



# Cancer Screening & Early Diagnosis: The Case for Lung Cancer

**21<sup>st</sup> September 2023**

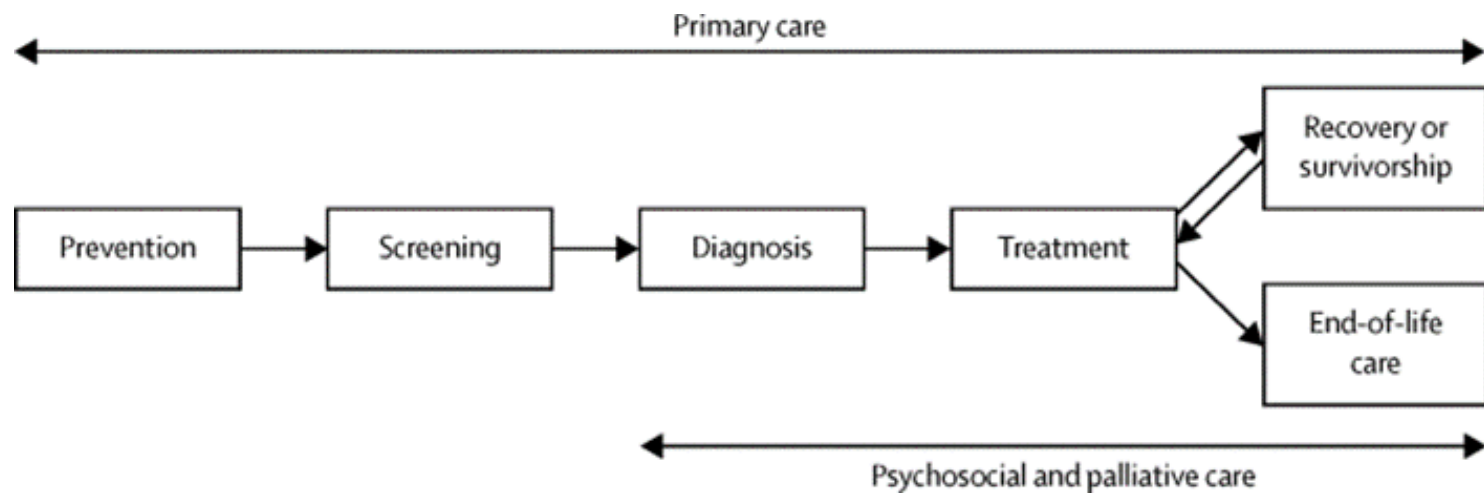
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# DISCLOSURES

- RCSI Employee
- Funding
  - Irish Cancer Society
  - EU4Health
  - Health Research Board
  - National Institute for Health Research (NIHR)
  - Academy of Medical Sciences

*Views expressed are solely my own and not necessarily those of the funder.*

# PRIMARY CARE'S ROLE IN CANCER CARE



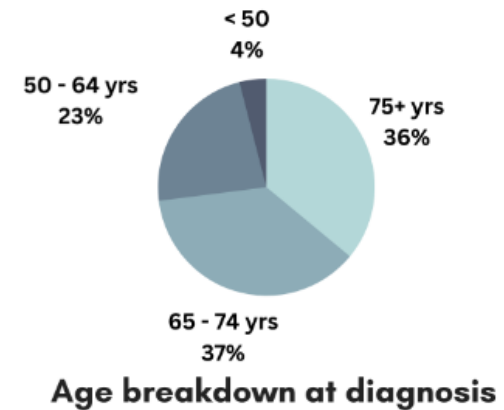
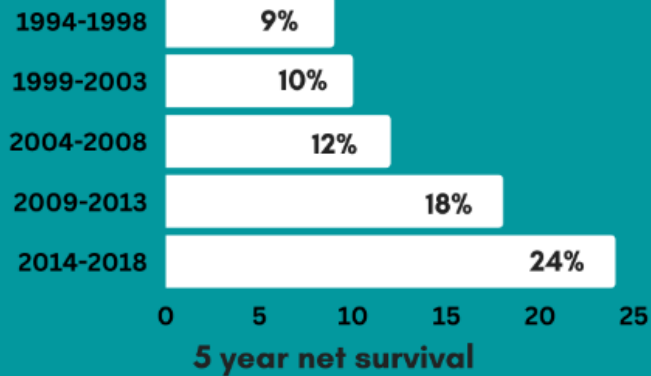
# LUNG CANCER



