









# Greetings

# from the Organising Committee

On behalf of the Melbourne Organising Committee, it is our great pleasure to extend a warm greetings to you and invite you welcome to Ca-PRI 2024 which will be held in Melbourne, Australia. Before we delve into the exciting program we have curated, we wish to acknowledge the traditional custodians of the land on which we gather, the Wurundjeri people of the Kulin Nation, and pay our respects to their elders past, present, and emerging.

Melbourne, renowned for its vibrant culture, innovative spirit, and diverse community, serves as an ideal backdrop for our conference. We hope you find the city's charm and hospitality as welcoming as we do.

We are thrilled to present to you an engaging and diverse program, crafted to stimulate discussions, foster collaborations, and inspire new ideas. With speakers joining us from various corners of the globe, we are privileged to offer insights from a truly international perspective.

The heart of our conference lies in its theme: Equity, Policy and Transforming Care. We are honoured to showcase a breadth the of quality and innovative of research and innovation it showcases that highlights how primary care can contribute to equitable and compassionate cancer care. This year, we are proud to feature exceptional abstracts through parallel concurrent talks, workshops, and poster walks. These presentations promise to illuminate the latest advancements in cancer control, offering valuable insights and opportunities for learning.

This year's meeting has been organised by the Primary Care Collaborative Cancer Clinical Trials Group (PC4) funded by Cancer Australia to support the development of high-quality cancer research in primary care, and the Cancer in Primary Care Group at the Department of General Practice and Primary Care, University of Melbourne. PC4 are funded by Cancer Australia to support the development of high-quality cancer research in primary care with members across Australia and the world. Under Prof Jon Emery, our Cancer in Primary Care Group are committed to advancing knowledge in cancer control, our group specialises in primary care data analysis, reducing diagnostic intervals for early cancer detection, leveraging genomics for screening, implementing digital health tools, and facilitating clinical trials. Our dedication to excellence is matched only by our unwavering commitment to collaboration, both nationally and internationally.

We extend our heartfelt gratitude to the Ca-PRI Executive Committee for their unwavering support and dedication in making this conference a reality. Furthermore, we extend our sincere thanks to all members of PC4 members and the Cancer in Primary Care Group for their tireless efforts in shaping this event into what it is today.

As we embark on this journey together, we eagerly anticipate the exchange of ideas, the forging of new connections, and the collective strides we will take toward advancing cancer control.

Once again, welcome.

Ca-PRI 2024 Organising Committee

Ca-PRI 2024 WELCOME

# Welcome

# from the Ca-PRI Co-Chairs

We'd like to begin by acknowledging the traditional owners of the land on which we are meeting for Ca-PRI 2024 – the Wurundjeri Woi-wurrung and Bunurong Boon Wurrung peoples of the Eastern Kulin. We would also like to pay our respects to Elders past and present. Welcome to Melbourne! This is the first time a Ca-PRI meeting has been held in the southern hemisphere and, as we write, registrations are approaching 200 – we couldn't be more thrilled. Our Melbourne hosts have worked tirelessly to ensure delegates have a wonderful experience; we are so grateful for all they've done. Like many other international research networks, we were concerned about the long-term effects of the COVID-19 pandemic. These concerns have been allayed with a very successful meeting in Oxford last year and what promises to be a wonderful couple of days in Melbourne.

The meeting is enriched this year by teaming up with PC4 – an Australian cancer and primary care network which has produced ground-breaking research over many years, in areas including early diagnosis, screening, cancer in Indigenous communities, cancer inequities and survivorship. It shares many common values with Ca-PRI in terms of bringing the primary care and cancer community together and promoting collaborative research.

Australia enjoys some of the best cancer outcomes in the world, and is a major contributor to international cancer research. Through institutions such as the Peter MacCallum Cancer Centre, and the Victorian Comprehensive Cancer Centre Alliance, Victoria has established itself as a world-leader in cancer research and cancer care - what better place to hold our conference. And yet, even in a privileged country such as Australia, there are significant disparities in cancer outcomes. As we'll hear during the conference, Indigenous communities and vulnerable, socially disadvantaged groups have often benefited less from Australia's successes in cancer control. These disparities are reflected around the world, and it's essential we maintain our efforts to improve equity, influence policy and transform care – which happen to be our conference themes this year. Primary care is at the vanguard of these efforts, and this meeting is a wonderful opportunity to engage with the huge challenges of equitable cancer control – and share strategies amongst a vibrant, multidisciplinary research community.

We'd like to thank Jon Emery, PC4, and the whole Melbourne team for staging this wonderful event. Thanks also to the sponsors: The Victorian Government through the Victorian Cancer Agency, the VCCC Alliance and Cancer Research UK – their support is greatly appreciated. And, of course, we thank the Ca-PRI Executive for their efforts throughout the year.

Thank you so much for coming to Ca-PRI 2024. Many of you will have travelled long distances – we hope you get the opportunity to enjoy this delightful part of the world, while meeting old friends, making new acquaintances and establishing new collaborations. Wishing you all the best for a wonderful conference.

David Weller & Christine Campbell, Co-chairs of Ca-PRI

Prof David Weller & Dr Christine Campbell Co-chairs of Ca-PRI Ca-PRI 2024 GETTING AROUND

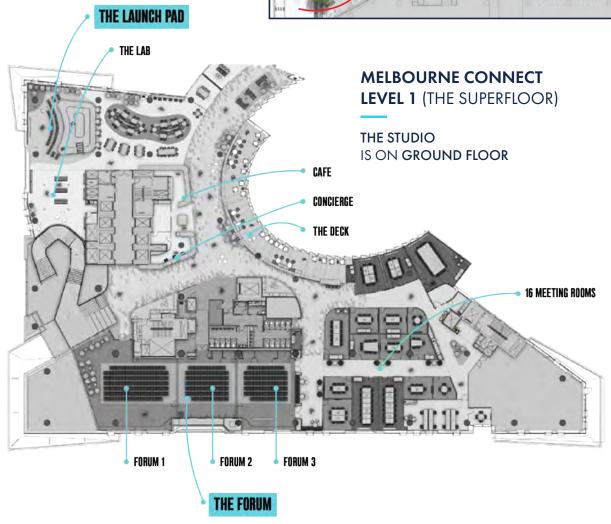
# Getting Around

# Melbourne Connect

Melbourne Connect 700 Swanston St Carlton VIC 3053

\*Enter via Swanston Street





# Program at a Glance

| Wednes | sday 17th April    | Victorian Comprehensive Cancer Centre |
|--------|--------------------|---------------------------------------|
| 5:00pm | Welcome Drinks Red | ception at VCCC, Level 13             |

| Thursda | y 18th April Melbourne Connect   |
|---------|--|
| 8:30am  | Coffee and Registration  |
| 9:30am  | Welcome to Country   |
| 9:40am  | Welcome from Prof Jon Emery & Prof David Weller                        |
| 9:50am  | Welcome from Health Minister, The Hon. Mary-Anne Thomas                |
| 10:00am | Opening Plenary: Visions of the role of primary care in cancer control |
| 11:20AM | MORNING TEA  |
| 11:45am | Concurrent 1   |
| 12:45PM | LUNCH  |
| 1:45pm  | Concurrent 2   |
| 3:15PM  | AFTERNOON TEA - INCLUDING POSTER WALK 1 & 2                            |

| 4:00pm | Plenary 2: Australia on track to eliminate cervical cancer by 2035 – lessons learnt |
|--------|---|
| 5:00PM | DAY 1 END   |
| 6:30PM | CONFERENCE DINNER: Old Melbourne Gaol - 377 Russell St                              |

| Friday 1 | 9th April Melbourne Connect                 |
|----------|---|
| 8:30am   | Coffee                                      |
| 9:00am   | Plenary 3: Prize talks                      |
| 10:30AM  | MORNING TEA                                 |
| 10:55am  | Concurrent 3                                |
| 12:20PM  | LUNCH                                       |
| 1:20pm   | Concurrent 4                                |
| 2:35PM   | AFTERNOON TEA - INCLUDING POSTER WALK 3 & 4 |
| 3:20pm   | Closing Plenary: The Great Debate           |
| 4:20pm   | Closing remarks                             |
| 4:30PM   | CONFERENCE CLOSE                            |

# Plenary Speakers

# Plenary 1: Visions of the role of primary care in cancer control

# **Prof Jon Emery**

Professor Jon Emery is the Herman Professor of Primary Care Cancer Research at the University of Melbourne, and the Victorian Comprehensive Cancer Centre Primary Care Research and Education Lead. He is also Director of the Cancer Australia Primary Care Collaborative Cancer Clinical Trials Group (PC4), and a Visiting Research Fellow at the Department of Public Health and Primary Care, University of Cambridge.

# **Prof David Weller**

David is James Mackenzie Professor of General Practice and Co-Director of the Centre for Population Health Sciences at the Usher Institute, University of Edinburgh, Scotland.

# **Prof Dorothy Keefe**

Professor Dorothy Keefe is the CEO of Cancer Australia, Australia's national cancer agency. Prior to this she had a long and distinguished career as a medical oncologist at the Royal Adelaide Hospital (RAH), and as Professor of Cancer Medicine at the University of Adelaide, where she remains an Honorary Clinical Professor. Her long term research interest has been Supportive Care in Cancer. She has a Master's degree in Medical Leadership and a strong interest in advocacy, career development and mentoring. She is committed to patient centred care, reducing unnecessary variation in cancer outcomes, and to improving outcomes for Aboriginal and Torres Strait Islander people affected by cancer. During her tenure as CEO, she has led the enquiry into Lung Cancer Screening and the development of the first national Australian Cancer Plan.

# **Prof Grant McArthur**

Professor Grant McArthur is a Fellow of the Royal Australasian College of Physicians and holds a PhD in Medical Biology. He is the Executive Director of the Victorian Comprehensive Cancer Centre; inaugural Lorenzo Galli Chair of Melanoma and Skin Cancers at the University of Melbourne and is a Senior Principal Research Fellow at the National Health and Medical Research Council (NHMRC). He is also Head of the Molecular Oncology Laboratory and a Senior Consultant Medical Oncologist at the Peter MacCallum Cancer Centre. His research interests include melanoma, clinical trials of targeted therapeutics, discovery of novel drug targets in cancer, targeting oncogenes, immunological effect of targeted therapies, personalised medicine, cell cycle control, metabolism and protein synthesis in cancer.

# **Prof Martin Wong**

Prof. Martin C. S. Wong is a specialist in Family Medicine and a researcher in the field of cancer screening and prevention of chronic diseases. Prof. Wong has composed over three hundred publications in international peer-reviewed journals, and received over ten international and local research awards for studies in his research area. He is currently the Chairman of the Association of the Pacific Rim Universities, NCD stream; Co-Chairman of the Grant Review Board, Health and Medical Research Fund, Food and Health Bureau; the Convener of the Advisory Group on Hong Kong Reference Framework for Care of Diabetes and Hypertension in Primary Care Settings; a member of the Expert Advisory Panel in Implementation Science of the HKSAR government, and a member of the Research Council of the Food and Health Bureau.

# Plenary Speakers

Plenary 2: Australia on track to eliminate cervical cancer by 2035 – lessons learnt

# Dr Claire Nightingale

Dr Claire Nightingale is a senior research fellow at the Melbourne School of Population and Global Health at the University of Melbourne. Dr Nightingale obtained her PhD at the Burnet Institute, and holds a Master of Science in Public Health (Health promotion) from the London School of Hygiene and Tropical Medicine. Dr Nightingale's research interests include the evaluation and implementation of models of care that increase access and acceptability to under-served populations, including point of care testing and self-collection. Dr Nightingale has over a decade of experience in global health research and practice, including working on HIV, cervical cancer, and sexual health programs while living in Myanmar, Papua New Guinea and Cambodia. Dr Nightingale currently leads the Cancer Screening Team within the Centre for Health Policy.

# **Prof Julia Brotherton**

Professor Julia Brotherton is a public health physician and Professor of Cancer Prevention Policy and Implementation in the Evaluation and Implementation Science Unit, Centre for Health Policy, Melbourne School of Population and Global Health, University of Melbourne. She is also a Professorial Fellow at the National Centre for Immunisation Research and Surveillance (Sydney) and Visiting Professor, University of Malaya. For over fifteen years Julia has been involved in research and policy development informing the implementation and evaluation of HPV vaccination and cervical screening programs.

# A/Prof Lisa Whop

Associate Professor Lisa Whop is a Torres Strait Islander NHMRC Early Career Research Fellow and epidemiologist. She is Australia's leading authority on cervical cancer control in Aboriginal and Torres Strait Islander women. Her research program focuses on cervical cancer control (screening and vaccination) for Aboriginal and Torres Strait Islander women. She is Chief investigator on the Centre for Research Excellence on Targeted Approaches To Improve Cancer Services (TACTICS) for Aboriginal and Torres Strait Islander Australians where so co-leads the Prevention and Screening stream and Principal Investigator on an ARC Discovery Indigenous grant.

# **Prof Christine Campbell**

Dr. Campbell is a Reader in Cancer and Primary Care at the Usher Institute, University of Edinburgh, UK. She leads a program of research into socio-demographic and ethnic disparities in cancer outcomes, the role of primary care in screening provision and symptomatic diagnosis, and implementation of cervical screening in low resource settings.

# Plenary Speakers

# Plenary 3: Prize talks

# Ian Walker

Ian Walker is executive director of policy, information and communications at Cancer Research UK

## Dr Simonne Neil

Dr Simonne Neil is the Senior Manager of Research Implementation at the VCCC Alliance. Simonne is a registered medical practitioner with 25+ years' experience in the public, private and not-for-profit health and medical research sector.

# Dr Robin Urquhart

Robin Urquhart is an Associate Professor and the Canadian Cancer Society Endowed Chair in Population Cancer Research in the Department of Community Health and Epidemiology, with cross-appointments in the Department of Surgery and Division of Medical Education, at Dalhousie University.

# Famke Huizinga

Famke Huizinga is a psychologist and PhD researcher interested in lifestyle, cancer, medical psychology and epidemiology.

# A/Prof Sarah Bailey

Sarah Bailey is an Associate Professor of Primary Care Diagnostics at the University of Exeter. Her PhD established the link between platelet count and cancer in primary care. She now leads a portfolio of research focused on cancer in primary care, and the development and implementation of new detection strategies for symptomatic patients. Sarah's work includes practice-changing research on the use of blood-based markers of cancer, faecal immunochemical tests for symptomatic patients, and the integration of genetic risk scores into suspected cancer pathways.

# Allison Drosdowsky

Allison Drosdowsky is a PhD candidate and Health Services Researcher with a background in quantitative research methods and biostatistics. Her research interests include investigating timely cancer diagnosis through use of linked datasets, the translation and implementation of research, meta-research and novel research methodologies.

# Prof Dr Biswajit Paul

Prof Dr Biswajit Paul is a medical doctor with a post graduate degree in community medicine and PhD in global health - behaviour change in chronic respiratory disease. Biswajit is a primary care physician and a public health researcher with research interests in cancer screening, non-communicable diseases including Chronic respiratory disease, diabetes, hypertension and poisoning.

# Dr Luke Mounce

Dr Luke Mounce is a Health Services Researcher working within Primary Care, and particularly Cancer Epidemiology, at the University of Exeter Medical School. I have expertise in methodology, especially applied statistics, and in the management and analysis of large databases of routine records to answer health research questions.

# Plenary Speakers

Closing Plenary: The Great Debate

# **Alanta Colley**

Alanta is a comedian, science communicator and story teller from Melbourne. With a background in international public health, her first solo science comedy show 'Parasites Lost' sold out its entire run at Melbourne International Comedy Festival in 2017 and has been enjoyed by audiences in Adelaide, Perth, Sydney and for the Gates Foundation in Seattle. Her second solo show 'Days of our Hives' about bee keeping and bee losing attracted more bee keepers than any other show at comedy festival. She's toured nationally with her science comedy debate series 'Sci Fight', was a recipient of the Inspiring Australia Science Arts Grant in 2019, and is a regular guest on ABC radio. She's appeared on ABC TV News and in Frankie Magazine. She also moderates for the Transitions Film Festival and recently was a guest reporter on ABC's TV's new show WTFAQ.

# A/Prof Rebecca Haddock

Rebecca Haddock is an internationally recognised academic researcher with over 15 years experience across the university, government and non-government health and science sectors as a scientist, scientific evaluator, project manager, strategic policy advisor and health policy intermediary. Rebecca is known for her leadership and strategic engagement skills which underpin her ability to translate health research and deliver independent advice on health systems issues to government and industry stakeholders. She is an Adjunct Associate Professor in the Institute for Health Transformation, Faculty of Health, Deakin University; and a Visiting Fellow in the Faculty of Health, Queensland University of Technology. Rebecca holds a PhD in Neuroscience from the Australian National University

# Paul Grogan

Paul Grogan is senior strategic advisor at the Daffodil Centre, a joint venture of Cancer Council NSW and the University of Sydney. Paul has been with the Cancer Council federation for more than 20 years and was a media and policy adviser for federal and state governments for 15 years before that, including 10 years as head of media and parliamentary in the NSW office of the Australian Department of Health.

# **Prof Willie Hamilton**

Willie Hamilton, CBE, MD, FRCP, FRCGP, is professor of primary care diagnostics at University of Exeter. The major part of his work is in cancer diagnostics in the symptomatic patient. He leads the DISCOVERY team, with staffing varying from 10-18, plus 4 PhD students, all supported by his grant awards. These grants total over £79m, including CRUK's first Catalyst award. He has published approaching 400 papers 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 clinical lead on the UK's NICE guidance on suspected cancer, NG12, published in 2015. This governs over £1bn of annual NHS spending. He was awarded a CBE in the 2019 New Years' Honours List for services to improving early cancer diagnosis.

# Plenary Speakers

Closing Plenary: The Great Debate

# Monique Bareham

In 2022 Monique was named the Australian of the Year, South Australian Local Hero SA, and received the Joy Noble Medal for her lymphoedema patient advocacy leading to the launch of the South Australian Lymphoedema Compression Garment Subsidy Scheme in 2020. Originally an orchestral musician and teacher, Monique moved into the public sector and was a manager when, at 37, her life was turned upside-down by a cancer diagnosis. Her life saving treatment left her with severe cancer treatment-related lymphoedema and unable to resume to her career path. Monique reinvented herself as a patient advocate and dedicated her energy to improving the lives of cancer survivors and individuals affected by lymphoedema with a focus on systemic advocacy.



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# Implications of delays in diagnosing sarcoma

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# **Abstract**

Implications of delays in diagnosing sarcoma

Moira O'Connor, Georgia KB Halkett, Rhys Weaver, Richard Carey Smith,

# Introduction/background

Delays in diagnosis often occur in rare cancers, such as sarcoma. These delays may result in the need for radical surgery and people have a reduced chance of survival. Previous research has focused on quantifying the time taken to obtain a diagnosis without exploring the reasons for delays.

#### Aim

The aim of this study was to explore patients', carers', and health professionals' perceptions of barriers to timely diagnoses and referral for treatment for sarcoma.

### Methods

Semi-structured interviews were conducted with: Health professionals working with sarcoma, including GPs, (n=21); people diagnosed with sarcoma (n=22); and carers of people diagnosed with sarcoma (n=17). Interview transcripts were analysed using reflexive thematic analysis.

### Results

Four overarching themes were identified: people's perceptions of symptoms, difficulties of diagnosis, lack of experience, and availability of health services. Diagnosis was prolonged by the limited availability of health services, lack of prompt referrals to a sarcoma specialist centre, and diagnostic challenges. Intervals also occurred when people underestimated the severity of their symptoms and did not seek a prompt medical consultation.

#### Conclusions

People with a potential sarcoma need to be promptly referred to a sarcoma specialist centre and additional diagnosis pathways need to be developed to reduce the rate of people being referred to wrong specialists. Sarcoma education must be embedded in medical courses and professional development curricula. A public health approach should be taken to improve sarcoma knowledge and health seeking behaviours in the community.

# An exploratory qualitative study exploring barriers and facilitators to cervical screening among Polish and Romanian migrant women

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#### **Abstract**

Introduction: Cervical screening is important for cervical cancer prevention; however, uptake is lower for ethnic minority women, particularly migrant populations. Little is known about the barriers economic migrant women face in relation to cervical screening in the UK. Even less is known about facilitators, or acceptability of interventions to improve uptake.

Objectives: The aim of this study was to explore barriers and facilitators to cervical screening uptake among Polish and Romanian women, and if applicable, what their attitudes are towards the HPV vaccination programme. This study also explored acceptability of interventions to improve uptake, for example HPV self-sampling.

Descriptions: A qualitative study comprising semi-structured interviews and focus groups with Polish and Romanian women in Hull, Yorkshire and Humber, UK was conducted between March and July 2023. 30 participants (n=15 Polish aged 29-73 years; n=15 Romanian aged 28-53 years) took part in 16 interviews and two focus groups. Data were analysed using the Framework Method, a systematic and flexible approach to qualitative data analysis, allowing for comparisons to be drawn.

Results: Out of the 30 women, five had never been screened in the UK and three were overdue. Barriers to cervical screening were experienced by participants, namely lack of trust, fear, shame, work, discrimination and cultural mismatches. Facilitators included family and/or personal history of cancer as well as other health conditions, preventative healthcare beliefs, education, feeling respected and reminders.

Conclusions: Many barriers to cervical screening exist for Polish and Romanian women in the UK. Transnational cervical screening was commonly adopted as a way to circumvent these barriers. However, there were also a number of facilitators, and an openness to interventions to improve uptake of cervical screening (e.g. most of the women expressed positive attitudes towards HPV self-sampling). Resultingly, self-sampling among these migrant population groups could be an important future research direction.

# How does prescribed medication influence how patients appraise and seek help for non-specific symptoms? A qualitative study

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#### Abstract

# Introduction, Objectives

When patients consult with their GP about non-specific symptoms, medication is often prescribed. For a minority of patients, such symptoms will be an early sign of cancer. Population-level research indicates that prescribing patterns pre-cancer diagnosis can indicate earlier diagnostic opportunities. The circumstances where such opportunities arise is unclear. Psychological models suggest that patients need to notice and have some symptom knowledge to seek help. This can depend on their expectations about seeking help and how they appraise symptoms. Little is known about how being prescribed medication affects patients' ongoing thinking about non-specific symptoms.

#### Methods

25 patients who had recently visited primary care with non-specific symptoms were recruited commercially. In-depth semi-structured interviews explored patient experiences of visiting primary care and receiving prescription medication to manage their symptoms. Interviews focussed on patient understanding of the prescribing rationale, how the medication may have affected subsequent symptom appraisal, and any decisions to reconsult. Thematic analysis examined similarities and differences in patient views and experiences.

#### Results

Most patients interpreted receiving a prescription as a resolution to their symptoms or as reassurance that they did not have a serious problem. Many attributed symptom improvement to their medication or lifestyle changes. Some received a trial-of-treatment that improved but did not resolve their symptoms, and many decided not to seek further help. For some, new or returning symptoms prompted repeated help-seeking and further diagnostic investigations.

### Conclusions

Prescribed medications may provide symptomatic relief and improve patients' quality of life, fostering trust between patients and GPs who may be perceived as taking symptoms seriously. However if patients experience symptomatic relief from medication, they might delay seeking additional medical help, which could delay a more accurate diagnosis and appropriate treatment. GP-patient communication about the prescribing rationale, any diagnostic uncertainty, and the need for follow-up without causing unnecessary worry may encourage vigilance and timely re-consultation.

# All dressed up and nowhere to go - Nurse's role in facilitating self-collection cervical screening

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### **Abstract**

# Background

Screening inequities persist under Australia's current National Cervical Screening Program, including lower participation in regional and remote areas. In July 2022, the program updated the eligibility to access self-collection, allowing all women and people with a cervix to choose between a clinician-collected or self-collected sample. This change has the potential to address barriers for under screened populations.

# Objectives

To explore regional nurses' views of how the expanded cervical self-collection screening eligibility impacts on their roles, the barriers and enablers to implementing self-collection, and what further support is needed.

### Methods

Qualitative semi-structured interviews were conducted with 18 nurses working in primary care in regional areas in Victoria, Australia, following the expanded eligibility. Transcriptions were thematically analysed with a coding framework informed by the COM-B Model and existing literature.

#### Results

Findings demonstrate nurses are often champions of cervical screening and play a key role in educating patients and other healthcare providers. Nurses were supportive of the opportunities self-collection presents for improving equity in regional areas, particularly the untapped potential of community outreach models. A key barrier identified was current policies and systems that do not support nurses as autonomous providers. Despite being a highly skilled workforce, nurses reported feeling devalued and experiencing system-level barriers to providing screening to their community. Some expressed concerns about lost opportunities for clinical encounters with self-collection, however this was largely outweighed by the advantages of self-collection. Nurses emphasised the importance of increased recognition for their role and improved engagement among other healthcare providers.

#### Conclusions

Nurses working in primary care play a key role in the provision of cervical screening, including self-collection and therefore can contribute to the implementation of self-collection and improve equity in cervical cancer outcomes. However, policy and system reforms that recognise and support nurses as autonomous providers may better facilitate access to cervical screening, particularly in rural areas.

# Empowering patients and GPs: A qualitative study on the implementation of a decision aid on taking aspirin for bowel cancer prevention

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### **Abstract**

# Objectives

Australian guidelines recommend that 50-to 70-year-olds consider taking aspirin to reduce their bowel cancer risk. We trialled a decision aid in general practice to facilitate the implementation of these guidelines into clinical practice. This study reports on the qualitative results of the process evaluation of the trial. We aimed to explore general practitioners' (GP) and their patients' approach to shared decision-making (SDM) about taking aspirin to prevent bowel cancer and how the decision aids were used in practice.

### Methods

Semi-structured interviews were conducted with 17 participants who received decision aid and 12 GPs who participated in the trial between June and November 2021. The interviews were coded inductively, and emerging themes were mapped onto the Revised Program Theory for shared decision-making.

## Results

Many patients discussed the decision aid with their GPs as advised, but some patients either took aspirin or dismissed it outright without discussing it with their doctors. Even though taking aspirin to prevent bowel cancer was considered an easy decision because it is easy to take, affordable, and accessible, the decision aid was not always a priority in a consultation, which was common during the trial period, as the COVID-19 pandemic was the focus for general practice. Shared decisions were also not made as part of discussing decision aid.

### Conclusion

Participants and GPs collectively understood the benefit of using a decision aid in general practice to implement low-dose aspirin for bowel cancer prevention. Patients and GPs were supportive of the decision aid in the context of the general practice setting, but it was not always given priority. Patients ultimately commenced aspirin only after their GP supported their decisions. This study provides insights into the implementation of guidelines in clinical practice and highlights the need for ongoing support and prioritization of disease prevention in the consultation.

Trial registration (ANZCTR) ACTRN12620001003965

# Practice staff experiences of software installation as part of the ERICA trial.

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#### **Abstract**

# Background

The UK has poorer cancer survival outcomes compared with other developed countries. With an increase in undiagnosed cancer following the Covid-19 pandemic, NHSE policy now mandates adoption of cancer risk tools in primary care to aid early diagnosis. The ERICA trial aims to provide definitive evidence of the clinical- and cost-effectiveness of one of these tools, electronic Risk Assessment Tools (eRATs). Here, we report on the parallel process evaluation which aims to shed light on general practice staff's experiences of installing and using the software.

## Methods

Ten, 30-minute interviews with members of practice staff responsible for overseeing software installation in intervention practices. Topics covered implementation into practice, staff training, planned use of eRATs in consultations, and recommendations and for improvements.

#### Results

Training was viewed very favourably; materials were of high quality and struck the right tone. Software set-up and installation experiences were straightforward for many but in some practices there were areas of concern. Governance and data sharing policies were complicated and stifled progression. The need for daily logins to use the software were frustrating and prevented wider engagement. Installation – the software needing to go on each windows profile on each clinical computer - had significant time and resource implications.

# Conclusions

At the time of reporting, the trial is still underway, and the process evaluation findings should not prejudice a view on trial outcomes. Instead, practice staff experiences will provide import context when helping us interpret main trial findings when they become available mid-2025.

# Testing outside of the National Bowel and Breast Cancer Screening Programs in Queensland, Australia.

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#### **Abstract**

### Introduction

Participation in Australia's national bowel and breast screening programs a is low at 41% and 55% respectively. Lack of data on cancer tests conducted outside of the program limits our ability to monitor true population screening coverage.

# Objectives

This study aimed to estimate the proportion of people testing for bowel and breast cancer outside of respective programs and describe the associated socio-demographic factors.

#### Methods

A large convenience sample of 9456 users of a Cancer Risk Calculator aged between 50 and 74 years were asked whether they participated in the National Bowel Cancer Screening Program (NBCSP) and/or the BreastScreen program. Answers included "yes", "no" and "no, I screen for bowel/breast cancer outside of the national program". As the third response option did not distinguish between screening, surveillance and diagnostic testing, we interpreted this response to broadly reflect a testing for cancer for any purposes. Percentages for each response were calculated and multivariate logistic regressions were conducted to test associations between age, gender, geographical remoteness and socioeconomic status and testing outside each program.

#### Results

Fifty-six percent of respondents (n = 5281) participated in the NBCSP and 59.0% of females (n = 4760) in BreastScreen. Almost half (n = 2019; 48.4%) of respondents reporting non-participation in the NBCSP and three quarters (n = 2442; 73.8%) not participating in BreastScreen reported testing outside the programs.

Older age (OR 1.29 for BreastScreen; OR 1.66 for NBCSP; p <.05) and higher socioeconomic status (OR 1.21 for BreastScreen; OR 1.17 for NBCSP; p <.05) predicted participation in the programs. Regional or remote residence predicted screening outside the programs for breast (OR 1.30; p <.05) and to a lesser extent bowel cancer (OR 1.10).

### Conclusions

These findings provide support for the need to address reporting gaps and better monitor the volume of cancer testing conducted outside national programs.

# Improving the diagnostic process for patients with possible bladder and kidney cancer: a mixed-methods study to identify potential missed diagnostic opportunities

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### **Abstract**

Background: Patients with bladder and kidney cancer may experience diagnostic delays. Further, women are more likely to experience diagnostic delay and worse survival than men with these cancers.

Aim: To identify patterns of suboptimal care and contributors of potential missed diagnostic opportunities (MDOs).

Method: We performed a prospective, mixed-methods study recruiting participants from nine general practices in Eastern England between June 2018 and October 2019. Patients with possible bladder and kidney cancer were identified using eligibility criteria based on National Institute for Health and Care Excellence (NICE) guidelines for suspected cancer. Primary care records were reviewed at recruitment and at 1 year for data on symptoms, tests, referrals, and diagnosis. Referral predictors were examined using logistic regression. Semi-structured interviews were undertaken with 15 patients to explore their experiences of the diagnostic process, and these were analysed thematically.

Results: Participants (n = 940) were mostly female (n = 657, 69.9%), with a median age of 71 years (interquartile range 64–77 years). In total, 268 (28.5%) received a referral and 465 (48.5%) had a final diagnosis of urinary tract infection (UTI). There were 33 (3.5%) patients who were diagnosed with cancer, including prostate (n = 17), bladder (n = 7), and upper urothelial tract (n = 1) cancers. Among referred patients, those who had a final diagnosis of UTI had the longest time to referral (median 81.5 days). Only one-third of patients with recurrent UTIs were referred despite meeting NICE referral guidelines. Qualitative findings revealed barriers during the diagnostic process, including inadequate clinical examination, female patients given repeated antibiotics without clinical reviews, and suboptimal communication of test results to patients.

Conclusion: Female patients with UTIs might be at increased risk of MDOs for cancer. Targeting barriers during the initial diagnostic assessment and follow-up might improve quality of diagnosis.

# Transforming Care: Introducing a Telephone Hotline for General Practitioners to Medical Oncologists in a rural area

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### **Abstract**

Delayed and lack of specificity in referrals from General Practitioners (GPs) have been found to be a common contributor to suboptimal timeliness of cancer care. Previous service improvement work by the Loddon Mallee Integrated Cancer Service (LMICS) identified referral pathway issues as a common critical 'bottleneck' in achieving cancer care in line with the Optimal Care Pathways. In collaboration with the acute and primary care sectors a "GP Oncology Hotline" decision support tool was created by LMICS to:

- 1. Provide decision support to GPs in the Loddon Mallee Region (LMR) treating patients with suspected cancer or needing additional immediate advice managing patients at a critical crossroad in their existing cancer journey
- 2. Enhance communication and clinical collaboration between the Bendigo Cancer Centre Medical Oncologists and GPs in the LMR to facilitate timely appropriate access to acute services for cancer patients in line with the national Optimal Care Pathways

This telephone hotline connects the GP directly to the on-call medical oncologist during business hours. After distributing 400+ promotional postcards to GPs across the referral catchment of the Bendigo Regional Cancer Centre and an 8-month evaluation of the GP hotline service, benefits realised saw the Hotline embedded as 'business as usual'. The Hotline has been very successfully operating for three years and increasing from the average 12 calls each month.

Data from call logs have highlighted the service to be an invaluable decision support tool for GPs, assisting in urgent advice and the hospital receiving more timely and accurate patient referrals, further facilitating adherence to recommendations by the national OCPs.

Furthermore, data from the Medical Oncologists, validates enhanced clinical collaboration with GPs in the LMR which has resulted in more robust professional relationships and timely access to acute services for urgent cancer patients. This intervention has great scope to be replicated within other health services.

# Diagnostic Accuracy of Multi-Cancer Early Detection (MCED) Tests: A Systematic Literature Review

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#### **Abstract**

# **Background:**

Worldwide, continuous efforts aim to enhance cancer diagnosis and management, with a primary focus on early detection to lessen the disease's impact. Several screening tests exist for various cancer types such as prostate-specific antigen (PSA), colonoscopy, cervical cytology, and mammography. However, most solid cancer types still lack non-invasive early detection methods. A novel approach, multicancer early detection (MCED), shows promise in identifying early-stage cancer by recognizing cancer-specific signals from tumour-derived material, like cell-free DNA, in bodily fluids like blood. MCED assays employ genomic sequencing and sometimes machine learning to identify cfDNA methylation, mutations, and fragmentation.

### **Purpose:**

This study evaluates current clinical data and the diagnostic accuracy of MCED tests.

### Methods:

We searched EMBASE, MEDLINE, and Cochrane Library from their start to February 2022, with two independent reviewers screening publications. Inclusion criteria were diagnostic performance assessments of blood-based liquid biopsy assays for multiple cancer types at any stage, with required sensitivity and specificity data. Exclusions were studies on single cancer-type populations, non-full text reports, and those reporting only positive and negative patient numbers without sensitivity and specificity data. We assessed study quality and bias risk with QUADAS-2.

#### **Results:**

From 7,235 citations and 2 additional records, after duplicate removal, 4,611 publications underwent screening, with 4,471 excluded from title and abstract reviews. Full texts of 140 articles were reviewed, resulting in 10 studies' inclusion. Investigated biomarkers included cfDNA, ctDNA, tumor-associated microparticles, and DNA methylation. Specificity ranged from 50.91% to 99.8%, and sensitivity from 15.6% to >99%. Only 3 studies reported PPV (6.9%-44%) and NPV (99.2%-99.8%).

