

# *The Role of Cancer NGOs in Primary Care Policy and Practice for Early Cancer Diagnosis in LMIC settings: A Malaysian Case Study*

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# Primary Health Care in Malaysia

	<b>Public Primary Care</b>	<b>Private Primary Care</b>
Administration	Part of Ministry of Health structure-staffed by MOH	-Stand-alone clinics, group practice clinics or chain clinics.
Structure	Rural clinics-staffed by nurses Small Health clinics –staffed by medical officers Large Health Clinics- staffed by medical officers/family physicians (Referral system between them)	- Has one/more permanent General Practitioners- some are family physicians/ many are post medical degree/ 4years government service -no formal referral system
Geographic spread	Well-distributed all throughout Malaysia-urban and rural	Largely centred around urban centres
Financing mechanism	Subsidised, US\$ 0.25 per visit to Medical Officer, US\$ 1.25 per visit to Family Physician	Largely Out-of-Pocket, ~20% employer coverage or personal medical insurance

1. World Health Organization Western Pacific Region . [website]. Malaysia Health Systems Review.2012. World Health Organisation, Manila. ([http://www.wpro.who.int/asia\\_pacific\\_observatory/hits/series/Malaysia\\_Health\\_Systems\\_Review2012.pdf](http://www.wpro.who.int/asia_pacific_observatory/hits/series/Malaysia_Health_Systems_Review2012.pdf))

2. World Health Organisation. World Health Organization Western Pacific Region . [website]. Country Health Information Profile – Malaysia: Malaysia Health Databank 2011.World Health Organization, Manila. (<http://www.wpro.who.int/countries/mys/en/>)

# Challenges in Early Cancer Diagnosis in Primary Care

## Public Primary Care

Crowded, Long waiting times

Not often seen by the same HCP

Long waiting times for certain screening tests – e.g. colonoscopes

Patients dislike doing screening tests

Knowledge & practice levels about cancer screening and diagnosis among HCPs

## Private Primary Care

Difficult to convince patients as need to pay for screening tests/regularly

Patients 'shop' to different HCPs

# Opportunities Arising in the Landscape



**Mandatory  
Continuous  
Medical Education  
points for Annual  
Practising  
Certificate renewal**



**Growing awareness  
and interest in  
medical-based CSR**



**Collaborative  
willingness from  
industry  
stakeholders**



**Engagement with  
social/community  
organisations  
on the ground**

# Seizing Opportunities

## Public Primary Care

Ministry of Health  
Partnership



MINISTRY OF HEALTH  
MALAYSIA



WINNING TOGETHER

## Private Primary Care

Private Hospital  
Partnerships



Nationwide  
GP training  
programme



Two components: Education and Service Provision

State level- divided at health district levels-

Pilot project at 2 health districts in Federal Territory of KL

## **Education:**

- slots for CME in cancer screening & prevention
- delivered to medical officers, primary care physicians & nursing staff
- cover screenable cancers
- School Doctors Programme

## **Service Provision**

- fast-track referral service for mammograms/ultrasounds (screening) for primary care patients under health clinic follow-up
- working with community partners

# Private Hospital Partnership

-Win-win situation/ Marketing & Branding versus Education

-Focused on providing education to GPs- source for feeding into the system

- Utilise NCSM's branding and reputation

- Sessional- Saturday mornings /driven by attendance- CME points –monthly-themed on cancer of the month

-speakers: NCSM and hospital clinicians



PUSAT PERUBATAN  
PRINCE COURT  
MEDICAL CENTRE



# Nationwide GP training programme



5 workshop sessions in 8 regions all across Malaysia = 40 workshops

-Run by NCSM working together with the Malaysian Medical Association and the Public Health Society

-Over 1 year, speakers= local experts + NCSM

**continuous assessment graded/ feedback given**

**Central Committee construct content of workshops**

**Local partners and institutions sourced to work together**

**Speakers sourced on expertise/ combines local experts/ NCSM and MMA**

**Content: Primary Care Screening and Management of Cancer- tailored for GPs to carry out in their own practice**  
-supported by education materials on web

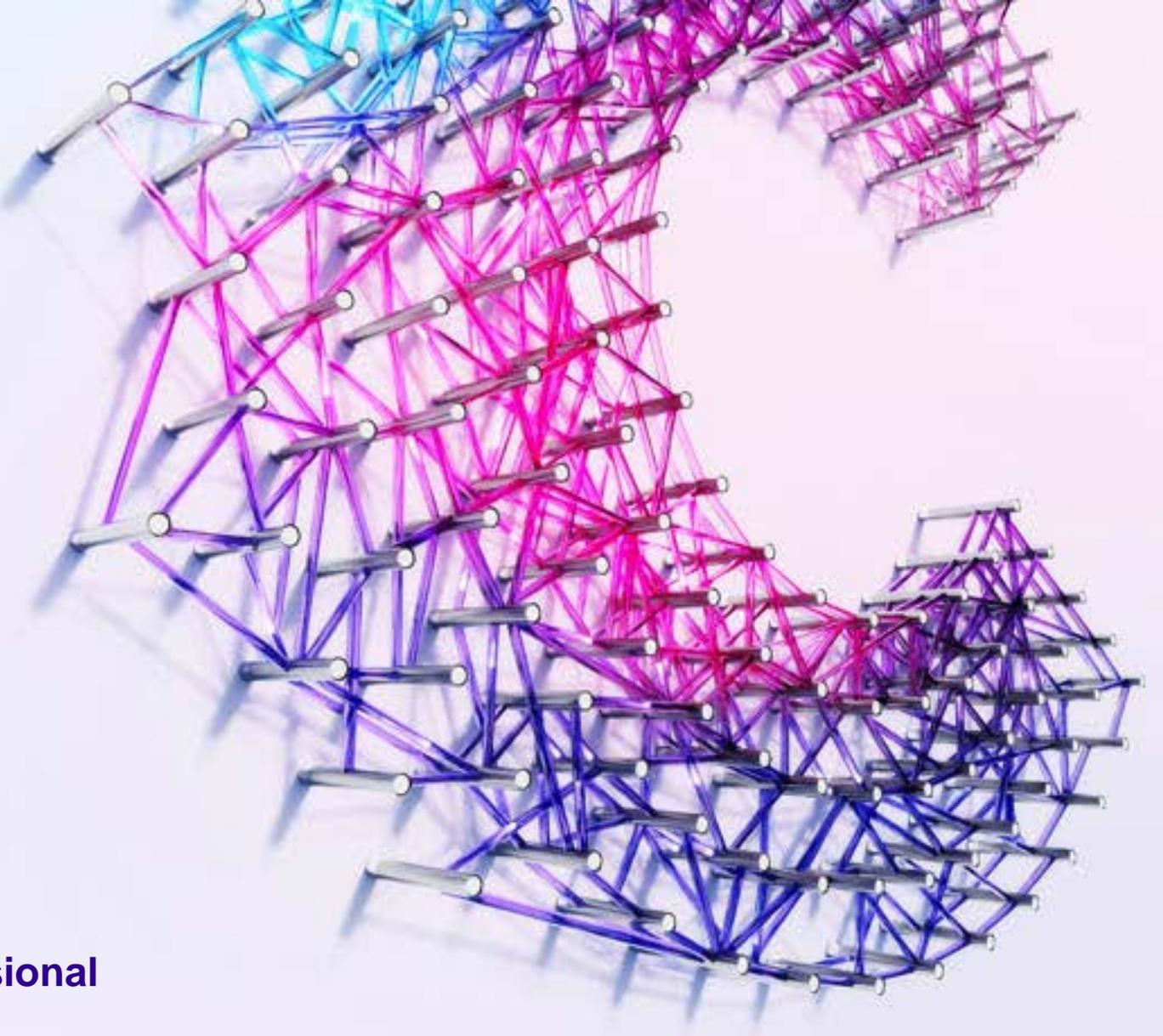
# The role of NGOs in promoting earlier diagnosis and treatment via primary care