Ranking 1st among most common  
invasive cancer deaths



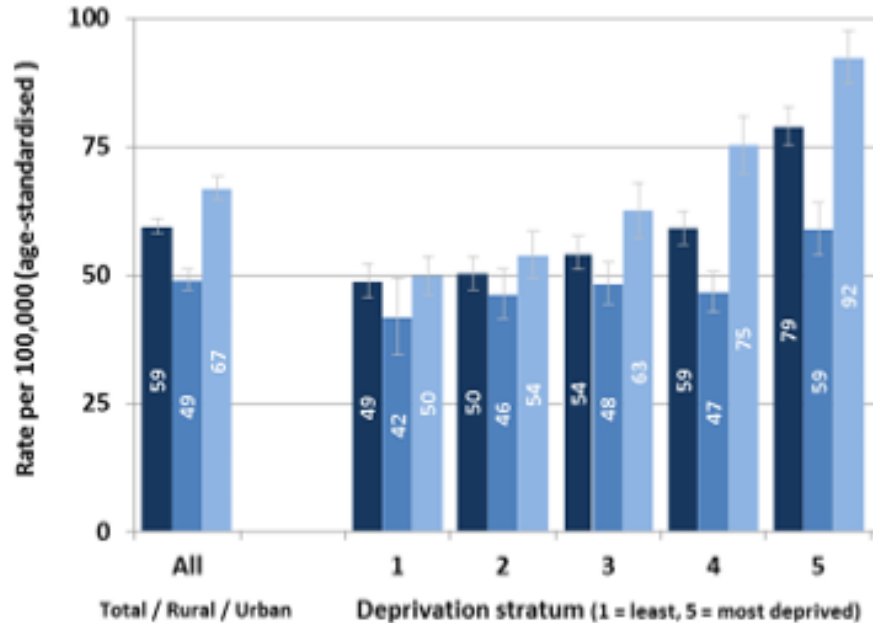
Makes up 20.5% of all cancer deaths



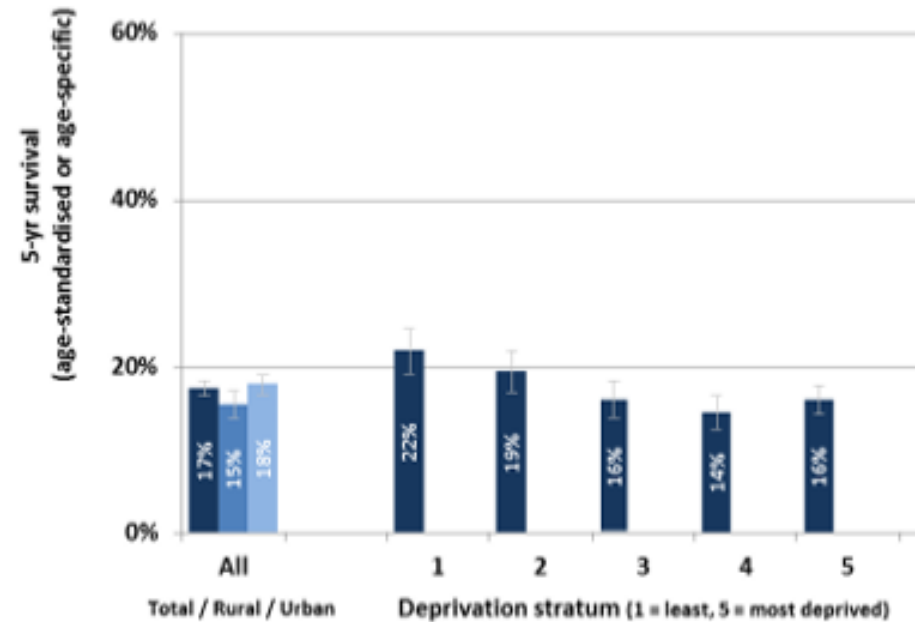
*NCRI. Awareness Infographic Lung Cancer. November 2022*

# SOCIAL GRADIENT

Incidence rate: lung cancer (male)