# **Conclusion:**

The MCED test demonstrated relatively high diagnostic performance in most included studies, showing the potential to augment existing single-cancer screenings.

# Discussing context information about older patients with cancer in multidisciplinary meetings: an implementation project

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#### **Abstract**

### Introduction

For older patients with cancer treatment options should be tailored to the patients' personal context, preferences and goals. Context information can be defined as information about a patients' physical, psychological and social circumstances. We implemented an intervention designed to incorporate enriched context information in the treatment decision-making process.

# Objectives

The aim of this study was to evaluate the intervention with respect to how often context information was discussed in multidisciplinary team meetings (MDTs), which domains were discussed (physical/psychological/social), and whether the information had been provided by the GP.

#### Methods

We included patients  $\geq$  70 years with a new solid tumor, discussed in a MDT in six care trajectories in three hospitals in the Netherlands in 2022-2023. During the implementation project, a trained nurse gathered context information through conversation with the patient before the MDT. Additionally, the patient's GP was asked to provide context information. Information from both sources could be shared in the MDT. We observed MDTs before and after implementation of the intervention.

#### Results

Before implementation we observed 45 MDTs (222 patients), after implementation (preliminary data) 45 MDTs (194 patients). Before implementation context information was discussed in 63% of cases, compared to 77% after implementation. When context information was available, this mostly comprised information about the physical domain (90% before, 86% after). Psychological and/or social information was shared prior to implementation in 66% of the cases and after implementation in 80%. Discussion of context information provided by the GP increased from 4% to 10% of the cases.

# Conclusions

Context information was discussed in MDTs more often after the implementation project. The relation between the availability of context information and treatment-decision outcome is yet to be evaluated. This abstract contains the preliminary results of the implementation project. During the conference, we will be able to present the final results and analyses.

# Other category

Treatment decisionmaking

# Data collection and enrichment in general practice trials: obstacles and potential solutions.

 $\underline{\text{A/Prof Jennifer McIntosh}}^1$ , Dr Sabine Fletcher<sup>2</sup>, Lyn Buchanan<sup>1</sup>, Dr Belinda Goodwin<sup>3</sup>, Sandra Sursock<sup>1</sup>, Dr Judy Trevena<sup>1</sup>, A/Prof Patty Chondros<sup>1</sup>, Anna Wood<sup>1</sup>, Prof Jon Emery<sup>1</sup>, Prof Mark Jenkins<sup>1</sup>

<sup>1</sup>University of Melbourne, Parkville, Australia. <sup>2</sup>Cancer Council Queensland, Fortitude Valley, Australia. <sup>3</sup>Cancer Council Queensland, Parkville, Australia

#### **Abstract**

**Introduction:** Australia's National Bowel Cancer Screening Program (NBCSP) was established to provide population-based screening, however uptake is low. A pilot trial sending an SMS from a patient's general practice just prior to them receiving the NBCSP kit increased uptake by 16.5%, but the data from the practice electronic health records were used which are incomplete. The new National Cancer Screening Register (NCSR) records NBCSP data and is more comprehensive but to-date has not been used for trials in general practice.

**Objectives:** The 'SMARTERscreen' trial aims to determine the effect of sending an SMS only (or an SMS with online video material) from a larger sample of 50-60-year-old patients' general practices on NBCSP participation. The NCSR data will be used to determine when to send the SMS and to evaluate the effectiveness.

**Methods:** The trial aimed to recruit 63 practices in Queensland and Victoria, and extract and transfer the eligible patient lists to the NCSR to add the dates their NBCSP kits are due. We developed novel methods for securely transferring the data between the practices using secure file transfer processes (SFTP) and back again. Challenges to-date have included logistics to provide assistance to practices with the data transfer, accurately matching data, and enriching the data with the required dates.

**Results:** We have recruited 63 practices across Victoria and Queensland and transferred data to the NCSR from 50 so far. This process of implementing this novel method has provided valuable learnings around the challenges and potential solutions to sharing data securely with the NCSR whilst adhering to the NMHRC Guidelines for Ethical Conduct in Research.

**Conclusion:** Data transfer between general practice and the NCSR has potential to evaluate interventions to increase NBCSP participation. We will discuss the challenges of this and strategies that will be useful for future projects.

# Generating system change: Shining the spotlight on inequities for Māori in the route to diagnosis for cancer in Aotearoa New Zealand

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Te Aho o Te Kahu-Cancer Control Agency, Wellington, New Zealand

#### **Abstract**

#### Introduction/Background:

Te Aho o Te Kahu, Aotearoa New Zealand's Cancer Control Agency, has eliminating cancer inequities as its vision. People diagnosed with cancer after emergency admission have worse outcomes. International Cancer Benchmarking Partnership (ICBP) research found Aotearoa performed poorly compared to international comparators. The agency's quality improvement team calculated the 'emergency diagnosis' indicator for 22 cancer types, by 20 regions, in order inform quality improvement.

## **Objectives/Aims:**

Understanding diagnosis via emergency admission rates by demographics (ethnicity, age, gender, etc) and regions to identify inequities and collect preliminary information on solutions.

#### **Description/Methods:**

The indicator measures rates of people diagnosed within 30 days of an unplanned emergency admission and is consistent with the ICPB measure. The indicator was calculated using the New Zealand Cancer Registry. Data was stratified by geography, ethnicity, rurality, age and deprivation. Expert advice across the sector was sought to understand cancer diagnosis barriers, enablers, and solutions for improvement.

#### **Results/Outcomes:**

A key finding is that Māori are much more likely (in some districts twice as likely) to be diagnosed following an emergency admission than those of European ethnicity. These results reflect qualitative data from the Te Aho o Te Kahu report: Rongohia Te Reo, Whatua He Oranga: The voices of whānau Māori affected by cancer.

Primary and community service providers describe societal and system level barriers leading to variation and slowing progress towards timely diagnosis and achieving equitable cancer outcomes.

#### **Conclusions:**

Multifactorial difficulties and barriers intersect with primary and community care systemic issues and contribute to lower quality cancer diagnosis, care and outcomes. Te Aho o Te Kahu is working with its partners to identify, advise on and promote initiatives to address the findings of this report and reduce inequities caused by late and inappropriate pathways to cancer diagnosis.

# Mitigating the Financial Cost of Cancer Care: A Policy Perspective for Primary Care

<u>Kate Whittaker</u>, Drew Meehan, Clare Lynex, Tanya Buchanan, Megan Varlow Cancer Council Australia, Sydney, Australia

#### **Abstract**

#### Background:

Australia's universal healthcare system should mean that no one is financially disadvantaged by their cancer diagnosis and treatment, although this is currently not the case. Financial toxicity is the negative patient-level impact of the financial costs of cancer, which can lead to physical and psychological harm, altered decision making and ultimately sub-optimal cancer outcomes.

## Objectives:

Cancer Council developed the Financial Cost of Cancer policy to address the impact of both direct and indirect financial costs of cancer, as well as reducing the impact of changing financial circumstances experienced during cancer care. The role of healthcare professionals to raise the issue of financial costs and refer to support services was a focus.

# Description:

Several literature reviews guided the development of this policy, and the priorities were refined following consultation with individuals and organisations with expertise in the financial costs of cancer. From this process, four overarching priority areas emerged: 1) ensuring informed financial consent; 2) improving the experience of people with cancer who require income support; 3) enhancing financial support for people living in regional and remote areas to access cancer treatment and care; 4) increasing access to financial counsellors.

### Outcomes:

Primary care professionals can support the implementation of the Standard for Informed Financial Consent and provide financial navigation support to people affected by cancer. This will ensure that all Australians are informed of the potential financial costs of cancer care and can access financial supports to enable them to access optimal care, and no longer leave it to chance.

# Conclusions:

By reducing the financial burden on patients and ensuring that everyone has equitable access to quality cancer care, we can ensure that the cost of cancer is no longer a barrier to optimal care.

# Navigating the cancer care maze: Cancer Council's Navigation in Cancer Care Policy

<u>Kate Whittaker</u>, Drew Meehan, Clare Lynex, Tanya Buchanan, Megan Varlow Cancer Council Australia, Sydney, Australia

#### **Abstract**

#### Background:

The often-siloed way that cancer care is delivered in Australia can lead to great inequities in care delivery, which is especially pronounced in regional and remote communities and for those from lower socioeconomic backgrounds. Effective, appropriate, flexible and accessible navigation support can assist individuals to become active participants in their care and can help people connect with the healthcare services that they need. The role of primary care is central to accessing optimal cancer care.

# Objectives:

The aim of the Navigation in Cancer Care policy is to reduce the societal barriers that people affected by cancer face when accessing healthcare, and to advocate for change that will make accessing optimal cancer care easier.

# Description:

The policy was developed in consultation with people with lived experience of cancer along with organisational representatives with expertise in navigation and cancer care including primary and tertiary healthcare professionals along with researchers and policy experts. [KW1] [DM2] Several literature reviews were conducted to inform the development of the policy priorities. Priorities recognised the spectrum of support needs dependent on the complexity of individual circumstances.

#### Outcomes:

People affected by cancer have different needs for navigation support. It is important that everyone has access to the information they need, and the option to access dedicated support as required. Three overarching policy themes were determined: 1) All people can access appropriate information to enable them to navigate their cancer experience; 2) All people are supported to actively navigate their own cancer experience; 3) All people affected by cancer can access anti-racist healthcare.

# Conclusions:

Navigation support to access cancer care varies by individual need. Meeting the needs of individuals and enabling healthcare professionals to refer to a range of support options increases optimal cancer care.

# General Practice follow-up of NBCSP positive iFOBTs in Western Australia: a mixed methods study

<u>Caroline Bulsara</u><sup>1</sup>, Jane Gaspar<sup>1</sup>, Diane Arnold Reed<sup>1</sup>, Karen Taylor<sup>2</sup>, Anne Williams<sup>2</sup>, Kathleen O'Connor<sup>2</sup>

<sup>1</sup>University of Notre Dame Australia, Fremantle, Australia. <sup>2</sup>Cancer Network Western Australia, North Metropolitan Health Service, Perth, Australia

#### **Abstract**

#### Introduction

Bowel cancer has a significant impact on the health of Australians. Furthermore, one in 26 men and one in 33 women in Western Australia (WA) alone expected to be diagnosed with this illness before the age of 75. The National Bowel Cancer Screening Program (NBCSP) aims to maximise early detection through immunochemical Faecal Occult Blood Test (iFOBT) screening. This project investigates follow-up protocols and experiences of WA GPs subsequent to a patient returning a positive iFOBT (+iFOBT) through the program.

# Objectives

The project aims to: i) explore processes used by WA general practitioners (GPs) to follow-up NBCSP participants with +iFOBTs; (ii) gain insight into the effectiveness of these current approaches to improve of the program and guide future projects.

#### Methods

This study used a two-phase sequential mixed method approach. During the first phase of consultation a Qualitative Descriptive methodology using semi-structured interviews was conducted with sixteen practicing GPs in metropolitan Perth, WA. Analysis of the interviews generated themes which were subsequently used to conduct a modified Delphi study via an online survey disseminated to GPs to establish consensus priority areas.

#### Results

Emerging themes include an understanding that GP follow-up processes are effective but could be improved. GPs typically request a patient with a +iFOTB attend a non-urgent appointment within two weeks and refer the patient for colonoscopy via direct private referral or public referral system. Colonoscopy guidelines are predominately used post-colonoscopy or with patients who present with symptoms and not as NBCSP participants. Clinic software and electronic interfaces are beneficial but occasionally complicate processes for GPs.

#### Conclusion

Consensus priority findings have identified ways to improve patient management, referral, and support for screening programs and inform on best practice to drive consistency and equity in the NBCSP.

# Dense breast notification following screening mammography - a Western Australian primary care perspective.

Jacqueline Frayne<sup>1</sup>, <u>Lucy Gilkes</u><sup>1</sup>, Ramya Raman<sup>2</sup>, Sarah Seddon<sup>1</sup>, Katherine Gray<sup>1</sup>, Eric Khong<sup>3</sup>, Diane Arnold-Reed<sup>2</sup>, Jennifer Stone<sup>1</sup>, Ann White<sup>4</sup>

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#### **Abstract**

Introduction: General practitioners (GPs) lack clear consensus guidance when consulting women with dense breasts. Current practices and the needs of GPs in the management of women receiving breast density notifications through an established screening program are not known.

Objectives: To describe the current practices of GPs following breast density notifications for their patients and to gain the GP and stakeholder perspectives on ways to improve current processes.

Descriptions: This mixed-methods study involved three phases: i) 10 GPs were interviewed, and their responses coded using the Theoretical Domains Framework (TDF) to capture their experiences, ii) de-identified data from a random sample of 692 women from 4 large geographically spread GP practices who attended screening mammography between 2019 – 2022 were collated and iii) this data was used to inform and guide a focus group of a broad range of stakeholders using nominal group technique framework.

Results: Of the random sample having screening mammography, 30% had dense breasts. Within this group referral for supplemental ultrasound occurred in 31%. Interviews highlighted inconsistency in current practice, with uncertainty regarding the appropriateness of referrals for supplemental breast ultrasound. Higher socioeconomic status was the only predictor on quantitative analysis associated with higher rates. Eight stakeholders, including GPs and consumers, participated in a focus group which generated and ranked ideas for improvement. This included better communication and processes for both GPs and consumers, education and the need for co-designed research and guidelines to inform practice.

Conclusions: Overall, this study emphasises the complexities for GPs when consulting women with dense breasts. Collaboration between GPs and screening providers is needed to facilitate optimum service delivery for patients and to mitigate GP uncertainty. Clear guidance and resources need to be developed with GPs, to help them respond to mammographic breast density notifications and identify women at high risk of breast cancer.

# What is the association between inequality and cancer recurrence? A scoping review

<u>Dipesh Gopal</u><sup>1</sup>, Garth Funston<sup>1</sup>, Stephanie Taylor<sup>1</sup>, Shaumya Kularajan<sup>2</sup>, Fiona Walter<sup>1</sup> Queen Mary University of London, London, United Kingdom. <sup>2</sup>University of Glasgow, Glasgow, United Kingdom

#### **Abstract**

**Introduction:** Cancer recurrence is the second clinical episode of cancer after initial cancer cure and causes 67% of all cancer-related deaths. Existing research on cancer recurrence focuses on two broad areas: (i) tumour characteristics and treatment such as radiotherapy; and (ii) behavioural factors such as diet. Despite this, there is a limited understanding about the impact of broader sociological and economic factors on the risk of cancer recurrence. Understanding who is at risk of cancer recurrence and why they have an elevated risk can improve understanding on how to detect and prevent cancer recurrence.

**Objective:** To identify the association between inequalities, such as low socioeconomic status and disability, and cancer recurrence.

**Methods:** A scoping review (Joanna Briggs Institute, 2020) was conducted to identify the relationship between inequality and cancer recurrence by searching MEDLINE, EMBASE, PsychINFO, Web of Science and CINAHL from 2000 to October 2023. The search strategy involved a modified PROGRESS-Plus framework to cover several definitions of inequality such as place and social capital. A greater focus was placed on intersectionality, multiple and cumulative disadvantages, since PROGRESS-Plus has been criticised for its omission. The population is people who are subject to health inequalities including marginalised people in terms of place of residence, race/ethnicity, cultures, non-English language, occupations, sex and gender minorities, intellectual disabilities, religion, education, lower socioeconomic status, social capital, school exclusion, being a carer, being homeless, sex workers, asylum seekers, refugees as well as intersectionality The concept is cancer recurrence. The context is English language primary and secondary quantitative research.

**Results:** Full study results will be available prior to the conference.

**Conclusions:** This study will review the current evidence on the association between inequality and cancer recurrence. This could inform future cancer recurrence detection and prevention approaches.

# Presenting Complaints for Prostate Cancer in Primary Care: The PC<sup>3</sup> cohort studies

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#### Abstract

#### Introduction

Prostate cancer is the most common cancer in males in the UK, with over 50,000 new cases diagnosed each year. Like many countries, the UK does not have a national screening programme for prostate cancer. The main routes to diagnosis are either through opportunistic, asymptomatic PSA screening or following symptomatic presentation to primary care. There is a lack of consensus around the diagnostic and prognostic significance of the presence of symptoms associated with prostate cancer.

# **Objectives**

The PC<sup>3</sup> cohort aims to determine the diagnostic and prognostic significance of the presence or absence of symptoms associated with prostate cancer.

#### **Methods**

Males aged 50 years and over with no history of prostate cancer in the Clinical Practice Research Datalink (CPRD) Aurum dataset were potentially eligible for this study. All eligible males with a first presentation of lower urinary tract symptoms (LUTS), haematuria, or erectile dysfunction between 01/01/2011 and 31/12/2016 were included with up to three matched asymptomatic controls. Included participants were followed up for at least two years. Data linkage to Office for National Statistics (ONS) and national cancer registry data was performed.

#### Results

722,597 males (mean age 64.4 +/- 9.76years) were included in this cohort. 90.68% had white ethnicity. Non-white participants were over-represented in higher deprivation deciles. 262,718 had an index consultation with symptoms during the study period. Mean follow-up was 7.46 years. Early-stage diagnosis was more common in symptomatic males (54.47% vs 50.91% p<0.001), with no difference in clinically significant disease (77.59% vs 77.50% p>0.1). All-cause mortality (155.17 vs 185.67 deaths/1,000person years) and prostate cancer mortality rates (0.41 vs 0.44 deaths/1,000person years) were lower in the symptomatic patients compared to the asymptomatic group.

#### **Conclusions**

Men presenting to primary care with symptoms associated with prostate cancer are more likely to have early-stage disease and lower mortality rates compared to those who undergo opportunistic, asymptomatic screening.

# State of the evidence on cancer outcomes across the cancer care continuum in rural and remote Scotland: a systematic scoping review

<u>Natalia Calanzani</u>, Christopher Walker, Peter Murchie University of Aberdeen, Aberdeen, United Kingdom

#### **Abstract**

**Background:** International evidence shows that rural-dwellers often have worse cancer outcomes compared to their urban counterparts. Primary studies in Scotland also indicate such disparities. Nonetheless, to our knowledge, evidence for rural and remote (R&R) Scotland has never been reviewed.

**Aims:** To map the state of research on cancer outcomes across the cancer care continuum (from symptom appraisal/screening to survivorship/end-of-life) in R&R Scotland.

**Methods:** Following the Joana Briggs Institute's guidance and the PRISMA extension for scoping reviews, a systematic approach to searches, study selection and data extraction was adopted. Medline, Embase, PsycInfo, Scopus, Web of Science and government websites were searched. Adopting the PCC (Population, Concept and Context) mnemonic, we included primary studies (peer-reviewed/grey literature) describing qualitative and quantitative outcomes for any cancers (Concept), across the cancer care continuum (Context) for individuals (any age) living in R&R Scotland (Population). The review was underpinned by the Model of Pathways to Treatment, the Aarhus Statement and the Cancer Care Ontario's model of cancer care continuum.

**Results:** Sixty-four studies were included, published from 1940-2023 and often concentrated in Northern Scotland (n=27). Over half of studies (n=33) had authors affiliated with academic primary care departments. Most (n=49) adopted quantitative methods. Mortality (n=23), survival (n=19) and stage at diagnosis (n=18) were the most reported outcomes. A minority of studies described primary care intervals (n=1), or outcomes related to patient decisions/preferences across the care continuum (n<5). Results did not always indicate worse outcomes for R&R Scotland, but distance/travel burden (n=23) was consistently reported as negatively influencing cancer outcomes.

**Conclusions:** Evidence shows no substantial increase in publications over time, focus on specific regions and outcomes, and limited understanding of reasons for disparities beyond travel distance. Further studies should explore how and why variations exist throughout the patient trajectory, for all Scottish R&R areas.

#### Other category

Health disparities, cancer outcomes across the care continuum, rural-urban variation

# Al-based detection of colorectal cancer in primary care

 $\underline{\text{Eliya Abedi}}^1$ , Marcela Ewing $^2$ , Elinor Nemlander $^1$ , Jan Hasselström $^1$ , Annika Sjövall $^3$ , Axel C. Carlsson $^1$ 

#### **Abstract**

#### Introductions

Colorectal cancer (CRC) is the third most common cancer globally. CRC screening programmes have been launched in some countries, but even in these countries, the detection of CRC is mainly achieved by clinical assessment of symptoms and signs. Patients with low health literacy are more often diagnosed in late stages and have lower participation rates in screenings.

# **Objectives**

The present study has two objectives:

- 1. To develop algorithms for detecting patients with elevated CRC-risk in a primary care setting by focusing on symptoms and signs found in the electronic patient records, comorbidities, and frequency of visits.
- 2. To test the algorithms with an add-on software tool (ALMA) for reading electronic medical records, to identify patients with elevated CRC-risk in a primary care setting.

#### **Descriptions**

Data from medical records of visits to primary care centres (PCCs) in the Stockholm region during the year before CRC diagnosis will be analysed for patients with CRC diagnosis and matched controls (1:4). Natural language processing (NLP) methods will be used to find keywords/descriptions that signal for CRC and for structuring the data with the help of other Al-methods. Structured data will be analysed with stochastic gradient boosting to find a model for predicting elevated CRC-risk.

The algorithms will be tested in a controlled trial, comparing PCCs that receive the add-on tool ALMA programmed with the CRC algorithm with PCCs that use standard care to detect patients with CRC.

#### **Results**

Still pending.

#### **Conclusions**

If we find algorithms that can accurately predict CRC in a primary care setting and easily implement them with the ALMA tool, we will have a way to automatically scan medical records for all patients visiting PCCs for risk of CRC. This can transform care by automatically alerting the physician and create more equity for patients seeking primary care.

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# Assessment of continuing education needs and feasibility of a primary care provider virtual training intervention to improve care for people living with and beyond cancer

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#### **Abstract**

**Objective**: Researchers and cancer institutions recognize the essential role of primary care providers (PCPs), from suspicion of disease to long-term survivorship. However, this role is assumed inconsistently, partly due to a lack of training opportunities for PCPs. We report on an assessment of continuing education needs and a feasibility study of a virtual training intervention conducted in Family Medicine Groups in Quebec (Canada).

**Methods**: An online survey to assess PCP training needs inquired about educational needs around 21 items related to management of cancer and its treatment-related sequelae, health promotion, and quality of life support for people living with and beyond cancer, using a scale of 1 to 10. For each item, respondents were also asked to rate the importance of their need (1 = not important; 10 = very important) and the frequency of questions posed by cancer patients in their practice (1 = never; 10 = very frequently). Building on results, six one-hour virtual training sessions were tailored for PCPs.

**Results**: The survey response rate was 35%. Mean scores on each item ranged from 4.2 to 7.4 for continuing education needs; 5.6 to 8.4 for the importance of their need, and 2.7 to 6.4 for frequency of questions from patients. The items with the highest importance scores were Anxiety, Persistent fatigue, Fear of recurrence and Cognitive impairment management. Forty-four PCPs completed the virtual training intervention, with 93% rating their level of satisfaction as excellent. PCPs considered that the intervention's most important benefits to enable their role were increased basic knowledge about cancer, and better evaluation of whole person health, response to individual needs, and navigation with cancer teams.

**Conclusion**: There was convergence between PCP perceived needs for continuing education, rated importance of items and frequency of questions from patients. A virtual training intervention is feasible and is received positively. The next step is to determine scale-up processes.

# Findings of a hybrid cancer survivorship and primary care clinic led by a medical oncologist

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#### **Abstract**

**Introduction:** Despite increasing recognition of the role of primary care in providing long-term care for cancer survivors, many gaps remain as patients transition from oncology. We report on an innovative practice model in which a medical oncologist addresses cancer survivorship-specific needs and ongoing primary care in one place.

**Objectives:** We sought to characterize the patient characteristics and health care delivery model for over 200 unique patients in the clinic. Our aim was to investigate the feasibility and impact of a hybrid clinic with dual focuses in survivorship and primary care.

**Descriptions:** Electronic patient charts were reviewed since the clinic opened November 1, 2021 through January 31, 2023 for domains including survivorship-specific topics addressed, referrals placed, labs and medications ordered, and vaccines given.

**Results:** A total of 209 patients established care. Seventy-four percent were women, age ranged 19 - 89 (mean 54). The most common cancer was breast (44%), followed by leukemia (12%) and lymphoma (10%). Thirty-two patients (15%) had undergone a bone marrow transplant (BMT). A majority (74%) were post treatment; 22% had active disease; and 3% were "previvors" with a genetic syndrome without a cancer diagnosis. Twenty-seven (13%) had more than one cancer. Most (74%) returned for at least one follow-up visit. Long-term effects were addressed in 87% and at least one other primary care problem was managed in 96%. These included cardiovascular risk (92%), mental health (76%), bone health (47%), sexual health (22%), and fertility (19%). Secondary cancer screening was addressed in 93%. Surveillance for the primary cancer was addressed in 86%, and seven recurrences were diagnosed.

**Conclusions:** Given a growing need to care for cancer survivors, new models of comprehensive survivorship care are greatly needed. This study demonstrates the feasibility and demand for a novel clinic in which both survivorship and routine primary care are managed concurrently.

# Stigma related to help-seeking for early diagnosis of prostate cancer in Black men: a scoping review

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#### **Abstract**

# **Background**

Prostate cancer (CaP) disproportionately affects 1-in-4 Black men and is a stigmatised disease within their communities. However, Black men are underrepresented in CaP research concerning stigma, necessitating a scoping review which maps the evidence on this topic to inform future research.

#### Aim

To map published literature on stigma related to CaP in Black men with a view to understand their experiences and/or perceptions and identify evidence gaps to direct future research.

#### Methods

A scoping review was conducted using Arksey and O'Malley's five-step framework.. We included studies published in English Language reporting on stigma related to CaP from the perspectives of Black men and/or their families. We searched six databases including Medline, Embase, PsycInfo, CINAHL, Web of Science Core Collection and Google Scholar, from inception to April 2023. Citation searches were also conducted. Following deduplication of results, two independent reviewers conducted screening and data extraction. Data was synthesised using a descriptive qualitative content analysis.

#### Results

2,017 studies were retrieved of which 34 eligible studies published between 1995 and 2023 were included. The studies were conducted in the USA (n=19), UK (n=8), Trinidad and Tobago (n=3), South Africa (n=2), Cameroon (n=1), Canada (n=1) and included 1,867 Black men with/without a CaP diagnosis and 145 partners aged 18 years and above. Review findings showed a complex intersection of self, public and structural stigma impacted men's perceptions of their masculinity and influenced their reluctance towards social interactions on CaP and screening via digital rectal examination.

#### **Conclusions**

This novel scoping review highlights the need for a multipronged approach which is underpinned by cultural intelligence to empower Black men and their communities to negotiate stigma related to CaP. This will help to normalise social discussions, encourage early help-seeking for diagnosis, and advance equity in CaP care for Black men. Directions for further research were also identified.

# Co-Design And Implementation of the ONESTOP-CARES Cancer Risk Screening Program In Primary Care in Singapore: A protocol

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#### **Abstract**

#### Introduction

Breast, colorectal, liver, lung and prostate cancers have the highest incidence of cancers in Singapore. Over 50% of these cancers are detected in advanced stages, with sub-optimal uptake of current age-based cancer screening programmes. The introduction of HealthierSG, a national initiative focusing on preventive health, offers an opportunity to improve the delivery of cancer screening services in primary care. Patients enrolled with a family doctor have an annual Health Plan, which includes cancer screening, provided at no charge. Maximisation of digital solutions will be critical to the success of HealthierSG.

# **Objectives**

To co-develop and implement the ONESTOP-CARES programme that includes a digital multicancer personalised risk-stratified screening tool, streamlined clinical pathways and supportive education.

#### **Description**

The ONE-STOP Cares programme will be co-developed with up to 40 patient participants using purposive sampling. The first session will involve sharing a prototype of the cancer risk tool with example risk outputs and screening recommendations. In the second session, a revised prototype and proposed clinical pathways will be shared for further input. Co-development with healthcare providers from polyclinics, general practices and tertiary care services will focus on the decision support tool, development of clinical workflows and training.

Implementation will be explored at three polyclinics and six general practices. A total of 5,000 patients will be enrolled, complete the ONESTOP cancer risk assessment, and review the tailored cancer screening recommendations with a health professional, guided by decision support tools. A mixed-methods evaluation method will be undertaken based on the RE-AIM framework and the Consolidated Framework for Implementation Research.

When available, genomic data will be added to participants' cancer risk profiles to determine if incorporation of genomic information alters cancer risk estimates.

#### **Conclusions**

Implementation of HealthierSG offers the opportunity for innovations to increase cancer screening in family medicine in Singapore, supplemented by genomic information, when available.

# Improving physical activity interventions for cancer survivors in general practice: A mixed methods study

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#### Abstract

# Introduction/Background

Cancer survivors are at increased risk of long-term morbidity. Modifying lifestyle behaviours, in particular physical activity, can improve morbidity associated with the physical and psychological sequelae of cancer. However, many survivors do not receive comprehensive healthy lifestyle recommendations. General practitioners (GPs) are appropriately placed to provide holistic care, such as physical activity interventions, but the practicalities within the Australian setting remain unknown.

# **Objectives/Aims**

This study aimed to explore the role of general practice in implementing physical activity interventions for cancer survivors, including the barriers and enablers.

## **Description/Methods**

We used a mixed methods study design. Participants were asked to complete a survey before a semi-structured interview. The survey explored preferences of possible interventions arising from the findings of a realist review. The interview explored the role of general practice in physical activity interventions for cancer survivors underpinned by the Theoretical Domains Framework. Interview data was analysed inductively and deductively.

#### **Results/Outcomes**

We recruited 17 GPs and 6 cancer survivors who completed the study. Greater engagement with physical activity promotion was reported to be influenced by patient mindset and interest, access to services, pre-morbid condition, support, and early intervention within cancer care. Barriers included cost, time constraints, patient physical capacity, patient mindset and perception of exercise as a treatment, and a lack of knowledge/evidence.

#### **Conclusions**

Physical activity promotion for cancer survivors in primary care is influenced by individual and cultural contexts, cancer related factors, health system issues and healthcare support needs. These factors should be considered when designing models of care which support sustained behavioral change and can be integrated into existing standard holistic patient care. This study forms important pre-implementation work for a physical activity intervention tailored to the needs of cancer survivors in general practice.

# What are rural cancer survivors' information needs posttreatment and how can we meet those needs?

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#### **Abstract**

**Introduction:** Quality survivorship information is an essential component of cancer care, particularly for rural cancer survivors finishing treatment and returning to primary care in the community. Despite this, two-thirds of rural cancer survivors report receiving inadequate information to support this transition of care.

**Objectives:** To map the post-treatment information needs of rural cancer survivors in Australia and mechanisms for effective delivery of this information to inform the development of guidelines for consistent information delivery in the transition of care.

**Methods:** A systematic review of original studies in five academic databases and reports on websites of 118 cancer organisations was conducted to identify post-treatment information needs of rural cancer survivors in Australia. A second review of original studies in six academic databases was conducted to identify mechanisms for effective delivery of survivorship information in Australia. Using realist review methodology, context-mechanism-outcome theories were generated for how survivorship information should be transferred.

**Results:** From 37 studies and 15 reports, information on prognosis and recovery, managing treatment side-effects, health behaviours, and referrals to support was needed by, yet often not provided to, rural cancer survivors. Forty-five studies reported on mechanisms for effective delivery of survivorship information. At the individual level, these mechanisms included tailoring information to survivors' social, cultural, and linguistic backgrounds; reducing the burden on survivors to navigate their transition of care; and providing information in multiple modalities. At the system level, clear roles and communication among care teams, dedicated staff and consultation time for survivorship care, and specialised training for staff providing this care facilitated effective information delivery.

**Conclusions:** Findings provide practical recommendations for improving the delivery of survivorship information to rural cancer survivors and primary care providers' role in the transition of care. Guidelines are currently being drafted in consultation with healthcare professionals and survivors to support consistent communication of survivorship information to rural cancer survivors.

# **Cancer Screening for First Nations People**

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#### **Abstract**

Following a Health Needs Assessment across south east Melbourne, South Eastern Melbourne PHN (SEMPHN) identified lower numbers of cancer screening rates among First Nations People. In 2023, SEMPHN commissioned The Dandenong and District Aborigines Cooperative Ltd (DDACL) and Better Health Network (BHN) to deliver programs that improve and increase cancer screening participation among First Nations People in south east Melbourne.

Adopting a responsive and co-designed approach, SEMPHN funded DDACL to provide a predominantly health promotion-based program; and BHN to leverage their existing Integrated Team Care program. Both approaches offered practical support to ensure access, participation and focus on three population-based cancer screening programs:

- BreastScreen Australia (breast cancer);
- National Cervical Screening Program (cervical cancer); and
- National Bowel Cancer Screening Program (bowel cancer).

# Objectives

Both programs provide culturally safe services for all eligible First Nations People which are aimed at increasing access to, and participation in, cancer screening. At a systemic level, both programs work collaboratively to support mainstream primary care services, the First Nations People's health sector and cancer screening programs to improve access and engagement for First Nations People. Improved cultural safety, engagement and linkages between the three parts of the service system is expected to increase awareness and access to breast, bowel and cervical cancer screening by First Nations People in south east Melbourne. SEMPHN will take learnings from both approaches in determining future commissioning of First Nations programs, in particular, how self-determination can improve access and participation and ultimately help close the gap in Indigenous health outcomes.

#### Results and Conclusions

This program is in early implementation. An update on numbers of First Nations People screened and narratives on effectiveness of health promotion activities will be provided by April 2024.

# An Investigation of the Completeness and Accuracy of Routine GP Data Used to Determine Eligibility for Lung Cancer Screening (ICARUS-Lung)

<u>Oisin Brady Bates</u>, Benjamin Jacob, Patrick Redmond Royal College of Surgeons Ireland, Dublin, Ireland

#### **Abstract**

### Background

Lung cancer screening using low-dose computed tomography (LDCT) has shown effectiveness in reducing lung cancer-specific mortality by 20% in "high-risk individuals," as demonstrated by the National Lung Screening Trial (NLST), with a number-needed-to-screen of 320. However, accurately identifying suitable candidates for screening involves predicting lung cancer risk using a variety of input information. The ICARUS-Lung study aims to determine the suitability of Irish GP records as input data for existing lung cancer risk prediction models.

## Objectives

The objectives are to:

- Identify and list patient variables based on the completeness and accuracy of their recording as informed by the LLPv2 and PLCOm2012 lung cancer risk prediction models
- Investigate trends in data recording based on practice characteristics
- Make recommendations for the use of lung cancer risk prediction models LLPv2 and PLCOm2012 based on the completeness and accuracy of GP data recording in Ireland.

#### Methods

Thirteen variables in routine GP records will be assessed for availability and completeness: Sex, Age, Ethnicity, BMI (or height and weight), Education level, Personal history of COPD, Personal history of cancer, Personal history of pneumonia, Family history of lung cancer, Smoking status, Pack year history, Years since quitting smoking, and Asbestos exposure. These variables were selected as they are sufficient for risk prediction by= established lung cancer risk prediction models such as PLCOm2012, LCRAT, Pittsburgh, Bach, LLPv2 and LLPv3.

