Dr Alasdair Patrick

Gastroenterologist and General Physician

Middlemore Hospital

Auckland

Friday, June 9, 2017

8:55 - 9:20 Bowel Cancer Screening in NZ. What is the Role of the GP?

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CENTRE
Digestive Diseases & Endoscopy

The only fully comprehensive Gastroenterology center in Auckland

- Opened in 2009
- Largest Gastro practice in NZ
  - 12 Gastroenterologists
  - 1 Hepatologist
  - 4 Surgeons
  - Dietician
- Full diagnostic facilities on site

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Gastroenterologist

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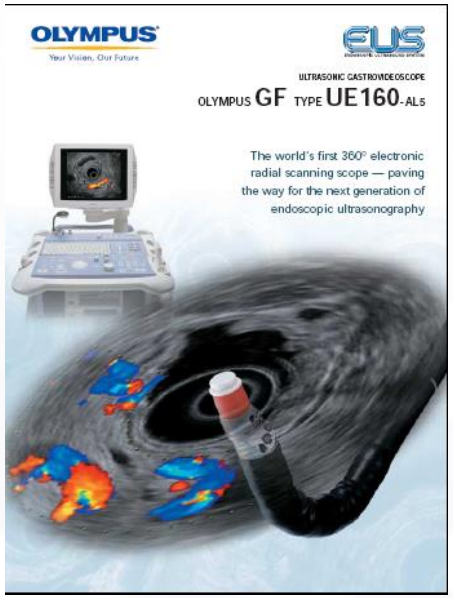

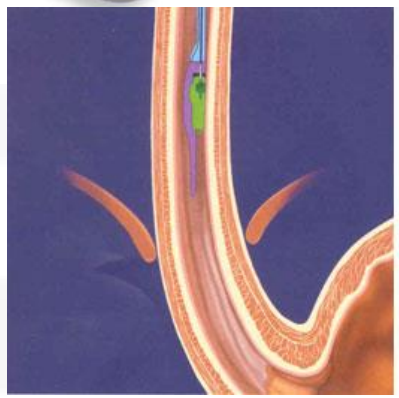

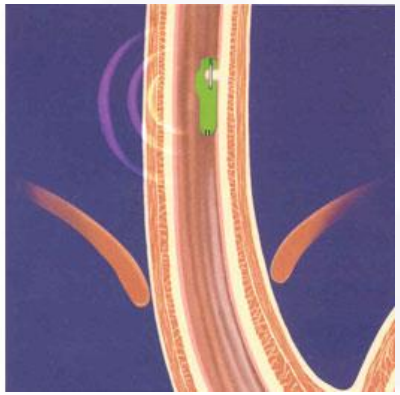

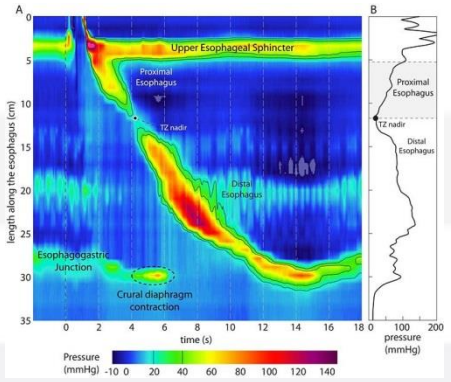

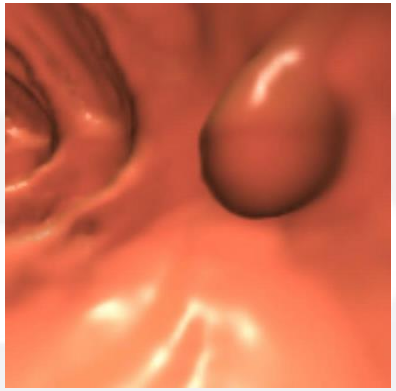

Bowel cancer screening in NZ
The role of the GP

Plenary Fri 9th June: 0855-0920

Dr Alasdair Patrick

HOD- Gastroenterology Department CMDHB

Clinical lead- CMDHB bowel cancer screening

Director- MacMurray Centre

Gastroenterologist

COUNTIES MANUKAU DISTRICT HEALTH BOARD
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A preventable cancer!

Outline

- The Past

  Background of current situation in NZ

- The Present

  What work has been done?

  Workforce planning

  Bowel screening pilot at WDHB

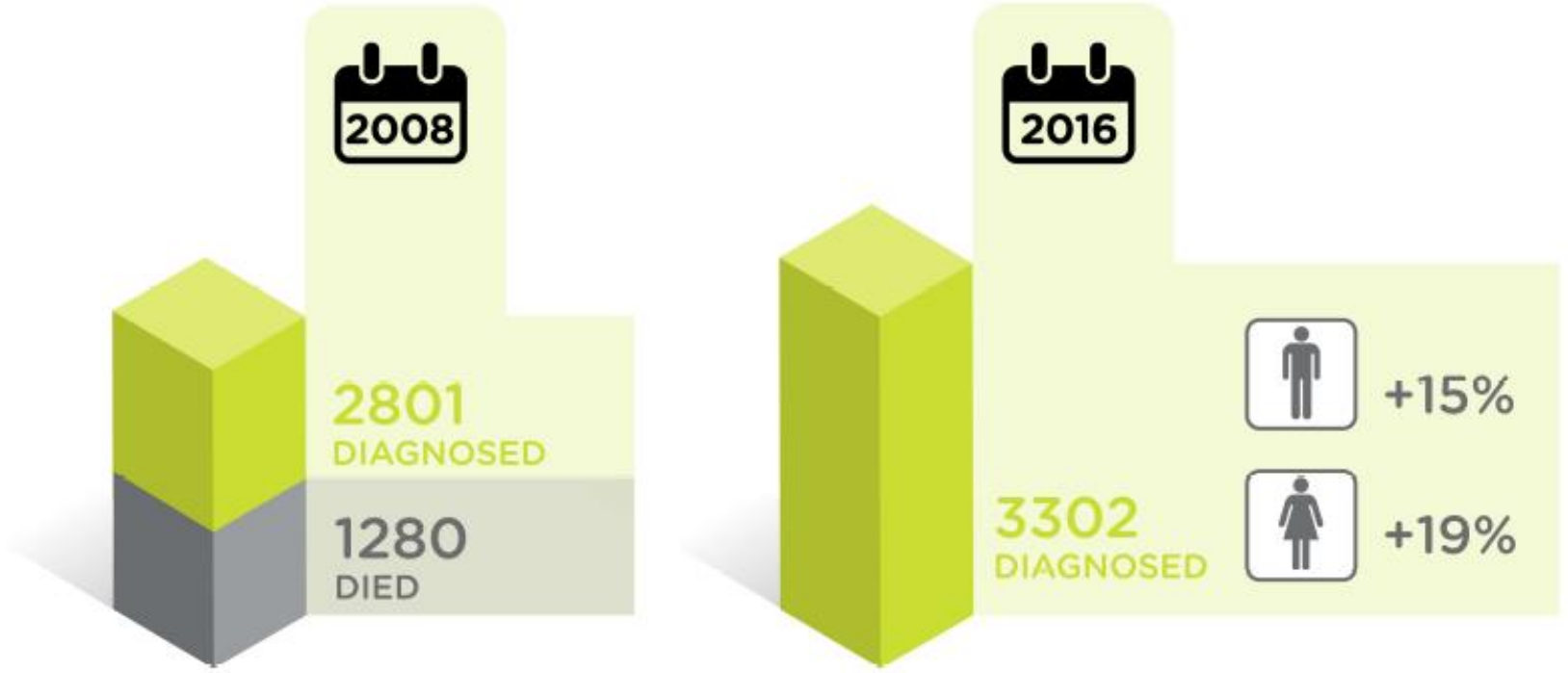
- The future

  Plan for National Screening

- GPs role in Bowel screening program (BSP)