5-yr cause-specific survival: lung cancer



RCSI

# WHAT ARE SOME CHALLENGES?

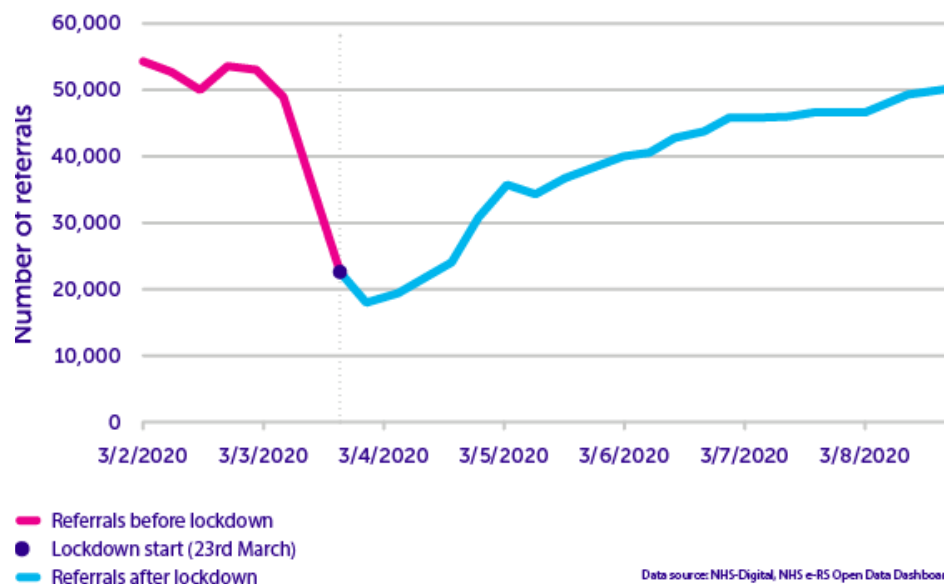
## How and when lung cancer patients are diagnosed

% of patients diagnosed in England, 2015-2016

Stage when diagnosed



## Weekly numbers of urgent suspected cancer referrals in England



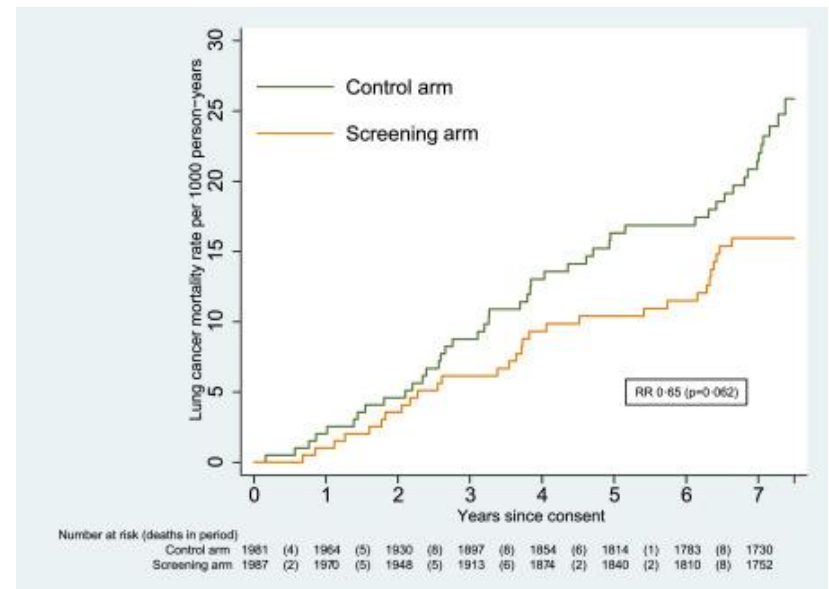
Data source: NHS-Digital, NHS e-RS Open Data Dashboard.



Low-dose CT



16% relative reduction in lung cancer mortality (Field et al., 2021)



# Geographical spread



## Participant Countries

Austria		Ireland	
Belgium		Italy	
Bulgaria		Latvia	
Croatia		Lithuania	
Czechia		Netherlands	
Estonia		Poland	
France		Romania	
Germany		Slovakia	
Greece		Slovenia	
Hungary		Spain	