# Results/Conclusions

We will present our proposed methods as well as interim results from our affiliated healthcare network. The sample size will reflect the full range of practices affiliated with this netowrk. The network dataset is for the 70 participating GP practices and approximately 400,000 patients. This study will assess the feasibility of using GP records to streamline lung cancer screening eligibility determination in Ireland and contribute to the optimisation of lung cancer screening strategies more broadly.

# Adequacy of clinical guideline recommendations for patients with low-risk cancer managed with monitoring: Systematic review

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#### **Abstract**

#### Introduction

Monitoring patients with cancers that are not causing symptoms, and have a low risk of progression could help reduce the harms of over-diagnosis and over-treatment. For monitoring to be a viable option, clinicians need clear, unambiguous, evidenced based guidelines and recommendations on which patients would benefit most from monitoring, and how the monitoring should be done.

## Objective

To understand the quality of evidence underpinning monitoring recommendations, we undertook a systematic examination of clinical practice guidelines that included recommendations for monitoring patients with low-risk cancer.

# Description

We searched PubMed and TRIP databases for guidelines updated between 2012-2023. We assessed whether the guidelines provided clear recommendations for 1) identifying low-risk patients, 2) specifying tests to use, 3) determining monitoring intervals, and 4) defining triggers for intervention. For each of the four recommendations, we determined whether they were non-specific (clinically not useful) or if the recommendation was specific (clinically useful). Guideline quality was evaluated with the AGREE II tool, and results were reported by cancer type.

#### Results

Across the 41 guidelines, 48 recommendations were identified: 15 (31%) for prostate cancer, 11 (23%) for renal cancer, 6(12.5%) for thyroid cancer and 10 (21%) for blood cancer. The remaining 6 (12.5%) were for other cancers. 48 recommendations (100%) stated which patients qualify for monitoring, 31 (65%) specified which tests to use, 25 (52%) provided recommendations for surveillance intervals, and 23 (48%) outlined triggers to initiate intervention. Across all cancer sites, the evidence cited in guidelines for intervals was mainly expert opinion or other guidance.

# Conclusion

With the exception of prostate cancer, the evidence base for monitoring low-risk cancer is weak and consequently recommendations in clinical guidelines are inconsistent. There is a lack of direct evidence to support monitoring recommendations in the literature making guideline developers reliant on expert opinion, alternative guidelines, or indirect or non-specific evidence.

# Other category

Monitoring low risk cancer in Primary Care

# A decision support tool to identify patients with unexpected weight loss who are at risk of cancer in primary care: a simulation study.

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#### **Abstract**

Background: The presence of non-specific symptoms related to cancer, such as unexpected weight loss (UWL) presents challenges to early cancer diagnosis in general practice. Clinical decision support systems (CDSS) have the potential to identify patients who may benefit from further investigation. Future Health Today (FHT) is a software that uses electronic medical record (EMR) data to provide recommendations at the point of care.

Objectives: To evaluate the acceptability, usability, and feasibility of incorporating symptom-based recommendations for UWL into general practice through a CDSS.

Methods: Ten general practitioners (GPs) will be recruited to test the UWL recommendations embedded in the FHT CDSS in a simulated general practice environment. Simulated consultations will occur between GP participants and patient-actors with UWL. GPs will participate in a semi-structured interview to evaluate their experiences and perceptions of the tool and how it would translate to use in practice. After observing a recorded interaction between the GP and the actor, five consumers will also be interviewed. Simulations and interviews will take approx. 45-60 min to be completed. Data will be analysed using the Acceptability of Health Care Interventions Framework and the Socio-Technical framework for digital interventions.

Results: This simulation study will assess the impact of the tool on general practice consultations and explore GP and consumer/patient attitudes, perceptions, and experiences of using the CDSS. Barriers and facilitators to implementation and suggestions for optimization will be identified. Results will be reported in April 2024.

Conclusions: Testing a digital intervention in a simulated environment to identify patients at risk of cancer before implementing it into general practice, will facilitate optimisation of CDSS and supportive resources to enhance the prospects of effective real-world implementation.

# The role of pre-diagnosis intervals on colorectal cancer outcomes: a linked data study

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<sup>4</sup>Melbourne Health, Melbourne, Australia. <sup>5</sup>Western Health, Melbourne, Australia

#### **Abstract**

Introduction/Background: Colorectal cancer is a leading cause of cancer-related morbidity and mortality in Australia. Reducing the time it takes to diagnose and treat colorectal cancer is seen as important to reduce this burden, but there is limited evidence from an Australian context to help guide recommendations for optimal times. This study represents the first time Australian data from general practice and clinical registries has been linked to study the role of diagnostic intervals in colorectal cancer.

Objectives: to assess the relationship between time before diagnosis on overall survival and stage of disease in a cohort of Victorian symptomatic colorectal cancer patients.

Methods: Data from two general practice electronic medical record databases were linked to a colorectal cancer clinical registry (ACCORD) and hospital administrative datasets to determine the lengths of key intervals in the time before diagnosis. Outcomes (overall survival and stage of disease) were determined from ACCORD. Cox proportional hazards, and logistic regression were used to model associations, with restricted cubic splines to allow for non-linear associations.

Results: Linked data allowed for the determination of the diagnostic interval (between first presentation in primary care to diagnosis) and the doctor interval (between first presentation in primary care to first investigation) for 265 and 99 people respectively. The waiting time paradox, characterised by a U-shaped association, was seen for the association between the diagnostic interval and both overall survival and stage, with poorer outcomes for both long and short intervals.

Conclusions: This study represents the first time linked data has been used in an Australian context to better understand the importance of the time colorectal cancer patients spent in primary care. For both survival and stage, poorer outcomes were seen with longer times, in both cases after approximately 120 days, adding to the evidence base for formulating guidance around optimal times.

# Risk prediction of bladder cancer among person with diabetes: A derivation and validation study

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#### **Abstract**

#### **Aims**

This study aimed to devise and validate a clinical scoring system for risk prediction of bladder cancer to guide urgent cystoscopy evaluation among people with diabetes.

#### Methods

People with diabetes who received cystoscopy from a large database in the Chinese population (2009–2018). We recruited a derivation cohort based on random sampling from 70% of all individuals. We used the adjusted odds ratios (aORs) for independent risk factors to devise a risk score, ranging from 0 to 5: 0-2 'average risk' (AR) and 3-5 'high risk' (HR).

#### Results

A total of 5905 people with diabetes, among whom 123 people with BCa were included. The prevalence rate in the derivation (n = 4174) and validation cohorts (n = 1731) was 2.2% and 1.8% respectively. Using the scoring system constructed, 79.6% and 20.4% in the derivation cohort were classified as AR and HR respectively. The prevalence rate in the AR and HR groups was 1.57% and 4.58% respectively. The risk score consisted of age (18–70: 0; >70: 2), male sex (1), ever/ex-smoker (1) and duration of diabetes ( $\geq$ 10 years: 1). Individuals in the HR group had 3.26-fold (95% CI = 1.65-6.44, p = 0.025) increased prevalence of bladder than the AR group. The concordance (c-) statistics was 0.72, implying a good discriminatory capability of the risk score to stratify high-risk individuals who should consider earlier cystoscopy.

### Conclusions

The risk prediction algorithm may inform urgency of cystoscopy appointments, thus allowing a more efficient use of resources and contributing to early detection of BCa among people planned to be referred.

# Community Engaged Approach to Cancer Control Policy In Abia State - Nigeria: A Mixed-Methods Action Research Project

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#### **Abstract**

## Background

Beyond the National Cancer Control Plan, most States in Nigeria do not have a cancer control policy (CCP). Using the multiple perspective analysis framework, this research sought to explore the perspectives of cancer patients (CP), healthcare providers (HCP) and health policymakers (HPM) regarding CCP in Abia State.

#### Methods

This was a concurrent mixed methods action research involving CP diagnosed with breast or cervical cancer, HCP, and HPM. It was conducted in collaboration with the Abia Cancer Control Group (ACCG), a community-based coalition. Tailored survey data included demographics, experiences and expectations regarding cancer control while key informant interviews were structured to illuminate the surveys. Data analysis involved descriptive statistics, chi-square and T-tests, while deductive thematic analysis was used for qualitative data.

#### Results

Participants were 29 CP, 50 HCP and 33 HPM (n=112), with an average age of 45 ( $\pm 11$ ) years. Challenges identified by  $\geq 60\%$  of participants were: lack of local data regarding cancers (95.2%, 79/83); lack of treatment pathways (92.8%, 77/83); absence of support groups (88.0%, 73/83); and low public awareness (75.9%, 63/83). Themes were categorized into experiences (i.e. awareness; delays; financial toxicity) and expectations (i.e. priority rating; funding; framework for CCP). The top three priority areas for a new CCP were: cancer prevention (83%, 93/112); State legislation (80%, 86/112); and multi-agency partnerships (79%, 88/112). Most participants (80%, 90/112) recommended that health insurance should fund  $\geq 16\%$  of cancer care, although policymakers were more likely to make quarterly insurance contributions than patients (7 out of 10 vs. 5 out of 10).

## Conclusion

Inadequate prevention services with a background of >3-month diagnostic delay was common in Abia State. Future CCP should emphasize: cancer prevention, local clinical pathways and a blended funding model for cancer care. Collaboration with community groups is critical to the successful development and implementation of a CCP in Abia State.

# Risk prediction of advanced colorectal neoplasia varies by race and neighborhood socioeconomic status

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#### **Abstract**

#### Introduction

Risk prediction enables prioritization of screening and risk reduction for patients at high risk for developing advanced colorectal neoplasia (ACN).

# **Objectives**

Developing race-specific ACN prediction models that integrate individual-level risk factors with neighborhood socioeconomic status to improve accuracy of risk prediction.

# **Descriptions**

We included 2,393 patients [1,457 European Americans (EAs) and 936 African Americans (AAs); aged 50-80 years] undergoing screening or diagnostic colonoscopy in this study. Race-specific ACN risk prediction models were developed using lifestyle risk factors and Neighborhood Disadvantage Index (NDI) derived from 17 neighborhood socioeconomic status variables. Prediction accuracy was evaluated by C-statistic for discrimination (ability to differentiate cases from controls) and Hosmer-Lemeshow goodness-of-fit test for calibration (agreement between observed and predicted risk).

#### **Results**

With fewer predictors, the EA- and AA-specific prediction models had better prediction accuracy in the corresponding race sub-population than the overall model. Compared with the overall model of inferior calibration ( $P_{Calibration} = 0.049$  in the whole population), the EA-model had C-statistic of 0.655 (0.594, 0.717) and  $P_{Calibration} = 0.663$ ; and the AA-model had C-statistic of 0.637 (0.572, 0.702) and  $P_{Calibration} = 0.810$ . NDI was a significant predictor of ACN (OR = 1.24 (1.03, 1.50), P = 0.029) in the EA-specific ACN prediction model, and it improved calibration accuracy across neighborhood deprivation groups ( $P_{Calibration} = 0.924$  for the prediction with NDI vs.  $P_{Calibration} = 0.140$  for the prediction without NDI) and discrimination accuracy (C-statistic = 0.700 vs. C-statistic = 0.655). In AAs, NDI is not a significant predictor (P = 0.487), and it provided limited calibration improvement across the neighborhood disadvantage subgroups ( $P_{Calibration} = 0.462$  with NDI vs.  $P_{Calibration} = 0.282$  without NDI) but some discrimination improvement (C-statistic = 0.697 vs. C-statistic = 0.637).

#### **Conclusions**

Risk prediction models integrating neighborhood socioeconomic status improves the risk prediction accuracy for socioeconomically disadvantaged sub-populations.

# The Predictive Value of Signs and Symptoms for Pancreatic Cancer in Patients Presenting to Primary Care

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#### **Abstract**

# Introduction/Background

Pancreatic cancer is often diagnosed at an advanced stage with a poor outcome, supporting the need for early detection tools. Decision support tools have been developed to aid early detection of pancreatic cancer in primary care settings: QCancer, Risk Assessment Tool (RAT) and QPaC Tool.

#### **Objectives/Aims**

The aim of this study was to estimate the positive predictive values (PPVs) of these tools using Australian primary care data to quantify their clinical utility.

### **Description/Methods**

Linked primary care (Patron/MedicineInsight), hospital admission (VAED) and clinical cancer registry data (PURPLE) were used to identify pancreatic cancer patients who had presented to primary care in Victoria, Australia. Symptoms included in the tools were identified from the primary care datasets. The positive predictive value (PPV 95% CI) of each of the tools for detecting pancreatic cancer within 12 months of the first relevant symptom was estimated.

#### **Results/Outcomes**

The highest PPVs for pancreatic cancer were from the RAT tier 1 (high risk symptom) which had a PPV of 1.5% (95% CI 1.12%, 1.98%), although jaundice was the sole symptom in this tier. PPVs for any of the RAT tier 2 symptom combinations were 0.13% (95% CI 0.03%, 0.37%). QPaC PPVs were 0.56% (95% CI 0.43%, 0.72%) for tier 1 and 0.08 (95% CI 0.03, 0.12) for tier 2. QCancer had the lowest PPV of 0.0% (95% CI 0.0%, 4.56%).

### **Conclusion**

No tool reached the 3% PPV threshold used by many existing guidelines for recommending urgent cancer referral. Jaundice had the highest predictive value but is one of the most common presenting features of pancreatic cancer. All the tools included several non-specific symptoms. Incorporating additional GP patient data could help optimise tools to identify patients in the early stages of pancreatic cancer when patients are more likely to present with vague symptoms.

# Cancer WHIRI I: Decolonizing the early cancer pathway for Māori in New Zealand

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#### **Abstract**

#### **Background**

Māori are twice as likely to die after a diagnosis of cancer compared to non-Māori in Aotearoa, New Zealand. Māori receive delayed poorer quality treatment and those with comorbidities are undertreated. Coordination of care is crucial for Māori patients and whānau (family), but poorly developed along this early part of the cancer pathway. Our vision is that a potential diagnosis of cancer results in positive racism free health engagement, timely access to high quality care and well-being gain for individuals and their whānau.

#### **Aims**

This study sought to co-design, implement and evaluate a holistic cancer service that is patient and whānau/family centred using WHIRI, an established Māori model of care. This comprehensive, racism-free, wellbeing enhancing and responsive model of care was redesigned for the early part of the secondary care cancer pathway.

#### **Design and Method**

The WHIRI model includes navigation and an electronic holistic assessment tool with follow up protocols. WHIRI includes nurse led case management including a general practice/family doctor and daily clinical case reviews with proactive team management for making systems changes. Over 1 year, the team developed a WHIRI model of cancer care using Kaupapa Māori methodology. Key to this was working in partnership with patients, whānau, cancer clinicians, Māori navigators and Te Aho o Te Kahu - the national Cancer Agency. We used 'He Pikinga Waiora' (Māori implementation framework) to guide the research process. The cancer WHIRI programme was piloted with 50 Māori patients referred for suspicion of cancer to Waikato hospital.

#### Results

The Cancer WHIRI model of care included the following components: Patient and whānau centred care; relationships; maximised hauora/wellbeing and equity gain; systems; and tino rangatiratanga/Māori autonomy. The team will present results of the pilot and discuss the model, which has potential to expand nationally with reach from primary care through to palliative care.

# Other category

Supportive care

# Enhancing Survivorship Care For Long-Term Responder Patients with Metastatic Non-Small Cell Lung Cancer (mNSCLC): Feasibility of a Multi-Disciplinary Team (MDT) Consultation

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#### **Abstract**

**Background:** Recent advances in metastatic non-small cell lung cancer (mNSCLC) management have resulted in prognostic gains for many. Individuals achieving long periods of disease stability have been reported to have a range of unique 'survivorship' challenges, including chronic toxicity, multi-morbidity management, and psychological concerns. Management of mNSCLC survivorship needs requires multi-disciplinary care, including general practitioner (GP) expertise.

# **Objectives:**

- To determine the feasibility and acceptability of a multidisciplinary team (MDT)
  consultation aimed at identifying survivorship needs of 'long-term responder' patients
  with mNSCLC.
- To explore the utility of a survivorship care plan (SCP) in enhancing communication between hospital- and primary care-based clinicians.

## Methods:

- This is a single-site pilot study of a one-off, survivorship-focused MDT consultation, delivered via tele-health.
- Eligible participants are those with a histological diagnosis of unresectable or mNSCLC deemed 'long-term responders' (>/=6 months after start of current systemic therapy without radiological progression).
- Pre-MDT participants complete a modified version of the Cancer Survivors' Unmet Needs (CaSUN) questionnaire. The MDT is a lung-cancer nurse-led, structured discussion, guided by CaSUN responses. MDT attendees include: participant +/-support person, lung-cancer nurse, allied health representative, oncology doctor, and

- primary-care clinician. Post-MDT an SCP is distributed to the participant, hospital team, and GP.
- Pre/post-MDT surveys are distributed to the participant's GP, to document pre-MDT awareness of survivorship needs and management changes subsequent to MDT participation.
- Qualitative exit interviews will be conducted with all stakeholder groups.

**Results:** This is an ongoing trial-in-progress with five participants of a planned 30 recruited to date. Four MDTs have been completed successfully within the 6-week target post consent and two participant exit interviews completed.

**Conclusions:** Improved coordination between hospital- and primary care-based health-care teams is needed to meet the supportive care needs of individuals with mNSCLC.

# Time to diagnosis and treatment for ovarian cancer and associations with outcomes: a systematic review.

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#### **Abstract**

#### Background

Ovarian cancer is commonly diagnosed symptomatically at an advanced stage. Although trials of screening for asymptomatic women have not shown a mortality benefit, differential survival for those diagnosed with early or advanced disease continues to suggest that improving diagnostic pathways may be one strategy to improve outcomes in the absence of screening.

# Objectives

This study examines literature assessing diagnostic intervals for ovarian cancer and their association with outcomes.

#### Methods

Medline, EMBASE and Emcare databases were searched for studies including quantitative measures of at least one time interval from first symptom to treatment, published between 1/1/2000 and 9/8/2022. Interval measures and length, associations with outcomes (survival, stage, quality of life) and analytic strategies, were synthesised. Risk of bias of association studies was assessed using the Aarhus Checklist and ROBINS-E tool.

#### Results

65 papers (20 association studies) were included. 26 unique intervals were identified. Interval estimates varied widely and were impacted by summary statistic used (means or medians) and group focused on (advanced vs early disease). Of Aarhus defined intervals, patient (symptom to presentation, n=23; range (medians): 7-168 days) and diagnostic (presentation to diagnosis, n=22; range (medians): 7-270 days) were most common. 19 association studies examined survival or stage outcomes with most, including 5 low risk-of-bias studies, finding no association. Multivariate regression models were used in 9 association studies, with 5 adjusting for potential mediators on the causal pathway between diagnostic intervals and survival.

#### Conclusions

Different start and end points used to determine intervals, variations in data collection methods, and variation in study populations makes it difficult to draw conclusions from existing research regarding diagnostic intervals for ovarian cancer. Greater utilisation of the Aarhus statement to define intervals and greater use of appropriate analytic methods, including use of non-linear analytic methods to account for the waiting time paradox, are needed.

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# Primary care plays an important role in prostate cancer survivors' experiences with follow-up care

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#### **Abstract**

Introduction: Prostate cancer is a common and life-altering condition among Canadian men, who require ongoing follow-up care to manage their needs and optimize health recovery. Despite evidence of high health care utilization following cancer treatment, little is known about how prostate cancer survivors themselves experience care after primary treatment.

Objectives: To explore prostate cancer survivors' experiences with follow-up care, including their satisfaction with care and their experiences with their providers during follow-up.

Descriptions: Guided by qualitative description, we conducted one-on-one, semi-structured interviews with prostate cancer survivors who had completed primary treatment and were receiving follow-up care. The interviews took place using videoconferencing software. All were audio-recorded, transcribed, and analyzed thematically.

Results: Eight prostate cancer survivors took part. Follow-up care was provided by and shared between a variety of providers, including cancer specialists (e.g., urologists, oncologists), family doctors, nurses, and physiotherapists. Most commonly, participants' satisfaction related to their physicians' involvement (or lack thereof) in their care, suboptimal coordination across physicians, and continuity of care (i.e., having a consistent physician). Many participants expressed surprise by how little their cancer specialist was engaged in this period of care. Conversely, most participants felt their primary care provider (PCP) was an integral part of their follow-up, with half reporting their PCP was primarily responsible for their post-treatment care. Participants felt the longitudinal nature of their PCP relationship, and the compassion and empathy that PCPs provided, were important aspects of follow-up care.

Conclusions: Primary care providers may play an important role in follow-up care for men with prostate cancer, particularly around the delivery of person-centred care and optimizing health recovery. Issues related to coordination and continuity of care continue to challenge survivors' experiences with follow-up care. These issues have been longstanding in the cancer survivorship literature and may require new ways of thinking and working in cancer care.

# Patients' concern for own health and predictive values for cancer

<u>Kirubakaran Balasubramaniam</u>, Sonja Wehberg, Lisa Maria Sele Sætre, Peter Haastrup, Sanne Rasmussen, Dorte Ejg Jarbøl Research Unit of General Practice, Department of Public Health, University of Southern Denmark, Odense, Denmark

#### **Abstract**

Introduction: As timely cancer diagnosis is of great importance for both morbidity and mortality of most cancers, there is a constant focus on improving timeliness. In Denmark the administrative registers have a high degree of completeness, thus enabling epidemiological studies of high quality. We have previously developed a Cancer Risk Assessment Model (CRAM) to aid with automated identification of individuals at risk of any type of cancer. The model showed a modest accuracy. From other studies it is known that the healthcare professionals´ gut feeling has a high predictive value for serious illness, and it may be hypothesized that the patient´s gut feeling may have similar predictive values. Thus, the aim of the current study is to incorporate the individuals´ degree of concern for own health in the CRAM to explore if this increases the precision of the model.

Methods: A register-based cohort study of individuals in Denmark aged +20 years, combined with questionnaire data from a nationwide survey. The outcome of interest is all cancers during the study period excluding nonmelanoma skin cancer. Diagnoses, medication, and contact with general practitioners and self-reported concern for own health will be considered for the predictive model. Backward selection to all variables by logistic regression will be applied to develop a risk model for cancer. The receiver operating characteristic curves will be calculated, and the corresponding areas under the curve (AUC) will be estimated.

Results: The analyses are currently being conducted, and results will be presented at the conference.

# Should the diagnostic interval as a tool of early cancer diagnosis research be consigned to the history books?

 $\underline{\mathsf{Gary}\ \mathsf{Abel}^1}$ , Bianca Wiering $^1$ , Mike  $\mathsf{Cooke}^1$ , Sarah  $\mathsf{Price}^1$ , David Shotter $^1$ , Willie Hamilton $^1$ , Leon Farmer $^1$ , Jose Martinez Valderas $^2$ , Luke Mounce $^1$  University of Exeter, Exeter, United Kingdom.  $^2$ National University of Singapore, Singapore

#### **Abstract**

#### Introduction

Enshrined in the Aarhus statement, the diagnostic interval (DI - time between first presentation and diagnosis) is a mainstay of early diagnosis research. The DI depends on the identification, generally retrospective, of a first presentation, which can introduce potential biases. The degree to which such biases might explain differences in DI between groups is hitherto unknown.

# Objectives

Recent work found large differences in DIs according to multi-morbidity status. However, no differences were seen in the timing of increasing consultation rates. Here we assess whether differences in DI can be explained by different numbers of consultations with possible symptoms of cancer that are not related to cancer.

# **Descriptions**

A simulation approach is used (n=4,000,000 simulated patients) to recreate the findings of a large cohort of cases (n=288,297) and controls (n=288,297). The apparent DI observed in controls (people without cancer designated the diagnosis date of their matched case) was simulated for four multimorbidity burden groups assuming a constant daily probability of presentation with possible cancer symptoms, plus a patient-level clustering term. For cases, a further probability of presentation, dependent on time-before-diagnosis, was added independent of morbidity burden.

#### Results

In the observed cohort the median DI was 35 days in cases with no pre-existing conditions and 47, 65, and 135 days in those with low, medium and high morbidity burdens respectively. The corresponding intervals from the simulation were 53, 61, 72 and 104 days.

## Conclusions

A simple three parameter model recreates key differences seen in DI by morbidity burden in a large observational cohort. Importantly, only one parameter varies between morbidity groups, and this was chosen based on controls. These findings suggest observed DI differences are consistent with no appreciable differences attributable to cancer and thus call into question the value of investigating DIs. The use of DI in other study designs will also be discussed.

# Long-term psychological distress in breast cancer survivors and their matched controls: a longitudinal study.

<u>Saskia W.M.C. Maass</u>, Laurine T. van der Wal, Geertruida H. de Bock, Daan Brandenbarg UMCG, Groningen, Netherlands

#### **Abstract**

**Background** Breast cancer patients often experience psychological distress in the first years after diagnosis. Previous studies showed a continuation of depression and anxiety symptoms. However, the trajectory of long-term psychological effects is not well established. This study aims to assess long-term psychological distress in breast cancer survivors as compared to age and general practitioner (GP) matched controls.

**Methods** A previous study included 350 women early breast cancer survivors and 350 GP and age-matched controls. Nine years later, the same women were included again, creating a longitudinal study comprising two cohorts in primary care. Symptoms of depression were measured using the Hospital Anxiety and Depression Scale (HADS). Univariate logistic regression compared the risk for (severe) symptoms of depression and (severe) symptoms of anxiety in breast cancer survivors, compared to controls, median 19 years after diagnosis. Also, the HADS scores between the previous and this study will be evaluated. In multivariate logistic regression, the results were corrected for diagnosis of depression and/or antidepressant use before breast cancer diagnosis.

**Results** Our ongoing study anticipates the first results before Ca-PRI 2024. The previous study showed that the odds of having symptoms of depression (OR 2.3, 95%CI 1.3-4.2) and severe symptoms of depression (OR 3.3, 95%CI 1.1-10.3) were significantly greater for breast cancer survivors (median ten years after diagnosis) when compared to controls. Also, for severe symptoms of anxiety, the odds were significantly greater for breast cancer survivors (OR 2.1, 95%CI, 1.1-4.0). After correction for diagnosis of depression and/or antidepressant and time since diagnosis, these results remained significant.

**Conclusions** Our research highlights that long-term breast cancer survivors experience more (severe) symptoms of depression and anxiety compared to age- and GP-matched controls. As we await our follow-up results, this study will deepen our understanding of the symptom trajectory, allowing for more precise guidelines and interventions.

My Screen, My Choice - A co-designed mHealth tool to raise awareness of self-collection cervical screening and increase cervical screening participation in an Aboriginal-community controlled health settings in Victoria, Australia.

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#### **Abstract**

Introduction: Preventative health programs delivered through digital devices such as mobile phones (mHealth) are an innovative component of the healthcare tool kit, which are increasingly implemented at scale particularly in primary care settings. We explored the implementation and effectiveness of a codesigned mHealth tool in an Aboriginal community-controlled health service to improve the experience of and participation in cervical screening through self-collection (SC) for and with Aboriginal women.

Objective: To codesign and implement an mHealth strategy with Aboriginal women to improve awareness and participation in cervical screening

Descriptions: Using Indigenous research principles, a series of codesign activities highlighted the potential of utilising an mHealth tool (GoShare Plus) as a health self-collection promotion strategy. Focus group discussions with Aboriginal women (staff and community members) and a community survey informed the content and resources of the mHealth tool. Cervical screening participation was measured before and after implementation through analysis of pathology data.

Results: FGDs involved 11 Aboriginal and 3 non-Aboriginal staff at the Cooperative. 30 Aboriginal women from the community participated in the survey. An SMS-based tool was found to be highly acceptable to Aboriginal women including clicking a hyperlink in an SMS to additional resources. Women wanted the tool to reflect their community with suggestions of in-language greetings and testimonial videos of respected people or women in the community who used self-collection. Key messages developed with women included that SC is just as accurate as a clinician-collected specimen, eligibility criteria, that it's quick and easy and to contact their trusted health professional at the service. In designing the tool, the need to explicitly consider its appropriateness and accessibility for women with differing needs was emphasized.

Conclusions: Implementation of the mHealth tool will be completed by early 2024 with overall findings to be presented.

# Fidelity of a clinical decision support algorithm to identify patients with unexpected weight loss at risk of cancer in primary care

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### Abstract

Introduction: Unexpected weight loss (UWL) can be the initial presentation of cancer in primary care. Because of its non-specific nature and other diagnostic possibilities, there can be a delay in cancer diagnosis. Previous research in the United Kingdom conducted using primary care datasets showed an association between UWL and increased risk for ten different types of cancer. We developed a cancer risk algorithms using Australian primary care data and incorporated these into a clinical decision support system called Future Health Today (FHT). FHT applies algorithms to electronic medical record (EMR) data and provides point-of-care recommendations and a tool to facilitate recall for at-risk patients.

Objectives: To calculate the positive predictive value (PPV) of FHT in identifying people with UWL using EMRs' audit as gold standard.

Methods: Up to 10 practices will be recruited for the EMR audit. A clinician auditor will attend the practices in person or via remote access and generate a list of patients with possible UWL in FHT who may be at increased risk of cancer. Demographic information, medical history, medications, pathology results, progress notes and anthropometric measures will be interrogated and entered in REDCap. Based on the data, they will determine whether the patient had UWL. A second clinician will independently review the data with blinding of the final categorization; if a disagreement is found regarding the final categorization, a third clinician will be involved to reach a consensus. PPV of the FHT algorithm in identifying people with UWL will be calculated. The study has been approved by the University of Melbourne Human Research Ethics Committee.

Results: Data will be collected in November 2023 with results available in April 2024.

Conclusion: Our results will determine if optimisation of the FHT algorithm is required prior to it being utilised in an implementation trial in primary care.

# A Serial Cross-sectional Analysis of Irish GP Referrals to Rapid Access Clinics for Cancer (GRACCHUS-1)

<u>Benjamin Jacob</u>, Sean O'Regan, Niamh Blaine, Ming Chuen Chong, Vivian Teng Xiu Wen, Patrick Redmond RCSI University of Medicine and Health Sciences, Dublin, Ireland

### **Abstract**

**Background**: Cancer accounts for one third of deaths in Ireland and one sixth globally. The National Cancer Control Programme (NCCP) was created by the Irish health service in 2007 to improve outcomes. One of the NCCP's strategies to reduce diagnostic delay was the establishment of Rapid Access Clinics (RACs) for urgent suspicion of lung, prostate and breast cancer, and melanoma. No previous work has examined how GPs are using these services and, at the present time, this data cannot be accessed centrally.

**Objective**: To extract electronic RAC referral data from GP practices in Ireland and to examine how the use and distribution of clinical features has changed over time.

**Methods**: We created a "A Tool for Indexing and Benchmarking Electronic Referral Data from Irish GP Practices Using Socrates" (TIBERIUS) which extracts the relevant data and performs the analysis, which is forwarded in aggregated and fully anonymised form to the study team. Furthermore, we will examine inter-practice variability, adjusting for GP practice characteristics by means of a regression analysis.

**Results**: Preliminary results from one test practice revealed that the most common referral type was Breast (133, 4% male, median age 44), followed by Prostate (47, 100% male, median age 61), Melanoma (35, 69% male, median age 46) and Lung (5, 60% male, median age 71). We will present results from a network of 75 GP practices (comprising almost 10% of all patients in Ireland), examining how the use of RAC referrals, and the distribution of clinical features, have changed over time.

**Conclusions**: This piece of research will provide hitherto unavailable information about RAC referral trends to the NCCP, who coordinate the service in Ireland, and will inform educational and quality improvement initiatives for GPs. Furthermore, this work will inform further research into urgent cancer referrals by Irish GPs.

# A Systematic Review of Primary Care Prescribing Prior to Lung Cancer Diagnosis

Benjamin Jacob  $^1$ , Vivian Teng Xiu Wen  $^1$ , Delphi Morris  $^1$ , Bethany Wickramsinghe  $^2$ , Frank Moriarty  $^1$ , Heather Burns  $^3$ , Kathleen Bennett  $^1$ , Patrick Redmond  $^1$  RCSI University of Medicine and Health Sciences, Dublin, Ireland.  $^2$  University College London, London, United Kingdom.  $^3$ HSE National Cancer Control Programme, Dublin, Ireland

### **Abstract**

**Background**: Lung cancer is the leading cause of cancer death worldwide. A significant reason for its high mortality is delayed diagnosis, with around half of cases being diagnosed in Stage III or IV. Previous research has shown that prescribing rates of certain medications increase in the 24 months preceding a cancer diagnosis. This suggests an opportunity for earlier lung cancer diagnosis by calculating lung cancer risk from GP data (including prescribing data) and then alerting a GP seeing the patient via an electronic clinical decision support tool (eCSDT) if appropriate.

**Objective**: To conduct a systematic review of prescribing events associated within an increased incidence of primary lung cancer in the subsequent 24 months.

**Methods**: We searched the literature for all peer-reviewed studies in the English language that quantitatively describe an association between primary care prescribing data and subsequent lung cancer diagnosis. Only studies which reported the unadjusted prescribing rate in a lung cancer group and control group were included.

**Results**: We identified 2,240 unique articles, from which 53 were selected for full-text review. 8 studies met our original eligibility criteria, yielding 106 separate prescribing events for which an association with subsequent lung cancer has been studied, which we grouped as follows: analgesics (34), antibiotics (24), mental health drugs (18), cardiovascular medication (17), antidiabetic agents (10), and COPD medication (3). No meta-analysis was possible due to the significant methodological variation between studies. However, we will present results of the implied positive predictive value of comparable prescribing events studied in 3 or more articles, demonstrating how this changes according to the lung cancer incidence, event horizon and baseline prescribing rate.

**Conclusions**: This review summarises the evidence on drugs which, when prescribed, suggest the possibility of an as-yet-undiagnosed lung cancer and will directly inform the development of an eCSDT which has the potential to ameliorate diagnostic delay.

# Supporting Women with Cancer from Chinese, Vietnamese and Arabic Speaking Backgrounds after treatment

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#### **Abstract**

### Introduction

Women from culturally and linguistically diverse (CALD) backgrounds express substantial unmet supportive care needs after cancer treatment. There is a paucity of research dedicated to serving CALD minorities in Australia.

# · Objectives/Aims

Co-design and deliver culturally safe community-based supportive care to women living with cancer from Chinese-, Vietnamese- and Arabic-speaking backgrounds.

## • Description/Methods

Focus groups and interviews with women with cancer and their healthcare providers (HCPs) were conducted in-language, online and in-person by experienced bilingual researchers. These were recorded, transcribed verbatim, and translated into English. Data were analysed thematically to inform program development.

We will pilot three programs per language group, in language and face to face, facilitated by a bilingual health professional. Evaluation includes focus groups and measures of symptom burden and self-efficacy.

#### Results/Outcomes

Forty-six women from Arabic (n=11), Cantonese (n=11), Mandarin (n=12) and Vietnamese (n=12) speaking backgrounds and 13 HCPs contributed qualitative data. All cultural groups highlighted the impact of cancer on physical health, a desire for connection with community, and the need to be heard, understood and seen by others. Women desired practical skills and knowledge, and approaches for psychological wellbeing were expressed within the context of faith, culture and fun. HCPs in hospital settings felt they often did not have time to address supportive care needs.