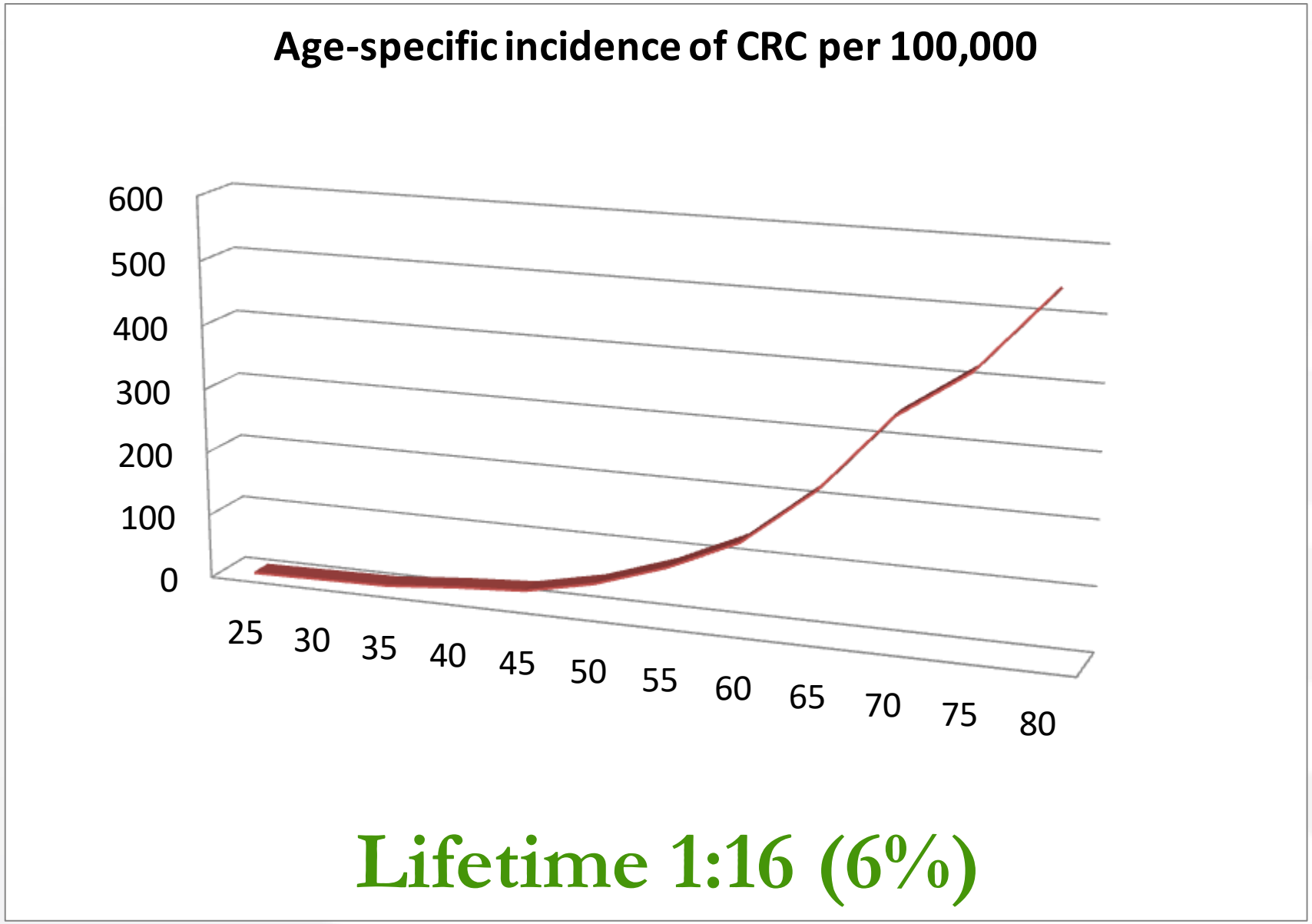

BACK
TO
THE
PAST

New Zealand bowel cancer statistics

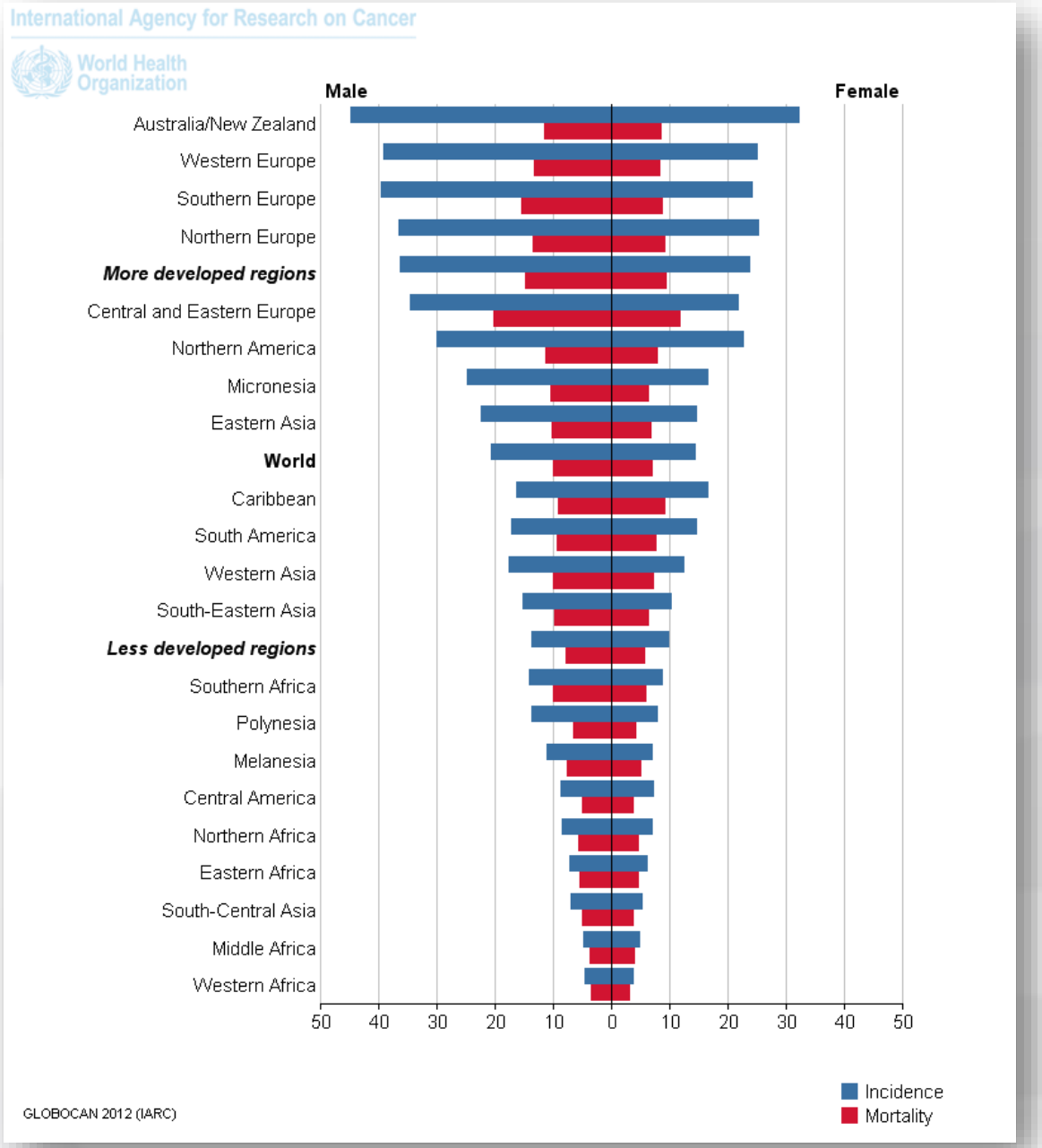


BowelScreening
Check Yourself Out

www.BowelScreeningWaitemata.co.nz | 0800 924 432



Lifetime 1:16 (6%)