**Session chair: Sara Hiom**

**Director of Early Diagnosis and Health Professional**

**Engagement**

**Cancer Research UK**



# Background – Non-Communicable Diseases are changing

Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries



**“Governments and NGOs must take measures to scale up prevention, early detection and diagnosis, treatment, and care services.”**

**The engagement of Primary Care is therefore increasingly important, with prevention and early diagnosis key**

■ No data    ■ Not applicable

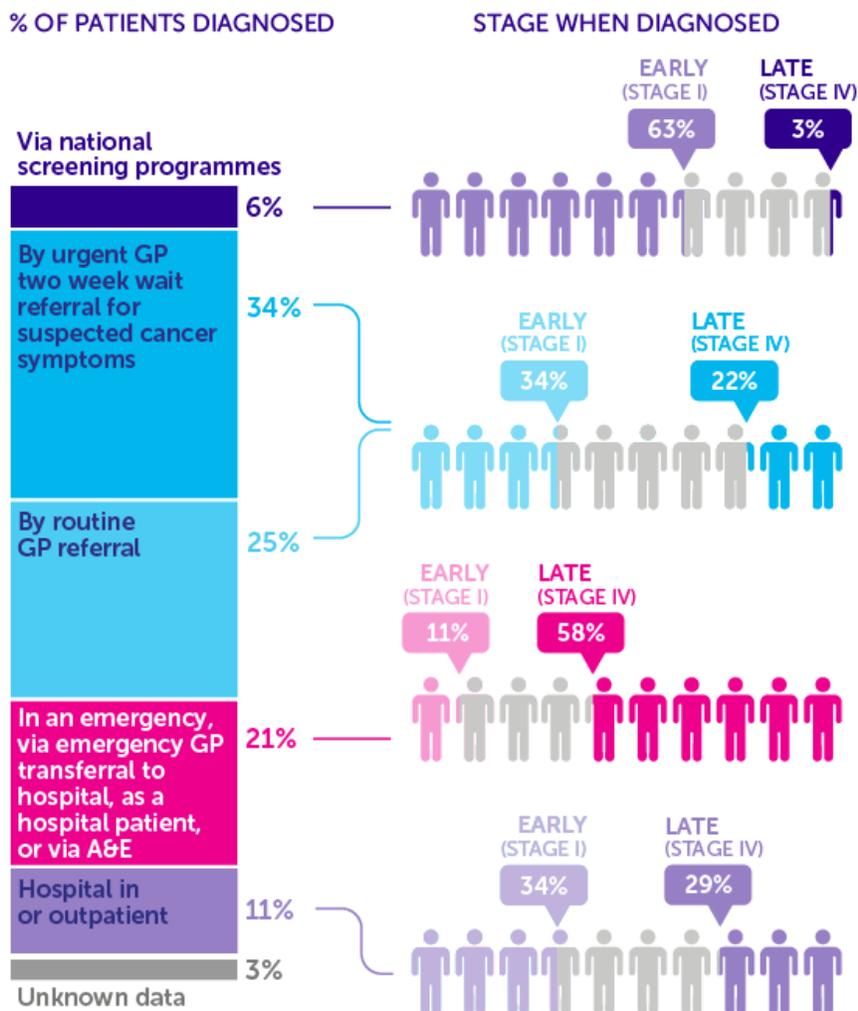
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: GHO  
Map production: CSU  
World Health Organization



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# Evidence demonstrates the importance of the way we diagnose and the stage of diagnosis on survival



Source: National Cancer Intelligence Network, data for England 2012-2013

## SURVIVAL BY STAGE AT DIAGNOSIS

LATEST STATS



= People surviving their cancer for five years or more

DIAGNOSED AT STAGE 1  
EARLIEST STAGE

DIAGNOSED AT STAGE 4  
LATEST STAGE

AROUND  
4 IN 10

LESS THAN  
1 IN 10



MORE THAN  
9 IN 10

LESS THAN  
1 IN 10



Data for patients diagnosed in the East of England 2006-2010.  
Calculated by Public Health England.

LET'S BEAT CANCER SOONER  
cruk.org



# **Cancer Research UK's role in primary care cancer engagement**

**Dr Richard Roope**

**Senior Clinical Advisor Cancer Research UK**

**CRUK/RCGP Clinical Champion for Cancer**

Role funded by CRUK



# Cancer Research UK Health Professional Strategic Framework

VISION: Transform cancer outcomes via health services to achieve 3 in 4

MISSION: Work with the health system to reduce variation in and accelerate **implementation of best practice**

OBJECTIVE: Create a supportive environment with providers, commissioners and planners

HOW: Partner to align local, regional and national organisations' priorities with ours where feasible

HOW: Share relevant evidence, insight and intelligence with organisations

OBJECTIVE: Accelerate innovation to support future need

HOW: Co-ordinate and evaluate service innovation

OBJECTIVE: Achieve individual professional behaviour change

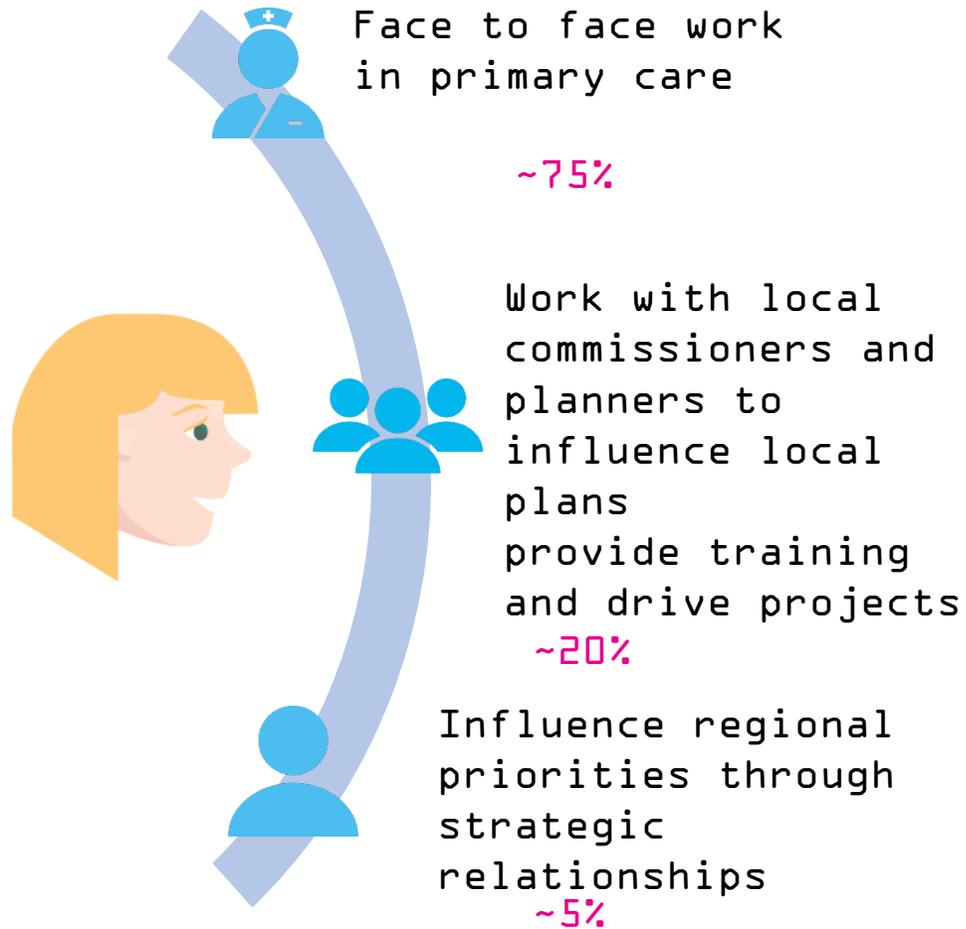
HOW: Train, educate and inform about best practice