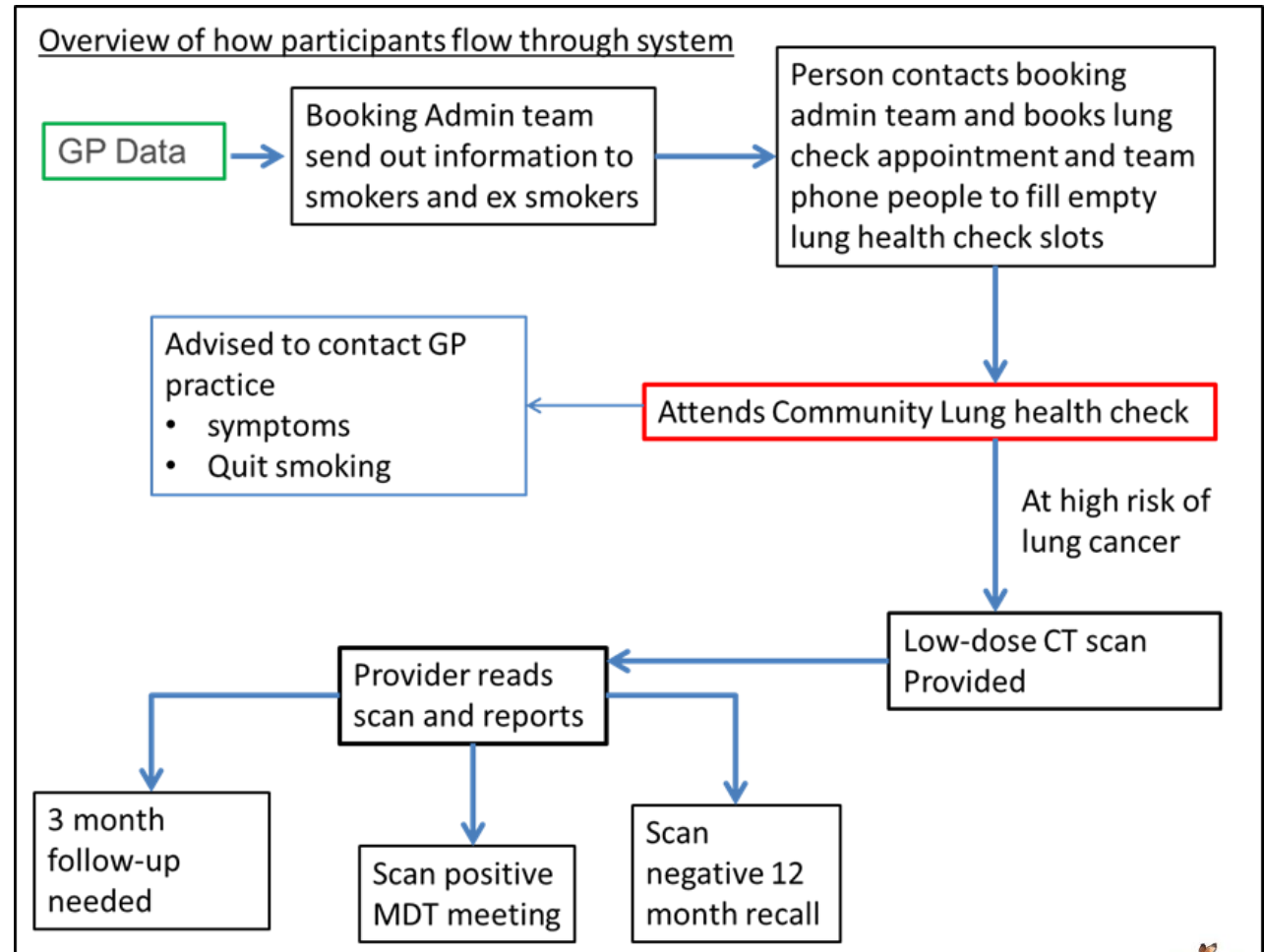


# COMMUNITY BASED; MOBILE



# LUNG 'HEALTH CHECK'

- Age 55-74
- (ex)Smoker
- Socio-economic deprivation
- Rural v Urban



# LUNG CANCER SCREENING: CHALLENGES

Uptake of lung cancer screening = ↓

30.7% response rate in the UKLS trial (2021)

High-risk, hard to reach groups

*(deprived areas, low socioeconomic backgrounds, LGBTQ+ community, mental health conditions, homeless population)*

# ENGAGEMENT

Editorials

## What should the role of primary care be in lung cancer screening?

Priya Patel, Stephen H Bradley, Grace McCutchan, Kate Brain and Patrick Redmond

British Journal of General Practice 2023; 73 (733): 340-341. DOI: <https://doi.org/10.3399/bjgp23X734397>

## Article

## Figures & Data

Info

eLetters

 PDF

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Lung cancer is the leading cause of cancer mortality worldwide and is often diagnosed in the advanced stages with a reduced likelihood of curative treatment and survival.<sup>1</sup> Lung cancer disproportionately affects socioeconomically deprived groups with higher incidence and worse outcomes, partly due to high rates of smoking and occupational exposures.<sup>2</sup>

