. His main clinical areas of interest are cancer, particularly early diagnosis, as well as dermatology and long-term conditions such as diabetes.

Non-clinical roles have included being clinical vice chair of a CCG, public health lead for screening programmes, an expert investigator for the Healthcare Commission and clinical lead for several service transformation programmes.

In his current role as London lead for primary care diagnostics, he provides regional leadership and expertise to promote GP direct access to diagnostic tests including faecal immunochemical test. He is the GP lead for the pan-London faecal immunochemical test Implementation Group. He is also the skin cancer pathway director for UCLH Cancer Collaborative. Dr Saker's post is funded by CRUK.

Dr Sarah Bailey



Dr Sarah Bailey is a Research Fellow based in the Discovery Group led by Professor Willie Hamilton at the

University of Exeter.

Her PhD focused on the association between thrombocytosis (raised platelet count) and cancer diagnosis and found that thrombocytosis is an important risk marker of undiagnosed cancer in primary care. This work has had significant impact on clinical practice since its publication in 2017, was the top-rated paper of the *British Journal of General Practice* in that year and won the Research Paper of the Year award in the cancer category. This is one of Sarah's personal career highlights to date, alongside being interviewed for Radio 4's Inside Health programme, learning to drive a tractor, and swimming an entire length of the University's pool underwater.

In her current position as a Postdoctoral Research Fellow at the University of Exeter Medical School, Sarah is involved in a range of projects further investigating the association between platelet count and cancer, several studies investigating the impact of multi-morbidity on cancer diagnosis, evaluating the effectiveness of faecal immunochemical tests (FITs) for colorectal cancer, and studying the effects of risk markers on risk factors for colorectal cancer.

Dr Nigel D'Souza



Dr Nigel D'Souza is a specialist registrar in general surgery. After a BA from Dartmouth College in the USA,

he attended medical school at UCL. He is a member of the Royal College of Surgeons, and has a Master's degree in Surgical Education from Imperial College.

Nigel conducted the initial NICE faecal immunochemical test (FIT) pilot study during his time as a Croydon colorectal research fellow. With his research supervisor Muti Abulafi, he set up the multi-centre NICE FIT study after successful applications for NIHR approval and NHS England funding. Nigel has now returned to training in general surgery at the Royal Hampshire County Hospital in Winchester.

His free time at present is spent either writing up his research MD on colon cancer imaging, working on the NICE FIT study, or looking after Eva and Harry, his two young children. In a previous life, he also liked to run, travel and go to dinner with his wife Charlotte.

Dr Brian Nicholson

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Evidence to make a difference in rarer and less common cancers

Chair Jane Lyons



Jane Lyons is CEO of Cancer52, an alliance of more than 90 largely small patient support group charities

working in the field of rare and less common cancer. Jane leads Cancer52 in its relationships with influencers and policy makers at a national level, and sits on the Independent National Cancer Advisory Group.

Jane has worked for Cancer52 for the past five years and before that was CEO of the women's gynaecological cancer charity The Eve Appeal. She previously worked in the communications field and has been a director of top ten consultancies, run her own PR agency, and worked at a senior level in house.

Dr Fiona Walter



Dr Fiona Walter leads the Primary Care Cancer Research group at the University of Cambridge and has

worked as a GP for more than 30 years.

Other current leadership roles include: until December 2018, chair of the NCRI's Primary Care Clinical Studies Group's Early Diagnosis sub-group, and membership of other NCRI groups including for Skin Cancer and Screening, Prevention and Early Diagnosis (SPED); membership of Cancer Research UK's Early Detection Committee and Cambridge Cancer Centre's Early Detection committee.

Fiona's work focuses on the cancer pathway to diagnosis and primary care diagnostics, aiming to improve patient safety and cancer outcomes. She co-leads the CanTest Collaborative, Cancer Research UK's first Catalyst award, aiming to accelerate progress towards improving cancer outcomes by focusing on the transformative implementation in primary care of tests to support early detection of cancer. She is also co-investigator on the new NIHR Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis, led by Professor Stephen Duffy.

She has honorary academic roles at two Australian universities where she contributes to parallel programmes of work on improving outcomes for cancer patients.

Dr Yin Zhou



Dr Yin Zhou is a GP and Wellcome Trust Primary Care Clinician PhD Fellow in Cambridge. After completing

an Academic Clinical Fellowship in Cambridge, Yin started a part-time PhD at the Primary Care Unit within the University of Cambridge while working as a GP.

She has an interest in diagnostic quality and safety in primary care, in particular relating to early cancer diagnosis. She is undertaking a mixed-methods PhD under the supervision of Dr Fiona Walter and Professor Yoryos Lyratzopoulos. Her PhD aims to explore missed diagnostic opportunities in patients with bladder and kidney cancer.

Dr Monica Koo

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Notes

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