HOW: Engage health professionals in improvement dialogue



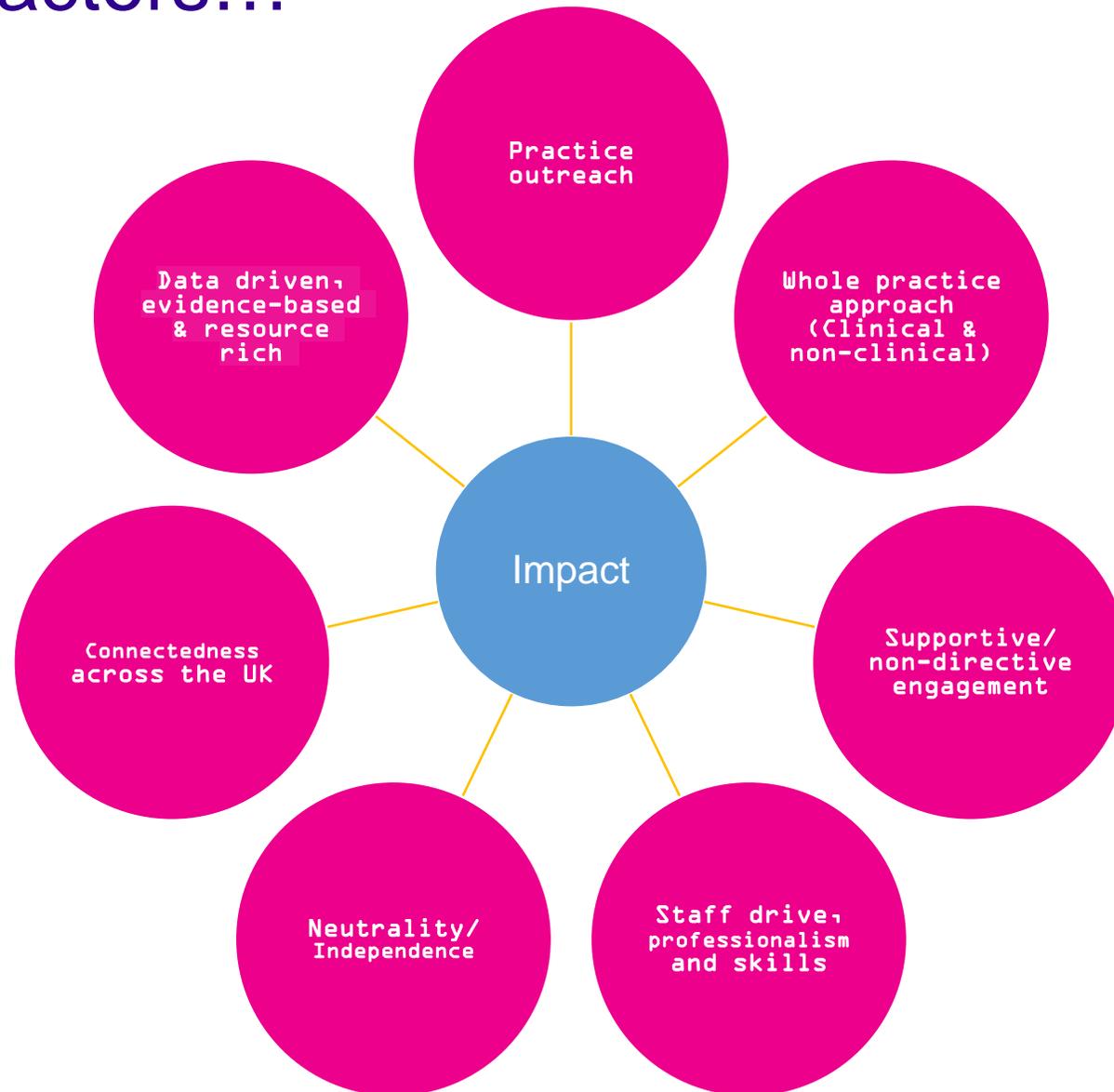
# CANCER RESEARCH UK FACILITATORS

work directly with the health system to drive improvement in cancer prevention and diagnosis



-  Independent critical friends
-  Sustained relationships
-  Local focus, national connectivity
-  Bring evidence based and practical learning

# Stakeholders attribute our effectiveness to a number of factors...



“CRUK Facilitators have played a significant role in introducing and embedding improvement in cancer screening and referral”

Conclusion of independent evaluation, Healthfocus, 2017

# CRUK CLINICAL LEADERSHIP PROGRAMME

19 CRUK GPs who deliver real impact



Provide **strategic primary care clinical leadership** and educational resource at regional level



Support SCNs in **improving cancer pathways and reducing variation in care** provision through the sharing of best practice and innovation