International Agency for Research on Cancer
World Health Organization
Male
Female
Australia/New Zealand
Western Europe
Southern Europe
Northern Europe
More developed regions
Central and Eastern Europe
Northern America
Micronesia
Eastern Asia
World
Caribbean
South America
Western Asia
South-Eastern Asia
Less developed regions
Southern Africa
Polynesia
Melanesia
Central America
Northern Africa
Eastern Africa
South-Central Asia
Middle Africa
Western Africa
50 40 30 20 10 0 10 20 30 40 50
GLOBOCAN 2012 (IARC)
Incidence
Mortality

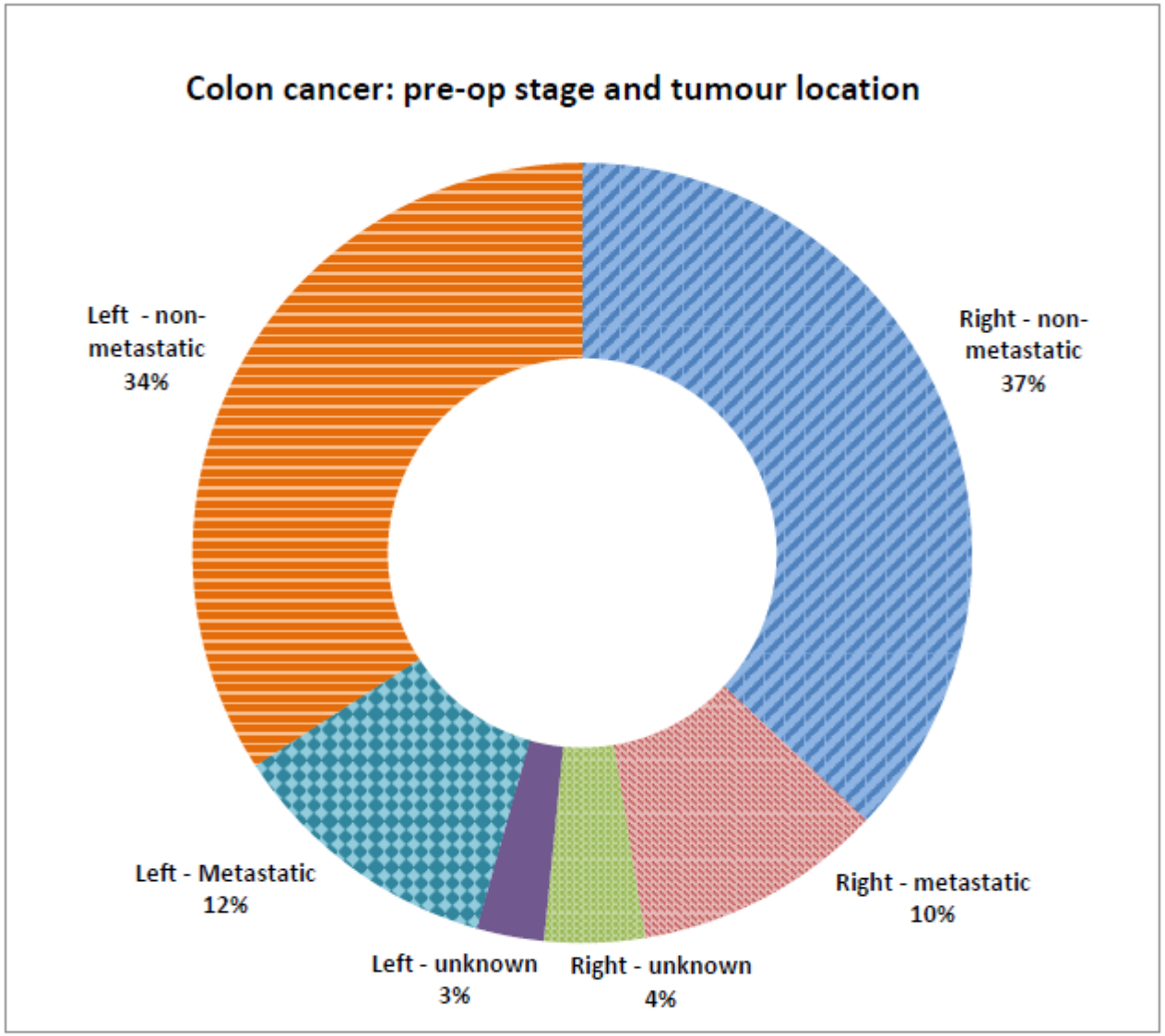


Figure 4.4-5 Doughnut plot of pre-op stage and tumour location for patients with colon cancer (excludes 44 patients where side of tumour was unknown).

Stage 1
94% 5 year survival

Stage 4
8% 5 year survival

Piper project. Findlay et al 2015

How have we managed familial risks historically in NZ?

Risk group	Increase in risk
Slight increase	≤ 2 x
Moderate increase	3 – 6 x
High risk	> 50% risk of CRC

Patients put in risk groups and guidelines are followed

Example of a case of Mrs Common

- 56 year old
- Fit and well
- Father diagnosed aged 56 with bowel cancer and died aged 57
- No other family history of note

- **Would you advise her to be screened for bowel cancer?**

Chapter 5. Familial risk

Category 1. Individuals with a slight increase in risk of colorectal cancer

Individuals with a slight increase in risk of colorectal cancer due to family history.

- One first-degree relative with colorectal cancer diagnosed over the age of 55 years.

No specific surveillance recommendations are made for this group at this time given the slight increase in risk, the uncertainty regarding the age at which this additional risk is expressed and the concern regarding the appropriateness of colonoscopy as a surveillance procedure in this group.	NZGG 2004	✓
Prompt investigation of lower bowel symptoms is advised.	NZGG 2004	✓
Individuals requesting information should be fully informed regarding their absolute risk of developing colorectal cancer and advised of the reasons for this recommendation.	NZGG 2004	✓

Category 2. Individuals with a moderate increase in risk of colorectal cancer		
Individuals with a moderately increased risk of colorectal cancer have one or more of the following: • one first-degree relative with colorectal cancer diagnosed under the age of 55 years • two first-degree relatives on the same side of the family with colorectal cancer diagnosed at any age.		
Offer colonoscopy every 5 years from the age of 50 years (or from an age 10 years before the earliest age at which colorectal cancer was diagnosed in the family, whichever comes first).	NZGG 2004	C
Fully inform individuals about their risk of developing colorectal cancer and the reason for this recommendation.	NZGG 2004	✓
Individuals should be informed that colonoscopy is generally a safe procedure, but it is an invasive procedure with some rare but recognised risks.	NZGG 2004	✓

Familial risk *continued*

Category 3. Individuals with a potentially high risk of colorectal cancer

Individuals with a potentially high risk of risk of colorectal cancer have one or more of the following:

- a family history of familial adenomatous polyposis (FAP), hereditary non-polyposis colorectal cancer or other familial colorectal cancer syndromes
- one first-degree relative plus two or more first- or second-degree relatives all on the same side of the family with a diagnosis of colorectal cancer at any age
- two first-degree relatives, or one first-degree relative plus one or more second degree-relatives, all on the same side of the family with a diagnosis of colorectal cancer and one such relative:
  - was diagnosed with colorectal cancer under the age of 55 years or
  - developed multiple bowel cancers, or
  - developed an extracolonic tumour suggestive of hereditary non-polyposis colorectal cancer (ie, endometrial, ovarian, stomach, small bowel, renal pelvis, pancreas or brain)
- at least one first- or second-degree family member diagnosed with colorectal cancer in association with multiple bowel polyps
- a personal history or one first-degree relative with colorectal cancer diagnosed under the age of 50, particularly where colorectal tumour immunohistochemistry has revealed loss of protein expression for one of the mismatch repair genes (MLH1, MSH2, MSH6 and PMS2)
- a personal history or one first-degree relative with multiple colonic polyps.