The clinical effectiveness of lung cancer screening (LCS) with low-dose CT (LDCT) has been established with improved lung cancer outcomes. A recent meta-analysis reported a pooled relative reduction in lung cancer-specific mortality of 0.84 (95% confidence interval = 0.76 to 0.92).<sup>3</sup> Accordingly, in June 2022, the UK National Screening Committee recommended LCS for high-risk adults based on age and smoking history.<sup>4</sup>

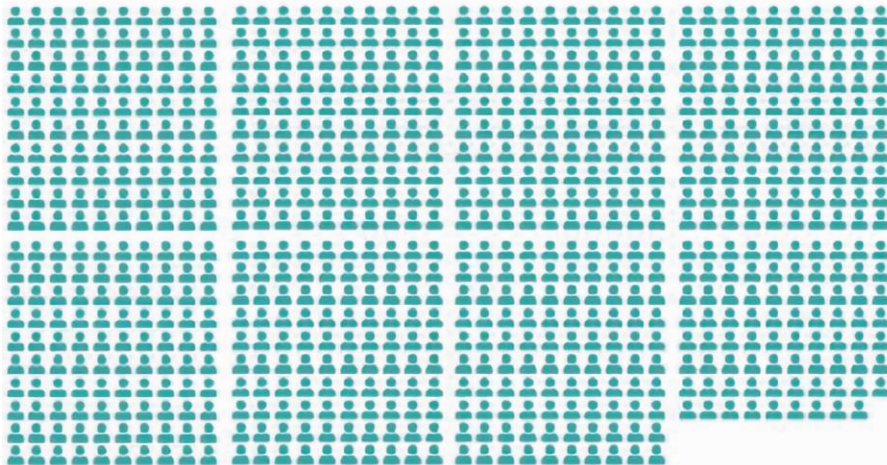


# PROS & CONS

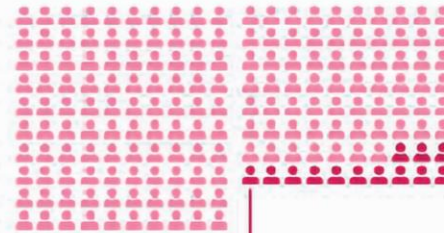


Any screening programme has potential benefits and harms. For lung cancer screening, if 1000 eligible individuals are screened 3 times, it is estimated that:

**779**  
will have all  
normal scans



**180**  
will need an extra scan  
but will not have lung cancer



13 will need an  
invasive procedure  
to rule out lung cancer

**41**  
will be diagnosed  
with lung cancer



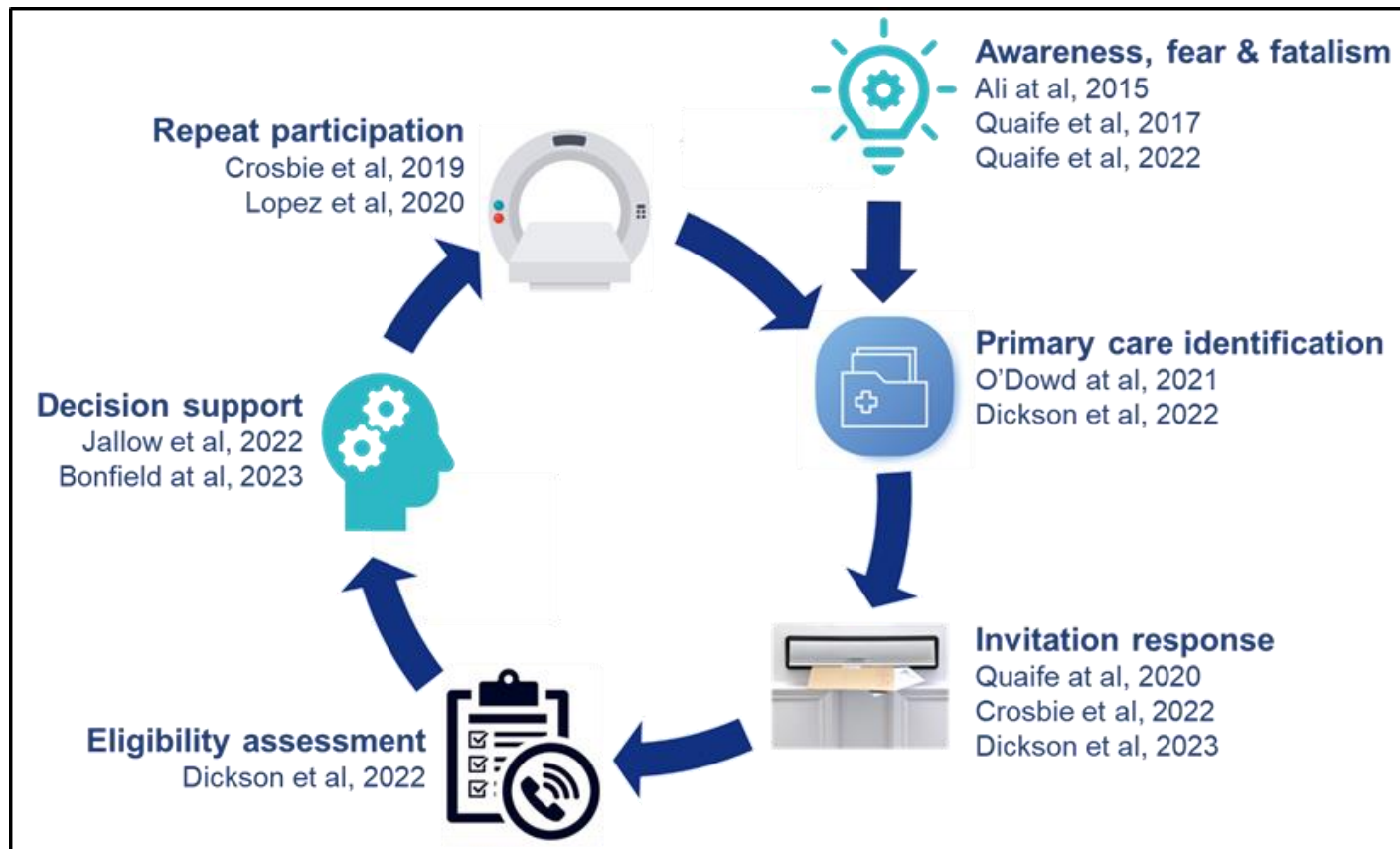
4 cancers would  
never have caused  
the person harm  
(overdiagnosis)

Thanks to screening,  
3 will not die from  
lung cancer

<https://www.iarc.fr/infographics/benefits-and-harms-of-lung-cancer-screening/>



# CHALLENGES



# WHAT NEXT?

- Irish Targeted Lung Health Check Pilot
  - Community Based
  - Mobile LDCT
  - COPD Detection, Smoking Cessation, Research Component
- Access, equity, shared decision making
- Biomarkers & AI
- Smoking cessation
- Training & Resourcing
- Education & Engagement

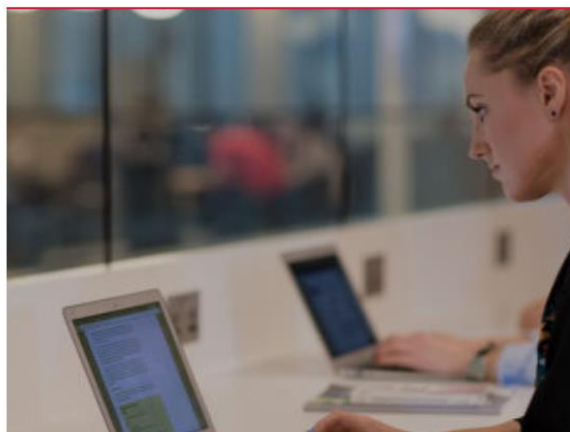
# QUESTIONS/CONTACT

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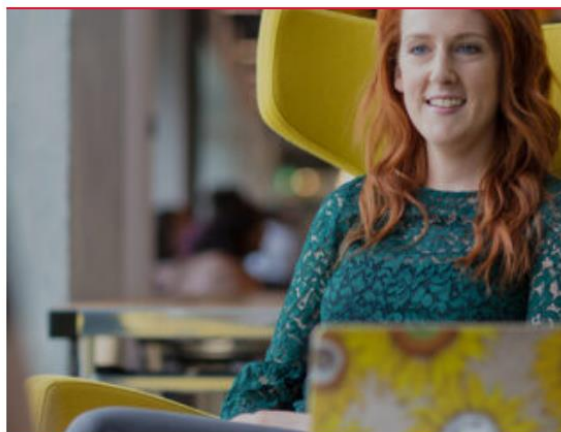
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PRiCAN  
(Primary Care Research into Cancer)



PRiCAN Top 10  
(Research Prioritisation Exercise)



PRiCAN Symposium 2024



Our Research