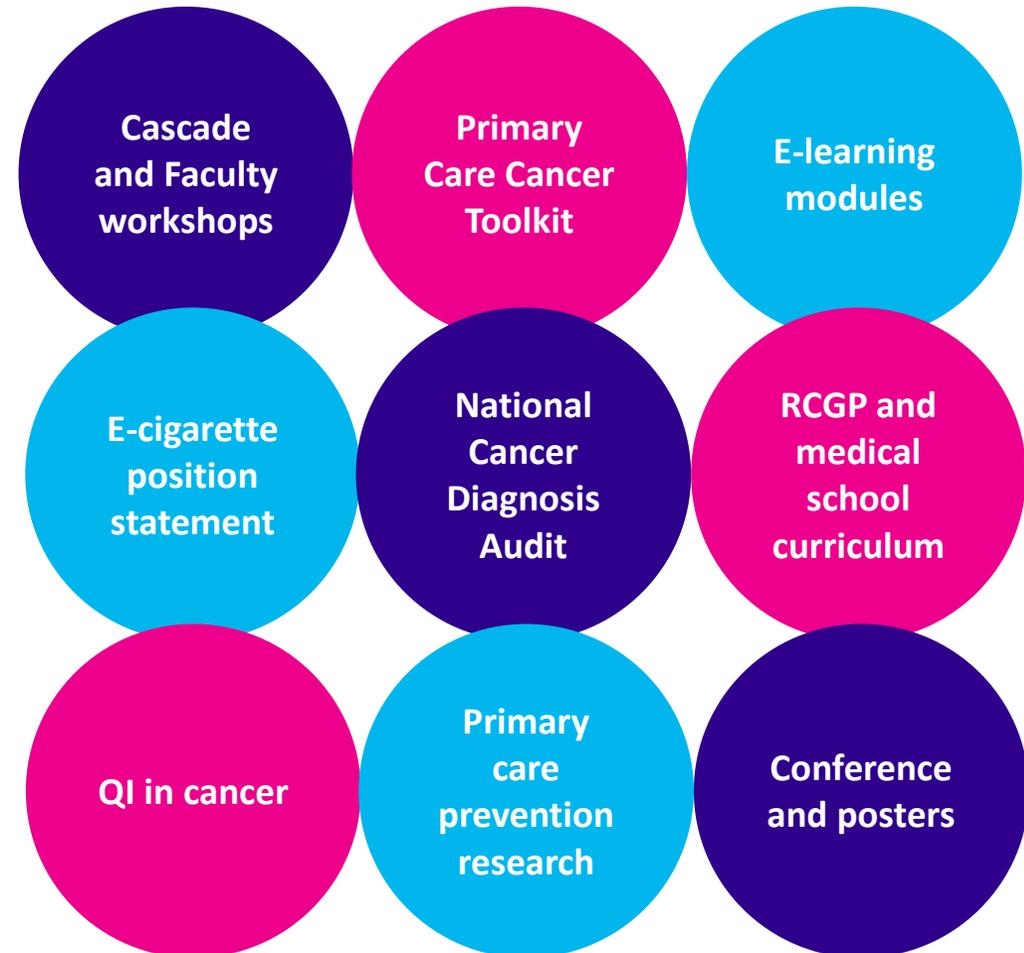
Enhance CRUK's relevance in primary care by **enabling CRUK to engage with and influence primary care** in a systematic way

# CRUK strategic partnership with RCGP

## 'Cancer as a clinical priority'

- ❖ We provide face to face training and education, and e-learning
- ❖ We provide position statements and on-line resources
- ❖ We 'influence the influencers' and input into consultations relating to general practice

### How we do it:



# National Cancer Diagnosis Audit 2014

The NCDA combined primary care data with data from the Cancer Registry for patients diagnosed with cancer<sup>1</sup> in 2014 across England to **understand pathways to cancer diagnosis**

**439 practices from 139 CCGs** took part in the audit  
(this is 5.4% of all practices in England)

**17,042 patient records** were collected  
(this is 5.7% of all patients diagnosed with cancer in 2014)

<sup>1</sup>All cancer diagnoses included except non-melanoma skin cancer

Swann et al. *BJGP* 2018: <https://doi.org/10.3399/bjgp17X694169>

## Research

Ruth Swann, Sean McPhail, Jana Witt, Brian Shand, Gary A Abel, Sara Hiom, Jem Rashbass, Georgios Lyrtzopoulos, Greg Rubin and the National Cancer Diagnosis Audit Steering Group

### Diagnosing cancer in primary care:

results from the National Cancer Diagnosis Audit

#### Abstract

**Background**  
Continual improvements in diagnostic processes are needed to minimise the proportion of patients with cancer who experience diagnostic delays. Clinical audit is a means of achieving this.

**Aim**  
To characterise key aspects of the diagnostic process for cancer and to generate baseline measures for future re-audit.

**Design and setting**  
Clinical audit of cancer diagnosis in general practices in England.

**Method**  
Information on patient and tumour characteristics held in the English National Cancer Registry was supplemented by information from GPs in participating practices. Data items included diagnostic timepoints, patient characteristics, and clinical management.

**Results**  
Data were collected on 17 042 patients with a new diagnosis of cancer during 2014 from 439 practices. Participating practices were similar to non-participating ones, particularly regarding population age, urban/rural location, and practice-based patient experience measures. The median diagnostic interval for all patients was 40 days (interquartile range [IQR] 15–84 days). Most patients were referred promptly (median primary care interval 5 days [IQR 0–27 days]). Where GPs deemed diagnostic delays to have occurred (22% of cases), patient, clinician, or system factors were responsible in 26%, 28%, and 34% of instances, respectively. Safety netting was recorded for 44% of patients. At least one primary care-led investigation was carried out for 45% of patients. Most patients (78%) had at least one existing comorbid condition; 21% had three or more.

**Conclusion**  
The findings identify avenues for quality improvement activity and provide a baseline for future audit of the impact of 2015 National Institute for Health and Care Excellence

#### INTRODUCTION

The timeliness of cancer diagnosis in patients who present with symptoms has long been a cause of public, professional, and political concern. The result has been an increasing focus on achieving earlier diagnosis,<sup>1,2</sup> supported by growing evidence for associations between time to diagnosis and clinical and patient experience outcomes,<sup>3,4</sup> and evidence of substantial variation in clinical primary care practice.<sup>5</sup> Differences in cancer outcomes between the UK and other comparable health systems are thought to partly reflect differences in diagnostic timeliness, and insights into processes that might underpin these differences have been generated through the International Cancer Benchmarking Partnership.<sup>6</sup>

Forming part of the National Awareness and Early Diagnosis Initiative,<sup>7</sup> the first English National Audit of Cancer Diagnosis in Primary Care (NACDPC) was undertaken in 2009–2010 in order to gain an understanding of the diagnostic process in primary care for patients subsequently diagnosed with cancer.<sup>8</sup> It included information on 18 879 patients diagnosed

with cancer, identified from the registers of nearly 1200 practices, and provided detailed information on the primary care pathways to cancer diagnosis.

The *Achieving World Class Cancer Outcomes* cancer strategy 2015–2020 contained a commitment to a second national audit of cancer diagnosis, alongside specific recommendations for clinical practice and the organisation of diagnostic services.<sup>9</sup> It suggested that precautionary 'safety netting'<sup>10,11</sup> becomes more established and that direct access for GPs to diagnostic tests be increased, additionally including a target for achieving diagnostic resolution (cancer diagnosed or ruled out) in most patients within 28 days of referral.<sup>12</sup> Building on the 2009–2010 NACDPC, a National Cancer Diagnosis Audit (NCDA) was formulated as a collaborative initiative between the key UK agencies in cancer diagnosis.

The aim of the NCDA was to generate a detailed understanding of the diagnostic process for cancer in primary care for patients who were diagnosed during 2014. At a national level, it would provide a baseline against which the impact of large-

**R Swann**, PhD, senior analyst, National Cancer Registration and Analysis Service, Public Health England, London, and Cancer Research UK, London. **S McPhail**, PhD, senior analyst, **B Shand**, PhD, software developer, **J Rashbass**, MD, PhD, MRCP, director, National Disease Registration, National Cancer Registration and Analysis Service, Public Health England, London. **J Witt**, PhD, project manager, Cancer Research UK, London. **GA Abel**, PhD, senior lecturer, University of Exeter Clinical School, University of Exeter, Exeter. **S Hiom**, BSc, director, Early Diagnosis and Cancer Intelligence, Cancer Research UK, London. **G Lyrtzopoulos**, MD, MPH, FRCP, FRCR, professor of cancer epidemiology, National Cancer

**G Rubin**, FRCP, FRCP, professor of general practice and primary care, Institute of Health and Society, Newcastle University, Newcastle. National Cancer Diagnosis Audit Steering Group, Cancer Research UK, London. **Address for correspondence** Ruth Swann, National Cancer Registration and Analysis Service, Public Health England, Skipton House, 80 London Road, London, SE1 6JH, UK. **E-mail:** ruth.swann@phe.gov.uk **Submitted:** 30 August 2017. **Editor's response:** 30 September 2017. **Final acceptance:** 17 October 2017.