Refer to: • a cancer genetic service or the New Zealand Familial Gastrointestinal Cancer Registry • a bowel cancer specialist to plan appropriate surveillance and management.	NZGG 2011	✓

What should we do with average risk individuals?

Should we screen?

- NZ has the highest rate of bowel cancer in the world
  - 3000 cases per year
  - 1200 deaths per year
    - Maori 30% more likely to die
- Screening reduces mortality by 16-90%
- 80 cases are expected do be discovered in each DHB in the first year

What has been done so far?

- Workforce challenges are being addressed
  - Nurse endoscopists
  - More Gastroenterology trainees
  - NZSOG in process of setting up quality assurance and accreditation framework
  - BSP

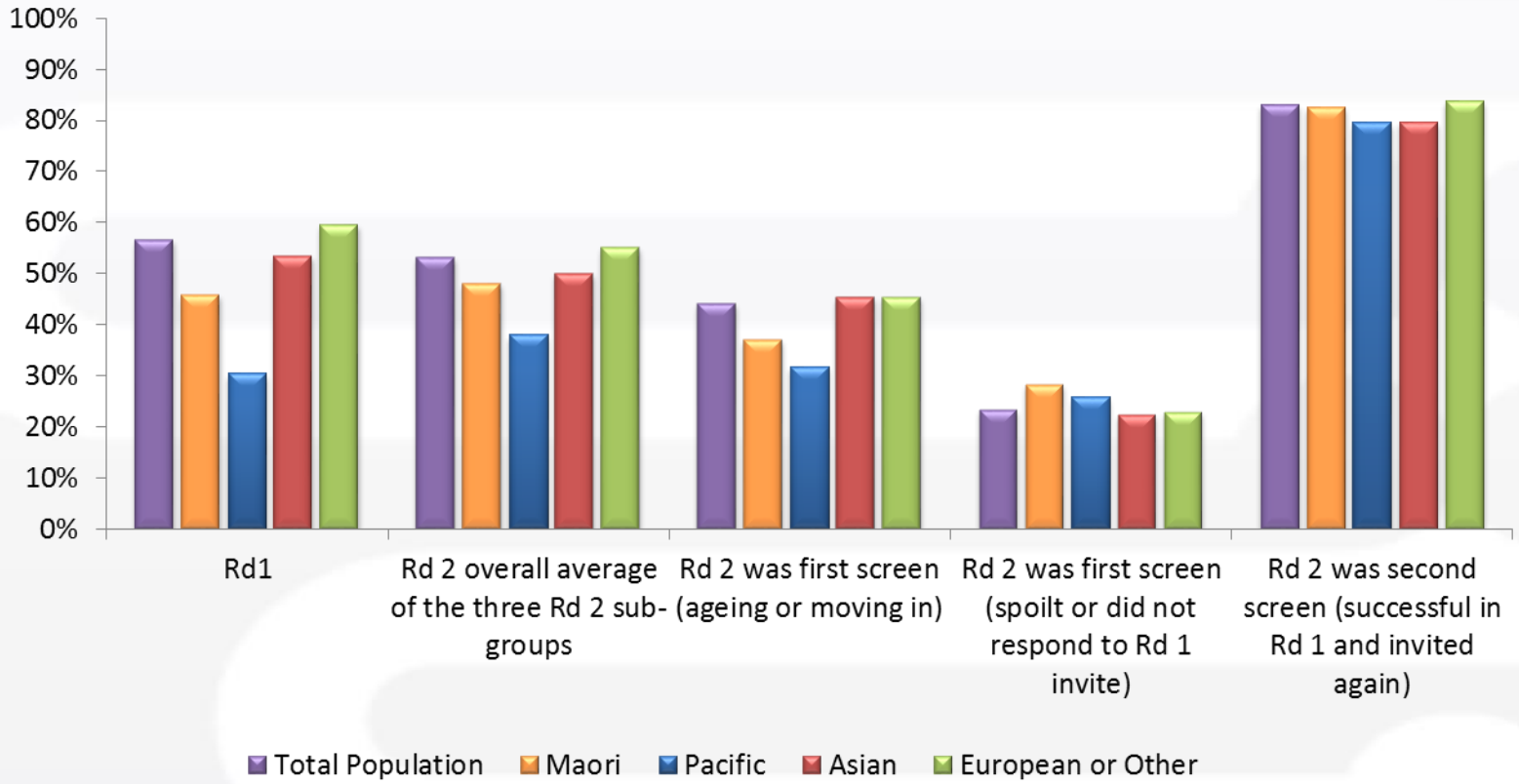
WDHB Bowel Screening Pilot

The first 6 years…

NZ Bowel Screening Pilot (BSP)

- **iFOB or FIT (OC-sensor, Eiken) selected**
- **Competitive RFP won by WDHB with support of ADHB and CMDHB**
- **Details of the program**
  - ***WDHB residents***
  - ***50 – 74 years of age***
  - ***Commenced October 17th 2011 until Dec 2015***
  - ***Two 2-year screening cycles***
- **Extended for another 2 years**

BSP Results:
Uptake of screening by ethnicity



Round 1 results:

Waitemata District Health Board
Best Care for Everyone

Between 1 January 2012 and 31 December 2013:*

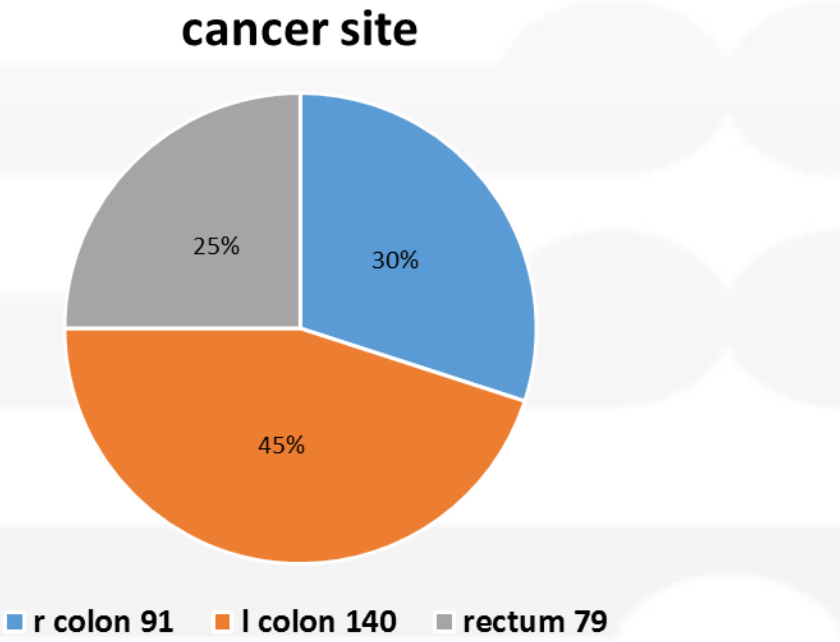
- Coverage 97.5% (based on census data)
- The programme participation rate was 56.8% (aim 60%)