Three six-week programs have been piloted (n=17) with at least three additional programs expected to be piloted by April 2024. Program contents, informed by qualitative findings, include mind-body therapies (qi gong and yoga), art therapy, expressive writing, nutrition and exercise advice, stress management, and information on safe complementary therapy use. Results from the program pilots completed to date will be presented in April.

## Conclusions

This program seeks to address the need for evidence-based, co-designed supportive care programs for women from CALD backgrounds to assist with the transition from hospital treatment to primary care.

# Evaluation of early implementation experiences of the provision of bowel screening kits through the newly introduced alternative access model

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## **Abstract**

Introduction: The Australian National Bowel Cancer Screening Program (NBCSP) invites individuals aged 50-74 years to participate through postal invitations and immunochemical faecal occult blood tests (iFOBT). However, less than half the people invited return their kit. Barriers to participation include structural, personal, cultural, and belief-based factors. Evidence suggests general practitioner (GP) endorsement is a key facilitator. Recently, the NBCSP introduced the Alternative Access Model (AAM), an additional pathway for primary care providers to bulk order/distribute kits to eligible patients, during a consultation, in order to encourage participation.

Aims: To understand the implementation experiences of healthcare providers and primary health network (PHN) staff in Victoria during the initial months of the AAM being implemented.

Methods: This study was part of a larger program to improve cancer screening through primary care in Victoria. Data were collected via an online survey and semi-structured interviews with healthcare providers, general practice staff, and PHN staff, along with aggregated screening data. The analysis employed a mixed-methods approach guided by Proctor's implementation outcomes.

Results: Seventy-five general practices and five PHNs participated in this evaluation. Many providers recognised the advantages of direct kit distribution, offering patients a cost-free screening option, and the opportunity to discuss the importance of bowel screening. Most providers who had not adopted the AAM expressed their intent to do so. However, various issues were reported that could impede widespread adoption. Serious issues, such as kits being distributed without registration, were reported but rectified promptly. Improved communication to primary care practices about the importance of each step and guidance for corrective actions in case of issues would be beneficial to strengthen future implementation of the model.

Conclusions: The addition of the AAM as an option for providers has the potential to encourage more NBCSP-based screening. However, several implementation issues need to be addressed to ensure its optimal use.

# International comparison of lung cancer screening programs and implications for Australia's program

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### **Abstract**

Introduction: In Australia, lung cancer is responsible for the most cancer deaths. In May 2023, the introduction of a National Lung Cancer Screening Program was announced by the Minister for Health and Ageing, with screening set to commence by July 2025. Whilst other national screening programs take a population approach to eligibility, lung cancer screening is unique, with eligibility targeted towards those with an elevated risk of disease. This eligibility means that some individuals with increased risk of lung cancer will not be able to access screening through a national program if they do not meet the required risk thresholds.

Aims: To compare lung cancer screening programs internationally with Australia's proposed program, to understand similarities and differences in eligibility, access pathways, models of screening and groups that are excluded from participation.

Methods: Targeted audits of existing policy documents were undertaken to identify countries that had implemented or were in the process of implementing a national lung cancer screening program, including US, Canada, South Korea and others. For each country, relevant national guidelines, position statements and policy documents were identified. Data were extracted on target groups, models of screening, access pathways, costs to participate, priority groups, evaluation and changes to the program since inception.

Outcomes: Australia's lung cancer screening program appears to be narrow in its scope with 30 or more pack years required to enter the program, compared to other established programs internationally. Entry to the Australian program is facilitated by General Practitioners and there is a need to consider the management of at-risk groups who are not eligible to be screened.

Conclusions: There are groups of individuals at risk of developing lung cancer who will be ineligible for Australia's program. There is potential to expand eligibility criteria for Australia's program in future years which could reduce lung cancer deaths.

HEALTHCARE PROVIDERS' KNOWLEDGE, PERCEPTIONS AND ADOPTION OF SELF-COLLECTION INTO ROUTINE CLINICAL PRACTICE IN AUSTRALIA'S NATIONAL CERVICAL SCREENING PROGRAM (NCSP): EARLY INSIGHTS FROM WITHIN THE FIRST YEAR OF UNIVERSAL ACCESS.

 $\underline{\text{Chloe J Jennett}}^1$ , Natalie Taylor $^2$ , Claire Bavor $^3$ , Tessa Saunders $^3$ , Rachael H Dodd $^1$ , Deborah Bateson $^1$ , Julia M.L Brotherton $^3$ , Marion Saville $^4$ , Angela Kelly-Hanku $^5$ , Louiza S Velentzis $^{1,6}$ , Claire E Nightingale $^3$ , Megan A Smith $^1$ 

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#### **Abstract**

#### INTRODUCTION

Self-collection for cervical screening, involves using a vaginal swab for human papillomavirus (HPV)-testing. It is an alternative to a clinician-collection speculum exam, and has been shown to facilitate increased cervical screening participation. From July-2022 the Australian National Cervical Screening program recommends anyone eligible for cervical screening be offered the choice between self-collection or clinician-collection.

## **OBJECTIVES**

Our objective was to identify factors related to adoption of self-collection into routine care, to support implementation of universal access. We investigated associations between adoption and; i) socio-demographic factors, ii) knowledge and iii) agreement with statements of acceptability.

### **METHODS**

We conducted a national, online, mixed-methods survey of clinical providers and non-clinical healthcare workers (recruitment period: November-2022 - May-2023). The survey was developed using the Consolidated Framework for Implementation Research (CFIR) and aimed to collect information on facilitators and barriers to implementation of self-collection into routine clinical care.

#### **RESULTS**

Of the 255 clinical healthcare providers, 252 (98.8%) answered the question on adoption of self-collection and were included in this analysis.

Most (88.4%) participants reported offering their patients self-collection. Adoption of self-collection was highest in Victoria (92.1%;94/102) and lowest in NSW (82.1%; 64/78). Those who adopted self-collection were more likely to have been offered self-collection training since June-2022 (52%,116/223) compared to those who had not adopted self-collection (20.7%;6/29). While knowledge of self-collection was overall high, the majority of non-adopters (69.0%,20/29), and over a third of adopters (37.2%,83/223) believed self-collection to be less accurate than clinician-collection.

The analysis of facilitators and barriers, categorised by CFIR domains, will be presented.

## **CONCLUSIONS**

The high adoption of self-collection reported by respondents potentially reflects a highly engaged group. Among those who had not adopted self-collection, the majority reported they had not been offered training and believed self-collection to be a less accurate test. Findings from this study provide evidence on facilitators to adoption of self-collection.

# Widening access to healthcare: A possible role for community pharmacy

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#### **Abstract**

### Introduction

UK health systems are exploring pharmacies as a new route into healthcare for people with suspected cancer to support the timelier and earlier diagnosis of cancer. Pharmacies are a promising route since they provide a network of trusted and trained professionals, offer an accessible service within local communities and already support cancer awareness campaigns.

## Objectives

We wanted to understand community pharmacists' attitudes and activity around cancer recognition and public views on help-seeking in community pharmacies.

#### Methods

An online quantitative survey was administered to a panel of UK primary healthcare professionals including n=341 community pharmacists by Dynata (January 2023) covering self-reported expertise, capacity and confidence around cancer recognition. Data from a nationally representative, UK-based sample of N=2,082 members of the public was collected online by YouGov on likely barriers towards help-seeking in community pharmacies for possible cancer symptoms (May 2023).

#### Results

Only 42% of pharmacists reported having the knowledge to spot potential signs and symptoms of cancer and only 35% feel confident doing so. Almost a third (30%) reported a lack of time to discuss and conduct examinations to spot possible cancer symptoms.

Top barriers, reported by the public, to help-seeking from a pharmacy for a possible cancer symptom concerned a lack of confidence in pharmacists' expertise and a lack of privacy within the pharmacy. Endorsement was significantly higher for white respondents, those from an ABC1 background, females and those aged 25 years plus

# Conclusions

These results highlight several barriers to community pharmacy playing an effective role in efforts to improve cancer diagnosis. Further insight will inform actions to improve pharmacists' knowledge, confidence and capacity, and to address perceived barriers to help-seeking in the community pharmacy setting.

# HPV Equity Study: exploring cervical cancer control in Scotland for women with experience of priority risks

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### **Abstract**

#### Introduction

Individuals with experience of homelessness, substance use/addiction, transactional sex, and incarceration experience significant health inequities, including in cervical cancer, with women less engaged with routine human papillomavirus (HPV) vaccination and cervical screening programmes, yet also at higher risk of developing cervical cancer. Opportunistic HPV vaccination is recommended by the JCVI for our population 'at clinical discretion'. However, there is limited evidence on the feasibility, uptake, attitudes and impact of vaccination in these at-risk and vulnerable groups and no nationally funded programme.

# **Objectives**

We aim to:

- assess the feasibility and acceptability of offering opportunistic HPV vaccination during standard sexual health care to women at high risk of HPV and cervical cancer
- identify the type-specific prevalence of HPV among recruited women

### **Descriptions**

This is a mixed methods study including:

- 1. Baseline HPV testing, and provision and assessment of uptake of HPV vaccination by women from our target population
- 2. In-depth interviews exploring participants' perspectives on HPV vaccination and screening
- 3. A systematic review of international clinical guidelines relating to HPV vaccination and cervical screening for women from our study population.

We are recruiting women with experience of homelessness, drug use/addiction, transactional sex, and incarceration. Trans-men and non-binary people at risk of cervical cancer with the same risk experiences are also included.

### Results

This study is ongoing. Analysis will detail the uptake of opportunistic HPV vaccine provision in our population and type-specific prevalence of HPV compared to wider age-matched epidemiological data. We will also describe the level of compliance with the JCVI dosing schedule for HPV.

#### **Conclusions**

We anticipate that the findings of our study will also be of wider interest to HPV vaccination and screening providers in the UK and internationally and will be of direct relevance to those providing healthcare services to vulnerable women across Scotland.

# Fear of cancer recurrence is associated with higher primary care use after cancer treatment: A survey-administrative health data linkage study

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### **Abstract**

Introduction: Cancer survivors frequently experience fear of cancer recurrence (FCR) after curative-intent cancer treatment. Little is known around whether FCR impacts their use of healthcare services.

Objectives: To examine how FCR impacts healthcare utilization after completing cancer treatment.

Descriptions: The "Cancer Transitions Survey" was a population-based survey to examine survivors' experiences and needs after completing cancer treatment, including FCR. The survey was administered by the provincial cancer registry as part of a national study, the largest of its kind in Canada. Respondents included Nova Scotian survivors of breast, melanoma, colorectal, prostate, hematologic, and young adult cancers who were 1-3 years post-treatment. Survey responses were linked to cancer registry, physicians' claims, hospitalization, and ambulatory care data. The data linkage provided four years of healthcare utilization data for each cancer survivor, beginning one year after their cancer diagnosis. The data were analyzed descriptively and using linear regression models.

Results: The study cohort were cancer survivors who responded to the survey, had their data linked, completed the FCR survey items, and were cancer-free during the four-year follow-up period (n=823). Younger respondents reported higher levels of moderate/high FCR compared to older respondents: 66.1% of those 18-64 years reported FCR compared to 26.7% and 24.4% of those 65-74 years and >=75 years, respectively. More females than males reported moderate/high FCR (44.2% and 30.8%, respectively). Upon adjusted analyses, moderate/high FCR was associated with higher primary care use after cancer treatment (coefficient=6.1, p<0.0001). No differences were found for specialist visits between those with moderate/high FCR and those with low/no FCR (p=0.12).

Conclusions: FCR is a highly prevalent ongoing effect for those who complete cancer treatment. Given the higher primary care use in those with FCR, primary care providers likely require additional supports to identify and appropriately care for this population to enable optimal recovery after cancer.

# Trends in primary care blood tests prior to lung and colorectal cancer diagnosis - A retrospective cohort study using linked Australian data

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#### **Abstract**

#### Introduction:

Abnormal results in blood tests commonly used in general practice may occur several months before lung cancer (LC) and colorectal cancer (CRC) diagnosis. Identifying early blood test markers of cancer and distinct blood test abnormality signatures could help support earlier diagnosis of LC and CRC in general practice.

# Objectives:

To examine primary care blood test use and results prior to LC and CRC diagnosis to identify changes that may define a 'diagnostic window' for potential earlier diagnosis and early blood test signals of underlying cancer.

## Descriptions:

Using linked Australian primary care and hospital cancer registry data, we conducted a cohort study of 855 LC and 399 CRC patients diagnosed between 2001–2021. General practice blood test requests and results were examined in the 2 years before cancer diagnosis for 11 test types. Poisson regression models were used to estimate monthly incidence rates and examine pre-diagnostic trends in blood test use and results prior to cancer diagnosis, comparing patterns in LC and CRC patients.

## Results:

General practice blood test requests increased from 7 months before CRC and 6 months before LC diagnosis. Abnormalities in many acute phase reactant and red blood cell index blood tests increased several months before LC and CRC diagnosis. These abnormalities are often detected prior to or in the absence of anaemia. LC and CRC patients have different blood test abnormality signatures pre-diagnosis .

# Conclusions:

This study demonstrates an increase in diagnostic activity in Australian general practice several months before LC and CRC diagnosis, indicating potential opportunities for earlier

diagnosis. It identifies blood test abnormalities and distinct signatures that are early markers of LC and CRC. If combined with other pre-diagnostic information, these blood tests have potential to support GPs to prioritise patients for cancer investigation of different sites to expedite diagnosis.

# Pre-diagnostic prescribing patterns in dyspnoea patients with as-yet-undiagnosed lung cancer: a longitudinal study of linked primary care and cancer registry data

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#### Abstract

#### Introduction

Patients with as-yet undiagnosed lung cancer (LC) can present to primary care with non-specific symptoms such as dyspnoea, often in the context of pre-existing chronic obstructive pulmonary disease (COPD). Related medication prescriptions pre-diagnosis might represent opportunities for earlier diagnosis, but UK evidence is limited. Consequently, we explored prescribing patterns of relevant medications in patients who presented with dyspnoea in primary care and were subsequently diagnosed with LC.

#### Method

Linked primary care (Clinical Practice Research Datalink) and National Cancer Registry data were used to identify 5,434 patients with incident LC within a year of a dyspnoea presentation in primary care between 2006-2016. Primary care prescriptions relevant to dyspnoea management were examined: antibiotics, inhaled medications, oral steroids, and opioid analgesics. Poisson regression models estimated monthly prescribing rates during the year pre-diagnosis. Variation by COPD status (52% pre-existing, 36% COPD-free, 12% new-onset) was examined. Inflection points were identified indicating when prescribing rates changed from the background rate.

### Results

63% of patients received 1 or more relevant prescriptions 1-12 months pre-diagnosis. Pre-existing COPD patients were most prescribed inhaled medications. COPD-free and new-onset COPD patients were most prescribed antibiotics. Most patients received 2 or more relevant prescriptions. Monthly prescribing rates of all medications increased towards time of diagnosis in all patient groups and were highest in pre-existing COPD patients. Increases in prescribing activity were observed earliest in pre-existing COPD patients 5 months pre-diagnosis for inhaled medications, antibiotics, and steroids,

#### Conclusion

Results indicate that a diagnostic window of appreciable length exists for potential earlier LC diagnosis in some patients. Lung cancer diagnosis may be delayed if early symptoms are misattributed to COPD or other benign conditions.

# A machine learning tool for identifying metastatic colorectal cancer in primary care

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#### Abstract

#### **Introductions**

Detection of colorectal cancer (CRC) is mainly achieved by clinical assessment. Patients with metastatic colorectal cancer (MCRC) may exhibit signs and symptoms that differ from patients with localised CRC. As new treatments become available also for MCRC, it is important to accurately identify these patients.

# **Objectives**

To develop a predictive model for identifying MCRC in primary health care (PHC) patients using diagnostic data analysed with machine learning (ML).

# **Descriptions**

A case-control study utilizing data on PHC visits for 146 patients > 18 years old diagnosed with MCRC in the Västra Götaland Region, Sweden during 2011, and 577 sex-, age, and PHC-matched controls.

Stochastic gradient boosting was used to construct a model for predicting the presence of MCRC based on diagnostic codes from PHC consultations during the year before index (diagnosis) date and number of consultations. Variable importance was estimated using the normalized relative influence (NRI) score. Risks of having MCRC were calculated using odds ratios of marginal effects (ORME).

#### Results

The optimal model included 76 variables with non-zero influence, had an area under the curve of 76.5%, a sensitivity of 77.8%, and a specificity of 69.2%. The 10 most important variables had a combined NRI of 61.0%. Number of PHC consultations during the year before index date had the highest NRI at 19.2%, with an ORME of 3.3 when comparing those with 7 and 2 consultations.

#### **Conclusions**

A ML method based on PHC consultation frequency and diagnoses can be used to identify important variables for predicting presence of MCRC. Both PHC consultations and associated diagnostic codes need to be taken into consideration.

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# Should I Take Aspirin? (SITA) trial results: Decision Aid Increases Informed Choice on Low-Dose Aspirin for Bowel Cancer Prevention

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#### **Abstract**

Background: In 2022, there were 15,713 new cases of bowel cancer and 5,326 deaths, the second leading cause of cancer death in Australia. Aspirin has been shown to reduce the risk of bowel cancer by 25% and mortality by 33% and is recommended for people aged 50-to-70-years old. The decision to take aspirin involves balancing its benefits and harms, and informed decision-making is crucial.

Aim: The aim of this efficacy trial was to assess the impact of a decision aid and health consultation with a research assistant in general practice on informed decision-making and self-reported aspirin uptake.

Methods: A randomised controlled trial was conducted with 261 participants (87% of eligible patients) from six general practices in Melbourne, Australia. The intervention group received a decision aid and a general bowel cancer prevention advice brochure, while the control group received the latter only. The co-primary outcomes were informed decision-making at one month and self-reported aspirin uptake at six months.

Findings: The trial demonstrated that the decision aid significantly increased informed choice by almost 11% in the intervention group, although the clinical significance of this result is uncertain due to wide confidence intervals. In addition, more than 30% of people in the intervention group spoke to their GP about taking aspirin. However, there was contamination between the intervention and control groups for self-reported daily adherence to aspirin.

Implications: A decision aid about aspirin for bowel cancer prevention increased short-term informed decision-making but had no effect on aspirin use in the medium term. Future trials may benefit from larger sample sizes and from having general practitioners deliver the decision aid directly. The high proportion of people in the intervention group who discussed aspirin with their GP suggests that interventions that provide information can empower patients to make informed decisions.

Trial registration number: Australian New Zealand Clinical Trials Registration ACTRN12620001003965.

# The role of Health Literacy in the early diagnosis of head and neck cancer (HNC); a secondary qualitative analysis.

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#### **Abstract**

#### Introduction

In the UK, 60% of HNC's are diagnosed at advanced stage, leading to severe treatment side-effects, reduced quality of life, and shorter survival. In the UK HNC patients experience longer diagnostic pathways, prompting a need to understand its influencing factors and how they may be contributing to late diagnosis.

Health literacy (a person's capacity, knowledge, understanding, and confidence in accessing and utilizing healthcare information and services) significantly impacts individual health outcomes. Within cancer it is related to poor screening uptake, difficulty in making treatment decisions and reduced quality-of-life. While studies in different cancers have shown the potential influence of health literacy on diagnostic intervals; understanding cancer risk, capacity to process symptom information and knowledge and skills within patients' wider social networks, there is little work to date that has explored the role of health literacy in the diagnostic pathways of HNC patients.

# **Objectives**

To explore the role of health literacy in the HNC diagnostic interval.

### **Descriptions**

Secondary analysis of qualitative data from two sets of semi-structured interviews previously conducted with HNC patients (n=39). We used thematic analyses, informed by the model of pathway to treatment, to explore whether health literacy influenced: symptom recognition and appraisal, help-seeking decision-making, negotiating access to health services; and patients' interactions with healthcare services and professionals.

### Results

Four themes were identified; "Relationships", "Negotiation of the healthcare system", "Push and Pull", and "Knowledge". Adequate knowledge about cancer and the healthcare system is crucial for early diagnosis of HNC. Positive relationships encouraged timely help-seeking in primary care and influenced how patients followed instructions. Difficulties negotiating the system (seeking information, communicating and community influence) created further delays.

# **Conclusions**

Health literacy is a significant factor in the early diagnosis of HNC. Aspects of health literacy impact different stages within the model of pathway to treatment, with system-related factors posing the greatest challenge to overcome.

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Introducing novel technology and new operational approaches: transitioning from a pilot project to the widespread implementation of teledermatoscopy in primary healthcare across a region.

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#### **Abstract**

Introduction: Dermatoscopy improves diagnostic precision for skin lesions among experienced users. Teledermatoscopy improves lead times to excision and has the potential to enhance melanoma diagnostics, when used with double reading.

Objectives: The aim of this study was to explore the step-by-step process from a pilot project to full-scale adoption of teledermatoscopy in primary care across the Stockholm Region in Sweden.

Descriptions: This broadscale implementation of teledermatoscopy entailing new technology and new working methods started 2012 and is used in full scale in Region Stockholm since 2023, serving 2.4 million inhabitants with approximately 240 primary healthcare centres, operating under regional agreements.

Results: From May 2021 to October 2023, a total of 21 657 referrals have been transmitted through the teledermatoscopy system, and all primary care centres in Stockholm are now integrated into the program. Of the referred lesions, 80 percent were classified as benign, while 18 percent were recommended for excision. This process resulted in the detection of 398 melanomas, 1 747 non-melanoma skin cancers, and 438 actinic keratoses. Currently, around 1 500 referrals for suspected skin lesions are submitted for evaluation each month.

Conclusions: The successful integration of teledermatoscopy within a comprehensive healthcare system demonstrates its potential for broader patient outreach. Challenges primarily revolved around engaging primary care, responding to the increasing need of the dermatologic consultation capacity, ensuring contractual alignment, adopting a holistic system perspective, ensuring effective management transition, cost allocation, and improving communication.

Funding: The project was funded by the Regional Cancer Centre Stockholm-Gotland.

# The ERICA trial - a trial of electronic Risk Assessment Tools for cancer in English General Practice: An update on where we are, and some lessons learned (particularly around software installation)

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#### **Abstract**

# Background

A suite of six electronic Risk Assessment Tools (eRATs) for cancer (lung, oesophago-gastric, kidney, bladder, ovarian, colorectal) was developed to support GPs in identifying cancer earlier, calculating the risk of an underlying cancer, based on a single or combination of symptoms. They were embedded into GP's clinical systems, delivering an automated prompt to consider the possibility of cancer when a patient has at least a 2% risk. The eRATs are the subject of an RCT to assess the clinical and cost effectiveness – to see if they can help GPs catch cancer sooner.

#### Methods

A pragmatic, cluster RCT of 530 practices across England, randomised 1:1 to receive either the intervention (access to the eRATs suite) or usual practice. Software installation required co-ordination of study team, third-party software provider, practices, and associated NHS IT administrators.

# Results

Many challenges were encountered during the trial. Integrating software into GP practices in the NHS was hard, as there is no single, unified process. CCGs and CSUs were supportive and willing to engage, but the process was convoluted, piecemeal and on occasions met with requests for recompense. Geographical variation in process exacerbated delays. In addition to these challenges, we encountered the COVID-19 pandemic and subsequent NHS Policy to adopt cancer risk tools which changed the usual care landscape. Solutions to all these challenges were found. A novel, cloud-based version of the software side-stepped installation barriers, offering a relatively unified installation process. The NHS agreed to protect the trial by not enforcing policy on our control practices.

### Conclusions

Structures are not in place to readily support software-based research within English general practice. A philanthropic funding source and a strong relationship with developers offered flexibility and creativity for managing finances to help overcome challenges. The trial runs until March 2024 with results available from mid-2025.

# Co-designing Participant Resources for a National Lung Cancer Screening Program: A qualitative study

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# **Abstract**

### Background:

Lung cancer is the leading cause of cancer death in Australia. In May 2023, the government announced funding for a national lung cancer screening (LCS) program for implementation in June 2025.

#### Aims:

To co-design resources to increase awareness about lung cancer screening and engage community members with a history of cigarette smoking in an implementation trial.

### Methods:

Participants were recruited from Victorian and New South Wales (NSW) Primary Health Networks, NSW general practice clinics and previous research participants who had previously consented to be contacted for future research. Participants in Victoria consisted of two groups who took part in three consecutive co-design workshops. In the workshops, participants brainstormed resource ideas to enhance lung cancer screening participation and offered design suggestions. Participants in NSW took part in a consultation process, offering feedback to customise the co-designed prototype resources from Victoria.

Analysis of the workshops is underway. Participant's views of the workshop will be gathered using an evaluation survey.

### Preliminary results:

In Victoria, 16 individuals across the two locations participated in three co-design workshops (10 metropolitan and six regional participants). All participants had a history of cigarette

smoking; 11 people currently smoked. Most came from lower socio-economic backgrounds. The groups reached a consensus on creating three resources: a poster, a user-friendly brochure, and a social media post. Participant input focused on the images used in resources, easy-to-understand eligibility criteria, minimising content about risk and focusing on the benefits of early detection. Prototype resources were shared with participants from metropolitan and regional NSW to tailor them for their local communities.

### Conclusions:

Co-designed resources feature accessible language, culturally diverse images, and a message to "screen for lung cancer for a lifetime with loved ones". The resources will be tested with a larger population in a primary care-based national implementation trial in 2024.

# Development of a mHealth tool to increase cervical screening participation in primary care in Victoria, Australia: The EASI-M study

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## **Abstract**

Introduction: SMS messages are part of mainstream communication and can be effective in delivering population-level health interventions such as increasing engagement in cancer screening (e.g., bowel screening). Mobile Health (mHealth) approaches offer an opportunity to use SMS messages and promotional information about self-collection cervical screening, a universally available option for people eligible for cervical screening in Australia.

Objectives: To develop a simple and acceptable SMS tool that Victorian primary care practices can use when informing their patients that their cervical screening is due and to promote the option of self-collection.

Descriptions: We undertook a cross-sectional survey (n = 221) and focus group discussions (n = 5) with women and people with a cervix in Victoria, Australia to explore awareness of self-collection, current receipt of SMS messages for health promotion and acceptability and preferences about message content and characteristics to promote cervical screening.

Results: Most survey respondents (83%) indicated that it would be acceptable to receive an SMS message to remind them that they were due for cervical screening. Participants indicated that the inclusion of the practice name, their name, and a personalised SMS message that they were due for screening were important. There was no clear preference in message timing. Preliminary analysis of focus group data indicates that although participants want to know about self-collection, communicating that they can still choose a clinician-collected screen is important. Focus group participants expressed hesitation to click on any links that are included in messages, as they would be perceived as a scam.

Conclusion: SMS messages appear to be an appropriate way to raise awareness about self-collection and remind people they are due for screening. Leveraging general practitioner endorsement through this mode of communication may be beneficial for screening participation, particularly for people who may prefer self-collection and are unaware of this option.

# Pre-diagnostic prescription patterns in bladder and renal cancer: a longitudinal linked data study

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#### **Abstract**

Background: Understanding pre-diagnostic prescribing activity could reveal windows during which more timely cancer investigation and detection may occur.

Aim: To examine prescription patterns for common urological clinical features prior to renal and bladder cancer diagnoses.

Method: We performed a retrospective cohort study using electronic primary care and cancer registry data on patients with bladder and renal cancer diagnosed between April 2012–December 2015 in England. We analysed primary care prescriptions up to 2 years pre-diagnosis for five groups of clinical features (irritative urological symptoms, obstructive symptoms, urinary tract infections, genital infections, atrophic vaginitis). Poisson regressions estimating the inflection point, from which the rate of prescriptions increased from baseline, were used to identify the start of diagnostic windows during which cancer could be detected.

Results: 48,094 prescriptions for 5,322 patients were analysed. Inflection points for an increase in UTI prescriptions were identified 9 months pre-diagnosis for renal (CI:5.3–12.7) and bladder (CI:7.4–10.6) cancers. For bladder cancer, the change in UTI antibiotic prescription rates occurred four months earlier in women (11 months, CI:9.7–12.3) than men (7 months, CI:5.4–8.6). No inflection points were identified, and so no diagnostic windows could be defined, for other clinical features.

Conclusion: Prescription rates for UTIs increased 9 months before bladder and renal cancer diagnosis, indicating that there is potential to expedite diagnosis of these cancers in patients presenting with features of UTI. The greatest opportunity for more timely diagnosis may be in women with bladder cancer, who experienced the earliest increase in UTI prescription rate.

# Transforming primary care in Aotearoa New Zealand to achieve lung cancer survival equity for Māori

Moira Smith, Virginia Signal, Jason Gurney University of Otago, Wellington, New Zealand

#### **Abstract**

Introduction - Lung cancer is the biggest driver of ethnic disparities in cancer in Aotearoa. Māori men and women have 2.5 and four times the risk of lung cancer than non-Māori, respectively. Māori are also 30% less likely than non-Māori to survive their lung cancer once diagnosed. These disparities have remained unchanged for at least two decades. There is some evidence that Māori may be less likely to be diagnosed with early-stage disease. Early detection in primary care and prompt referral to secondary care are imperative to maximising survival and addressing inequities.

Objectives - To understand the extent that differences in access to cancer services between Māori and non-Māori are modifiable, and how they might be modified.

Descriptions - Interviews were conducted with 20+ key informants. Informants were asked to comment on the extent to which an observed disparity in access to cancer services is modifiable by the health system; perspectives on systems-level factors needed to facilitate this change; and the timeframe required for modification. Data were analysed thematically, workshopped by the research team and incorporated into recommendations for action.

Results - Almost all informants indicated that primary care is a key area for modification to improve early detection of Māori with high-suspicion of lung cancer. Suggested modifications included: health promotion and education, at both community and health practitioner-levels; better use of allied health professionals such as community pharmacists; use of mobile diagnostic services; establishment of symptom-driven clinics with fast-track referral pathways; partnering with lwi/Māori Primary Care Providers; and changes to Primary Care models and funding. Some could be achieved in the short-term (e.g. health education campaigns); most will need longer-term commitment and resourcing at a national level.

Conclusions - Primary care has a crucial role to play in the early detection of lung cancer and can contribute to addressing the substantial disparities in survival between Māori and non-Māori.

# Provider perspectives on optimising the availability of selfcollection for women and other people with a cervix who live with physical disability in Australia.

<u>Tessa Saunders</u><sup>1</sup>, Kate Flynn<sup>1</sup>, Amelia Hyatt<sup>2</sup>, Claire Bavor<sup>1</sup>, Megan Smith<sup>3</sup>, Julia Brotherton<sup>1</sup>, Angela Kelly-Hanku<sup>4</sup>, Rachael Dodd<sup>3</sup>, Marion Saville<sup>5</sup>, Claire Nightingale<sup>1</sup>, And on behalf of the Supporting Choice research team<sup>1</sup>

<sup>1</sup>Centre for Health Policy, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Australia. <sup>2</sup>Department of Health Services Research and Implementation Science, Peter MacCallum Cancer Centre, Melbourne, Australia. <sup>3</sup>The Daffodil Centre, University of Sydney, a joint venture with Cancer Council NSW and the University of Sydney, Australia. <sup>4</sup>Kirby Institute, University of New South Wales Sydney, Sydney, Australia. <sup>5</sup>Australian Centre for Prevention of Cervical Cancer, Melbourne, Australia

#### **Abstract**

#### Introduction

In July 2022 HPV self-collection was introduced in Australia's National Cervical Screening Program (NCSP) as an option for all eligible people and has the potential to improve screening access and participation. Women and people with a cervix who live with disability are identified as a group that we can improve access to screening.

There is limited research into the implementation outcomes and challenges of providing the choice of self-collection to people with physical disability, and whether this option can address barriers to screening.

# Objectives/Aims

To understand the perspectives of professionals who provide health and other care services to people with a physical disability on how the choice of self-collection can improve access to cervical screening in Australia.

### Methods

Qualitative online semi-structured interviews were conducted nationally between July and October 2023, with data analysed deductively and mapped to the Consolidated Framework for Implementation Research.

## Results

Service providers (N=18) reported that self-collection was a highly acceptable option that created new opportunities for cervical screening in the home or community settings. However, levels of adoption were low for both providers and clients due to role confusion with the NCSP and their own organisation. Importantly, the device was identified as potentially being inaccessible due to grip design, with adaptor tools recommended. Respondents also highlighted that training for health service providers is needed to facilitate screening more broadly, and self-collection specifically, and to challenge misconceptions around sexual activity and screening need for people with a disability.

# Conclusions

Despite high levels of acceptability, this was moderated by a concern that barriers at the service and system level, and potentially at the device level, are hampering adoption of self-collection within services. A range of implementation strategies are required at multiple levels to achieve equity of access and ensure the 'choice' of self-collection, is really a choice for all people.

# Nurse-enabled shared follow-up care: Implementation insights from the Flinders University Cancer Survivorship Program trials

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### Abstract

Background: Shared follow-up and survivorship care that involves both cancer specialists and general practitioners (GPs) is recommended as optimal care for people who have completed their treatment for cancer.

Aims: Two single-site pilot randomised controlled trials and two national multi-centre hybrid effectiveness-implementation trials have aimed to implement and evaluate a nurse-enabled shared-care follow-up model in early breast cancer, lymphoma, and prostate cancer.

Methods: The shared-care model is coordinated by a specialist cancer nurse. The intervention involves: a nurse-led survivorship consultation and development of a survivorship care plan; a case-conference between the nurse and the patient's GP; and a shared care pathway with follow-up appointments alternating between the specialist and GP. Collection of implementation data were informed by the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework. Meeting minutes documenting the implementation challenges and decisions throughout the trials informed the present evaluation.

Outcomes: Key implementation learnings can be classified at the macro- (policy), meso- (organisation) and micro- (individual) levels. At the macro level, the clarity of primary care roles and engagement, funding and incentivisation for all actors, and cross-sector communication remain important factors. At the meso-level, support from nursing executives and senior medical staff, a culture for innovation, and facilities for nurse-led consultations/digital transfer of care plans all play an important role in the success of the intervention. At the micro-level, nurse education, the nurses comfort in working across sectors, and patient motivation to involve their primary care providers in follow up care are key factors for consideration.

Conclusions: Integration of nurse-led survivorship clinics in routine specialist care is possible but requires consideration of factors at all levels. Implementation of shared care follow-up models requires acknowledgement of the complexity of healthcare and commitment across sectors, and further exploration of health system barriers.

# Patterns of Diagnostic Testing for Common Upper Gastrointestinal Symptoms in Victorian General Practice

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### **Abstract**

#### Introduction

Symptoms associated with cancer, referred to as 'cancer symptoms,' often share characteristics with non-cancer conditions commonly seen in general practice. The diversity of potential diagnoses in primary care, combined with low cancer prevalence, can result in significant testing variations, the full extent and implications of which remain unclear.

# **Objectives**

To enhance our understanding of diagnostic testing patterns for common upper gastrointestinal symptoms associated with oesophagogastric cancer in Victorian general practice.

#### Method

We extracted patient encounters for select upper gastrointestinal symptoms as well as demographic information, pathology and imaging tests, and relevant medications from two primary care datasets: NPS MedicineWise MedicineInsight and the University of Melbourne Patron Dataset. Patient characteristics were analysed using descriptive statistics, and the impact of diagnostic testing for each symptom was estimated through regression analysis, adjusting for patient age, sex, and socioeconomic area index.