A partnership with:



# Health Marketing to Primary Care Health Professionals

GPs,  
 Practice  
 Nurses &  
 Pharmacists

**CANCER INSIGHT CENTRE**  
 Partnership: CANCER RESEARCH UK

HOME RESOURCES BY CANCER SITE EARLY DIAGNOSIS GP RESOURCES FEEDBACK

The Cancer Insight Centre combines all of Doctors.net.uk's educational cancer resources into one hub, including interactive modules and quizzes, toolkits, highlights from the journals and more.

**Medical News**  
**Elderly suffer from late cancer diagnosis**  
 The over-60s are more likely to have cancer diagnosed through an emergency admission to hospital, according to figures published today. The figures are surprising as elderly people are more likely to undergo screening or to have regular contact with doctors than younger patients.

**Find content by cancer site**  
 Resources in the Cancer Insight Centre have been categorised by cancer site to make it easier to find what you are looking for.

**Access early diagnosis resources**  
 The early diagnosis section provides information and tools, including real-life clinical cases, quizzes and modules, to help you diagnose cancer at the earliest opportunity.

**Stratified Medicine**  
 Find out about Cancer Research UK's stratified medicine programme, including key learnings from programme 1 and an overview of what is happening in programme 2.

**Skin cancer toolkit**  
 Boost your ability to spot skin to the practical skin cancer toolkit which contains images and descriptions, cases studies and referral guidelines. Information from Cancer Research UK and the British Association of Dermatologists.

**Oral Cancer Recognition Toolkit**  
 Improve your knowledge of the prevention and detection of oral cancer, including what to look out for and when and how to respond. This toolkit covers oral and oropharyngeal cancers including lip cancer.

**Referral decision guide**  
 This practical tool illustrates the red flags which should prompt referral to secondary care via a suspected cancer pathway.

**Accredited education**  
 Boost your knowledge of oral cancer and appropriate referral pathways with this accredited eCME quiz.

**Lesion recognition resource**  
 Browse images and descriptions of different types of lesion.

**VIDEO: Oral, head and neck examination**  
 Watch a 3 minute video demonstrating how to perform an examination.

**Oral cancer risk factors**  
 Some of the risk factors associated with oral cancer include:
 

- age
- tobacco use (smoking and chewing)
- betel nut (areca nut) use
- alcohol consumption
- human papillomavirus infection
- low fruit and vegetable consumption

Cancer Research UK @CR\_UK  
 Access modules to support earlier diagnosis of cancer  
 cards.twitter.com/cards/18ce53ws...

Gain CPD credits with Cancer Research UK... Learn more

Cancer Research UK  
 15 March at 10:53  
 Cancer Research UK's education modules for GPs

To learn more about diagnosing and referring oral cancer, read case studies from Richard Shaw, Professor of Head and Neck Surgery, University of Liverpool and Aintree University Hospital NHS Trust.

Gain CPD credits  
 In time for appraisals

**SKIN CANCER RECOGNITION TOOLKIT**  
 Improving your knowledge of skin lesions, typical features and referral guidelines.

**Referral decision aid**  
 This practical tool illustrates the red flags which should prompt referral to skin cancer services under the 2-week wait rule.

**Points to remember**

- Practice modules can improve the recording quality and timeliness of referrals
- Accurate referral information is key to ensure that all appropriate patients are referred under the 2-week wait rule
- Referrals are increasingly now being made online
- Book cancer to see in Book or A&E system

**Start referral decision aid**

**Image discussion**  
 Updated images of diagnosed lesions under the 2-week wait rule.

**Top 2-week referrals**  
 Some of the most common referrals under the 2-week wait rule.

**Accredited education**  
 Boost your knowledge in differentiating between management and benign skin lesions and in appropriate referral.

**CANCER INSIGHT**  
 FOR PRACTICE NURSES  
 October 2016

**WHAT YOU NEED TO KNOW ABOUT OBESITY AND CANCER**

INSIDE: A3 poster to display in your practice

**BE CLEAR ON CANCER CAMPAIGN NOW LIVE IN YOUR AREA**

**Be Clear on Cancer**  
 Uptake of bowel cancer screening in NW England is low

Help your patients make an informed decision about bowel screening

Compare uptake in your local area

Download free materials



# Key features of our approach to primary care engagement and transferability

- Carried out 'simply' yet effectively
- Independent and in-house evaluations confirm positive impact at individual clinician and system level
- Testimonies from health professionals show we are valued
- Complementary activities at national, regional & local level
- Relatively inexpensive
- Focus on people and communities
- No need for significant investment/complex infrastructure



# The role of cancer NGOs in primary care policy and practice for early cancer diagnosis

Dr Anna Boltong, (previous) Head of Division, Strategy and Support, Cancer Council Victoria; (future) Associate Director, Victorian Comprehensive Cancer Centre (VCCC)  
Prof Jon Emery, Herman Professor of Primary Care Cancer Research, University of Melbourne and VCCC.

# Are you over 40? Have you had any of these...

... for more than 4 weeks?

- Blood in your poo
- Problems peeing
- Looser poo
- Unexplained weight loss
- An unusual pain, lump or swelling anywhere in your body
- Becoming more short of breath
- A persistent cough

... once off?

- Coughing up blood
- Blood in your pee

If you have...

## Tell your doctor

The earlier cancer is found, the greater the chance of successful treatment.



"How's the ute?  
How's the Mrs?  
How's the waterworks?"

If your peeing is causing you problems, tell your doctor.

Turn over to find out more information



"With breast cancer, you won't always find a lump. I didn't."

It is better to be sure so tell your doctor if you notice anything unusual about your breasts.

Turn over to find out more information



"If blood's coming out the wrong place, get it checked out bloody quick."

If you have blood in your poo or looser poo, tell your doctor.

Turn over to find out more information

# GREAT SOUTHERN 2 Rural Cancer Initiative: A Guide for General Practitioners Colorectal Cancer

Which symptoms best predict colorectal cancer?

- Rectal bleeding
- Symptoms of anaemia
- Change in bowel habit
- Abdominal pain
- Weight loss

Figure 1 shows the probability of colorectal cancer for individual symptoms and pairs of symptoms, including second<sup>1</sup> presentation of same symptom. Probabilities highlighted in red are >5%, and urgent referral should be considered. For example, the probability of colorectal cancer for rectal bleeding alone is 2.4%, but rectal bleeding combined with an abnormal rectal exam increases the probability to 6.5%. Two separate episodes of rectal bleeding have a probability of 6.6%.