- Overall positivity rate was 7.5% (6 to 8)
- 96% of those with a +ve FIT went to colonoscopy

* Data pulled Sept 2015

Bowel Screening findings 2012-2015

- **315 cancers in 303 patients**
  - ***310 cancers/299 patients treated in public/private (8358 colos in 8187pts)***
  - ***43 cancers/39 patients treated in private***
  - ***171 males***
  - ***128 females***



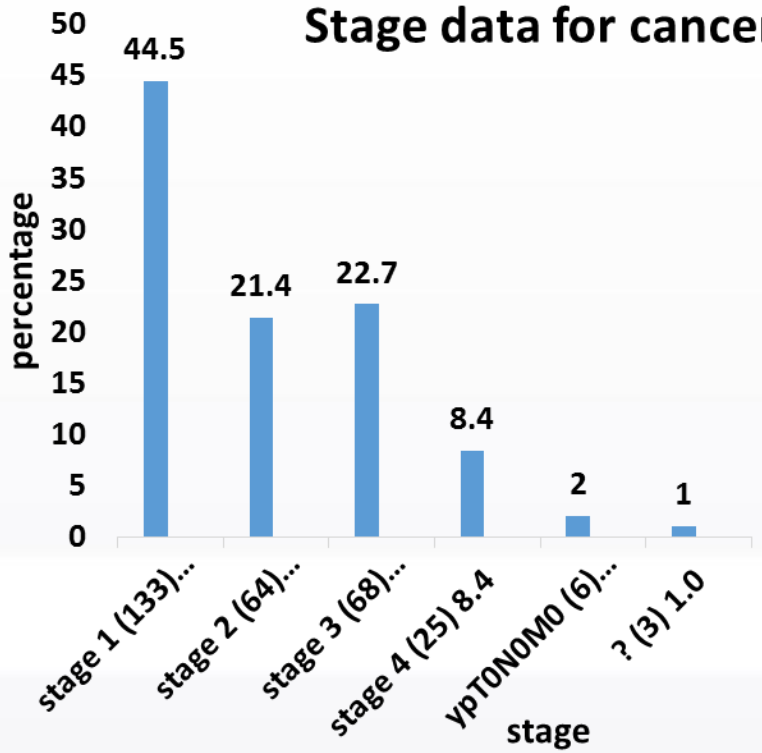


Table 3.3-2 Expected number of cases of colon cancers by stage

Stage	N	%
Stage I	419	11
Stage II	1752	46
Stage III	952	25
Stage IV	685	18
Total	3808	100

Piper project. Findlay et al 2015

Cost of screening

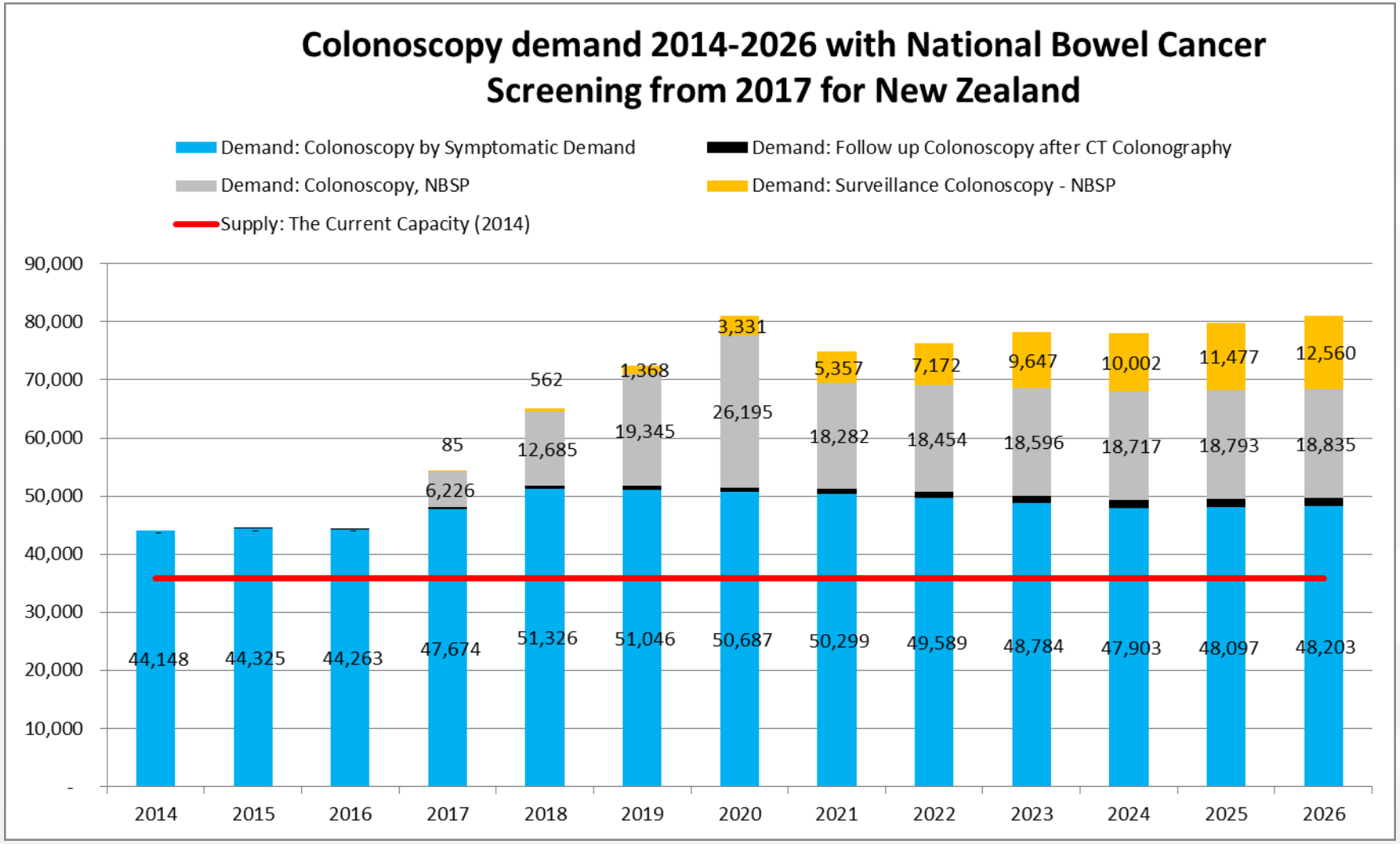
Table 21 Cost-effectiveness of bowel cancer screening - based on national generalisation of the Pilot – life time costs and benefits of the average person – Whole population

Treatment	Costs	QALYs	Incremental		Cost per QALY (95%CI)
			Costs (95% CI)	QALYs (95%CI)	
No screening	$2,643	17.661	-$98 (-$627 - $219)	0.0730 (0.0451 - 0.1084)	Dominates* (-$5,786 - $4,850)
Screening	$2,544	17.734			

Tom Love MOH review 2016

The Future

National roll out as per WDHB (age 50-74 yrs.)