#### Results

Across both datasets, we identified 29,574 patients, with 15,289 in NPS MedicineWise MedicineInsight and 16,601 in Patron. We found 2,316 patients common to both datasets. There were a total of 22,155 symptomatic encounters in MedicineInsight data and 24,086 in Patron data.

In MedicineInsight data, the most frequent symptom was unexplained nausea (8,326 encounters, with 1,556 (19%) relevant tests requested), followed by persistent epigastric pain (3,453 encounters, with 1,450 (42%) relevant tests requested) and unexpected weight loss (2,990 encounters, with 1,015 (34%) relevant tests requested).

In Patron data, the most frequent symptom was unexplained nausea (8,458 encounters, with 1,189 (14%) relevant tests requested), followed by persistent epigastric pain (4,326 encounters, with 1,296 (31%) relevant tests requested), and dyspepsia (3,416 encounters, with 348 (10%) relevant tests requested).

### Conclusion

We identified substantial variations in diagnostic testing. These findings emphasise the importance of improving diagnostic consistency in primary care for such symptoms. Additional findings on the predictors of certain test being ordered will be presented at the forthcoming conference.

# Changes in Health Outcomes in Cancer Survivors throughout a Physical Activity Counseling Program in primary care

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### **Abstract**

Introduction Physical activity (PA) favorably affects various health outcomes in cancer survivors, but there is little evidence about the implementation of PA programs and related health outcomes in primary care.

Aim We implemented a PA program for cancer survivors in general practice and evaluated changes in health outcomes over time.

Methods Patients aged ≥18 years and ≥6 months post cancer treatment were eligible for inclusion. The PA program comprised six coaching sessions with the practice nurse in nine months, seeking to increase daily PA and using an activity tracker for goal setting and feedback. Primary outcomes included the FACT-F (fatigue) and HADS (depression and anxiety). Further outcome measurements were the FACT-G (quality of life) weight, number of steps (activity tracker), step-test (aerobic endurance), sit-to-stand test (lower limb strength), and the IPAQ-questionnaire (self-reported PA). Timing of measurements were at T0 (baseline), T1 (3 months), T2 (6 months) and T3 (9 months). Dependent t-tests (normally distributed data) and Wilcoxon signed-rank tests (non-normally distributed data) were used to analyze differences between T0 and T1, T2 and T3, respectively. We will perform linear mixed models when all data is collected.

Results 149 patients from 14 general practices decided to participate. To date, 96 patients finished measurements at T1, while 79 and 57 patients finished T2 and T3, respectively. At T1, participants improved outcomes on their weight, number of steps, the sit-to-stand test, the step-test and FACT-G. At T2 participants improved outcomes on HADS-A and FACT-G. At T3 participants improved outcomes on weight, FACT-F, HADS-A, HADS-D and FACT-G. No significant changes were found for the IPAQ.

Conclusions These preliminary results indicate that cancer survivors participating in the PA program improved on physical outcomes at short-term of the program, whereas longer-term improvements were found on psychological and general well-being.

We expect the results of the linear mixed models at CA-PRI 2024.

# Blood test trend and cancer detection: a systematic review, meta-analysis, and critical appraisal

<u>Pradeep Virdee</u>, Kiana Collins, Claire Friedemann Smith, Xin Yang, Sufen Zhu, Sophie Roberts, Nia Roberts, Jason Oke, Clare Bankhead, Rafael Perera, FD Richard Hobbs, Brian Nicholson University of Oxford, Oxford, United Kingdom

#### **Abstract**

#### Introduction:

Clinical guidelines for primary care include single blood test abnormalities to identify patients with increased risk of undiagnosed cancer. Blood test changes over time may improve cancer risk stratification by considering a patient's individual baseline and identifying important changes within the normal range.

## Objectives:

To investigate the association between blood test trend and undiagnosed cancer (Aim 1) and critically appraise existing trends-based prediction models for cancer risk (Aim 2).

#### Methods:

MEDLINE and EMBASE were searched until 15th May 2023 for studies investigating blood test trend for undiagnosed cancer. Each article underwent screening and data extraction by two reviewers independently. We used descriptive summaries and narratively synthesised studies (both Aims) and performed a random-effects meta-analysis of the c-statitic for trends-based prediction models (Aim 2).

# Results:

Aim 1 (n=29 studies) identified trends in 30 blood tests across 25 cancer types, commonly haemoglobin (24%, n=7), C-reactive protein (17%, n=5), and fasting blood glucose (17%, n=5) and pancreatic (29%, n=8) and colorectal (17%, n=5) cancer. Of the 30 blood tests, an increasing trend in eight (27%) was associated with eight cancer types and decreasing trend in 17 (57%) associated with 10 cancer types. No association was reported between trend in 11 (37%) tests and breast, bile duct, glioma, haematological combined, liver, prostate, or thyroid cancer. Aim 2 (n=13 studies) identified seven trends-based prediction models developed or externally validated. Models were often developed using poor methods, including logistic regression with repeated measures data (n=2 models), or inadequately tested, often ignoring calibration assessments (n=9 studies). The ColonFlag model was most commonly externally validated, with a pooled c-statistic=0.79 (95% CI=0.76-0.83, n=6 studies) for two-year colorectal cancer risk.

### Conclusions:

We highlight trends in blood tests that could assist primary care with earlier identification of patients at increased risk of undiagnosed cancer. Appropriate methods to develop and trend-based models are required.

# Replication of a diagnostic accuracy study of primary care patients with unexpected weight loss

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#### **Abstract**

Background: Unexpected Weight Loss (UWL) is a non-specific symptom associated with a range of conditions including cancer. As a result, it can be challenging for General Practitioners to know when patients with this symptom should be referred for further investigation of cancer. Previous studies in the UK have identified patient characteristics associated with cancer risk of  $\geq 3\%$ , warranting further investigation.

Objectives: To calculate the Positive Predictive Values (PPVs) of patients with UWL being diagnosed with cancer within 6 months, using data from a population of primary care patients in the state of Victoria, Australia and compare these to a previous UK study.

Methods: A diagnostic accuracy study involving calculation of the PPV for any cancer using retrospective data from primary care was undertaken. Our novel approach to define the UWL patient cohort made use of a combination of rule-based, clinician-informed and machine learning techniques.

Results: When stratified by age, sex and smoking status, we find point estimates of positive predictive values almost identical with those derived in a previous UK study. When including blood test results we find broad agreement, though with much larger confidence intervals. Patients over 40 years of age with abnormal haemoglobin and CRP values had PPVs that exceeded the 3% investigation threshold.

Conclusions: Despite differences in patient populations and the health care system between Australia and the UK, our study robustly validates findings from the UK. Our results will be embedded in a clinical decision support tool to be piloted in Australian general practices in

| 2024 which aims to assist General Practitioners better understand the risk of patients presenting in their practices with UWL |
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# External validation of prediction models for six-month cancer risk in patients with unexpected weight loss in primary care

<u>Brian Nicholson</u>, Pradeep Virdee, Constantinos Koshiaris, Clare Bankhead, Rafael Perera, Jason Oke, FD Richard Hobbs University of Oxford, Oxford, United Kingdom

#### **Abstract**

#### Introduction:

Unexpected weight loss (UWL) is a presenting feature of cancer for which there remains no consensus on the most appropriate investigation strategy in primary care. We developed three prediction models to identify six-month cancer risk in patients with UWL in primary care: symptoms (Sm), blood tests (Tm), and symptoms and blood tests (STm) models. These models would help to sufficiently rule-out patients with UWL from invasive cancer investigation.

## Objectives:

To externally validate our prediction models to stratify cancer risk in patients attending primary care with UWL.

#### Methods:

We performed a cohort study of patients aged at least 18 years with first UWL in the Clinical Practice Research Datalink (CPRD) AURUM database between 01/01/2000 and 31/12/2018. We excluded patients registered <12 months with their practice or with a history of cancer before UWL. First cancer diagnosis within 6 months following the first UWL recorded was obtain from the linked National Cancer Registration and Analysis Service database, with additional cases from the CPRD, Hospital Episode Statistics, and Office of National Statistics databases. Model performance measures included the area under the curve (AUC) and calibration slope.

### Results:

We included 324,230 eligible patients with UWL. Six-month cancer incidence following UWL was 5.0% (n=16,250). The AUC of the models was 0.77 (95% Cl=0.76-0.77) (Sm), 0.84 (95% Cl=0.84-0.84) (Tm), and 0.85 (95% Cl=0.84-0.85) (STm). The calibration slope was 0.820 (95% Cl=0.803-0.836) (Sm), 0.851 (95% Cl=0.837-0.865) (Tm), and 0.860 (95% Cl=0.844-0.875) (STm). Further performance measures will be presented, including calibration plots and diagnostic accuracy measures. Performance will be presented by subgroups of age, sex, cancer site, and staging.

## Conclusions:

This first assessment of these models in external data identified they perform well in risk stratifying UWL patients for cancer. We are updating these models to increase predictive ability and updated findings will be presented.

# Clinical utility of lower urinary tract symptoms, erectile dysfunction, and haematuria for prostate cancer diagnosis in primary care: a PC<sup>3</sup> cohort study

Samuel Merriel<sup>1</sup>, Peter Nickol<sup>2</sup>, Willie Hamilton<sup>3</sup>, Gary Abel<sup>3</sup>

<sup>1</sup>University of Manchester, Manchester, United Kingdom. <sup>2</sup>PPI co-investigator, Exeter, United Kingdom. <sup>3</sup>University of Exeter, Exeter, United Kingdom

#### **Abstract**

#### Introduction

The vast majority of patients with prostate cancer in the UK are diagnosed following presentation to primary care; either for asymptomatic, opportunistic Prostate Specific Antigen (PSA) testing or symptomatic assessment. The role of symptoms in prostate cancer diagnosis remains controversial. Evidence from screening cohorts suggest symptoms don't significantly improve the prediction of clinically significant prostate cancer. However, there is very limited primary care evidence on symptomatic prostate cancer diagnosis.

# **Objectives**

To determine whether there is an association between individual LUTS, or a combination of symptoms, and early-stage clinically significant prostate cancer.

### **Methods**

Males aged 50 years and over with no history of prostate cancer in the Clinical Practice Research Datalink (CPRD) Aurum dataset were potentially eligible for the  $PC^3$  cohort studies. All eligible males with a first presentation with lower urinary tract symptoms (LUTS), haematuria, or erectile dysfunction between 01/01/2011 and 31/12/2016 were included with up to three matched asymptomatic controls. Included participants were followed up for at least two years. Associations between individual symptoms and diagnostic outcomes were assessed using mixed-effects logistic regression.

#### Results

722,597 males (mean age 64.4 +/- 9.76years) were included in this cohort. 90.68% had white ethnicity. 262,718 had an index consultation with symptoms during the study period. Erectile dysfunction (92,204) and a general LUTS code (65,173) were the most commonly recorded index symptoms. Of the 23,050 new cases of prostate cancer within the cohort, 50.31% (11,600) had no recorded symptoms prior to diagnosis. Symptomatic patients were more likely to be diagnosed with early-stage prostate cancer (OR 1.16 95% CI 1.09, 1.24). No difference was found for clinically significant prostate cancer (OR 0.98 95% CI 0.91, 1.07).

### **Conclusions**

Symptomatic males presenting in primary care are more likely to be diagnosed with earlystage prostate cancer than asymptomatic males, with a similar likelihood of clinically significant prostate cancer in either group.

# Diagnostic accuracy of Digital Rectal Examination (DRE) for early-stage prostate cancer detection in primary care: a PC<sup>3</sup> cohort study

Samuel Merriel<sup>1</sup>, Peter Nickol<sup>2</sup>, Willie Hamilton<sup>3</sup>, Gary Abel<sup>3</sup>

<sup>1</sup>University of Manchester, Manchester, United Kingdom. <sup>2</sup>PPI co-investigator, Exeter, United Kingdom. <sup>3</sup>University of Exeter, Exeter, United Kingdom

# **Abstract**

#### Introduction

Primary care clinicians currently have two main tests for triaging patients at risk of prostate cancer; Digital Rectal Examination (DRE) of the prostate and Prostate Specific Antigen (PSA). DRE is not recommended as a screening test for prostate cancer in asymptomatic males. A recent review of the accuracy of DRE for prostate cancer in symptomatic patients found only four small-scale studies with significant heterogeneity and limitations. The accuracy of DRE for early-stage, clinically significant prostate cancer in symptomatic primary care patients is unknown.

# **Objectives**

To determine the diagnostic accuracy of Digital Rectal Examination (DRE) for early-stage clinically significant prostate cancer in symptomatic primary care patients.

#### **Methods**

Males aged 50 years and over with no history of prostate cancer in the Clinical Practice Research Datalink (CPRD) Aurum dataset were potentially eligible for the PC<sup>3</sup> cohort study. All eligible males with a first presentation with lower urinary tract symptoms (LUTS), haematuria, or erectile dysfunction between 01/01/2011 and 31/12/2016 were included with up to three matched asymptomatic controls. Included participants were followed up for at least two years. Recorded DRE data were extracted to calculate sensitivity, specificity, positive and negative predictive values for early-stage clinically significant prostate cancer.

#### Results

722,597 males (mean age 64.4 +/- 9.76years) were included in this cohort. 90.68% had white ethnicity. 262,718 had an index consultation with symptoms during the study period. 12,137 patients had a record of DRE (8,139 symptomatic). 61.84% (7,505) were recorded as abnormal (20.66% [2,507] were missing a result). In symptomatic patients, abnormal DRE was reasonably sensitive (86.9% 95% CI 83.6, 89.8) and poorly specific (23.7% 95% CI 22.7, 24.9). DRE accuracy increased with increasing stage at diagnosis (p<0.01).

#### **Conclusions**

DRE can be useful as part of the clinical assessment for prostate cancer in symptomatic patients. Current evidence is still limited by under-recording of DRE data in primary care.

# Combining Genetic Scores with Routine Test Results to Predict Prostate Cancer in Primary Care Settings

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#### **Abstract**

# **Background**

Prostate cancer accounts for around a quarter of new cancer cases in men and 82% of cases are diagnosed following a symptomatic primary care presentation and an elevated prostate specific antigen (PSA) test. However, PSA has a high false positive rate. A recent study demonstrated a genetic risk score (GRS) using 269 known prostate cancer genetic risk variants has similar power to PSA in predicting incident prostate cancer. The combination of PSA test result with GRS might improve prostate cancer detection and reduce the burden for men without malignancy in primary care.

#### Aim

This project aims to leverage the predictive power of GRS to improve triage of prostate cancer in primary care.

### Method

This project will use data from the ProtecT trial, a cluster randomised trial of PSA testing for prostate cancer. We will use PSA and genotyping data of men from the trial to test the combined predictive power of GRS and PSA. The primary outcome of interest will be prostate cancer of Gleason Score 7+ (intermediate-high risk cancer). We will compare the ROC AUC of the logistic regression-based models: Model 1 PSA test result, using NICE-mandated thresholds, with and without GRS; Model 2 Age and PSA test as separate continuous variables, with and without GRS. Subgroup analyses will be performed based on lower urinary tract symptoms of participants.

### Results

The analysis is in progress. The result of Model 1 will show whether GRS improves prostate cancer prediction above PSA alone and Model 2 will yield an optimal model using GRS, PSA and age. Results are expected to be shared for the presentation.

#### Conclusion

We hypothesise that combining GRS and PSA will improve predictive power over using either the PSA or GRS alone. This would potentially benefit low-risk men and high-risk men with subthreshold PSA by avoiding unnecessary referral and delayed diagnosis respectively.

# Cancer outcomes in rural and remote areas worldwide: current evidence, challenges, and ways forward

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#### **Abstract**

# **Background**

Cancer survival is often poorer for residents in rural and remote (R&R) areas compared to their urban counterparts. However, there is limited understanding of reasons for these disparities, and of patient experiences and cancer outcomes across the cancer care continuum. Furthermore, evidence is scarce on variations across R&R areas, within and across countries.

#### **Aims**

To synthesise evidence on cancer outcomes in R&R areas worldwide, across the cancer care continuum (from symptom appraisal/screening to end-of-life/survivorship).

#### **Methods**

Systematic umbrella review (PROSPERO-CRD42023452501), informed by PRISMA, Cochrane and the Joana Briggs Institute's (JBI) guidance. Medline, Embase, PsycInfo (all OVID), CINAHL (EBSCO), the Cochrane Library, ProQuest, Scopus, and WebofScience were searched using keywords and subject headings. We also searched review registers (JBI and PROSPERO), journals specialised in rural health, Google, GoogleScholar and relevant international websites. Reference lists of included studies were checked. We included reviews adopting systematic approaches that reported on qualitative and quantitative cancer outcomes (any cancer) for individuals (any age) living in R&R areas worldwide. Primary outcomes were cancer mortality, survival and stage at diagnosis, secondary outcomes were any cancer outcomes or indicators that can influence primary outcomes. Systematic approaches to screening, quality appraisal and data extraction were followed. Narrative synthesis is being used to summarise and present the findings.

### Results

Final results will be presented at the conference; data extraction and analysis are ongoing. Preliminary findings indicate challenges regarding wide heterogeneity in definitions of rurality/remoteness; and in characteristics of included populations (such as race/ethnicity or socioeconomic circumstances) – these variations complicate interpretation of outcomes. Data are also being extracted on proposed solutions to reduce inequalities and improve cancer outcomes.

### **Conclusions**

Evidence will shed light on steps across the cancer care continuum that require further attention, and on persisting research gaps when investigating cancer outcomes in R&R areas worldwide.

# Other category

Cancer care continuum, rural-urban disparities

# Using self-collection to increase equity in access to cervical screening: Health service providers' perspectives on flexible models of screening

<u>Claire Bavor</u><sup>1</sup>, Tessa Saunders<sup>1</sup>, Megan A Smith<sup>2</sup>, Julia ML Brotherton<sup>1</sup>, Angela Kelly-Hanku<sup>3</sup>, Rachael Dodd<sup>2</sup>, Lisa Whop<sup>4</sup>, Deborah Bateson<sup>2</sup>, Karen Canfell<sup>2</sup>, Marion Saville<sup>5</sup>, Claire E Nightingale<sup>1</sup>

#### **Abstract**

# **Background**

The Australian National Cervical Screening Program is delivered through primary care. However, some population groups are more likely to under- or never-screen. The option to self-collect a vaginal sample offers choice and flexibility in where and by whom cervical screening can be offered. This could be used to develop models for screening tailored to different population groups and increase participation.

#### **Aims**

To explore the perspectives of healthcare providers on flexible models of screening, their perceptions of implications for screening participation, safety, and quality, and what they need to support implementation.

#### **Methods**

We conducted semi-structured interviews with 133 participants between June-October 2023 including: general practitioners (n=24), nurses (n=26), midwives (n=3), and program staff (n=5) in mainstream health services; pathology providers (n=16); and clinical and program staff from LGBTQ+ organisations (n=11), refugee and asylum seeker health services (n=26), and disability services (n=22). We analysed interview data using inductive thematic analysis.

#### Results

Most participants supported the flexibility enabled by self-collection, including increasing roles for nurses, midwives, community and peer workers. Participants reflected on the need for adequate counselling and referral pathways for screening participants and how different models could create acceptable ways of increasing participation among under-screened groups.

Some participants expressed concern about flexible approaches, including managing eligibility, results and symptomatic people. They identified barriers to implementation, including the requirement for clinician sign-off on pathology forms, and the logistical limitations of some sampling devices using liquid media.

Many participants identified the need for robust governance, dedicated funding and staffing, partnerships with clinical services, and education and training for healthcare providers to implement flexible models.

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# **Conclusions**

Flexible models using self-collection may increase access to screening. Potential implications for screening safety and quality must be addressed. Building evidence to support different models of screening should be a priority to ensure equity is achieved in Australia's cervical cancer elimination goals.

# Exploring barriers and facilitators to address inequities in cervical screening uptake among people with intellectual disability.

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#### **Abstract**

Background: Cervical cancer is one of the most preventable cancers, yet remains a disease of inequity, including for people with intellectual disability.

Aims: To report on preliminary findings from a qualitative study of facilitators and barriers to cervical screening among people with intellectual disability. Outcomes will inform a larger clinical trial evaluating a suite of co-designed resources and training materials to support informed decision-making about cervical screening by people with intellectual disability.

Methods: We established a ScreenEQUAL Advisory Group to co-design the qualitative study, which included knowledge users across the disability, cancer, and healthcare sectors, with representation from regional and rural, Aboriginal and Torres Strait Islander, culturally and linguistically diverse (CALD) and LGBTQ+ communities. We invited people with intellectual disability, healthcare providers, families and support people, and disability sector stakeholders to take part in a semi-structured interview. We invited people with intellectual to take part in an optional and additional arts-based participatory qualitative interview to gain a deeper understanding of their lived experience (body mapping). Two disability experts, one with lived experience of intellectual disability, delivered qualitative and participatory interviews with people with intellectual disability.

Results: Reflexive thematic analysis identified key facilitators and barriers including: (1) knowledge/feelings about cervical screening (2) prior experiences of having a cervical screening test, (3) prior experiences with healthcare providers/healthcare settings, (4) Informed decision-making/consent, (5) influence of support people, (6) system level issues, (7) the role of self-collection and clinician assisted self-collection, and (8) Healthcare providers perspectives.

Conclusions: Our qualitative investigation into cervical screening with people with intellectual disability, their healthcare providers, and other key stakeholders, highlights the need for co-designed accessible information and healthcare provider training in traumainformed care.

# Patients' views and experiences of genomic testing for cancer risk prediction provided in general practice settings

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#### **Abstract**

**Background:** Polygenic risk scores (PRS) can be used to provide personalised risk assessments for cancer. Associated tailored screening recommendations can also encourage screening uptake.

**Aims:** Explore patients' perspectives on a PRS to tailor cancer screening delivered in general practice, and identify how personalised risk information interacts with enablers and barriers to cancer screening.

**Method:** Semi-structured interviews were conducted with participants from the SCRIPT Trial (which explored the effect of PRS-guided screening recommendations with a personalised risk report on risk-appropriate colorectal cancer (CRC) screening) and the pilot MAGPE study (which expanded to a multi-cancer PRS (CRC, melanoma, and breast or prostate) with personalised screening recommendations). Interviews explored the presentation of risk results and emotional and behavioural reactions to the risk information. Interviews were audio recorded, transcribed and thematically analysed for common themes based on Rosenstock's (1974) Health Belief Model (HBM).

**Results:** Fifteen interviews were conducted in total. Participants understood the PRS information, particularly the visual representations of their risk scores. Some found the PRS results reassuring, while others suggested receiving a high PRS may have scared them, however those with an increased risk result appreciated the tailored screening recommendations for them. The use of the HBM identified domains where the PRS-based interventions targeted behaviours effectively, e.g., the 'scare factor' working to motivate screening. Similar themes emerged from both cohorts, suggesting that the addition of multiple cancers did not alter participants' understanding or reaction to the risk information. Despite acknowledgement of the important role of GPs in motivating patients to screen for cancer, most patients reported seeing their GP reactively when unwell, not for preventative health.

**Conclusions:** These findings provide evidence to facilitate the implementation of PRS to inform patients of their personal cancer risk and importantly to encourage uptake of the most risk-appropriate screening for one and multiple cancers.

# "Too Young to Have This Kind of Diagnosis": A Qualitative Exploration of Younger Adults' Experiences of Colorectal Cancer Diagnosis

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#### **Abstract**

Introduction: Worldwide, the incidence of colorectal cancer is rising among adults under the age of 50 (young-onset colorectal cancer). It is the leading cause of cancer mortality for those aged 25-44 in Australia, with young-onset patients more likely to be diagnosed with advanced-stage disease after symptomatic presentation.

Objective: To better understand factors influencing the diagnostic process, this study characterised experiences of decision-making during a diagnosis of young-onset colorectal cancer.

Description: One-on-one qualitative, semi-structured interviews were conducted with 17 people with young-onset colorectal cancer diagnosed in 2021-2022 in Victoria, Australia. Interviews were conducted online or by phone an average seven months (range 1-13) after diagnosis, and lasted 30-75mins. Ten participants had advanced (stage III/IV) disease. Analysis was approached from a critical realist perspective, with themes developed inductively using reflexive thematic analysis.

Results: Five themes were identified: Shifting Perception of Urgency, Multidimensional Perception of Role, Making the Most of Resources, Stage of Life, and COVID Adds Complexity. The decision-making process during the diagnostic interval was not static or uniform, but evolved depending on the urgency perceived by younger adults and their health care team. As participants perceived urgency to act, they took on an adaptive role in decision-making, utilising personal resources to access more timely care. Their decisions were impacted by stage-of-life considerations, such as employment, reproductive health, study or caring for a young family. The COVID-19 pandemic also shaped decisions, adding "...a whole other layer of complexity".

Conclusions: People with young-onset colorectal cancer make decisions in the context of unique considerations, adapting to reduce diagnostic delay, with decisions complicated by the COVID-19 pandemic. Greater support from health care providers for younger adults in the diagnostic period may improve timeliness of colorectal cancer diagnosis and outcomes.

# Future Health Today: A pragmatic 12-month cluster randomised controlled trial of quality improvement activities in general practice for patients at risk of undiagnosed cancer.

<u>Sophie Chima</u>, Jo-Anne Manski-Nankervis, Barbara Hunter, Javiera Martinez-Gutierrez, Jon Emery

University of Melbourne, Melbourne, Australia

#### **Abstract**

Background: Diagnosing cancer in general practice is complex, given the overlap of potential diagnoses and the non-specific nature of many presenting symptoms. Quality improvement (QI) tools have the potential to facilitate and support the diagnostic process. Future Health Today (FHT) is a technology platform with clinical decision support, audit, feedback and QI monitoring.

Objectives: Evaluate the effectiveness of FHT on the appropriate investigation and follow-up of people at increased risk of undiagnosed cancer in general practice.

Methods: We conducted a pragmatic, cluster randomised trial in 40 general practices in two Australian states. Practices were randomly assigned to receive recommendations for follow-up investigations for cancer (intervention) or chronic kidney disease (CKD) prescribing (active control). In FHT, algorithms are applied to the electronic medical record and use abnormal pathology results (anaemia/iron-deficiency, thrombocytosis and raised PSA) and demographic information to identify patients who may be at risk of undiagnosed cancer and provide recommendations for further investigation or care. The intervention consisted of the FHT software, a case-based learning series and ongoing practice support. The proportion of patients followed-up according to guidelines was determined at 12-months.

Results: Between Oct 2021 and Sept 2022, 7555 patients were identified as at risk of undiagnosed cancer (3709 in the intervention arm and 3846 patients in the control arm). At 12-months, 76.2% of patients in the intervention arm were followed-up (21 practices, n=2820), compared to 70% in the control (19 practices, n=2693; OR=1.15, 95% CI 0.87-1.5; p=0.332). No significant differences were identified in the secondary analyses.

Conclusions: The follow-up of patients identified as at risk of cancer in general practice overall was high suggesting a possible ceiling effect. There were no significant differences seen in the follow-up of patients when using the FHT tool. A process evaluation of the intervention has been conducted to contextualize the results of this trial.

# Implementation, usefulness, and sustainability of a quality improvement tool for cancer diagnosis in primary care: a process evaluation

<u>Sophie Chima</u>, Barbara Hunter, Jo-Anne Manski-Nankervis, Javiera Martinez-Gutierrez, Jon Emery

University of Melbourne, Melbourne, Australia

#### **Abstract**

Background: Diagnosing cancer in general practice is complex. Digital health interventions have been developed to support the diagnostic process, yet the mechanisms of effective implementation remain unclear. Future Health Today (FHT) is a technology platform with clinical decision support (CDS), audit, feedback, and QI monitoring, and provides recommendations on the appropriate investigation and follow-up of people at increased risk of undiagnosed cancer. FHT was used in a cluster randomised trial of a quality improvement (QI) program in general practice.

Objectives: Evaluate the uptake of the FHT intervention and provide context to the trial efficacy outcomes.

Methods: A process evaluation of the FHT intervention was conducted. Data were collected using interviews, surveys, engagement in trial components and general software usage. Clinical Performance Feedback Intervention Theory was used to analyse the qualitative data.

Results: 35 interviews were conducted with general practice staff. Uptake of supporting components of the intervention (training sessions, education, benchmarking reports) was low. The use of a study coordinator facilitated the sustained use of the platform, while contextual factors, such as the COVID-19 pandemic and the rollout of immunisation programs impacted the level of participation. Facilitators for use of the FHT tool include good workflow fit, importance of the clinical topic, the active delivery of the CDS and perceived knowledge gain. The accuracy of the recommendations, staff shortage and turnover, accessibility and the competing priorities of practice staff limited uptake. The tool was used primarily by general practitioners; practice nurses did not perceive the recommendations to be within their role.

Conclusions: The use of QI tools for supporting cancer diagnostic care in general practice is acceptable and addressing the key barriers to uptake may optimize the implementation. While components of the implementation process worked well, opportunities remain in reaching and engaging the entire practice.

# Concordance of colorectal cancer care with Optimal Care Pathway recommendations: a pre-post study.

Rebecca Bergin<sup>1,2</sup>, Dallas English<sup>1,2</sup>, Sabrina Wang<sup>1,2,3</sup>, Jon Emery<sup>2</sup>, David Hill<sup>1,2,4</sup>, Kathryn Whitfield<sup>5</sup>, Robert Thomas<sup>2,1</sup>, Anna Boltong<sup>6,7</sup>, Paul Mitchell<sup>2,8</sup>, David Roder<sup>9</sup>, Euan Walpole<sup>10,11</sup>, Roger Milne<sup>1,2,12</sup>, Victoria White<sup>13,1</sup>

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#### **Abstract**

Melbourne, Australia

Introduction: Optimal Care Pathways (OCPs) are tumour-specific standards for cancer care that aim to improve patient outcomes and reduce variation.

Objectives: This study compared concordance with colorectal cancer OCP recommendations before and after OCP policy implementation in Victoria, Australia.

Descriptions: Two cross-sectional surveys were conducted of patients identified by the Victorian Cancer Registry with a primary colorectal cancer, and their general practitioners (GPs), in 2012-2014 (pre-OCP) and 2018-2019 (post-OCP). Logistic regression was used to examine the relative difference in the proportion of patients receiving care concordant with OCP recommendations for timeliness of care and receipt of diagnostic tests and treatment, before and after implementation. Exploratory analyses examined whether any disparity in care by socio-economic position and rurality had reduced in the post-OCP group.

Results: The pre-OCP group included 413 patients (43% response) and 275 GPs; the post-OCP group 320 patients (34% response) and 201 GPs. Surveys were completed a median 6-and 7-months post-diagnosis in the pre- and post-OCP groups respectively.

Pre-OCP and post-OCP groups had similar concordance with recommended timeframes for colonoscopy, surgeon appointment, neoadjuvant treatment, and adjuvant chemotherapy. Concordance with recommendations for investigating symptoms was lower in the post-OCP group, especially for physical examination (Relative Risk [RR]=0.71; CI [95% confidence interval] 0.57-0.89). Rectal cancer patients were more likely to have an MRI post-OCP (RR=1.32; CI 1.03-1.68).

Patients residing in rural or low socio-economic areas were less likely to receive care in accordance with OCP recommended timeframes; with disparities increasing by remoteness, but reduced by socio-economic status, from pre-OCP to post-OCP.

Conclusions: There were limited changes in OCP recommended care early after policy implementation, although GPs reported some differences in test use post-OCP. A sustained focus on disparities is warranted given improvements for some groups, but a growing divide for others.

# Other category

Policy, equity

# Understanding uptake of cervical screening among South Asian women in Ontario, Canada: A concept mapping study

 $\underline{\text{Kimberly Devotta}}^{1,2}$ , Aisha Lofters $^{1,2}$ , Jacqueline Bender $^{3,1}$ , Patricia O'Campo $^{4,1}$   $^1$ University of Toronto, Toronto, Canada.  $^2$ Women's College Hospital, Toronto, Canada.  $^3$ University Health Network, Toronto, Canada.  $^4$ Unity Health Toronto, Toronto, Canada

#### **Abstract**

Introduction/background: Cervical cancer is highly preventable with appropriate and timely screening. In Ontario, Canada, South Asian women have some of the lowest screening rates in the province and innovative methods are needed to identify solutions.

Objectives/aims: Through the process of Concept Mapping (CM), this study set out to identify factors in the lives and experiences of South Asian women that impact cervical screening, and how participants perceived the importance and feasibility of addressing these identified factors to further encourage cervical screening.

Description/methods: CM is a participant-driven and semi-qualitative method that produces a conceptual framework that reflects how a group views a particular topic. This study engaged over 70 participants: South Asian women in the Greater Toronto area, community champions, people who work in organizations that serve South Asian women, and healthcare providers. Through a brainstorming activity using the focal prompt "One thing about the lives and experiences of South Asian women that influence their decision, in a positive or negative way, to get screened (i.e. a Pap test or HPV test) for cervical cancer is..." participants identified factors that impact screening uptake. They then rated these ideas based on importance and ease to address, and sorted them based on their individual thinking of how the ideas relate.

Results: Our findings capture a wide range of experiences in the lives of South Asian women living in Ontario that shape their decisions to get screened for cervical cancer. These experiences fall into 6 clusters representing larger themes. Additionally, we will present data to demonstrate differences and similarities in the importance assigned to each of these experiences by our different stakeholders.

Conclusions: Concept maps can guide action planning and program development for addressing low rates of cervical screening, while the rating data can be used to identify the areas of most impact.

# The Cost-Effectiveness of a Multi-target Stool DNA-based Screening (COLOTECT) for Colorectal Cancer

Junjie Huang, <u>Martin Wong</u> The JC School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong, Sha Tin, Hong Kong

### **Abstract**

Introduction: In 2020, approximately 1.9 million new cases and 1 million deaths of colorectal cancer were reported.

Objectives: This study aims to evaluate the cost-effectiveness of a multi-target stool DNA-based screening strategy, COLOTECT, compared to fecal immunochemical tests (FIT), and colonoscopy in the Asian population to inform more choices to policy making in colorectal cancer screening.

Descriptions: We assume that 100,000 persons aged 50 years undergo annual FIT, annual COLOTECT multi-target testing, or colonoscopies every 10 years until age 75. Participants with a positive FIT or COLOTECT result will undergo a colonoscopy. We assumed surveillance colonoscopies were repeated every three years and examined the cost of treatment. Various outcome measures were compared using Markov models.

Results: The incremental cost-effectiveness ratio (ICER) of COLOTECT, FIT, and Colonoscopy are USD82,206, USD108,952, and USD 160,808, respectively. Compared with FIT, COLOTECT has a higher prevention rate of CRC (39.3% Vs. 4.5%), can prevent more CRC cases (1272 Vs. 146), and save more life years (2,295 Vs. 337). Compared with colonoscopy, the total cost per life-years saved of COLOTECT(USD180,097) is lower than colonoscopy (USD238,356), which means COLOTECT is more affordable and cost-saving strategy than colonoscopy.

Conclusions: This research point out COLOTECT has better performance than FIT in preventing CRC. In addition, the COLOTECT detecting strategy may be more cost-effective than colonoscopy due to the lower cost and higher acceptance.