Figure 1: Probability of cancer if symptoms (Sx) present

Constipation	Diarrhoea	Rectal bleeding	Loss of weight	Abdominal pain	Abdominal tenderness	Abnormal rectal exam	Haemoglobin 10-15 g/L	Haemoglobin <10 g/L	PPV <sup>2</sup> Positive predictive value (%) or probability of Co if Sx present
0.42	0.94	2.4	1.2	1.1	1.1	1.5	0.97	2.3	PPV as a single symptom
0.81 <sup>1</sup>	1.1	2.4	3	1.5	1.7	2.6	1.2	2.6	Constipation
	1.5 <sup>1</sup>	3.4	3.1	1.9	2.4	1.1	2.2	2.9	Diarrhoea
		3.8	4.7	3.1	4.5	3.3	3.6	3.2	Rectal bleeding
			1.4	3.4	6.4	7.4	1.3	4.7	Loss of weight
				3	1.4	3.3	2.2	6.9	Abdominal pain
				1.7 <sup>1</sup>	6.3	2.7	>10	>10	Abdominal tenderness

Implications for practice

- Findings on a physical examination including rectal examination can significantly alter the probability of colorectal cancer.
- Conduct a full blood count in people with possible symptoms of colorectal cancer.
- A low haemoglobin in the presence of symptoms significantly raises the probability of colorectal cancer.
- Negative FOBT does not exclude cancer in people with symptoms.
- Recent onset of symptoms in patients >40yrs should be viewed with a higher degree of suspicion.

Risk factors

- Previous history of colorectal cancer or adenoma
- Inflammatory bowel disease
- Family history of bowel cancer (RACGP Red Book<sup>3</sup> for risk criteria)
- Inactive lifestyle, obesity, alcohol consumption, smoking
- Increasing age

Colorectal Multidisciplinary Assessment Clinics:

Sir Charles Gairdner Hospital - Colorectal Surgeon, General Surgery Tel: (08) 9346 3632 Fax: (08) 9346 4862  
7th Floor, G Block, SCGH, Hospital Avenue, Nedlands WA 6009  
Royal Perth Hospital - Colorectal Surgeon, General Surgery Tel: (08) 6477 5008 Fax: (08) 9224 2860  
Outpatient Appointments, RPH, Box X2213 GPO, Perth WA 6848  
Fremantle Hospital - Colorectal Surgeon, General Surgery Tel: (08) 9431 3333 and ask for FS Fax: (08) 9431 2330  
Colorectal Surgeon, Fremantle Hospital and Health Service, PO Box 480, Fremantle WA 6959  
St John of God Hospital Subiaco  
You can search for an available gastroenterologist at [www.slog.org.au](http://www.slog.org.au)



This resource has been developed by The University of Western Australia, Cancer Council WA and Department of Health with Royal Perth Hospital and Fremantle Hospital which is investigating ways to improve cancer outcomes for people in rural WA. <sup>1</sup>Reference: The CAPRI studies: Five case-control studies aimed at identifying and quantifying risk of cancer in symptomatic primary care patients. British Journal of Cancer 2009; 101: 380-386. <sup>2</sup>British Journal of Cancer 2009; 101: 380-386. <sup>3</sup>Royal Australian College of General Practitioners, Guidelines for preventative activities in general practice 'Red Book', RACGP, Melbourne, Australia, 2008.

# Rural Cancer Initiative: A Guide for General Practitioners Lung Cancer

Which symptoms best predict lung cancer?

- Cough >3 weeks or change in nature of cough
- Haemoptysis
- Dyspnoea
- Persistent hoarseness
- Non-resolving pneumonia
- Weight loss or fatigue, particularly in smoker or ex-smoker
- Unexplained bone or chest pain/shoulder pain
- Significant neurological signs, e.g. ataxia, weakness

Figure 1 shows the probability of lung cancer for individual symptoms and pairs of symptoms, including second<sup>1</sup> presentation of same symptom. Probabilities highlighted in red are >5%, and urgent referral should be considered. For example, the probability of lung cancer for haemoptysis alone is 2.4%, but haemoptysis combined with weight loss increases the probability to 9.2%. Two separate episodes of haemoptysis have a probability of 1.7%.

Figure 1: Probability of cancer if symptoms (Sx) present

Cough	Fatigue	Dyspnoea	Chest pain	Loss of weight	Loss of appetite	Thrombocytosis	Haemoptysis	PPV <sup>2</sup> Positive predictive value (%) or probability of Co if Sx present
0.4	0.43	0.66	0.82	1.1	0.87	1.6	1.6	2.4
0.58 <sup>1</sup>	0.63	0.79	0.76	1.8	1.6	2.0	1.2	2.0
	0.57 <sup>1</sup>	0.89	0.84	1.0	1.2	1.8	4.0	3.3
		0.85 <sup>1</sup>	1.2	2.0	2.0	2.3	4.9	4.9
			0.95 <sup>1</sup>	1.8	1.8	2.0	1.4	5.0
				1.2 <sup>1</sup>	2.3	6.1	1.5	9.2
					1.7 <sup>1</sup>	0.9	2.7	>10
						3.6	>10	Thrombocytosis
							>10	Abnormal sputum
							1.7	Haemoptysis

Implications for practice

- Perform early CXR in those with relevant symptoms

Risk factors

- Smoker or ex-smoker
- Increasing age
- Asbestos exposure
- Other exposures: silica; arsenic (copper smelting); nickel; beryllium; chromium; diesel exhaust fumes

Diagnostic pathways

Initial investigations

- CXR (may be normal)
- Sputum cytology (multiple samples more sensitive, but may be normal)
- If CXR abnormal or where normal CXR but symptoms are suspicious:
  - Request CT Chest with IV contrast and Upper Abdomen including adrenals

Refer all suspected lung cancer to a respiratory physician affiliated with a Multidisciplinary Team (MDT)

Royal Perth Hospital - Respiratory Medicine Tel: (08) 9224 2903 Fax: (08) 9224 2385  
Respiratory Medicine Block, Level 2 Ferguson Block, Wellington Street, Perth WA 6000  
Sir Charles Gairdner Hospital - Respiratory Medicine Tel: (08) 9346 1756 Fax: (08) 9346 1555  
Respiratory Medicine, Ground Floor, B Block, SCGH, Hospital Avenue, Nedlands WA 6009  
Fremantle Hospital - Respiratory Medicine Tel: (08) 9431 2762 Fax: (08) 9431 2759  
Respiratory Medicine, Fremantle Hospital and Health Service, PO Box 480, Fremantle WA 6959  
Albany Regional Hospital  
Ask for medical registrar to discuss investigation of suspected lung cancer  
Tel: (08) 9892 2222 (switch)

Patient presents with symptoms +/ risk factors

Early CXR And follow-up within 1 week

Suspected Lung Cancer (urgent referral to respiratory physician/seeked for MDT)

if CXR normal consider Sputum cytology & CT

<sup>1</sup> >5% probability of cancer  
<sup>2</sup> 2-5% probability of cancer  
<sup>3</sup> 1-2% probability of cancer  
<sup>4</sup> <1% probability of cancer  
<sup>5</sup> Second presentation

Reference: 1. Hamilton et al. The CAPRI studies: Five case-control studies aimed at identifying and quantifying risk of cancer in symptomatic primary care patients. British Journal of Cancer 2009; 101: 380-386.