Budget 2016 Announcement

- $39.3 over 4 years for design, planning and set up
- Extra money for IT infra-structure
- Money for implementation in 2017 budget
- Progressive roll out from mid 2017
  - Starting with Lower Hutt and Wairarapa
  - **Narrowed criteria to 60-74 year olds**
  - **Changed FIT sensitivity**

Indicative roll-out order

Confirmed roll-outs for throughout 2017/18 financial year:

Waitemata DHB – Pilot ends Dec 2017

Waitemata joins NBSP January 2018

Hutt Valley DHB – July 2017

Wairarapa DHB – July 2017

Counties Manukau DHB

Southern DHB

Indicative times for other DHBs

Throughout **2018/19** financial year:

Northland DHB

Auckland DHB

Waikato DHB

Hawkes Bay DHB

Whanganui DHB

MidCentral DHB

Capital & Coast DHB

Nelson Marlborough DHB

Canterbury DHB

South Canterbury DHB

Throughout 2019/20 financial year:

- **Bay of Plenty DHB**
- **Tairawhiti DHB**
- **Lakes DHB**
- **Taranaki DHB**
- **West Coast**

The future:
What will be the role of the GP?

GP is fundamental and will be the key to success

Four main differences with BSP compared to other screening programs

No other program relies on GPs

A population register is used

It is invitation based as opposed to enrolment based

The test is done in the patients home

How patients take part in BSP

NHI database is used (60-74 years old)

Quarterly data extracts from PHO database to enhance the national database

Around the time of their birthday they are sent a pre-invitation and 4 weeks later the pack is sent to them including the test kit

It is vital that GPs:

Promote and endorse the program to their patients

Encourage minority groups to ensure equity

Encourage those who have not sent in the sample

Inform BSP of those who are ineligible

Exclusion criteria

Those who have had a colonoscopy in the last 5 years

Those on a bowel polyp or bowel cancer surveillance program

Those who have had or are being treated for bowel cancer

Those who have had their bowel removed

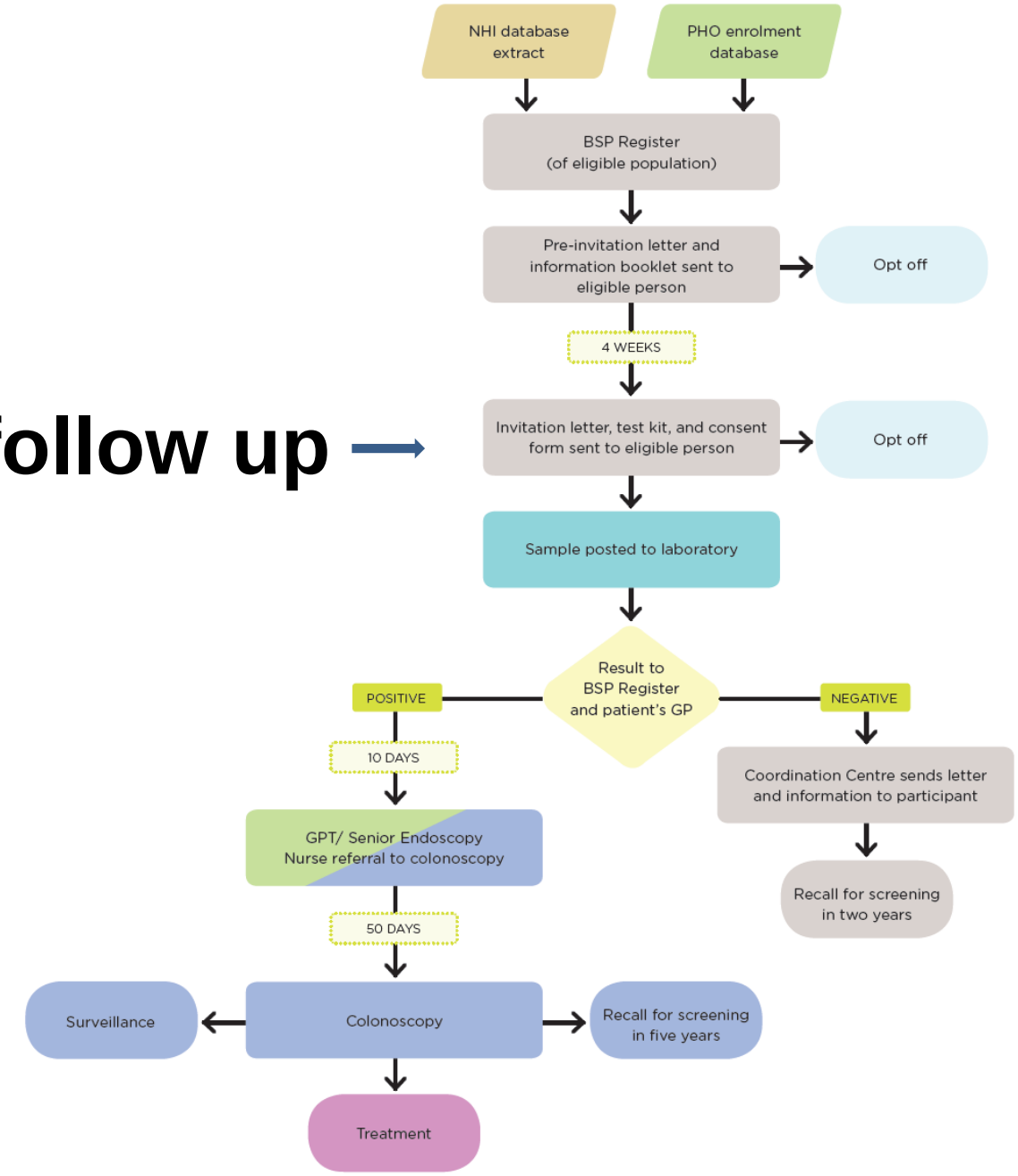
Those who have IBD

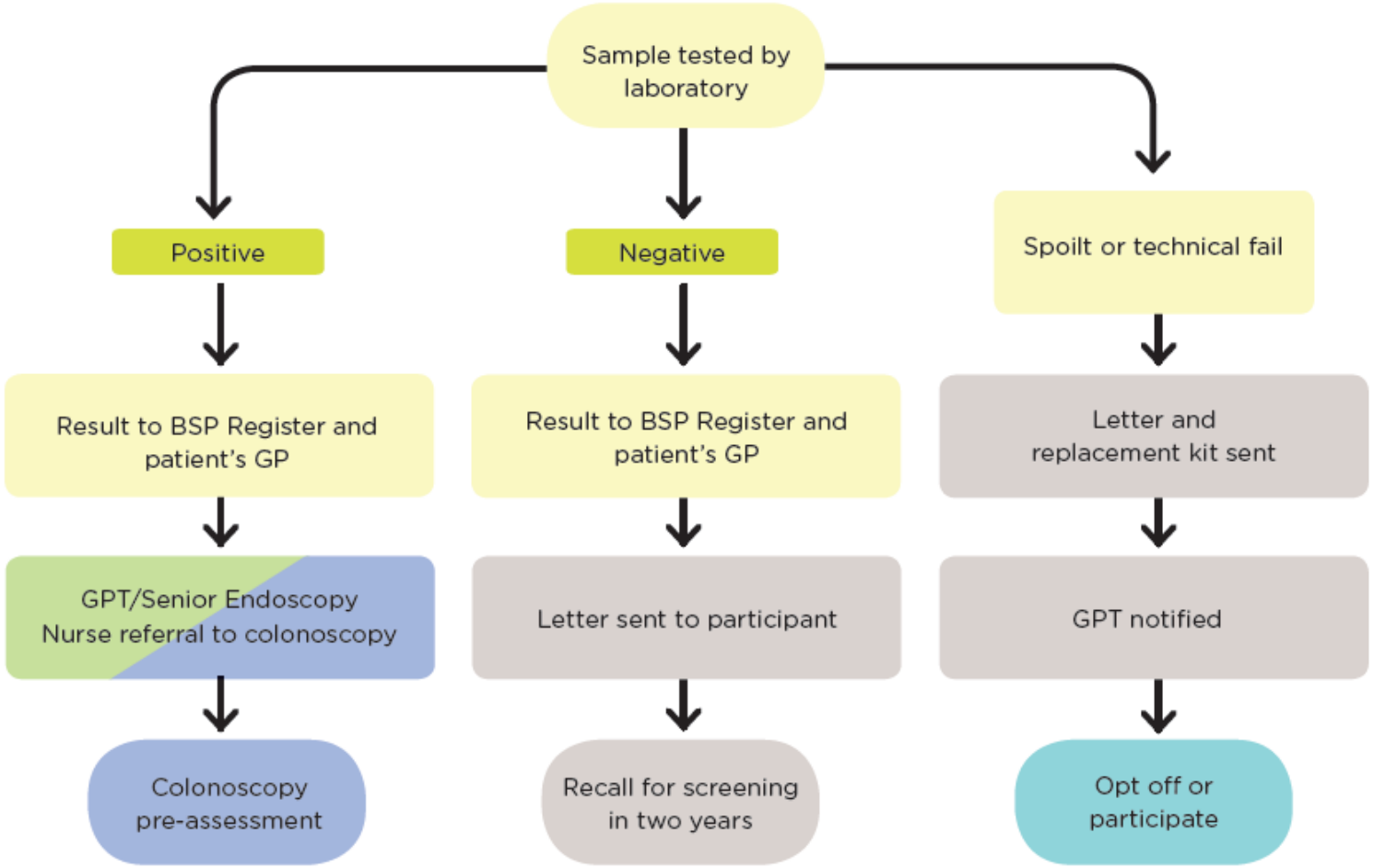
Those who are awaiting other bowel investigations

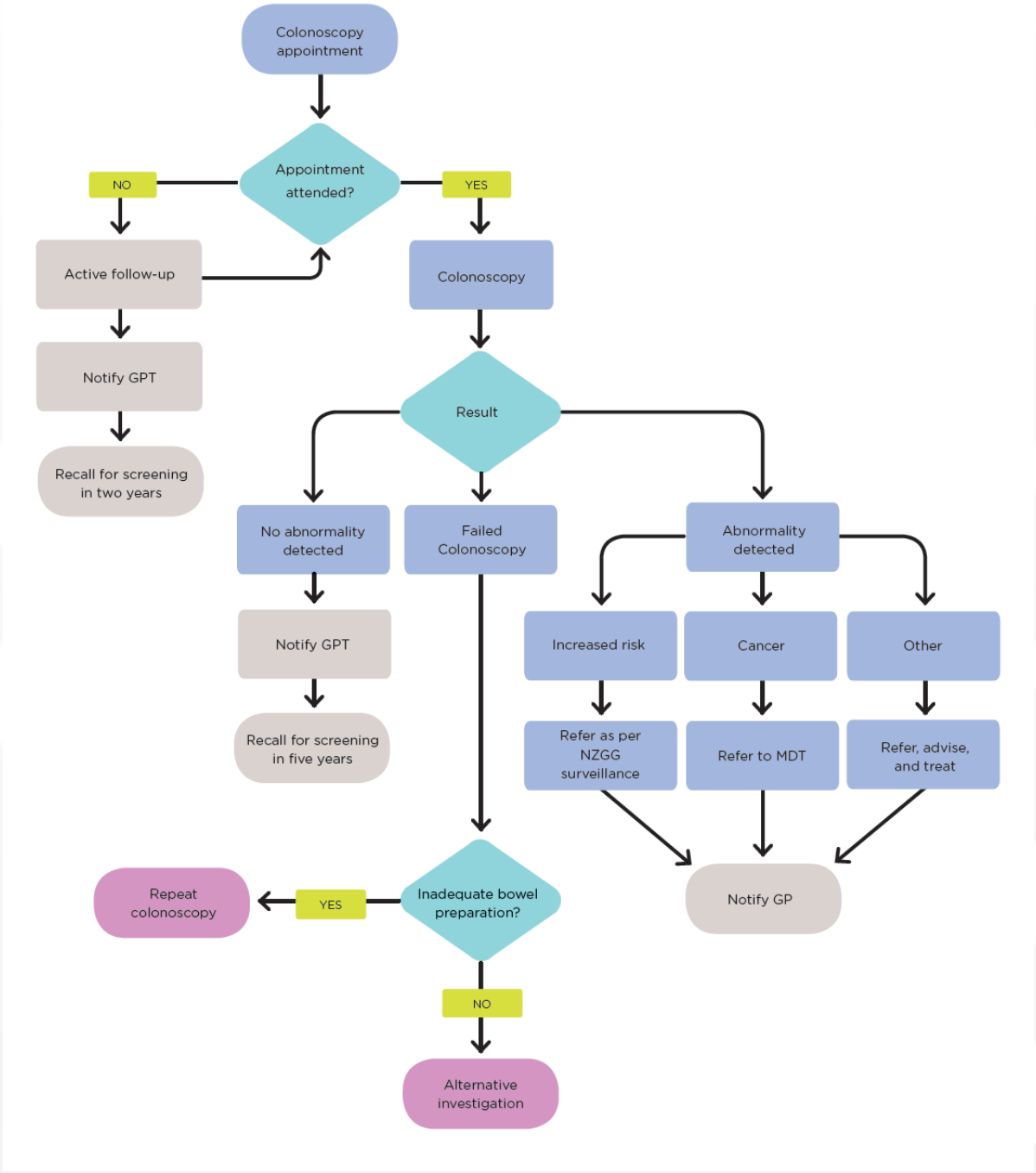
Those who are medically inappropriate

Those who are not ‘average’ risk

Active follow up




Sample tested by laboratory
Positive
Negative
Spoilt or technical fail
Result to BSP Register and patient's GP
Result to BSP Register and patient's GP
Letter and replacement kit sent
GPT/Senior Endoscopy Nurse referral to colonoscopy
Letter sent to participant
GPT notified
Colonoscopy pre-assessment
Recall for screening in two years
Opt off or participate


Colonoscopy appointment
Appointment attended?
NO
YES
Active follow-up
Colonoscopy
Notify GPT
Result
Recall for screening in two years
No abnormality detected
Failed Colonoscopy
Abnormality detected
Notify GPT
Increased risk
Cancer
Other
Recall for screening in five years
Refer as per NZGG surveillance
Refer to MDT
Refer, advise, and treat
Repeat colonoscopy
YES
Inadequate bowel preparation?
Notify GP
NO
Alternative investigation

Pilot evaluation:
Key findings for General Practice

75% of participants obtained their positive FIT result from their GP

No strong preference on who informed them re result

Pilot evaluation
Key findings for General Practice

- GP awareness was critical
- Participants who benefit from GP consultation
  - those who are highly anxious,
  - those with co-morbid conditions
  - those who are reluctant to have a colonoscopy

Summary: What is the role for the GP?