# A single SMS message sent automatically immediately before a consultation to patients who were overdue for screening for colorectal cancer modestly increased the screening rate

 $\underline{\text{Oliver Frank}}^1$ , Fernanda Nobre $^1$ , Jessie Edwards $^1$ , Elizabeth Hoon $^1$ , Carla Bernardo $^1$ , David Gonzalez-Chica $^1$ , Anton Knieriemen $^2$ , Nigel Stocks $^1$ 

<sup>1</sup>University of Adelaide, Adelaide, Australia. <sup>2</sup>Doctors Control Panel Services Pty Ltd, Melbourne, Australia

#### **Abstract**

# Background

Uptake of screening for colorectal cancer through Australia's National Bowel Cancer Screening Program remains suboptimal at 44%.

Personal recommendation by a patient's usual general practitioner has the greatest influence on uptake of preventive services. We created a system to deliver personal advice automatically opportunistically at low cost.

### Aims

The aim of the study was to increase uptake of screening for colorectal cancer. The objective was to estimate the effect of our innovative strategy to achieve this.

### Methods

Patients: Adults aged 50-74 years eligible but overdue for screening by faecal occult blood test (FOBT/iFOBT/FIT, recommended every 2 years), who made an appointment at their general practice between 4/3/2023 and 17/10/2023.

Intervention: One automatically-generated personalised SMS message advising the patient to ask about screening, sent two hours before the patient's first appointment during the intervention period.

Comparator: Usual care.

Allocation was by record number within the practice. Patients with odd numbers were allocated to the intervention group, and those with even numbers were allocated to the control group.

Outcome: Record of FOBT or colonoscopy in the 24 months before 17/10/2023.

#### Results

2 324 active patients allocated to the intervention group and 2 177 patients allocated to the control group attended either of two participating general practices during the

intervention period. The groups were well-matched on patient characteristics. On 17/10/23, there was a record of FOBT or colonoscopy in the preceding 24 months for 1 112 (48%) intervention group and 1 008 (46%) control group patients.

### Conclusions

Our intention-to-treat analysis found that one SMS message costing \$0.16 sent before an appointment modestly increased uptake of screening for colorectal cancer. The cost of \$8.00 per additional FOBT represents reasonable cost-effectiveness. The intervention is ongoing, and forthcoming analyses will explore the role of possible 'contamination' and other factors on the apparent effect size.

# Cancer Shared Care in Regional Victoria - a pilot of co-designed models of shared care in regional Victoria

<u>Catherine Lambert</u>, Griffan Randle Gippsland Primary Health Network, Traralgon, Australia

#### **Abstract**

#### Introduction

This project was funded by the Victorian Department of Health to co-design and pilot cancer shared care models in regional Victoria.

# Objectives

To improve the health and outcomes of people living with cancer through enhanced care coordination by:

- creating and maintaining sustainable relationships between providers in the acute and primary care settings
- building the capacity of local acute and primary workforces
- developing, implementing and embedding shared care models for cancer survivorship

### Descriptions

Three models of shared care were co-designed to suit local environments in each of the Gippsland, Murray and Western Victoria PHN catchments. Models were implemented in general practice settings, working in collaboration with local acute providers, using a co-designed Shared Care Toolkit to guide pilot activities.

#### Results

Pilot activity commenced in early 2023 and concludes in December 2023. Early results revealed barriers to recruitment of patients at the end of treatment. In response, eligibility was expanded to include patients at all stages of their cancer journey. Data will be collected from needs assessments and supportive care referrals, regarding collaboration between providers, and the patient and provider experience. A cost benefit analysis will also be conducted as part of the evaluation.

#### Conclusions

We will present early evaluation findings, including our learnings regarding the barriers and enablers for the further development of sustainable shared care.

# Developing and implementing age- and sex-specific thresholds for platelet count for cancer detection in primary care: a cohort study in UK, Canadian, and Australian primary care data

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### **Abstract**

### Introduction

A high platelet count is a well-established marker of undiagnosed cancer, integrated into health guidelines in multiple countries. General population studies have shown that the platelet count varies by age and sex in healthy individuals. The optimum threshold for cancer detection by age and sex is not known.

# Objectives

1) Estimate one-year cancer incidence, by age and sex, in patients with a primary careordered full blood count to develop personalised thresholds. 2) Explore the impact of these thresholds on patient referrals and cancer diagnoses.

## Description

Three retrospective cohort studies set in primary care in the UK, Canada, and Australia. Sample stratification by sex (M/F), age in 10-year groups, and platelet count (400-449, 450-499, 500-549,  $\geq$ 550 x109/l) yielded 40 patient groups. Platelet counts corresponding to cancer incidence >7% were selected as thresholds. An audit of hospital data mapped impact.

### Results

3,236,488 patients were included in the UK cohort. Thresholds were: 550x109/l (women aged 60-69), 500x109/l (women aged 70+), 450x109/l (men aged 60-69), 400x109/l (men aged 70+). The most common cancers were lung, colon, prostate, renal, stomach. Cancer yield was 9.5% in patients meeting these thresholds in UK audit data; around 1 in 4 were emergency presentations. Canadian and Australian analysis is ongoing.

### Conclusions

Applying age- and sex-stratified upper thresholds for platelet count makes good use of natural variation in platelet count levels in healthy individuals. Understanding the most 'at risk' groups will allow targeted alerts and advice. General practitioners will be able to draw on resources currently available within primary care to maximise high quality referrals. We have developed and implemented a raised platelet pathway in the South-West of England to be initiated in patients meeting the proposed age- and sex-specific thresholds.

# Chronic Disease Prevention in Younger Adults Living with Low Income: A BETTER Life intervention

<u>Kimberly Devotta</u><sup>1,2</sup>, Aisha Lofters<sup>2,1</sup>, Mary Ann O'Brien<sup>1</sup>, Kimberly Lepine<sup>3</sup>, Donna Manca<sup>4</sup>, Eva Grunfeld<sup>1</sup>, Lawrence Paszat<sup>5</sup>, Carolina Fernandes<sup>4</sup>

 $^1$ University of Toronto, Toronto, Canada.  $^2$ Women's College Hospital, Toronto, Canada.

#### **Abstract**

Introduction: Addressing lifestyle factors is critical in the prevention of many chronic conditions. The BETTER (Building on Existing Tools to Improve Chronic Disease Prevention and Screening in Primary Care) intervention consists of a visit between participants ages 40-65 years and a "Prevention Practitioner" (PP), who empowers the participant to set achievable prevention goals for chronic diseases. The original BETTER cluster randomized controlled trial (cRCT) demonstrated the effectiveness of a PP in the primary care setting. We then undertook the BETTER HEALTH: Durham study, a community-based cRCT in Ontario, Canada, employing a public health-led approach to evidence-based target actions among adults aged 40-64 years living with low income. However, stakeholders emphasized that intervening at a younger age may have more meaningful impact on preventing chronic diseases.

Objectives: We developed and tested BETTER Life, an adaptation of BETTER HEALTH that focuses on adults aged 18-39 years living with low income - a group known to have earlier mortality due to, and higher prevalence of, preventable chronic diseases than their higher-income peers. A qualitative study was conducted to understand acceptability.

Methods: We recruited 9 participants from the Durham Region of Ontario to complete a baseline questionnaire and then a PP visit at a community health centre. We conducted qualitative interviews with participants who had completed the PP visits, as well as a focus group with two PPs.

Results: We identified contextual themes such as how food insecurity, housing quality, access to services, and mental health, impact health behaviours. We identified key aspects of the BETTER Life program that helped participants set health-related goals.

Conclusions: BETTER Life is a program unique to the region of Durham and addresses several aspects of people's everyday lives that are impacting their health. This intervention blends well with the role of health promoters as PPs and recognizes health goals of participants.

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# Cancer Support for People of Refugee Background (CSPRB) - analysis, education and support to improve the patient cancer experience across primary care and acute services

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<sup>1</sup>Bendigo Health, Bendigo, Australia. <sup>2</sup>Loddon Mallee Integrated Cancer Service, Bendigo, Australia. <sup>3</sup>Bendigo Community Health Services, Bendigo, Australia

### **Abstract**

The CSPRB project was funded by the Department of Health in 2022 as a joint two year initiative between the Loddon Mallee Integrated Cancer Service, Bendigo Community Health Service and Bendigo Cancer Centre.

The project is working with Bendigo Karen and Afghan communities, primary care and acute health service providers, to identify enablers, barriers, and myths surrounding cancer, prevention, cancer care, and refugee sensitive practice. It aims to improve health equity across the cancer continuum by supporting former refugees to better understand cancer, prevention, early intervention, and optimal care pathways that are also provided in culturally safe and more easily understood ways by health services.

Preliminary findings from the community analysis (9 focus groups: 128 participants) indicate a fear and inability to screen unsupported and existing cancer resources being too complex.

'Everyone [with cancer] will die, so there is no point getting treated' - extreme fatalism based on experiences in refugee camp/ like settings.

'I can handle the pain, but I cannot handle being ashamed' - feeling misunderstood by service providers.

Service provider challenges raised through the focus groups include;

- A dearth of appropriate in-language patient information.
- Limited cultural awareness of refugee communities
- Reported lack of engagement and difficulty communicating with diverse consumers
- Interpreter availability and competence limited

Literature findings show language and communication act as barriers for people of refugee background and the complex health systems make it difficult to navigate. Systemic sustainability by working with and alongside key health organisations is a key focus. In

2024, the project will move to quality improvement implementations listed below and scaling to other parts of the State:

- Refine evidence of underrepresentation in screening.
- Facilitate in-language education sessions.
- Simplify and translate existing cancer resources.
- Co-design and produce new in-language videos/resources.
- Develop pilot cancer navigation model
- Identify and implement system improvements within cancer care services.

# Other category

Shared & Supportive Care for vulnerable population group

# Systematic review of methodological considerations in colorectal cancer early diagnosis research and dose-response meta-analysis

Allison Drosdowsky $^1$ , Karen Lamb $^1$ , Amalia Karahalios $^1$ , Rebecca Bergin $^2$ , Kristi Milley $^1$ , Lucy Boyd $^1$ , Maarten IJzerman $^1$ , Jon Emery $^1$ 

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### **Abstract**

Introduction: Researching timely diagnosis and treatment in colorectal cancer is pivotal for producing evidence on how to improve outcomes. However, attempts at consolidating the literature often report varied methodological quality and approaches. A systematic review was performed to comprehensively assess the issues and provide recommendations, as well as to demonstrate the potential of a novel meta-analytic technique in evidence synthesis.

Objectives: a) to systematically assess the literature to report key methodological considerations, including statistical and epidemiological issues, and b) utilise a doseresponse meta-analysis technique to determine if it improves on other meta-analysis techniques.

Methods: a systematic review of the literature was performed to find all research conducted that assessed the role of any interval before initial treatment of colorectal cancer with any outcome. Four databases were searched (Ovid Medline, EMBASE, EMCARE and PsycInfo), and two reviewers independently screened each paper for inclusion. Data was extracted on study findings as well as key methodological considerations. A dose-response meta-analysis was performed using a one-step process, using restricted cubic splines to allow for a non-linear association.

Results: 130 papers were included in the systematic review, and eight in the meta-analysis. Key methodological issues included frequent categorisation of intervals (n=107, 82% of papers), the use of unadjusted analyses (n=65, 50%), introduction of immortal time bias in studies assessing survival (n=33, 41%) and no consideration of the waiting time paradox (n=73, 56%). The dose response meta-analysis was able to synthesise the evidence of the association between the treatment interval and survival and show a U-shaped association with a nadir of 45 days.

Conclusions: Recommendations for future research were developed based on the findings of common issues in the literature. The dose response technique was found to be a suitable method for synthesising evidence and was able to show the waiting time paradox in a meta-analysis.

# Pilot testing of HPV-based cervical cancer screening in resource limited settings in India: an implementation trial

<u>Biswajit Paul</u>, Rita Isaac, Anu Mary Oommen, Rajeshwari Siva Christian Medical College, Vellore, India

#### **Abstract**

Introduction Cervical cancer is a major public health problem in the global south with 90% of new cases and deaths occurring in the low- and middle-income countries (LMICs). India contributes to highest proportion of cases and deaths due to cervical cancer in the world. In absence of Human Papilloma Virus (HPV) vaccine in national programme and low coverage and service challenges of VIA/VILI screening, self-collection and screening for cervical cancer through HPV testing may widen screen coverage, promote early diagnosis, and improve compliance.

Aim This pilot study was conducted to assess implementation challenges of HPV -based screening among women from tribal, rural and urban slum areas of south India.

Methods After community engagement and education to women about cervical cancer and HPV self-collection technique by health workers and nurses respectively, women aged 30-60 years were invited to participate. All participating women were informed of their results and those who were positive were navigated for follow up (triage with colposcopy/pap smear, followed by ablative treatment). An interrupted time series analysis was done to assess change in knowledge, attitudes, and practices (KAP). Implementation outcomes were assessed using Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM) framework.

Results The overall screening participation rate was 30.3% (1170/3861); 31.0% in tribal, 26.7% in urban slum and 32.9% among rural women. The prevalence of HPV was 12.1%, 5.5% and 3.1% and follow up rate for triage was 53.6%, 45.5% and 96.2% among tribal, rural and urban poor women, respectively. Programmatic challenges included identifying and educating eligible women, adoption, sample collection and ensuring follow up.

Conclusion HPV self-collection showed encouraging coverage in various vulnerable groups. HPV prevalence and pre-cancer was higher in tribal women. Although screening rates were encouraging, follow up rates were low in tribal and urban poor.

# Psychosocial Outcomes and Stigma Among Cancer Patients Undergoing Navigation in Southern Nigeria.

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#### **Abstract**

# Background

Cancer patients in Nigeria have reported psychological distress, anxiety, and depression. These concerns stem from a lack of information and social support and lead to poorer health outcomes and higher mortality. The impact of stigma against cancer patients has not been adequately explored in Nigeria. The community-driven patient navigation programs in Abia and Akwa Ibom states were established to guide patients through cancer screening to survivorship and address psychosocial issues while eliminating barriers to care.

# Objective

This study explored self-reported psychosocial outcomes of cancer management and the pattern of stigma against cancer patients in both states.

#### Methods

This was a mixed-methods cross-sectional study of a sample of consenting cancer patients aged 18 years and older. The revised Edmonton Symptoms Assessment System was used to evaluate pain, anxiety, and depression. Perceptions of cancer stigma were also evaluated using a validated tool. Data analysis involved descriptive statistics, chi-square tests, Pearson correlation coefficient, and deductive thematic analysis.

#### Results

About 88% of the participants (N = 66) had been diagnosed with breast cancer. Most patients (56.06%, N = 66) reported moderate to severe anxiety, while 57.58% (N = 66) had moderate to severe depression. The proportion of patients with high stigma scores (ie, mean score  $\geq$ 2.5) in each domain were cancer perception 25.76% (N = 66), stereotype perception 46.97% (N = 66), and discrimination experience 18.18% (N = 66). There was a moderate positive correlation (r = 0.403, P <.001) between the perception of cancer and anxiety. Qualitative themes regarding opportunities for improvement included "need for support," "creating awareness," and "hope."

#### Conclusion

Psychosocial issues and stigma were common among cancer patients in the study. Stigma was correlated with anxiety and depression. There is a need to educate patients, their

families, and the community about cancer stigma in the Abia and Akwa Ibom states.

# Times to lung cancer diagnosis and treatment from radiological requests as first encounter: a data-linkage cohort study

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<sup>1</sup>Department of General Practice; Centre for Cancer Research, University of Melbourne, Melbourne, Australia. <sup>2</sup>Victorian Comprehensive Cancer Centre, Melbourne, Australia.

#### Abstract

Background: Lung cancer is characterised by late stage at diagnosis, reflecting delays in diagnosis then treatment.

Aims: To investigate the impact of radiology requests as the first encounter on times to diagnosis and treatment, disease stage at diagnosis, and overall survival.

Methods: This study is part of the first data-linkage study in Australia on time intervals based on primary care and hospital settings. Outcomes were: diagnostic interval (DI), from first presentation in primary care to diagnosis at hospital; diagnostic and treatment interval (DTI), from first presentation to cancer treatment initiation; disease stage at diagnosis; and OS. The multivariable Cox-regression was used for analysing time intervals and OS, respectively; the multivariable logistic regression was for disease stage at diagnosis.

Results: A total of 268 patients diagnosed with lung tumours between 2005-2021 were linked and analysed, including: 40% with radiology requests as the first encounter; 71% at stages III-IV. The median of follow-up period were 539 days since diagnosis. Compared to symptom or sign as the first encounter, patients with radiology requests had a shorter DI (hazard ratio (HR)=1.56 [95%CI 1.19-2.04]) and TDI (HR=1.66 [1.25-2.21]), relatively lower risk of stages III-IV (odds ratio (OR)=0.68 [0.35-1.32]), and relatively better OS (HR=0.89 [0.62-1.28]). Among patients with radiology requests as the first encounter, patients with CT (DI: HR=1.90 [1.18-3.308]; DTI: HR=5.04 [1.83-13.93]) or both of CT & X-ray on the same day (DI: HR=5.04 [1.83-13.93]; DTI: HR=6.26 [2.04-19.83]) had shorter time intervals compared to those with X-ray. Further analyses supported patients with CT as the first encounter had a relatively better patient outcomes (stages III-IV: OR=0.60 [0.25-1.45]; OS: HR=0.62 [0.33-1.17]) but those with both tools on the same day did not (stages III-IV: OR=1.83 [0.19-17.35]; OS: HR=2.71 [0.92-7.95]).

Conclusion: Radiology, especially CT, plays a key role in timely diagnosis and treatment, potentially leading to better outcomes.

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# Consumer versus Expert opinions on Bowel Cancer Screening Promotional Videos: Findings from a Co-design Study.

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#### **Abstract**

Introduction: Videos are a promising medium for promoting bowel cancer screening in primary care. However, little is known about consumer perspectives and preferences on video content which is often selected by health promotion experts.

Objectives: We consulted with consumers and experts to co-design and edit a selection of videos from publicly available video material to embed into a bowel cancer screening endorsement SMS; an intervention to be tested via a randomised controlled trial in general practice.

Methods: Fifteen videos were presented to between 71 and 89 Australian "consumers" aged 50 to 74 and 32 "experts" (i.e., researchers, clinicians, and health promotion specialists) who rated the degree to which each video was credible, relatable, compelling, reassuring, informative, easy to understand and a call to action. Open responses regarding the liked and disliked elements of videos were collected from consumers. Responses were compared and discussed during an interactive workshop to select the optimal combination of content to include in the video bundle.

Results: Experts and consumers differed significantly in their ratings. For example, videos favoured by consumers received significantly lower ratings from experts on relatability, reassurance, and ease of understanding. In deciding on the video content for the intervention, consumers preferences were prioritised. One informational video was selected and sections from three favoured narrative videos were combined based on consumer liked and disliked elements.

Conclusions: This study highlighted the importance and value of consulting consumers when designing promotional video content for bowel cancer screening as opposed to relying on expert opinion.

# Impact of a Blended Learning Course on Clinical Skills Relevant for Cancer Care Among Nursing Students in Nigeria

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#### **Abstract**

#### Introduction

Most Nigerian clinicians lack adequate skills and resources in screening, diagnosis, and managing patients with common cancer, partly due to deficiencies in undergraduate education. Training undergraduates to provide cancer-related services can help to improve their competence. Blended learning (BL), a combination of online and face-to-face teaching methods, has been used in other settings to improve the competencies of clinicians.

# Objective

This educational research sought to develop and evaluate the impact of a BL course for undergraduate nursing students in Abia State on clinical skills relevant to early detection, management and follow-up of patients with breast, cervical and prostate cancers.

#### Method

The course was divided into four online modules delivered via Google Classroom and a 2-day in-person workshop, with rotational skills stations. The skills taught using simulation models, included rectal exam, pelvic exam/cervical cancer screening, and clinical breast exam. Data collected included demographics, performance in pretest and post-tests, and feedback on the course experience. Data analysis involved descriptive statistics and t-tests. A sample size of 107 individuals was required to identify a moderate effect size for the BL course.

#### Results

One hundred and eighty-two students (175 females and 7 males) with a mean age of 24 (+3) years enrolled for the course, while about 60% (106/182) completed all the components. Most enrollees (65%, 119/182) did not have prior cancer management knowledge. With a maximum of 20 points in each test, there was a significant improvement in the average post-test performance compared with the pre-tests (67.2% vs 62.2%, p=0.03). Most participants expressed satisfaction with the BL approach and felt more confident in their skills to provide clinical-based cancer early detection and follow-up.

#### Conclusion

Results showed improvement in learning and self-reported confidence. The BL approach is an effective method for teaching clinical skills relevant to cancer early detection and management.

# Overscreening in cervical and breast cancer screening

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#### **Abstract**

Background: Appropriate resource utilization is crucial for cancer screening programs. Overscreening is defined as screening provided beyond the upper age limit of the target age or at the shorter interval than recommended in national programs. In Japan, there are no upper age limits set for the cancer screening programs, and the recommended screening interval for cervical and breast cancer screening is 2 years. After government policy changed in 2004, some municipalities have continued yearly breast and cervical cancer screening.

#### Objective

Based on the national survey for cancer screening in 2021, the number of cases of overscreening was estimated.

# Descriptions

This study's target age was 20-69 years for cervical cancer screening and 40-69 years for breast cancer screening. The subjects were divided into the following groups by age and screening frequency: target age and biennial screening; overage and biennial screening; target age and annual screening; and overage and annual screening. Overscreening included the latter three groups. The percentage of overscreening was compared between cervical cancer and breast cancer screening by a chi-square test.

#### Results

In 2021, the total number of national program participants was 2,565,850 for breast cancer screening and 3,779,508 for cervical cancer screening. The overscreening rate was 37.1% for cervical cancer screening and 37.6% for breast cancer screening. The cause of overscreening was different between cervical and breast cancer screening. Screening at overage was higher in breast cancer screening than in cervical cancer screening (24.1% vs. 14.9%, p<0.01), whereas too-frequent screening, was more elevated in cervical cancer screening than in breast cancer screening (28.2% vs. 19.2%, p<0.01).

#### Conclusion

Cancer screening beyond the target age leads to overdiagnosis and unpredictive adverse effects. To avoid these harms, the stopping age should be clarified. Since overscreening is a waste of resources and harms cancer screening, appropriate resource use should be considered as public health policy.

# Moving Towards Sustainability: implementation and roll-out of cervical cancer 'Screen and Treat' services across rural Malawi

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<sup>1</sup>University of Edinburgh, Edinburgh, United Kingdom. <sup>2</sup>Nkhoma Hospital, Nkhoma, Malawi.

#### **Abstract**

#### Introduction

Malawi has the highest global cervical cancer mortality, and second highest global cervical cancer incidence. It is vital that cervical screening is made available to women living in rural areas with limited health care access. The Malawi Ministry of Health's National Cervical Cancer Strategic Plan 2022 – 2026 supports cervical screening with either Visual Inspection with Acetic acid (VIA) or human papilloma virus (HPV) testing, in line with the World Health Organisation's 'Global strategy to accelerate the elimination of cervical cancer as a public health problem'.

# Objectives

The MALSCOT Cervical Cancer Screening and Mentoring project has worked cooperatively with the Reproductive Health Directorate to implement a programme of same day 'screen and treat' programme of cervical screening using VIA, thermal ablation for immediate treatment, and robust follow-up pathways, focusing on rural areas, since 2018.

#### Description

Facility assessment, sensitization of local leaders, refurbishment of screening rooms and equipping with standard instruments was implemented. Screening clinics liaise closely with antiretroviral therapy clinics. Initiatives have been set up to reach vulnerable groups (including women with HIV, women with albinism, persons with disabilities, and transactional sex workers), working with local advocacy groups.

### Results

Screening is provided in 7 hospitals across Northern, Central, and Southern Malawi, and 34 associated health centres. Over 85,000 first attenders received an initial VIA screen from October 2018 to March 2023; 27.5% are women living with HIV. VIA positivity is 1.4-2%;  $\sim 90\%$  of those with VIA positive lesions receive same day treatment with thermal ablation. Approximately 4% of women have received care for other gynaecological conditions.

#### Conclusions

With provider training and initial infrastructure and consumables outlay, cervical screening can be integrated into routine service delivery in health centres, with relatively modest ongoing costs. Close and continued engagement with District Health Offices to plan for sustainable cervical screening delivery is on-going and essential.

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# Consumer-Led Research: A systematic review of patient-led cancer survivorship care.

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#### **Abstract**

**Background:** There is a growing body of evidence exploring the challenges with current models of cancer survivorship care. Research addresses the effectiveness and implementation of nurse-, specialist- and primary care-led models of survivorship care. Despite the emergence of patient-centred and consumer-co-designed care, there is limited evidence for patient-led survivorship care. This presents an opportunity to consider the role that patients can play as leaders in their own survivorship.

**Aims:** To investigate leadership domains of patients engaged in research, as well as enablers of and barriers to patient-led cancer survivorship care.

**Methods:** A systematic review using a narrative synthesis following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Systematic Reviews. Using pre-specified search terms, 11 databases were searched from inception to December 2023. Manuscripts were included where the population included adults living with or beyond any cancer type and where the survivorship intervention or model of care was patient-led, in any setting. Studies were categorised based on models of care, intervention types and patient reported outcomes. Primary outcomes are domains of leadership, barriers and enablers in accordance with the Quality of Cancer Survivorship Framework (Nekhlyudov et al, 2019).

**Results:** Preliminary search resulted in 5,192 articles; 49 manuscripts met the inclusion criteria, representing 33 unique studies (n=8 RCTs, n=4 cross-sectional, n=9 mixed-method, n=12 qualitative studies). Preliminary analyses suggest the need for a clearer definition of patient leadership and better articulation of the patient role in survivorship care

**Conclusions:** Findings will inform development of a patient-led model of survivorship care, provide guidance for enabling greater patient leadership and suggest opportunities for future research.

# Depression, anxiety, and fear of recurrence among cancer survivors who participated in a virtual cognitive behavioral therapy (CBT)-based telephone coaching program

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#### **Abstract**

Background: Depression, anxiety, and fear of recurrence (FOR) are prevalent among cancer survivors, and it is recommended that they have access to supportive services and resources to address psychosocial needs during follow-up care. This study examined the impact of a virtual cognitive behavioral therapy (CBT)-based telephone coaching program (BounceBack®) on depression, anxiety, and FOR. Objective: To explore the effectiveness of a free readily accessible CBT virtual coaching tool to support the mental health needs of cancer survivors. Methods: Through the After Cancer Treatment Transition (ACTT) clinic at the Women's College Hospital (Toronto, Canada), eligible participants were identified, consented, and referred to the BounceBack® program. Program participation involved completion of self-selected online workbooks and support from trained telephone coaches. Measures of depression (PHQ-9), anxiety (GAD-7), and FOR (fear of cancer recurrence inventory, FCRI) were collected at pre-intervention (baseline) and post-intervention (6month and 12-month time points). For each psychosocial measure, paired t-tests compared mean scores between study time points. Participant experiences and perceptions were collected through a survey. Results: Measures of depression and anxiety significantly improved among participants from pre-intervention to post-intervention. Scores for PHQ-9 and GAD-7 decreased from moderate to mild levels. Measure of FOR also significantly improved, while FCRI sub-scale scores significantly improved for 5 of the 7 factors that characterize FOR (triggers, severity, psychological distress, functional impairment, insight). Participants rated the intervention a mean score of 7 (out of 10), indicating a moderate level of satisfaction and usefulness. Conclusions: This study suggests that a virtual CBT-based telephone coaching program can be an effective approach to managing depression, anxiety, and fear of recurrence in cancer survivors.

# Use of routine referrals for cancer investigation and subsequent cancer incidence: identifying high-risk groups

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#### **Abstract**

#### Background

Routine referrals to secondary care are recommended for many common but low-risk features of cancer in UK national guidance.

# Objective

To describe i) the extent to which routine referrals for suspected cancer are used, ii) the proportion of these that result in cancer diagnosis and iii) how these vary by feature and patient characteristics.

#### Methods

Retrospective cohort study using electronic health records. Included patients presented to primary care (records from the Clinical Practice Research Datalink) between 01/01/2016-31/12/2017 with features considered low-risk (abdominal pain, back pain, low-risk anaemia, recurrent urinary tract infection, weight loss) or high-risk (breast lump, dysphagia, haematuria, high-risk anaemia, jaundice, lumps/masses, post-menopausal bleeding) and met feature-specific age thresholds in UK guidelines. Data were linked to Hospital Episode Statistics for referrals and the national cancer registry up to 31/12/2018.

#### Results

68,538/1,070,741 (6.40%) of patients with a low-risk feature and 42,889/740,249 (5.79%) of patients with a high-risk feature received a routine referral (6.15% overall). Odds of routine referral increased with higher morbidity and deprivation, and decreased for younger and older patients. Cancer incidence following routine referrals varied greatly by feature, and exceeded 3% (threshold risk of cancer for referral in UK guidelines) by 90 days post-presentation, rising to 4.90% after one year. Cancer incidence increased with older age, lower morbidity and male gender. The highest one-year incidences in low-risk features were for anaemia (4.08%) and weight loss (4.85%). Jaundice had the highest one-year incidence at 18.61%. Importantly, 81.59% of jaundice patients received no apparent referral, and 19.63% were diagnosed with cancer within a year, 54.63% of whom via an emergency route.

#### Conclusions

Patients with low-risk anaemia or weight loss, where a referral is made, should be seen promptly, with use of non-site specific pathways or multi-cancer early detection tests considered. Patients aged 40+ with jaundice should be referred urgently.

# Clinical predictors of lung cancer for patients with chronic obstructive pulmonary disease (COPD) in an English primary care setting

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#### Abstract

#### Introduction

Globally, COPD prevalence is >10%. Patients with COPD are >2x as likely to develop lung cancer. Many clinical signs of lung cancer are also features of COPD. It is unknown which features should prompt investigation for cancer in COPD patients seeing their general practitioner.

### Objectives

To quantify the predictive value of clinical features of lung cancer in patients with COPD.

#### Description

Case-control study with English primary care records linked to cancer registration data. Cases were diagnosed from 2012 to 2019, aged over 40, with no previous cancer. Age, sex, and practice matched controls were selected at a 1:5 ratio. Conditional logistic regression modelling was used to examine features recorded in the year before diagnosis. To investigate whether any association was different for patients with and without COPD, interaction terms were included in the model.

#### Results

There were 47,756 cases and 238,780 controls. Median age at index was 73.0 years. 53% were male. 73% had BMI>25. 12,419 (26%) cases and 14,466 (6%) controls had COPD. For most common features there were stronger associations with lung cancer among COPD-free compared to COPD patients (e.g. odds ratio for a cough without COPD: 3.82 vs with COPD: 2.69). However, the opposite was true for thrombocytosis and abnormal liver function tests. Most red-flag symptoms, e.g. haemoptysis, still had strong associations with lung cancer, albeit weaker than in patients without COPD. Work is ongoing to derive the PPVs for the presence of these features.

#### Conclusions

We have estimated the predictive value of important clinical features that should prompt further investigation for suspected cancer for patients with COPD. These results will be vital

in developing health policy to support the >1.2 million people living with COPD in the UK, a figure which is set to rise by 40% by 2030.

# Healthcare-seeking with cancer symptoms over the last decade. Knowledge from two Danish population-based cross-sectional studies in 2012 and 2022

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#### **Abstract**

#### Introduction

The perception of bodily sensations as symptoms of cancer, and subsequent healthcareseeking behaviour are susceptible to time trends, among others, due to efforts targeting timely diagnosis of cancer. Some argue that these may induce higher concern in the general population, without contributing to adequate healthcare-seeking behaviour. Yet, the development in symptom experiences, symptom concern and healthcare-seeking over time remains to be investigated.

### Objectives

In this study we aim to compare and analyse the frequency of cancer symptoms, the degree of symptom concern and proportion of contacts to the general practitioner (GP) in 2012 and 2022, respectively.

#### Methods

Two population-based surveys, the Danish Symptom Cohort, from 2012 and 2022, respectively. In each study 100,000 randomly selected individuals aged 20 years or older were invited. Items regarding experience of cancer symptoms (prolonged coughing/hoarseness, haemoptysis, haematuria, blood in stool, weight loss etc.), symptom concern and GP contact were included in the questionnaire. Analyses include descriptive statistics and multivariable logistic regression models.

#### Results

This study includes 49,706 and 31,415 respondents from 2012 and 2022, respectively. For all symptoms in the questionnaire the average number of reported symptoms were lower in 2022 than in 2012, while the proportion of symptoms presented to the GP changed from one in four to one in five. For the cancer symptoms the proportion of GP contacts was lower in 2022 than in 2012 for haematuria (from 73.2% to 63.3%) and haemoptysis (47.5% to 28.4%), while it was higher for blood in stool (from 33.7% to 38.1%.)

Analyses are ongoing and mature results including changes in concern and associations with GP contact will be presented at the conference.

#### Conclusion:

Despite efforts to contrary, healthcare-seeking has decreased for some important cancer symptoms during the last decade. This emphasizes the need for a stratified focus when

developing intervention strategies.

# Culturally tailored initiatives to increase breast and cervical cancer-related knowledge and health behaviours among Black women in Canada

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Health, Toronto, Canada. <sup>4</sup>Women's College Research Institute, Toronto, Canada

#### **Abstract**

Background. In Canada, racialized and immigrant women are typically underscreened for breast and cervical cancer which may contribute to increased morbidity and mortality. Underscreening is linked to numerous barriers including lack of awareness of screening, fear of pain, the stigma of cancer, socio-cultural factors (e.g., language barriers), and socio-economic factors (e.g., challenges with travelling to screening sites).

Aims. In partnership with community organizations, we co-created two culturally tailored events - an educational event and an on-site cancer screening event - to address barriers to cancer screening for Black women.

Description. The virtual, free educational events (2022: Breast Health for Black Women; 2023: and Best Health for Black Women) empowered Black women with information about risk factors, prevention strategies, and cancer screening. The 2022 and 2023 Breast & Cervical Cancer Screening for Black Women events created safe, inclusive, accessible, and culturally affirming opportunities for screening. Evaluation included post-event surveys to assess whether objectives were met and to solicit feedback.

Results. Each educational event attracted more than 450 attendees. In both years, more than 87% of the educational events' survey respondents agreed that an event specifically for Black women helped them feel supported. At the on-site cancer screening events, 46 and 48 women were screened in 2022 and 2023, respectively. 81% of respondents noted that they were (extremely) likely to go for a mammogram when next due; 87% said they were (extremely) likely to go for a Pap test when next due.

Conclusions. Co-created, culturally tailored educational and on-site screening events provided opportunities for Black women to learn about prevention, risk factors, resources, and screening for women's cancers. It is possible that, over time, such events may reduce or remove the stigmas associated with cancer and decrease differences in cancer-related knowledge and behaviours between racialized and non-racialized groups.

# Advice after urgent suspected cancer referral when cancer is not found: survey of patients' preferences and perceived acceptability

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#### **Abstract**

#### Introduction

In England nearly 3 million people per year are referred via urgent suspected cancer (USC) referral pathways. In the majority (over 90%) no cancer is found, but they are at higher risk for future cancers. No standardised approach exists to provide advice after USC referral when cancer is not found.