# The RAGE Project

## Rapid Access G-I Endoscopy - Colorectal Cancer A GUIDE FOR GENERAL PRACTITIONERS

### PREDICTIVE SYMPTOMS

- Rectal bleeding
- Symptoms of anaemia
- Change in bowel habit
- Abdominal pain
- Unintentional weight loss

### RISK FACTORS

- Previous history of colorectal cancer or adenoma
- Inflammatory bowel disease
- Family history of bowel cancer (RACGP Red Book<sup>2</sup> for risk criteria)
- Inactive lifestyle, obesity, alcohol consumption, smoking
- Increasing age

### IMPLICATIONS FOR PRACTICE

- **Positive FOBT** in National Bowel Cancer Screening Program requires urgent referral.
- Findings on a physical examination including **rectal examination** can significantly alter the probability of colorectal cancer.
- Conduct a **full blood count and iron studies** in people with possible symptoms of colorectal cancer.
- A **low haemoglobin** in the presence of symptoms significantly raises the probability of colorectal cancer.
- FOBT is not an appropriate test for people with symptoms.
- Recent onset of symptoms in patients >40yrs should be viewed with a higher degree of suspicion.
- Consider findings and time since last colonoscopy in assessment of current symptoms.

### WESTERN HEALTH REFERRAL PATHWAY



\*<http://www.westernhealth.org.au/HealthProfessionals/ForGPs/Pages/Endoscopy.aspx>



Figure 1: Probability of colorectal cancer if symptoms (Sx) present

Constitution	Diarrhoea	Rectal bleeding	Weight loss	Abdominal pain	Abdominal tenderness	Abnormal rectal exam	Haemoglobin 10-13 g/dL	Haemoglobin <10 g/dL	PPV = Positive predictive value (%) or probability of Ca if Sx present
0.4	0.9	2.4	1.2	1.1	1.1	1.5	0.9	2.3	PPV as a single symptom
0.8*	1.1	2.4	3.0	1.5	1.7	2.6	1.2	2.6	Constipation
	1.5*	3.4	3.1	1.9	2.4	11	2.2	2.9	Diarrhoea
		6.8*	4.7	3.1	4.5	8.5	3.6	3.2	Rectal bleeding
			1.4*	3.4	6.4	7.4	1.3	4.7	Weight loss
				3.0*	1.4	3.3	2.2	6.9	Abdominal pain
					1.7*	5.8	2.7	>10	Abdominal tenderness

Probability of cancer  
 >5% (Red)    1-2% (Yellow)  
 2-5% (Orange)    <1% (White)  
 \* second presentation

Figure 1 shows the probability of colorectal cancer for individual symptoms and pairs of symptoms, including second presentation\* of same symptom.<sup>1</sup>

For example, the probability of colorectal cancer for rectal bleeding alone is 2.4%, but rectal bleeding combined with an abnormal rectal exam increases the probability to 8.5%. Two separate episodes of rectal bleeding have a probability of 6.8%.

### References:

1. Hamilton, W. The CAPER studies: five case-control studies aimed at identifying and quantifying risk of cancer in symptomatic primary care patients. *British Journal of Cancer*. 2009; 101, S80-S86.
2. Royal Australian College of General Practitioners. Guidelines for preventative activities in general practice. 'Red Book', 8th edition, RACGP, Melbourne, Australia, 2012.

Initiative of Western Health and Department of Health, Victoria.

# Implementation strategy



**Every minute**  
**Every hour**  
**Every day**

Click for more...

Cancer never rests so neither do we.

# RAGE: key findings

- Increase in urgent referrals for cancer over time
- Better patient selection
- RAGE referrals associated with shorter waiting time
- Improvements in quality of referrals (> symptoms reported)

# I-PACED- Implementing Pathways for Cancer Early Diagnosis

- Following success with RAGE, we approached State Government to expand the model
- Key success factors:
  - ✓ Cancer Council branding has prestige and salience with GPs
  - ✓ Specialist oncology nurses respected workforce and trusted sources of information
  - ✓ Strong practice engagement
  - ✓ Tailored primary care tools and resources
- Opportunity through two, sequential academic detailing visits to:
  1. Operationalise recommendations within the Optimal Care Pathways (OCPs)
  2. Sell a new message at the second, follow up visit
- Aim: Increase GPs awareness about critical primary care points along the **colorectal cancer** and **lung cancer** OCP and support facilitation of recommended care



# Optimal Care Pathways

- Facilitate consistent care based on best evidence and practice
- Guides to optimal care across 15 tumour types for health professionals, including quick reference guides for GPs
- Have become recognised as a “standard of care”
- Encourage concept of an integrated pathway of care
- High level overview of what, where and who
- Emphasises the importance of communication across care sectors and at transition points for patients and carers
- Tool to assist health services, clinicians, service planners, and others to map, plan and benchmark services
- Inform quality improvement projects by identifying gaps

Optimal care pathway for people with colorectal cancer

Optimal care pathway for people with colorectal cancer

Quick reference guide

Please note that not all patients will follow every step of this pathway:

Support: Names supportive care needs at every step of the pathway and lists to support both health professionals or organisations.