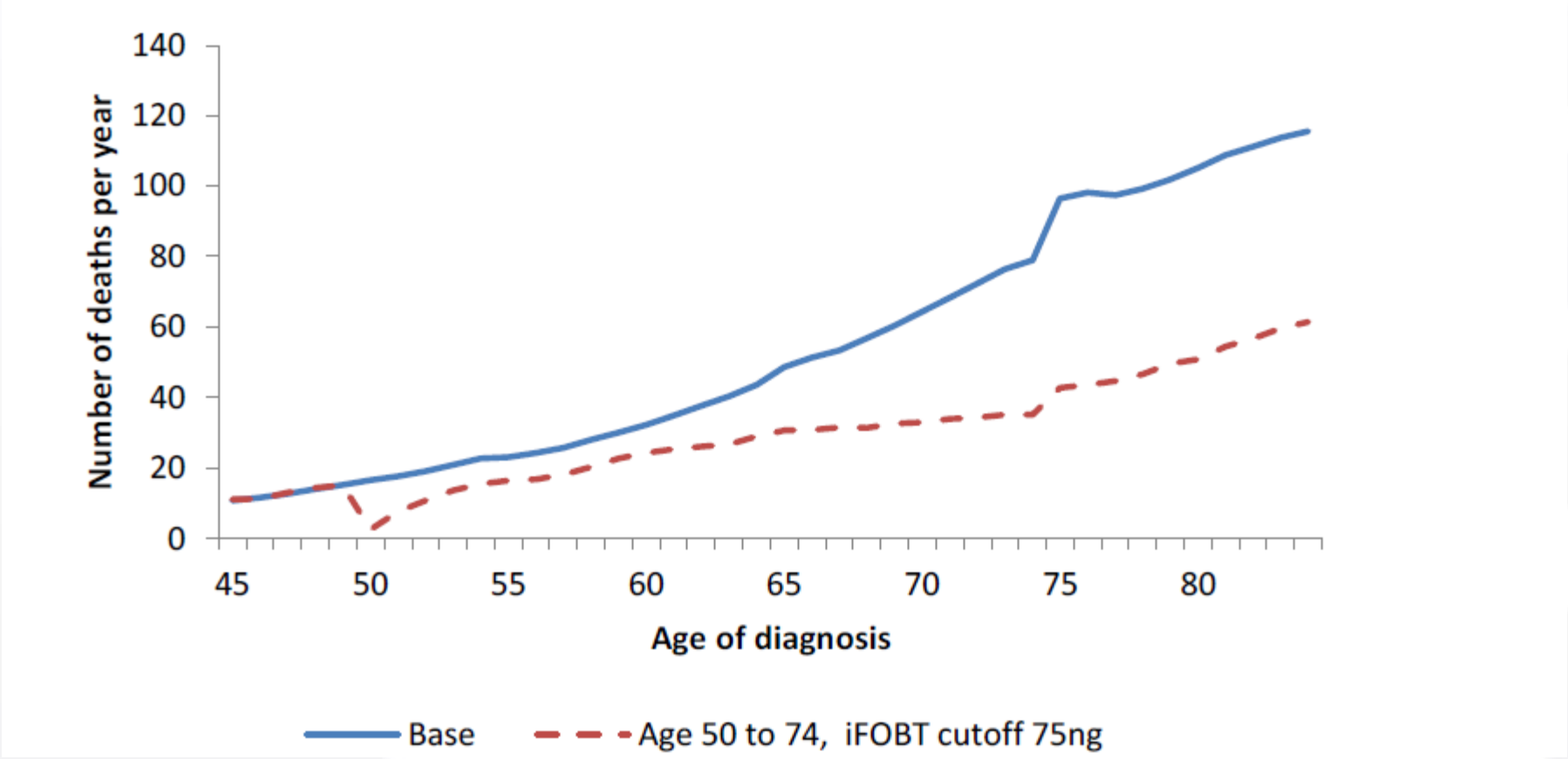
- Promote and endorse the program
- Help BSP identify appropriate participants
- Chase up recidivists and non attenders

- Receive the results
- Inform the patient of a positive result & refer for a colonoscopy (10 days)
  - After this the BSP takes over

Conclusions

- Can and should we do it in NZ?……YES
- “It is possible to organise a programme largely within the existing resources of an endoscopy unit”
  - Train more endoscopists
- We will need to accept that the ‘Gold Plated’ model may not be what we start with
- Regional staged rollout as regions become ready and can demonstrate ability to meet quality standards
- Private will/must have a role
- GPs will have the key role in ensuring success

Conclusion:
Benefit for NZ if we screen



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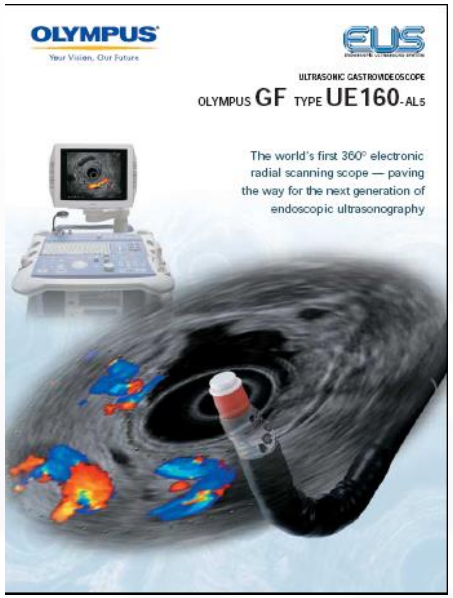

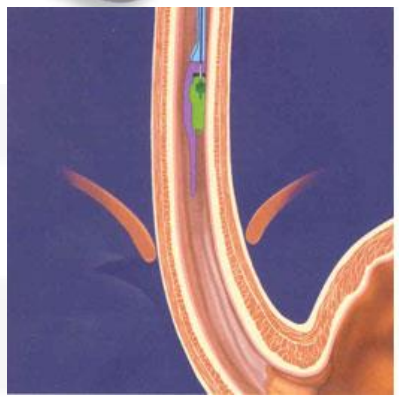

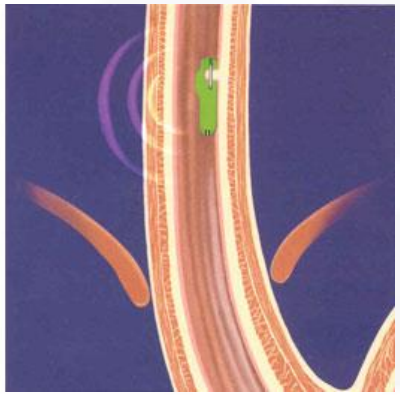

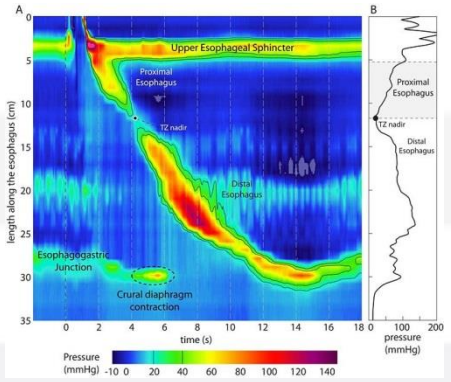

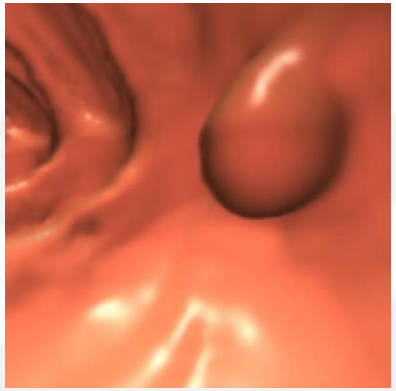

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