# Objective

This study aimed to assess preferences and acceptability of receiving advice after USC referral related to: 1) managing ongoing symptoms, 2) responding to early symptoms of other cancers, 3) cancer screening, 4) reducing the risk of future cancer.

### Descriptions

541 patients from two large Hospital Trusts in London were mailed a survey 1-3 months after having no cancer found following urgent suspected gastrointestinal or head and neck cancer referral. Participants were asked about: willingness to receive advice; prospective acceptability; preferences related to mode, timing and who should provide advice; and previous advice receipt.

#### Results

406 patients responded (16.0%) with 397 in the final analyses. Few participants had previously received advice, yet most were willing to. Willingness varied by type of advice: fewer were willing to receive advice about early symptoms of other cancers (88.9%) than advice related to ongoing symptoms (94.3%). Acceptability was relatively high for all advice types. Reducing the risk of future cancer advice was more acceptable. Acceptability was lower in those from ethnic minority groups, and with lower levels of education. Most participants preferred to receive advice from a doctor; with results or soon after; either face to face or via the telephone.

#### Conclusions

There is a potential unmet need for advice after USC referral when no cancer is found, especially given higher future risks of cancer. Equitable intervention design should focus on increasing acceptability for people from ethnic minority groups and those with lower levels of education.

# A primary care cancer detection programme; mixed methods evaluation

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#### **Abstract**

#### Introduction

Primary care has a crucial role in cancer detection including utilising urgent suspected cancer (USC) referral pathways. Increased cancer detection via USC is associated with improved patient outcomes, however there is significant variation between general practices in their use.

#### Objectives

To understand potential patient, healthcare professional (HCP), practice and system factors impacting on cancer detection in primary care including differences between high and low cancer detection practices.

# Descriptions

A primary care cancer detection programme in West London covering a population of 3.8 million, over 500 general practices (7% of total for England). A USC cancer referral detection data visualisation tool was developed. Practices were sampled from both high and low USC detection rates, with comparative statistics informing a qualitative study. Practice level focus groups including clinical team and admin/managers were run by locality GP cancer leads. Focus groups were recorded and notes taken. Thematic analysis was undertaken and themes checked with wider stakeholders.

#### Results

114 general practices were sampled and 46 practices (40%) were interviewed, including 28 high and 18 low USC detection practices with 185 staff members. 5 year (2017-2022) USC detection rate for England 53.5%, 62.7% for high detection practices and 38.4% for low detection practices. Referral rates were 14% higher and 22% lower than the average for England respectively. 2/3 of high detection practices were aware of their cancer data compared to 1/3 of low detection practices. Factors more common to higher detection practices included stable workforce; use of decision-support tools; perceived access to diagnostics/effective relationships with secondary care; participation in cancer audits.

#### Conclusions

A primary care cancer detection rate programme is achievable including with low referral practices. The programme resulted in 236 action items for practices. This suggests substantial benefit of a supportive, data-led, practice conversations. The interviews also provided the opportunity for communicating data and research.

# A Scoping Review of Non-invasive Biomarkers Used to Guide Decisions in Lung Cancer Screening

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#### **Abstract**

**Introduction**: Lung cancer screening with low-dose CT (LCS) offers a 20% reduction in lung cancer mortality but it has a number-needed-to-screen to prevent one lung cancer death of 200-300 and a number-needed-to-harm of 75 for unnecessary invasive procedures. Hence, many authors have investigated the use of a biomarker to refine decision making in LCS pathways. This includes decisions on the need for screening, where improved risk prediction could increase the number of cancers detected via LCS (and thus improve early diagnosis) and decrease the number of people exposed to the harms of screening.

**Objective**: To perform a scoping review of the use of non-invasive lung cancer biomarkers in a LCS-eligible population, focusing on pre-diagnostic use cases (i.e., biomarker tests which could be conducted in primary care as a part of an LCS programme).

**Methods**: We systematically searched the literature using three themes: "lung cancer", "screening" and "biomarkers" and manually searched identified systematic reviews for other eligible articles. We assessed eligibility using the following criteria: population = LCS-eligible persons; exposure/comparison = non-invasive biomarker test result; outcome = lung cancer diagnosis.

**Results**: Our tailored pilot search of MEDLINE, Embase, Web of Science, Scopus and Cochrane Library yielded 575 unique studies, of which 22 were systematic reviews and 158 were deemed eligible original research articles. These examined the following non-invasive biomarker sample types: blood (78%), sputum (7%), breath (11%), nasopharyngeal or buccal swab (2%), urine (1%) and sweat (1%). For each biomarker study, we will report the following data: biomarker sample type, biomarker test type, LCS use case, study population characteristics, and reported diagnostic performance.

**Conclusions**: These results will inform a prospective study of biobank samples from a lung cancer screening pilot trial commencing in Ireland in 2024 and will support future translational studies on the use of lung cancer biomarkers in the primary care setting.

# Maximising Cancer Screening - effectiveness and experience of a statewide initiative to improve engagement with cancer screening through primary care

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#### **Abstract**

Background: The Maximising Cancer Screening Program (MCSP) engaged general practices in metropolitan and regional Victoria. The program was designed to build on Primary Health Networks (PHNs) expertise in quality improvement to maximise engagement and awareness of screening for bowel, breast, cervical and liver (via hepatitis screening) cancer in primary care. Participating practices were supported to undertake a suite of QI activities during a three-month intervention and 2-month follow-up period in late 2022 and 2023. Activities included using the National Cancer Screening Register (NCSR), completing educational modules, embedding auditing and reminder/recall processes, and improving the identification of Aboriginal and culturally diverse individuals in medical records.

Aims: Our goal was to evaluate the program's implementation and effectiveness at achieving increased awareness and engagement in cancer screening.

Methods: Several quantitative and qualitative data sources, including primary data such as questionnaires and interviews and secondary data involving extracts from national and state registries were used. We analysed the results using the RE-AIM framework, which assesses program success on several levels and from multiple perspectives.

Results: This evaluation included seventy-five general practices and five PHNs. Project outcomes included an increase in the number of practices and practitioners using the National Cancer Screening Register to facilitate screening and more practices conducting audits and sending recalls and reminders. There was an increased number of FOBT kits provided and ordered through practices, and an increase in the proportion of cervical screening tests that were self-collected, particularly in Regional practices. There were no changes in rates of Aboriginal and Torres Strait Islander identification on pathology forms, despite an increased confidence and improved systems to "ask the question" about identification at a practice level. Participants reported positive experiences of the program.

Conclusions: The Maximising Cancer Screening Program met many of its objectives and successfully enhanced awareness and practice engagement in cancer screening.

# Description of survivorship recommendations in NCCN guidelines in the United States

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#### **Abstract**

Introduction: The National Comprehensive Cancer Network (NCCN) in the United States issues evidence-based guidelines to ensure that all patients receive preventive, diagnostic, treatment, and supportive services that are most likely to lead to optimal outcomes. The information offered by these guidelines is used as the standard for clinical management and policy in cancer care.

Objective: This study aimed to assess the content of survivorship recommendations in the NCCN guidelines.

Descriptions: In April 2023, a total of 59 guidelines were downloaded from the NCCN website and assessed for survivorship recommendations and information provided. The guidelines were aimed at both adults and children with cancer.

Results: Among the evaluated NCCN cancer guidelines, only 20% included a dedicated survivorship section. Of the 12 guidelines with survivorship sections, all targeted survivors of adult-onset cancer. Half of these guidelines featured only general survivorship recommendations, for example, gynecological and colorectal cancers. When cancer survivorship sections were included, the most common domains were surveillance/management of late and long-term physical effects (92%), health promotion (92%), and psychosocial effects (75%). Surveillance for recurrences/new cancers and chronic disease management were less common (58% and 50%, respectively). Surprisingly, only 47% of guidelines without survivorship sections referred to other resources for the care of cancer survivors (including the NCCN survivorship guideline).

Conclusions: The findings indicate that less than a quarter of NCCN guidelines include a section dedicated to cancer survivorship recommendations, and less than half of the guidelines without survivorship sections refer to other resources for the care of cancer survivors. Though NCCN has a dedicated survivorship guideline, the lack of survivorship recommendations in disease-based guidelines shows a gap in the comprehensive provision of survivorship guidance. Standardization of survivorship care recommendations across all NCCN guidelines is needed

# The MAGPIE Study: Multi-cancer genomic risk assessment to target screening in general practice

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#### **Abstract**

Introduction: Polygenic risk scores (PRS) are able to predict an individual's risk of cancer and therefore target cancer screening more precisely based on risk. This genomic risk assessment can feasibly be delivered in general practice as a complex intervention, both recommending the right type and timing of screening for an individual and encouraging uptake of that screening.

Objectives: Following the MRC framework for complex intervention design, this study aimed to pilot and refine a multi-cancer genomic risk assessment to target screening in general practice.

Methods: General practice patients aged 45-59 were recruited in Melbourne, Australia, provided a saliva sample and received personalised risk information for three gender-specific cancers. The psychosocial (MICRA score, Cancer Worry Scale) and behavioural response (screening intention and uptake) was measured after 1, 2 and 6 months.

Results: 149 patients were recruited, and 143 personalised cancer risk results were returned. 22% were identified at increased risk for at least one cancer due to their family history and a further 20% were identified due to their PRS. The mean MICRA score (possible range 0-100) was 13.2 (sd 10.6). Cancer-specific anxiety (possible range 4-24) did not increase after risk information (baseline: mean 8.8, sd 2.6; 1 month: mean 8.4, sd 2.4; 2 months: mean 8.4, sd 2.6). Intentions to screen increased for all cancers, with statistical differences for colorectal cancer (baseline: 21%, 1 month: 30% and melanoma (baseline: 31%, 1 month: 50%).

Conclusions: The MAGPIE study shows that a multi-cancer polygenic risk score delivered in general practice can identify individuals for tailored cancer screening, without increasing cancer-related worry. Interim data showed an effect on intention to screen and final data on screening behaviour will be available by April 2024. Final results will be used to refine the complex intervention for trialling in the CASSOWARY RCT to begin in 2024.

# The management of Type II Diabetes in Colorectal cancer survivors in general practice: a data linkage study

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#### **Abstract**

#### Aims:

The management of comorbid conditions is emerging as a crucial aspect of healthcare for cancer survivors. Primary care is a critical component in the management of Type II Diabetes (T2D). Guidelines for the management of T2D patients are available, however international research has shown inequalities in the management provided exist in general practice (GP), including in cancer survivors. This study aimed to describe the management of T2D in survivors of colorectal cancer (CRC) in comparison to patients without CRC to determine if discrepancies in care provision exist in Australia.

#### Methods:

This novel study utilised data-linkage methodology to combine registry data and general practice EMR data \_CRC survivors were identified from the ACCORD registry and linked to MedicineInsight and Patron GP data sets, where a T2D diagnosis was identified. Patients active in GP with at least 12 months of follow up were included. CRC survivors were matched to controls based on age, gender, and year of activity in GP. The proportion of patients receiving adequate monitoring and achieving treatment targets were reported, with differences evaluated using chi-square tests.

### Results:

168 CRC survivors were linked to GP and matched to 649 controls. A slightly higher proportion of CRC survivors received at least one HbA1c test (55% vs 48%), blood pressure test (63% vs 55%), eGFR test (82% vs 76%) and cholesterol test (22% vs 15%) compared to controls with 29% meeting the HbA1c target level vs 26% of controls. Similar proportions of survivors vs controls received a uACR test (45% vs 44%).

#### Conclusions:

While differences in the proportion of patients being adequately monitored according to T2D guidelines exist, management of T2D is not neglected or overprovided in CRC survivors in comparison to the control group. Further research into factors influencing the achievement of treatment targets is warranted to explore differences in T2D management.

Evaluating barriers and enablers to the implementation of an automated lifestyle-focused SMS support program for cancer survivors in primary care: Semi-structured interviews following the Consolidated Framework for Implementation Research

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#### **Abstract**

Background: Lifestyle-focused short message service (SMS) interventions can improve health outcomes for people with chronic diseases, including cancer. However, limited evidence exists for effective implementation into primary care.

Aims: Evaluate primary care staffs' perspectives of barriers and enablers to implementing a lifestyle-focused SMS program for cancer survivors.

Methods: Semi-structured interviews (phone/videocall); discussion guide developed using the Consolidated Framework for Implementation Research (CFIR) to evaluate barriers/enablers at system-level (Outer-Setting), practice-level (Inner-Setting), Individual-level, Intervention-level and Implementation Processes. Inclusion criteria: general practitioners (GPs), practice-nurses, managers or receptionists working in Australia, familiar with Pen Computer Systems (Pen CS). Interviews were audio-recorded, transcribed verbatim and themes analysed deductively (Nvivo) using CFIR by two independent researchers.

Results: Participants (N=15) were GPs (n=11), practice-nurse (n=1), managers (n=2), and receptionist (n=1). Mean (SD) age was 46 (10) years, most were women (10/15), from major cities (12/15) and Australia's most advantaged socioeconomic areas (8/15). CFIR thematic analysis revealed several enablers: high patient opt-in for SMS reminders and staff incentives for additional workload (e.g. money, acknowledgement) (Outer-setting); positive culture around SMS appointment reminders (Inner-Setting); had necessary SMS delivery skills (Individual-level), describing message content and benefits to patients/testimonials (Intervention-level); highlighting benefits to patients, getting the whole team 'on board', automated processes, and identifying champions (practice managers/nurses) and supporters (receptionists) (Implementation). Barriers: unclear patient need, lack of resources (time, staff) or policies (e.g., no Medicare rebates) (Outer-setting); hesitancy about health-related SMS due to strict health-data management policies (Inner-setting), training needed for Pen CS SMS software (Individual-level), privacy concerns, perceived limitations for patients with older age or transient lifestyles (changing phones often) (Intervention-level) and unclear 'spam' SMS may increase workload for receptionists (Implementation).

Conclusions: A set of enablers and barriers were developed for implementing a lifestylefocused SMS intervention for cancer survivors, which will inform an implementation toolkit and national clinical trial in primary care.

# Cancer diagnosis in Scotland: further insights from the second Scottish National Cancer Diagnosis Audit and the potential role of a Scottish Rapid Cancer Diagnostic Service (RCDS)

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#### Abstract

Introduction/Objectives: To characterize cancer diagnosis in Scottish primary care in 2018/19 and draw comparisons with diagnostic activity in 2014. To explore the potential role of the Scottish Rapid Cancer Diagnostic Service.

Descriptions: A national audit of cancer diagnosis undertaken in Scottish general practices. Participating GPs collected diagnostic pathway data on patients diagnosed with cancer in 2018/19 from medical records. These data were supplemented by linkage to the Scottish Cancer Registry and previous audit data from 2014. Analyses explored and compared patient demographics, presentation, diagnostic routes and intervals.

Results: Seventy-three practices submitted data on 2,014 cases in 2014 and 90 practices submitted data on 2,318 cases in 2018/2019. Individual demographics and types of cancer were similar. There was a higher proportion of USC (urgent suspected cancer) referrals in 2019 than 2014 (42.9% vs 38.1%, p=0.008) but a similar proportion of emergency presentations (19.2% vs 20.4%). Primary care (median 4 (IQR 0-22) vs 5 (0-23)) and diagnostic intervals (27 (10-59) vs 30 (13-68) were similar in both periods. Significantly fewer (24.5% vs 28.3, p=0.015) had a diagnostic interval >60 days in 2019 than 2014. Harder to diagnose cancers were more likely to present as emergencies and be subject to prolonged delays in both cohorts. 17.9% of cases in the sample met criteria for the Scottish RCDS pilot. These patients had a significantly longer primary care interval (7vs4 days; p=0.001) than patients who did not meet the criteria.

Conclusions: The 2014 and 2018/19 cohorts were broadly similar. There is limited evidence that USC use increased between 2014 and 2018/19. Harder to diagnose cancers are still most likely to present as emergencies and be subject to delays. Overall, it seems there were small improvements in cancer diagnosis pre-pandemic. A further audit could examine evidence for a post-pandemic recovery. A Scottish RCDS has potential to reduce primary care delay.

# COLORECTAL CANCER SURVIVORS' EXPERIENCES WITH SUPPORTIVE CARE IN GENERAL PRACTICE AND SUGGESTIONS TO IMPROVE CARE

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#### **Abstract**

#### Introduction

Colorectal cancer (CRC) treatment can lead to various physical and psychosocial sequelae, necessitating ongoing monitoring and management. This highlights the crucial role of General Practitioners (GPs) in the coordination of survivorship care to enhance individuals' quality of life following CRC treatment.

This study aimed to investigate the experiences of CRC survivors with care provided by their GPs post-treatment, their perspectives on how to improve this care and the potential role of Patient-Reported Outcome Measures (PROMs) in monitoring survivorship care in primary care.

#### Methods

This mixed-method study utilised an investigator-developed survey and semi-structured qualitative interviews with CRC survivors to explore:(1) Post-treatment care experience with their GPs, (2) Ways to enhance this care, and (3) Perspectives regarding the potential use of PROMs for managing CRC treatment sequelae and meeting survivorship care needs. Survey responses were descriptively summarised and interview data was thematically analysed.

#### Results

Fifty-one CRC survivors (41% aged <50 years, 79% female) completed the survey and 19 participated in qualitative interviews. Participants reported experiencing a wide range of CRC treatment-related issues; however, they often did not discuss these concerns with their GPs. For instance, the percentages for experienced versus discussed concerns were as follows: 78% versus 27% for psychological/emotional concerns, 63% versus 22% for impaired sleep, and 69% versus 29% for weight loss/gain. Participants believed that improving post-treatment education to help better understand potential sequalae and having mechanisms to introduce relevant support services would improve their care. Participants were generally positive about incorporating CRC-specific PROMs in their survivorship care (70%), believing they could enhance communication with their GP for better recognition and management of CRC-treatment sequalae.

#### Conclusions

Our study identified a communication gap in the management of CRC treatment sequelae within the general practice setting. The use of CRC-specific PROMs appears to be a potential method acceptable to CRC survivors.

# Intersectional inequalities for socio-economically disadvantaged women and the impact on the NHS breast cancer screening programme: A Qualitative Evidence Synthesis (QES)

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#### **Abstract**

#### Background

Existing data shows there is a strong association between low socio-economic status (SES) and low breast cancer screening attendance, highlighting the many barriers women are more likely to encounter when accessing breast cancer screening. SES inequalities do not happen in isolation; people living in disadvantaged areas are also more likely to experience multiple inequalities. Therefore, it is necessary to explore the intersections of these inequalities in order to understand the impact on attendance.

### Objectives

This Qualitative Evidence Synthesis (QES) aimed to review and synthesise UK-based qualitative studies exploring intersectional inequalities in the context of breast cancer screening in order to inform intervention development to improve uptake of breast cancer screening among low SES women.

#### Methods

The QES protocol was prospectively registered with PROSPERO (CRD42023394413). Electronic databases MEDLINE, EMBASE, PsycINFO, CINAHL, and ASSIA were searched alongside grey literature. Reliable search filters for inequalities were combined with MeSH and keyword terms for the concept of breast screening.

Search selection included abstract and full-text screening carried out independently by two reviewers (EL/JC). Quality assessment of the included studies was carried out using the Critical Appraisal Skills Programme (CASP) qualitative studies checklist. Data was then extracted and synthesised to identify patterns and descriptive themes. Data analysis was conducted within the framework of the Sociocultural Health Behaviour Model.

#### Results

The findings from this QES study will make an important contribution to developing interventions that may improve breast cancer screening attendance for those experiencing multiple inequalities.

#### Conclusions

Exploring the intersections of inequalities for women living in socio-economically disadvantaged areas helps us to better understand the complexities around accessing breast cancer screening. Gaining a rich interpretation of experiences, views, and healthcare beliefs enables us to make recommendations for future research, policy and practice in order to improve the uptake of breast cancer screening.

# Leveraging primary care cancer service improvement capability via GP input into the formal Governance Group structure of LMICS (Loddon Mallee Integrated Cancer Service)

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#### **Abstract**

Nine Integrated Cancer Services (ICS) are funded by the Department of Health across Victoria to undertake quality improvement in cancer services with hospitals and health services, traditionally within treatment services. Each ICS has a formal Governance Group (GG) structure including Clinical Director (CD) representation, historically from a Medical Oncology or Surgical craft group.

LMICS has a large geographical region, higher incidence and greater risk factors for many cancers, where the majority of health care is provided by GPs. Access to specialist services is more limited, with longer wait times than in metropolitan areas. LMICS work is underpinned by a strategic population health intersectoral approach that utilises our influence and ability to connect cancer services. LMICS identified an opportunity where the existing GG structure could become a springboard to allow greater strategic intersection with the primary care sector. The aspiration was to facilitate GP input via the CD positions, to strengthen their role as peer champions and engage and encourage system and service level reform and improvements in the primary care-acute cancer sectors across the Loddon Mallee Region.

In 2021, two GPs were appointed onto the LMICS GG in a ''job share'' CD role, alongside a Medical Oncologist. This innovative and now embedded case study model has not only facilitated more formal collaboration with the Primary Health Network, but in a myriad of ways added a critical primary care interface lens when strategic and service improvement decisions are being made. It's also allowed the LMICS team to have ''real time'' input from GPs into project development and implementation, providing immeasurable insights and strategic advantage.

The model has potential application across all ICS as a lever for enhanced primary care collaboration and is a way of translating policy and guidelines into practice that has a clear win-win benefit for the whole cancer service system.

#### Other category

Strategic Planning for GP Acute Shared Cancer Care

# Role of Primary Health Care in National Cancer Plans: A scoping review of relevant cancer strategies.

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#### **Abstract**

Background: Cancer is the second leading cause of death globally. The burden of cancer is increasing rapidly in Latin America and in Chile. The World Health Organization (WHO) recommends the establishment of national plans for cancer control (NCPs) that incorporate Primary Health Care (PHC). PHC plays a crucial role in cancer control and many countries have developed NCP. However, the alignment between NCP functions and the globally-recognized essential functions of PHC for cancer in Chile is unclear.

Aim: To summarize the evidence on the essential NCP cancer functions and interventions of PHC globally and to identify potential gaps in the actions assigned to PHC in Chile.

Methods: We conducted a scoping review that included a systematic search in Pubmed for peer-reviewed literature from 2011 to 2021 as well as a review of the official NCP platform. We developed a critical review analysis with standardized criteria, comparing cancer prevention actions reported in the literature with those included in the Chilean NCP.

Results: Among 2,146 studies identified, 56 articles were fully reviewed, with all but one originating from developed countries. The evidence highlights PHC's significant role in cancer promotion, prevention, and early detection, with a particular emphasis on new screening techniques. These findings align with the Chilean NCP. However, a major gap identified was in the care and follow-up of cancer survivors.

Conclusion: The Chilean NCP positions PHC as a key integrator of the health network, primarily emphasizing promotion, prevention, and early diagnosis, which is in line with the global literature. However, survivor care is underrepresented in the Chilean NCP, despite the strong growth of this population globally and the key role of primary care reported in many studies. Future NCPs should consider including guidelines and goals for cancer survivorship associated with PHC functions.

#### Other category

National Cancer Plan

# Identifying cirrhosis and liver cancer in primary care: The IC3 Trial

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#### **Abstract**

Background: Hepatocellular carcinoma (HCC) is a low survival cancer, with an increasing incidence rate in Australia, with cirrhosis; the primary risk predictor. Current cirrhosis screening and detection rates are low in primary care settings, with 60% of patients diagnosed with HCC, not in appropriate surveillance programs. This is due to a lack of awareness of risk factors, and low accuracy of existing liver screening tests in primary care. Targeted screening for cirrhosis in at-risk populations may lead to improved diagnosis and appropriate management in HCC surveillance pathways.

Methods: This is a stratified randomised controlled single blinded, parallel arm superiority trial, that will compare the rate of participants entering an HCC surveillance pathway. The intervention arm will enter a cirrhosis detection pathway and the control arm will continue in usual general practitioner care. Two thousand eight hundred and four adult participants, aged 45-75, with risk factors for liver disease, will be recruited from primary care settings in both regional and urban settings across four Australian states. Participants will be stratified by clinic site and a screening tool score for hazardous drinking. Randomisation will be 1:1, using permuted blocks of random sizes, concealed until after the trial is completed. Secondary outcome measures include other liver related endpoints (cirrhosis diagnosis, incident HCC, episodes of liver decompensation), the optimal cirrhosis detection pathway, cost effectiveness of the cirrhosis detection pathway compared to usual care, and patient reported outcomes including quality of life, across the two groups.

Discussion: This trial will provide evidence for the implementation of a cirrhosis detection pathway in primary care settings, to support general practitioners in early diagnosis and detection of advanced chronic liver disease. This will provide evidence to optimize enrolment into HCC surveillance programs to facilitate early HCC diagnosis, gain access to potentially curative treatments, and potentially improve patient survival.

# Uncovering the Health Economic Impact of Multi-cancer Early Detection(MCED) Tests Through Dynamic Simulation: A System Dynamics Modeling Study

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#### **Abstract**

# **Background**

Cancer screening plays a critical role in early disease detection, leading to improved patient outcomes. In Australia, established screening protocols for major cancers like colorectal, breast, and cervical have significantly contributed to timely cancer detection. However, there is potential to enhance these screenings through the implementation of Multi-Cancer Early Detection (MCED) tests, though comprehensive data on its health and economic impacts in Australia is limited.

#### Aim

The aim of this study is to evaluate the potential benefits of MCED testing within the Australian healthcare context. We seek to identify scenarios in which MCED tests provide a balanced ratio of benefits to costs, maximizing value for patients and the broader healthcare system.

#### **Methods**

A system dynamics (SD) model was developed to represent existing standard of care (SOC) screening pathways for prominent cancers, integrating potential clinical pathways introduced by MCED tests. The model encompasses the entire process from eligibility for SOC screening to diagnosis and staging, excluding treatment pathways due to their dynamic nature and variability among patients. An integrated cost and health outcomes model was also created to assess the costs and impacts on 5-year survival rates and Quality-Adjusted Life Years (QALYs) associated with both SOC and MCED.

#### **Results**

The study will include the effects of various screening intervals and assess the long-term benefits and costs of MCED testing for early solid tumor detection. Results will also cover the benefits and costs among different patient groups, including those ineligible or not participating in SOC screening, and those receiving both SOC and MCED tests. The impact on health outcomes and costs due to the stage shift resulting from MCED testing will be reported.

#### Conclusion

The findings from this study have the potential to significantly influence the cancer screening landscape in Australia, informing critical decisions regarding the integration of MCED to complement the current screening methods.

# Updated epidemiology of gastrointestinal cancers in East Asia

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#### **Abstract**

Introduction: Globally, gastrointestinal cancers represent more than one-fourth of all cancer incidence and one-third of cancer-related mortality.

Objectives: This project provides a comprehensive and updated summary of the epidemiology of gastrointestinal cancers in East Asia.

Descriptions: This study compares their epidemiology in East Asia with that in Western regions, and highlights the major risk factors and implications for prevention.

Results: Although there has been much progress in screening colorectal cancer, the prognosis of other gastrointestinal cancers tends to be poor. The highest burden of gastrointestinal cancers, including stomach, liver, oesophageal and gallbladder cancers, was observed in regions in East Asia. The increasing burden of gastrointestinal cancers in East Asian regions is related to population growth, ageing and the westernization of lifestyle habits in this region. Furthermore, the rising incidence of young-onset colorectal cancer is an emerging trend in East Asia.

Conclusions: Overall, to optimally reduce the disease burden incurred by gastrointestinal cancers in East Asian regions, a concerted effort will be needed to modify unhealthy lifestyles, promote vaccination against the hepatitis virus, control Helicobacter pylori, liver fluke and hepatitis virus infections, increase the uptake rate of colorectal cancer screening, enhance detection of early cancers and their precursors, and improve cancer survivorship through an organized rehabilitation programme.

# The Role of the Mediterranean Diet in Breast Cancer Survivorship: a secondary data analysis and a Mendelian Randomization study

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### **Abstract**

### **Background**

Female breast cancer (BC) is the most frequently diagnosed cancer. Despite the improved long-term survival rates of BC patients, the unique demands of high-quality health care to improve BC survivorship are commonly unmet. The Mediterranean diet (MD) is associated with reduced breast-cancer risk and various health-related benefits in the general population. However, our recent systematic review only found low-to-very-low certainty of association between the MD and reduced mortality, and limited evidence on outcomes reflecting the wellbeing of survivors, such as quality of life (QoL). Therefore, its role on BC survivorship remains uncertain.

### Aim

This study aims to explore the role of the MD in BC survivorship, including quality of life, survival and health related outcomes.

#### **Methods**

A secondary data analysis and a Mendelian randomization (MR) study are planned as the main research methods. We will use UK Biobank data to explore the associations of MD with outcomes in BC survivors. The primary outcomes will be QoL, mortality and BC recurrence, which are key factors for addressing survival and wellbeing. The secondary outcomes will include health-related parameters (anthropometric and biochemistry parameters) and long-term/late effects of BC treatments (e.g. incidence of cardiovascular disease), which will further address the common issues of BC follow-up care and comorbidity management. Linear/logistic regression and survival analysis, adjusting for potential confounders will be applied. The limitations of current evidence will be addressed, such as assessing the association in patient group with diet measured after BC diagnosis. MR will be used to further explore the causal relationship between MD and the outcomes, where possible.

### **Outcomes**

The analysis is currently in progress. Main results are expected to be shared for the presentation.

### **Conclusions**

The planned secondary data analysis and MR study results are expected to provide robust evidence to inform dietary guidelines and development of a dietary intervention for BC survivors.

# Impact of Distribution Changes in Population-Wide Electronic Health Records During the COVID-19 Pandemic on the Fairness of Cancer Risk Prediction Models

<u>Yangfan Li</u> University of Cambridge, Cambridge, United Kingdom

### **Abstract**

### Introduction

Cancer risk prediction models face challenges when applied to populations and timeframes that differ from training data due to shifts in variable distributions. COVID-19 pandemic had an impact on practices and patient behaviour, potentially affecting the accuracy of these predictions and exacerbating disparities. Our goal is to quantitatively measure these shifts, evaluate their implications for cancer risk prediction, and identify subpopulations that are disproportionately affected.

### **Objectives**

Our primary objectives are:

- Quantify the shifts that occur in different cohorts and time periods, when applying a colorectal cancer risk prediction model as an illustrative case.
- Relate the shifts in variable distributions to model's discrimination and calibration changes.
- Identify disadvantaged subgroups susceptible to inaccurate predictions.

### Methods

We adapted the CRC risk prediction model derived using UK Biobank for deployment in the Clinical Practice Research Datalink and HDRUK DATA-CAN at multiple timepoints spanning the COVID-19 pandemic. To quantify the distribution shifts in risk predictors, cancer outcomes, and their relationships across datasets and time, we used methods including the Kolmogorov-Smirnov test and Kullback-Leibler divergence. We will calculate the integrated Brier score to determine individual predictive performance and train a classifier to identify key characteristics that predict model performance, thereby identifying disadvantaged subpopulations.

### Results

We have preliminary results on DATA-CAN, which covers over 96% of the population in England. We examined changes in the number and distribution of basic demographics, as well as available health records relevant to the model, across the three lockdown periods. We also analyzed the sensitivity of different quantitative methods for detecting these changes. Currently, we are investigating their impacts on model performance, as well as identifying characteristics of disadvantaged subpopulations.

### **Conclusions**

This study promises to provide valuable insights into the types and origins of changes in variable distributions and their impact on model performance, which is critical for creating more adaptive and equitable clinical-decision systems.

# Addressing informational and support needs for Victorian women and people with a cervix who receive an abnormal Cervical Screening Test result and are referred to colposcopy.

<u>Alice Bastable</u><sup>1</sup>, Ange Steele<sup>2</sup>, Rachael Andrews<sup>2</sup>, Kelly Mills<sup>2</sup>, Stefanie Hodson<sup>1</sup>, Michelle Cornelius<sup>1</sup>, Lauren Temminghoff<sup>1</sup>

<sup>1</sup>Cancer Council Victoria, Melbourne, Australia. <sup>2</sup>The Royal Women's Hospital, Melbourne, Australia

### Abstract

### Introduction/background:

Thousands of Victorians are referred to colposcopy each year. Despite the importance of attending colposcopy for the detection and assessment of precancerous or cancerous cervical cell abnormalities, data shows that some Victorian women and people with a cervix referred to colposcopy do not attend. This can result in delayed treatment, poorer health outcomes, increased waitlist times and unnecessary healthcare expenditure.

### **Objectives/ aims:**

Develop a suite of resources for patients and healthcare professionals that address the informational and emotional needs of patients who receive an abnormal Cervical Screening Test (CST) result and are referred for colposcopy.

### **Description/ methods:**

This project used the insights from previous qualitative research conducted in 2022 by Cancer Council Victoria (CCV) that identified barriers and enablers to colposcopy attendance. Facilitating factors included addressing patient stress, anxiety and information needs and improving healthcare professional communication.

Following a desktop resource review, resources were drafted, clinically reviewed and translated into plain language. Six patients who had experienced barriers to colposcopy attendance were recruited to review drafted and existing resources for appropriateness and acceptability before final clinical review and production.

### Results/ outcomes:

Three fact sheets, one animation and one video that explain abnormal CST results and prepare patients for colposcopy were developed and promoted to patients and healthcare professionals. Resources promoted CCV's nurse helpline as a contact for more information and support. Selected resources were then integrated into patient facing communications and systems at a large metropolitan public hospital. Further promotion, healthcare professional education, partnering with other health services and evaluation will follow.

#### **Conclusions:**

Identifying patient barriers and involving patients in resource development can address informational and support needs for those who receive abnormal CST results and are referred to colposcopy. It is hoped that patient colposcopy experience and attendance will be improved because of this project.

## Incidence, Risk Factors, and Temporal Trends of Small Intestinal Cancer: A Global Analysis of Cancer Registries

<u>Junjie Huang</u>, Martin Wong JC School of Public Health and Primary Care, CUHK, Sha Tin, Hong Kong

#### Abstract

Introduction: Small intestinal cancer is a rare cancer, with limited studies exploring its epidemiology.

Objectives: To our knowledge, this study is the first effort to comprehensively analyze the incidence, risk factors, and trends for small intestinal cancer by sex, age, and country.

Descriptions: Global Cancer Observatory, Cancer Incidence in Five Continents Plus, and Global Burden of Disease were accessed to estimate the age-standardized rates of small intestinal cancer incidence (International Classification of Diseases, 10th Revision, Clinical Modification: C17) and prevalence of lifestyle risk factors, metabolic risk factors, and inflammatory bowel disease (IBD). Risk factor associations were assessed by linear and logistic regressions. Average annual percent change was calculated using joinpoint regression.

Results: A total of 64,477 small intestinal cancer cases (age-standardized rate, 0.60 per 100,000) were estimated globally in 2020, with a higher disease burden found in North America (1.4). Higher small intestinal cancer incidence was associated with higher human development index; gross domestic product; and prevalence of smoking, alcohol drinking, physical inactivity, obesity, diabetes, lipid disorder, and IBD ( $\beta$  = 0.008-0.198; odds ratios, 1.07-10.01). There was an overall increasing trend of small intestinal cancer incidence (average annual percent change, 2.20-21.67), and the increasing trend was comparable among the 2 sexes but more evident in the older population aged 50-74 years than in the younger population aged 15-49 years.