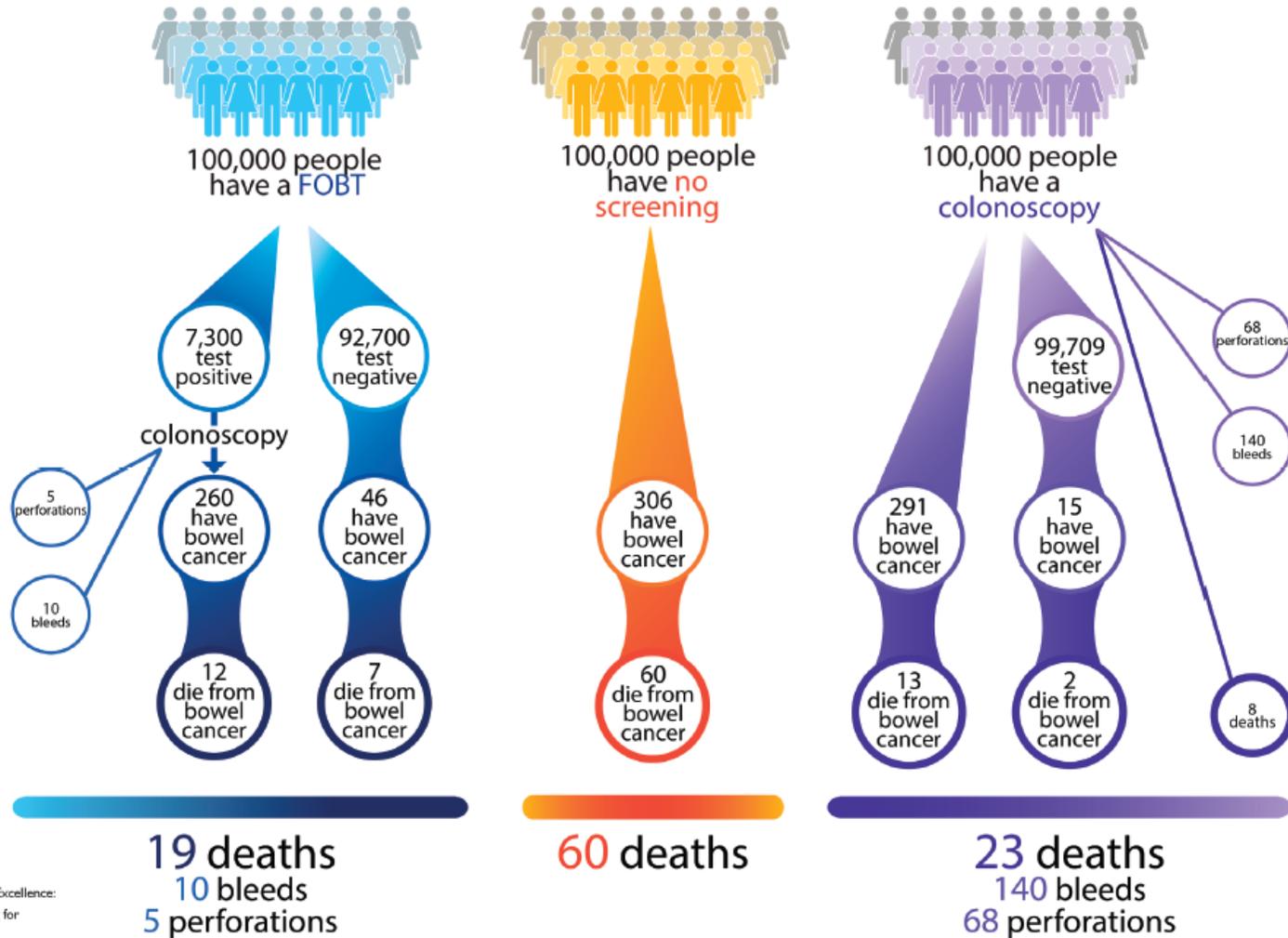
Step 1 Prevention and early detection	Step 2 Presentation, initial investigations and referral	Step 3 Diagnosis, staging and treatment planning
<p><b>Prevention:</b></p> <ul style="list-style-type: none"> <li>• eating a healthy diet, including plenty of vegetables, fruit and whole grains while minimising intake of red meat and processed meat</li> <li>• maintaining a healthy body weight</li> <li>• exercising regularly</li> <li>• avoiding or limiting alcohol intake</li> <li>• not smoking.</li> </ul> <p><b>Early detection:</b></p> <ul style="list-style-type: none"> <li>• Average risk</li> <li>• No personal history of colorectal cancer, adenoma or chronic inflammatory bowel disease, or</li> <li>• No more than one close relative diagnosed at age 55 or older.</li> </ul> <p><b>Screening recommendations:</b></p> <ul style="list-style-type: none"> <li>• If over 50 years, screen every two years using a faecal occult blood test (FOBT)</li> <li>• Participation in the National Bowel Cancer Screening Program recommended if eligible.</li> </ul> <p>Increased or high risk – refer to the colorectal optimal care pathway for screening recommendations.</p>	<p>The following signs and symptoms should be investigated:</p> <ul style="list-style-type: none"> <li>• positive FOBT</li> <li>• passage of blood with or without mucus in the faeces</li> <li>• unexplained iron deficiency anaemia</li> <li>• change in bowel habit (loose stools or constipation)</li> <li>• undiagnosed abdominal pain</li> <li>• unexplained rectal or abdominal mass</li> <li>• unexplained weight loss</li> <li>• the presence of multiple signs and symptoms.</li> </ul> <p><b>Positive screening test:</b> All patients with a positive FOBT should be referred for a colonoscopy within four weeks.</p> <p><b>Initial investigations include:</b></p> <ul style="list-style-type: none"> <li>• physical examination</li> <li>• digital rectal examination</li> <li>• blood tests including iron studies.</li> </ul> <p>Test results should be provided to the patient within one week.</p> <p><b>Referral:</b> If symptoms suggest cancer, the patient should be referred for a colonoscopy within four weeks.</p> <p><b>Communication – lead clinician to<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>• explain to the patient/carer who they are being referred to and why</li> <li>• support the patient/carer while waiting for specialist appointments.</li> </ul>	<p><b>Diagnosis and staging:</b></p> <ul style="list-style-type: none"> <li>• For colon cancer           <ul style="list-style-type: none"> <li>– Computed tomography (CT) scan of the chest, abdomen and pelvis</li> <li>– Whole body fluoro-deoxyglucose positron emission tomography (FDG PET) (if suspected limited metastatic disease)</li> </ul> </li> <li>• For rectal cancer:           <ul style="list-style-type: none"> <li>– CT scan of chest, abdomen and pelvis</li> <li>– Local staging with magnetic resonance imaging (MRI) and/or endoscopic rectal ultrasound</li> </ul> </li> </ul> <p><b>Treatment planning:</b> All newly diagnosed patients should be discussed by a multidisciplinary team. Patients with rectal cancer should be discussed prior to surgery.</p> <p><b>Research and clinical trials:</b> Consider enrolment where available and appropriate.</p> <p><b>Communication – lead clinician to:</b></p> <ul style="list-style-type: none"> <li>• discuss a timeframe for diagnosis and treatment with the patient/carer</li> <li>• explain the role of the multidisciplinary team in treatment planning and ongoing care</li> <li>• provide appropriate information or refer to support services as required.</li> </ul>

1 Lead clinician – the clinician who is responsible for managing patient care. The lead clinician may change over time depending on the stage of the care pathway and where care is being provided.

Endorsed by  

# Is colonoscopy the right screening test?

Outcomes for **average risk** population, **without symptoms**<sup>1</sup> (refer to RACGP Red Book<sup>2</sup> for risk criteria).



# Outcomes

## Practice visits

- Appointment setting= 4850 phone calls!
- 320 GP practices visited (40% of total); 1108 practice staff educated by Cancer Council nurses

## Change in awareness, use of OCPs, confidence, information and support services

- 50% improvement in general awareness of the OCPs.
- 50% improvement in awareness of the specific practice recommendations contained in the OCPs for colorectal and lung cancer.
- An increased likelihood to use the colorectal and lung OCPs to guide their clinical practice.
- Improved confidence in clinical practice related to all clinical areas outlined in the OCPs
- An increased likelihood to refer to cancer prevention or information and support services

# Key benefits and resources

## Benefits

- ✓ Leveraged credibility and neutrality of Cancer Council brand
- ✓ Defined model for engaging the primary care setting
- ✓ Strengthen relationships across the cancer landscape
- ✓ Contribute to improved patient outcomes and cancer care

## Resources

- Clinical practice guidelines for the prevention, early detection and management of colorectal cancer [https://wiki.cancer.org.au/australia/Guidelines:Colorectal\\_cancer](https://wiki.cancer.org.au/australia/Guidelines:Colorectal_cancer)
- The Optimal Cancer Care Pathways and consumer PDFs can be downloaded from [www.cancer.org.au/OCP](http://www.cancer.org.au/OCP)
- Interactive web portal for consumers ('What to Expect' guides) at [www.cancerpathways.org.au](http://www.cancerpathways.org.au)
- The I-PACED GP resource cards can be downloaded from [www.cancervic.org.au/for-health-professionals/optimal-care-pathways](http://www.cancervic.org.au/for-health-professionals/optimal-care-pathways)