Conclusions: There was a substantial geographic disparity in the burden of small intestinal cancer, with higher incidence observed in countries with higher human development index; gross domestic product; and prevalence of unhealthy lifestyle habits, metabolic disorders, and IBD. There was an overall increasing trend in small intestinal cancer incidence, calling for the development of preventive strategies.

## The challenges of conducting research in primary care - lessons from the PEOPLE-Hull study

Alex Young<sup>1</sup>, Julie Walabyeki<sup>1</sup>, Sara Macdonald<sup>2</sup>, Elizabeth Mitchell<sup>1</sup>, Una Macleod<sup>1</sup>

<sup>1</sup>Hull York Medical School, University of Hull, Hull, United Kingdom. <sup>2</sup>University of Glasgow, Glasgow, United Kingdom

### **Abstract**

### Introduction

Research has been conducted in primary care to understand patient experiences of healthcare. In the field of cancer research, there is a growing body of work linked to early diagnosis and symptom awareness that has been linked to interventions in primary care. The PEOPLE-Hull study similarly looked to increase early presentation to primary care for respiratory symptoms. Drawing on the complex intervention framework of Skivington et al. (2021), we explore the contextual challenges of conducting a multi-faceted patient-facing study in primary care during- and post-COVID.

### Aim

To explore the challenges presented in conducting research in primary care in Hull duringand post-COVID-19 pandemic.

### Descriptions

We recruited six practices in North and East Hull and asked them to complete these activities: educational activities and quality improvement exercises, co-production and display of practice-specific campaign materials, develop a respiratory pathway and provide fast-track appointments, patient interviews, focussed ethnography, consensus development exercise, and data extraction. We interviewed clinical and administrative staff (n=24) in recruited GP practices and eligible patients (n=24). We also conducted observations in the practices as part of the focused ethnography.

### Results

Each practice was considered within its own context in accordance with the complex intervention framework. We found two overarching factors which had significant influence on the practice's engagement with the study activities: internal and external factors. Internal factors included the practice size, support of practice management, and practice relationship with patients. External factors included policy changes e.g. additional vaccination clinics and changes to practice access. These affected other study activities, e.g. patient recruitment, planning for focused ethnography elements, and data extraction,

### Conclusion

Conducting research in primary care is always challenging. We learned from this study that our plans had to be flexible and adaptable to the different circumstances in each of the recruited practices and that a pragmatic approach is needed for data collection.

### Other category

Research participation

## Exploring the key components of a pathway to respond to new respiratory symptoms in primary care: a qualitative study.

Alex Young<sup>1</sup>, Julie Walabyeki<sup>1</sup>, Sara Macdonald<sup>2</sup>, Elizabeth Mitchell<sup>1</sup>, Una Macleod<sup>1</sup>

Hull York Medical School, University of Hull, Hull, United Kingdom. <sup>2</sup>University of Glasgow, Glasgow, United Kingdom

### **Abstract**

### Introduction

Hull has one of the highest rates of Lung cancer In England but one of the lowest rates of 2-week wait referrals, indicating potential delays in diagnosis. The PEOPLE-Hull study combined public and community engagement, and primary care interventions to improve the early diagnosis of lung cancer. We report on the practice aspect of the study, conducted during and post-COVID-19.

### Objectives

To explore the key components of a pathway to respond to new respiratory symptoms in primary care in Hull.

### Descriptions

Each recruited practice (n=6) designed a pathway to fast-track appointments for patients with new respiratory symptoms. We compared the planned pathway to the enacted pathway. We interviewed clinical and administrative staff (n=24) in recruited GP practices and eligible patients (n=24) about the appointment-making process. Eligible patients were adults over 40 years old, preferably without COVID-19, consulting for ongoing or new respiratory symptoms developed during the study period. We asked the patients about their experience scheduling an appointment. Clinical and practice staff attended in-person focus group discussions.

### Results

We report on the development of practice-specific pathways. Planned pathways included; telephone triaging, protected on the day, and offering out-of-hours appointments. Not all the planned respiratory pathways were followed. This was dependent on patient factors, the influence of COVID-19, and practice context.

Patients described influences on their willingness to consult, e.g. perception of the severity of experienced respiratory symptoms, and time burden of appointments. Patients also downplayed cough symptoms as a primary complaint, or didn't attend, assuming coughs were a COVID symptom. Practice context included additional pressures from staffing, e.g. staff shortages, practice changes, e.g. merges, and seasonal pressures.

### Conclusion

Successful components for a pathway for respiratory symptoms e.g. additional triaging, varied across our recruited practices, suggesting that the best approach is flexible to the practice's contextual challenges and patient population.

# A critical appraisal of the evidence for PSA screening intervals recommended in clinical practice guidelines for prostate cancer: a systematic review and assessment using AGREE II

<u>Kiana Collins</u><sup>1</sup>, Pradeep Virdee<sup>2</sup>, Jason Oke<sup>2</sup>, Brian Nicholson<sup>2</sup>

<sup>1</sup>University of Oxford, OXFORD, United Kingdom. <sup>2</sup>University of Oxford, Oxford, United Kingdom

### **Abstract**

### Introduction

Clinical guidelines recommend "screening" with the PSA test for prostate cancer although the evidence is conflicting. Patients may undergo PSA testing due to symptoms or by request. After receiving results below the urology referral threshold, uncertainty surrounds the necessity and timing of future PSA testing for these patients. Internationally, no consensus exists on the optimal interval for PSA testing in primary care.

### Objective

The aim of this review was to summarise the recommendations in clinical practice guidelines for PSA screening intervals and evaluate the evidence cited by each guideline to determine if it was appropriate to support the recommendation.

### Description

We searched PubMed and TRIP databases for guidelines' written in English, and developed or updated between 2013-2023. For each guideline we extracted the recommended interval, determined if intervals were risk stratified and assessed quality using the AGREE II tool. For referenced studies, we identified if they used single or multiple PSA tests, aimed to calculate intervals, and if their conclusions were appropriately incorporated into guideline recommendations.

### Results

Across the 11 published guidelines, 9 (82%) guidelines recommended an interval around 2-4 years. 6 (55%) of recommendations for intervals were risk-adjusted by PSA value. 4 (36%) were risk-adjusted by both age and PSA value and 1 (9%) was not risk-adjusted by either age or PSA. 38 individual papers were referenced as evidence for the recommended intervals in the 11 guidelines. 13(34%) of the papers cited as evidence for intervals were studies done with single PSA test results. 6 (16%) had the objective of determining PSA testing intervals.

### Conclusions

Guideline recommendations for PSA screening intervals varied. Most guidelines cited evidence derived from single PSA test values. Many referenced studies primarily assessed prostate cancer risk, and the data often originated from randomised screening trials with a primary focus on reducing mortality rather than determining precise testing intervals.

### Development of a General Practitioner (GP) Androgen Deprivation Therapy (ADT) Management Action Plan in a Regional Setting. A 5-year review.

<u>Sonia Strachan</u> Goulburn Valley Health, Shepparton, Australia

### **Abstract**

### Introduction and objectives:

Androgen Deprivation Therapy (ADT) is a widely accepted treatment for metastatic and locally advanced prostate cancer. While its clinical benefits are well-established, ADT is known to have significant side effects affecting cardiovascular and metabolic systems, bone health, psychological well-being, and cognitive function. This study assesses the utilization and effectiveness of the GP ADT Management Action plan, developed and implemented at Goulburn Valley Health, five years post-development.

### Description:

We conducted an audit to evaluate the extent to which the ADT care plan was utilized and its impact. Healthcare professionals and patients provided feedback on their experiences with the care plan, its effectiveness, and its influence on patient well-being.

### Results:

Survey results indicated that both healthcare providers and patients are satisfied with the care plan, recognizing its positive effects on patient care and well-being. The Prostate Cancer Specialist Nurse, a key advocate for the care plan, observed improved patient comprehension of their treatment. Furthermore, the care plan has enhanced communication between patients' oncological treatment teams and primary healthcare providers, significantly improving ADT patient care.

This local care plan has attracted interest from healthcare facilities nationally, leading to its adaptation to their specific needs.

### Conclusions:

The ADT care plan is now an established standard of care at GVH, routinely implemented at the commencement of ADT by all treating medical streams (surgical, radiation oncology, medical oncology).

Qualitative data suggests satisfaction among healthcare providers and patients, along with enhanced interdisciplinary communication and care.

### Other category

Shared care

## Supporting informed financial consent in primary care: Implementation: recommendations from early adopters.

Carolyn Mazariego $^1$ , Raylene Cox $^2$ , <u>Kate Whittaker</u> $^2$ , Elizabeth Kennedy $^1$ , Megan Varlow $^2$ , Natalie Taylor $^1$ 

<sup>1</sup>The Daffodil Centre, The University of Sydney, a joint venture with Cancer Council NSW, Sydney, Australia. <sup>2</sup>Cancer Council Australia, Sydney, Australia

### **Abstract**

### Background:

Despite the negative psychological and physical impacts of financial toxicity on people affected by cancer, there is no standard process to ensure that informed financial consent (IFC) is obtained within cancer care settings. Understanding the costs and payment structures associated with cancer care can be challenging for patients given the complex way in which healthcare is delivered in Australia. General Practitioners (GP) refer people to cancer diagnostic and treatment services, and provide care coordination, thereby they have a role in informing patients about IFC.

### Aims:

This study aimed to understand existing pathways of established IFC processes to inform general recommendations about its implementation in different cancer care settings.

### Methods:

Australian healthcare professionals involved in the care of people affected by cancer participated in semi-structured interviews. Participants had an existing IFC process, so they were considered 'early adopters'. The Consolidated Framework for Implementation Research informed the interview questions and a deductive thematic analysis identified instances where IFC discussions and strategies were implemented.

### Results:

Interviews were conducted with 10 healthcare professionals, including three GPs. A process map was developed for each participant, documenting points along the usual care pathway where IFC strategies or processes were implemented. IFC processes varied by professional speciality and healthcare setting. Key components of the individual IFC process maps were characterised and led to the development of an aggregated process map. Key components included; the establishment of centralised points of contact, consolidated information delivery, reiteration and follow-up. Themes from the interviews were grouped into barriers and enablers to the delivery of IFC, and along with the aggregated process map, informed recommendations on practices to achieving IFC.

### Conclusions:

General Practitioners can use IFC to support people with a cancer diagnosis to understand the potential financial costs of care and the financial support options available.

# Development of a Risk Scoring System for Predicting Advanced Colorectal Neoplasia within Subcentimetric Polyps: a population-based study

Junjie Huang, Martin Wong
JC School of Public Health and Primary Care, CUHK, Sha Tin, Hong Kong

### **Abstract**

Background and aim: This study aimed to devise and validate a risk scoring system for predicting advanced colorectal neoplasia (ACN) within subcentimetric polyps in a large Asian population.

Methods: A retrospective study involving participants receiving the initial colonoscopy was conducted from 2008 to 2015 in Hong Kong. Among 44,846 subjects, 28675 subjects had polyps<1cm detected as the most severe lesion. A random sample of 20,072 subjects acted as a derivation cohort to evaluate independent factors associated with ACN by logistic regression modelling. The remaining 8603 subjects formed a validation cohort. We developed and validated a risk scoring system and evaluated its performance using the Area Under the Curve (AUC).

Results: The following variables were used to assign risk scores to each involved participant: patients admitted from inpatient colonoscopy (2.2) or not (1); patients with 3 or more chronic diseases (hypertension, diabetes and hyperlipidaemia) (1.7) or not (1); anaemia (1.3) or without anaemia (1); patients received aspirin (0.5) or not (1); patients received of OTHER NSAIDS (0.3) or not (1); gender male (1.2), gender female (1); age below 55 (1), 55-64 years (1.4), 65-69 (2), 75 or above (2.2). A score of < 2.192 was designated as low risk (LR). Scores at 2.192 or above had a higher prevalence of ACN and were designated as high risk (HR). In the validation cohort, the prevalence of ACN in LR and HR groups was 3.56% and 13.28% respectively. The AUC for the risk-scoring model in the derivation and validation cohorts was 71.38%. The NNS was 8, showing the efficiency of the scores to detect one ACN in HR subjects.

Conclusion: The findings of the present study provide evidence to physicians on appropriate workup for subcentimetric polyps detected by imaging tests. We recommend physicians to utilize this validated score for risk-stratification of patients detected having subcentimetric polyps.

# Nurse-enabled, shared-care MOdel between primary and acute care for proStatE cancer Survivors (MOSES): a hybrid, implementation-effectiveness study.

Nicolas H. Hart <sup>1,2</sup>, Jon Emery <sup>3,4</sup>, Jeff Dunn <sup>5,6</sup>, Patsy M. Yates <sup>7</sup>, Bogda Koczwara <sup>1</sup>, Louisa G. Gordon <sup>8</sup>, Michael Jefford <sup>9</sup>, Lee Jones <sup>8</sup>, Ian Vela <sup>10,7</sup>, Ian D. Davis <sup>11,12</sup>, Shomik Sengupta <sup>11,12</sup>, Carla Thamm <sup>1,7</sup>, Raymond J. Chan <sup>1,7</sup>

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### **Abstract**

Background: Prostate cancer is the second most common cancer globally with a 10-year relative survival rate of  $\sim 90\%$ . Owing to its high incidence and prevalence, the specialist-led model of prostate cancer follow-up care is unsustainable, requiring patients to attend specialist outpatient clinics for 5 years or more. Shared-care (between specialists and general practitioners) is safe, feasible, and acceptable, and may provide best-practice care to address the needs of these patients.

Aims: To assess the effectiveness, cost-effectiveness, and implementation of the MOSES-Survivorship intervention (shared-care model) relative to usual care (specialist-led model).

Methods: Prostate cancer patients (n=490; randomised 1:1; n=245 per arm) will be recruited over 4 years. Eligible participants must be on active surveillance, OR within 3 years following curative-intent treatment for localised prostate cancer, OR at-least 3 months after a metastatic prostate cancer diagnosis. Participants randomised to MOSES-Survivorship shared-care model receive a specialist prostate cancer nurse-led survivorship care plan (per the Prostate Cancer Essentials Framework), communicated through case conferencing to their general practitioner (GP) with established follow-up schedules and negotiated clinical responsibilities between their cancer specialist and GP. This is an equivalence trial, with health-related quality of life (FACT-P) at 12-months as the primary outcome. Cost-effectiveness and budget impact analysis will be conducted. Implementation outcomes will be evaluated using the RE-AIM framework.

Results: Two hospitals are recruiting (Princess Alexandra Hospital, QLD; Eastern Health, VIC). As of November 2023, 31 patients have consented to the study, with 25 randomised (13 to MOSES-Survivorship; 12 to usual care). Of these, 5 (20%) are on active surveillance, 12 (48%) are patients with localised prostate cancer post-treatment, and 8 (32%) are patients with metastatic prostate cancer.

Conclusions: This trial evaluates whether a shared-care model (between specialists and general practitioners) produces clinically similar outcomes to standard care; is cost-effective; and can be sustainably implemented. Barriers, facilitators, and learnings will be reported.

### The role of GPs in oncology supportive care and how a multidisciplinary allied health team can benefit oncology patients.

Sean Black-Tiong, <u>Lauren Whiting</u> Lift Cancer Care Services, Adelaide, Australia

#### **Abstract**

Introduction: Patient access and awareness of recommendations for exercise and allied health supports in Australia is limited. There is clear evidence for the benefits of exercise and multidisciplinary supportive care from diagnosis and throughout treatment into survivorship care. General Practitioners(GPs) have the ideal skillset to assess and coordinate the complex and wholistic care required.

Objectives: Describe the supportive care needs that GPs can assess for in oncology patients and the preventive care benefits this can provide in various domains. Educate practitioners on the allied health services of specific benefit to oncology patients.

Descriptions: From the point of diagnosis, patients can benefit from a wide range of supportive care professionals. Due to competing priorities and time constraints, medical practitioners may not be able to provide the appropriate depth of advice, however they can provide strong recommendation for patients to receive this advice from specialised alliedhealth professionals.

Results: We will provide an overview of allied health services and how each of these is of specific benefit in the oncology population that GPs should be aware of (dietician, exercise physiology, physiotherapy - including lymphoedema and mens/women's health, psychology, speech pathology). This will be informed by our experience as an oncology specialised provider of these services.

Conclusions: Early intervention by an oncology specialised allied-health team can help address patient concerns and prevent significant complications (e.g. cancer related fatigue, cachexia, sarcopenia, depression/anxiety, carer stress or relationship stress, falls, cardiovascular risk). The skillset of GPs in wholistic care provision and with long-term continuity provides an optimal clinical pathway for patient assessment and referral to indicated oncology specialised multi-discilplinary team care.

### A hybrid event to increase access to information about postmastectomy breast reconstruction

Camille Williams<sup>1</sup>, Kate Mlodzik<sup>1,2</sup>, Natalie Witkin<sup>1</sup>, Patricia Rabel-Jeudy<sup>1</sup>, Matina Haralampous<sup>1</sup>, Maria Madden<sup>1</sup>, Holly Bradley<sup>2</sup>, Veronica Guglietti<sup>1</sup>, Aisha Lofters<sup>1,3,4</sup>, Randi MacQueen<sup>1</sup>, Aletta Poll<sup>1</sup>, Emma Rinaldo<sup>1</sup>, Mitchell Brown<sup>1,3</sup>, <u>Elaine Goulbourne</u><sup>1</sup> Women's College Hospital, Toronto, Canada. <sup>2</sup>Canadian Cancer Society, Toronto, Canada. <sup>3</sup>University of Toronto, Toronto, Canada. <sup>4</sup>Women's College Research Institute, Toronto, Canada

### **Abstract**

Background: Breast Reconstruction Awareness (BRA) Day is a free event that brings together women pre/post breast reconstruction and various healthcare providers (HCPs), e.g., reconstruction surgeons, genetic counsellors, social workers, and allied health professionals. Before the pandemic, BRA Day was held in-person; however, in 2021 and 2022, it was offered virtually. This year, we attempted to capitalize on both presentation formats.

Objectives: A hybrid event that: 1) educates women on their options for post-mastectomy breast reconstruction; 2) empowers women to make decisions about reconstruction; 3) provides an opportunity to see reconstruction outcomes; and 4) connects women to others who have had reconstruction and/or can provide support.

Description: The event was delivered in person at Women's College Hospital (Toronto, Canada) and virtually via Zoom Webinar. The program (livestreamed and in-person) included 5 expert presentations, 3 patient speakers, and a question-and-answer period. The in-person event also included 10 exhibitors who shared relevant services and two private 'Show & Tell' lounges, where volunteers who have undergone reconstruction showed their results and shared their experiences. Virtual attendees received a pre-recorded Show & Tell session. A post-event feedback survey will be administered.

Results: Of 200 in-person registrants, 97 were pre/post reconstruction; 45 were at-risk or in treatment for breast cancer; and 52 were HCPs. There were over 100 in-person and almost 400 virtual attendees. Anecdotal comments from attendees and exhibitors indicate that the first hybrid BRA Day was successful. Results of the post-event survey are pending.

Conclusions: The volume of questions submitted before and during the event indicate a great demand for accessible and credible information about breast reconstruction. A hybrid event allowed us to connect attendees with Show & Tell volunteers and exhibitors while also broadening access through virtual presentation. Going forward, we will continue to offer a hybrid format and utilize attendees' feedback to improve the event.

### Providing patients with copies of Oncology-GP letters

Rob Campbell<sup>1</sup>, Julie Symons<sup>1,2</sup>, Michelle Hird<sup>1</sup>, Shona Critch<sup>1</sup>, Sam Harris<sup>1</sup>

Bendigo Health, Bendigo, Australia. <sup>2</sup>Loddon Mallee Integrated Cancer Service, Bendigo, Australia

### **Abstract**

**Background:** Oncologist letters to General Practitioners provide an important record of oncology consultations. In Australia it is not common for patients to be routinely provided copies of oncologist letters to GPs. There is evidence to suggest that copying correspondence to patients increases patient's involvement in and understanding of their care and that patients generally report high rates of satisfaction when receiving copies of correspondence.

**Aim:** We undertook a healthcare improvement project to copy patients into their oncologist GP letters. Our aim was to determine if patients and their carers value receiving copies of these letters and if they experienced improved understanding of their condition/treatment and doctor/patient communication. Secondary aim was to ensure providing copies was sustainable.

**Methods:** Using Plan-Do-Study Act (PDSA) cycles with consumer advocate participation in the project, increasing numbers of patients were consented to receive copies of letters. Patient/carer experience was captured via an anonymous 8 question online survey and a series of process measures were used to assess sustainability during each cycle.

**Results:** Between February and July 2022, >200 patients/carers at Bendigo Health consented to receive copies of their oncologist letter. 48 surveys were returned and multiple other patients provided informal feedback. Survey responses were strongly positive, >90% patients/carers reported the letters: improved understanding of their condition and treatment plan; made them feel more included in their care; wanted to keep receiving the letters; and found the letters useful as a record. Multiple other positive outcomes were reported and the process was proven sustainable. 86% of patients did not find the letters confronting or upsetting. The majority of informal feedback was positive, and only 3 patients provided negative feedback.

**Conclusions:** Providing patients with copies of their oncologist GP letters can lead to improved communication with patients and is generally perceived as a positive outcome by oncology patients.

### Other category

Shared care

## Transforming Cancer Care in Primary Health: Through the lens of Reporting for Better Cancer Outcomes Program

<u>Rifat Mehjabeen</u>, Beatrix Palmer-Aronsten, Sarah McGill Cancer Institute NSW, Sydney, Australia

#### **Abstract**

### Introduction

Primary healthcare providers serve as the vital bridge connecting patients with the broader healthcare system. Improving primary care services is crucial in cancer care as it facilitates early detection, timely interventions, and comprehensive patient support, ultimately enhancing treatment outcomes and reducing the burden of cancer.

### Objective

This presentation aims to explore how the Reporting for Better Cancer Outcomes (RBCO) program's Primary Health Care report, subsequent partnerships and engagements drive improvements in care through a multifaceted approach.

### Description

The RBCO program, a collaborative effort between the Cancer Institute NSW and health services in NSW, utilises comprehensive data analysis and engagement with the health system to interpret variations in cancer outcomes and identify scopes for process improvements. Aligning with the NSW Cancer Plan 2022–2027, this program aims to improve outcomes, especially for individuals disproportionately affected by cancer and ensure equity in care. Drawing from over ten data sources, including the NSW Cancer Registry, BreastScreen NSW, and national datasets, the report incorporates inclusive terminology, acknowledges diverse gender identities and emphases sensitivity towards the Aboriginal population in NSW.

### Results

The report highlights Medicare-funded health assessments, particularly the 715-health assessment for Aboriginal people, which addresses physical, psychological, and social well-being. It also presents trends in healthy behaviours and preventive activities across primary health networks in NSW, promoting a holistic approach to cancer prevention. Furthermore, the report examines and presents trends and changes in cancer screening activities, emphasizing the reduction of risks associated with common cancers and other preventable types, such as breast, bowel, and cervical cancers.

### Conclusion

This RBCO program reporting and engagement approach supports continuous quality improvement within primary care organisations, ultimately contributing to better cancer outcomes for the community. It is a testament to the power of data-driven insights in advancing healthcare and striving for better cancer outcomes.

## Best practices for screening and early cancer detection in primary care: A rapid review

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### **Abstract**

Background: Cancer is one of the main causes of death in Chile, with higher incidence rates of prostate, breast, and colorectal cancer. Prevention and early detection of cancer are crucial to improve health outcomes and reduce mortality. Primary health care plays a vital role in this context. The landscape of prevention and early cancer detection is changing rapidly with the development of new technologies, and it is imperative that the strategies implemented are supported by robust scientific evidence.

Aim: To identify effective, acceptable, and feasible to implement practices for the prevention and early detection of cancer in primary health care.

Methods: We searched MEDLINE, Embase, Cochrane Library, and Health Evidence for systematic reviews in the last 5 years. All steps were performed by two independent reviewers. Studies were included if they reported evidence of interventions for cancer prevention, screening, or/and early detection conducted primarily in primary care or a community setting.

Results: Our search identified 349 systematic reviews, of which we included 37. Of those, seven included primary prevention, 22 referred to screening practices, and eight addressed early cancer detection. A total of 16 studies addressed general cancer, seven colorectal cancers, four breast cancers, and two addressed skin cancers. Four systematic reviews addressed human papillomavirus interventions and four related to new technologies such as artificial intelligence or genomic screening.

Conclusion: Primary care is the gateway for cancer prevention, screening, and early detection. It can also integrate several levels of care with a person-centered approach. The results of this study will inform the development of a set of evidence-based recommendations, concerning effective and practical strategies for the prevention and early detection of cancer in primary care that will be reviewed by a set of international experts in a Delphi study in 2024.

## The implementation and mechanisms of advance notifications to promote participation in cancer screening: a scoping review.

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### **Abstract**

### Introduction:

Cancer screening is essential to primary health care, but participation rates are low. Providing advance notification to screening invitees informing them of an upcoming opportunity to screen for cancer is an effective way to increase screening participation. Little is known about why.

### **Objectives:**

This review describes and synthesizes the content and delivery of advance notification interventions used to increase screening participation and examines potential mechanisms that may underlie their effectiveness.

### **Description:**

Six electronic databases were searched using terms relevant to advance notification and cancer screening. Two independent reviewers screened articles for inclusion. Data extracted included the intervention characteristics (how/when the advance notification was delivered, content included within) and effectiveness (effect on screening uptake). Full versions of the text provided within the advance notifications were sought and analysed using inductive content analysis.

#### Results:

Thirty-six of the 8,228 records identified met eligibility criteria, reporting on 34 advance notification strategies. Of these, 74% were letters, 78% were distributed prior to bowel cancer screening, and the modal delivery time was two weeks prior to screening offer. Content analysis of the 22 full versions of the advance notifications obtained indicated that these notifications typically included information about the benefits and ease of screening and personal susceptibility to cancer. Of the advance notifications that were tested statistically, 68% significantly increased screening participation. Effectiveness did not tend to differ according to cancer type, the content of the notification, or delivery time; however, all notifications delivered over the phone significantly increased screening participation.

### **Conclusion:**

Advance notification appears to be an effective means of increasing cancer screening participation, regardless of the specific method employed. Primary care practitioners should consider the delivery of advance notification to patients to encourage adherence to upcoming cancer screening tests or medical appointments, particularly via the use of phone calls.

## The LungScot study update: feasibility and acceptability of lung screening in Scotland

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### **Abstract**

Objectives: The LungScot study aims to pilot lung screening in Scotland using low dose computed tomography, in order to explore its feasibility, acceptability, and implementation challenges. We aimed to understand people's views on, and barriers and facilitators to, lung screening, to test the process for lung screening in Scotland. This poster will give an update on the findings to date from the pilot study and some qualitative feedback from patient and professional interviews.

Methods: Patients for the pilot were identified via participating general practices using codes for smoking status. Those who responded were screened for eligibility using validated risk prediction tools. Patients assessed as high risk were offered a one-off low dose CT scan. A sub-group of participants and health care professionals were interviewed to ascertain their views on the process and identify implementation challenges. Non-responder interviews were carried out to understand reasons for not taking up the offer of screening.

Results: To date, 378 patients have responded to a lung screening invitation. Approximately 75% of responders were assessed as high risk and offered a scan. A total of 220 scans have been conducted for those at high risk. Further findings of participant characteristics and scan outcomes will be presented. Findings from health professionals, screening participant and non-responders interviews will be shared to provide insight to barriers and facilitators to participation and implementation of lung screening. Experiences on participating have been categorised in motivation, capability and opportunity.

Conclusions: Understanding the barriers and facilitators to screening participation and implementation will inform policy and practice to deliver a screening programme, maximise uptake and improve outcomes. Our pilot study to explore the feasibility and acceptability of lung screening in the Scottish population will help identify challenges to be addressed in any future lung screening programme, and identify how primary care can help optimise screening.

# From shared motivation to joint action along the cancer journey: What will it take to optimize primary care provider engagement in care transitions?

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### **Abstract**

**Background**: Real-world evidence and national cancer programs still call for greater efforts to prevent people living with and beyond cancer from getting lost in transition. Assuring integrated care increases pressure on primary care providers (PCPs) to develop collaborative approaches with cancer team members. This presentation reports on PCP concerns around their role in improving transitions along the cancer journey that were identified during the course of a larger study.

**Methods**: Qualitative interpretive description was used to illustrate how transitions between teams take shape in context. A total of 61 PCPs (family physicians, nurses, social workers) from two regional cancer networks in the province of Quebec, Canada, participated in eleven focus groups. They explored perceptions of the shared motivation to optimize their role, the centrality of cancer care, and the mechanisms of joint action between PCPs and cancer team members. The thematic analysis, approached pragmatically, was inductive and iterative.

**Results**: Almost all PCPs in the study acknowledged the benefits of their role in caring for people after cancer, while expressing concerns about their contribution during active cancer treatment. They considered it important to maintain trust with patients they knew before cancer, but the complexity of cancer treatments and sequelae limited their motivation. While PCPs were eager to ensure optimal use of expertise and recourse to appropriate levels of care, they were unsure about their ability to develop capacities for joint action without diverting scarce resources from clients with non-cancer health conditions. Finally, government imposition of productivity imperatives for family physicians appears to limit commitment to playing a greater role in cancer care and follow-up.

**Conclusions:** Findings suggest that increasing the role of PCPs along the cancer journey requires more than structural integration. Attention to PCP's concerns may open the door to solving dilemmas, preventing potential equity issues, and addressing the relational dimension of more fluid transitions.

### Enhancing cancer risk assessment in primary care using blood test trends: Perspectives on acceptability, equity, and implementation from general practitioners and patients

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### **Abstract**

### Introduction:

Current primary care guidelines incorporate abnormalities in single blood tests to identify patients at high risk of underlying cancer. Thresholds for abnormality do not consider patient details that may influence test results (e.g. age, sex, and ethnicity). Monitoring changes in serial blood test results could offer improved individualised cancer risk stratification in primary care. For example, a patient with 'normal' but declining haemoglobin over 3-4 years has increased likelihood of undiagnosed cancer. However, there is currently no clinical guidance incorporating blood test trends.

### Objectives:

To discuss the acceptability, equity, and implementation of blood test trends to identify undiagnosed cancer in primary care and generate critical priorities for future research.

### Descriptions:

This workshop will include three sections: 1) showcase of current evidence on blood test trends for cancer risk, with examples using real-world English primary care data; 2) GP perspectives of using blood test trends for cancer risk; 3) patient perspectives of using blood test trends for cancer risk. This workshop will incorporate facilitated discussions on the interpretation of blood test trend, their role in avoiding inequities (e.g. ethnic), communicating cancer risk between GPs and patients, and implementation strategies including clinical guidelines incorporating blood test trend.

### Results:

Results of this workshop will highlight important milestones to consider in the research and implementation of blood test trends for cancer detection. We will learn what is important to both GPs and patients when understanding trends and communicating cancer risk. This workshop will identify key strengths and weaknesses of utilising relevant blood test trends in practice, other patient data to consider when interpreting trends, and further research needed in this field.

### Conclusions:

This workshop will facilitate the development and implementation of cancer risk stratification tools incorporating blood test trends in primary care. This includes the development of clinical guidelines for repeated blood testing in primary care.

## Lung cancer screening in Europe and Australasia: Challenges for primary care

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### Abstract

**Introduction/Background:** Lung cancer screening using low-dose CT scans offers the prospect of lowering the substantial public health burden from this disease. Evidence from RCTs indicates that mortality can be significantly reduced – provided screening targets those most at risk. There are few population-based screening programmes, but many countries have established pilots to examine key issues including recruitment, uptake, access, screening pathways and potential impact on health inequities – particularly relating to deprived, ethnic minority and indigenous populations. Primary care will play a crucial role in across these areas as screening is implemented around the world.

**Objectives/Aims**: This workshop aims to 1) compare and contrast the status of lung cancer screening across Australia, Ireland, New Zealand and Scotland, highlighting the variable roles of primary care; and 2) examine ways we can develop common theoretical frameworks for evaluating these emerging programmes - to facilitate collaborative research and sharing of best practice in areas including behavioural change, primary care data utilisation, and implementation science.

**Description/Methods:** The authors, all actively involved in lung screening implementation and evaluation, will synthesise evaluation data and engage participants in identifying common themes and consensus areas within primary care.

**Results/Outcomes:** The workshop will generate discussion leading to a Ca-PRI-endorsed publication on primary care's involvement in lung cancer screening.

**Conclusions:** As lung cancer screening is poised to significantly reduce disease burden, primary care faces unique challenges and opportunities. International collaboration is essential to generate evidence supporting primary care's role in enhancing recruitment, uptake, and addressing disparities in lung health.

### Is it time to update the Aarhus statement?

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### **Abstract**

The Aarhus statement was developed following previous Ca-Pri workshops and subsequent consensus meetings about how to design and report studies on the time to cancer diagnosis and treatment. It was published in 2012 and has been widely cited and used in many studies of early cancer diagnosis. However, feedback from several researchers who have used it, and subsequent methodological developments in the field, mean that it may need to be reviewed and updated.

This workshop will provide a brief overview of the origins of the Aarhus statement. There will be brief presentations regarding the following areas:

- 1. Challenges of measuring and defining the patient interval.
- 2. Challenges with health system interval definitions.
- 3. Methodological considerations when analysing time to diagnosis and treatment.

We will seek experience and insights from the workshop attendees on using the Aarhus statement and identify the key areas that require updating. We will seek to identify people who wish to contribute over the next 12 months to revise the Aarhus statement, including from those unable to attend this conference. We plan to present recommendations for an update to the Aarhus statement at Ca-Pri 2025.

### 'Making shared care a reality'

 $\underline{\text{Michael Jefford}}^1$ , Larissa Nekhlyudov $^2$ , Daan Brandenbarg $^3$ , Karolina Lisy $^1$ , Jon Emery $^1$   $^1$ The University of Melbourne, Melbourne, Australia.  $^2$ Dana-Farber Cancer Institute, Boston, USA.  $^3$ University Medical Center Groningen, Groningen, Netherlands

### **Abstract**

There is international recognition that the dominant model of follow up for cancer survivors (oncologist-led, face-to-face) is suboptimal and unsustainable. One model that has been recommended, is shared care, which is a formalised arrangement in which oncology specialists and primary care providers share roles and responsibilities in the follow up of cancer survivors. Shared care seeks to combine optimal cancer-specific care with optimal generalist care.

This Ca-PRI session will review evidence to support shared care, including evidence from two Australian studies that have examined shared care for survivors of prostate cancer and colorectal cancer. We will also share international experience on implementing shared care models and seek discussion from the audience on specific contextual issues that affect implementation of new models of survivorship care.

We will discuss and seek input from the audience on future research priorities, including (1)How do we define shared care and is it really the preferred model of care to implement?; (2) Which aspects of shared care are best allocated to primary care providers (3) How do we implement aspects of survivorship care more effectively including recognition and management of psychosocial issues, chronic disease management and health promotion?; (3) Which outcome measures should we use to determine effectiveness of shared care?