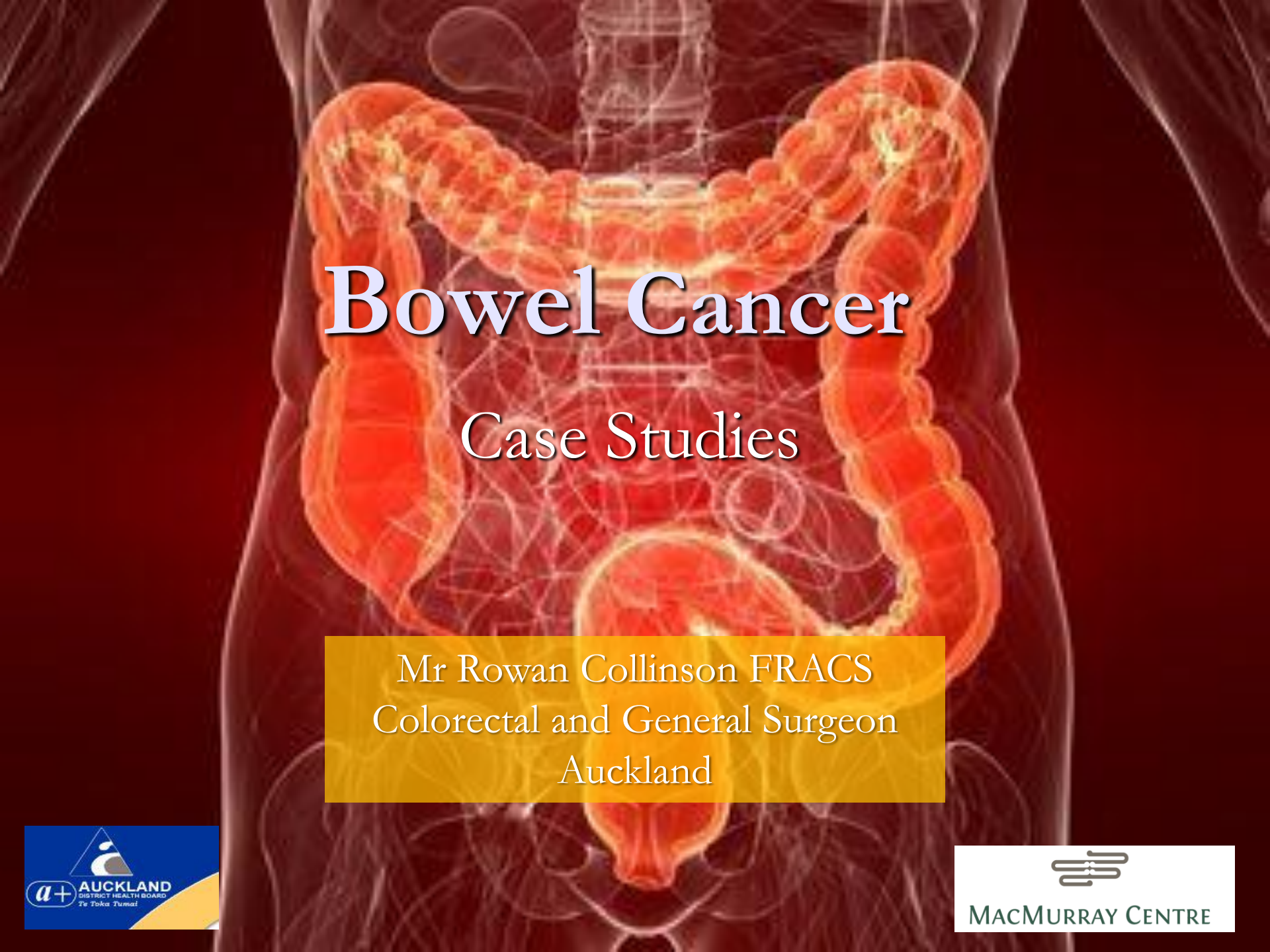

Bowel Cancer

Case Studies

Mr Rowan Collinson FRACS
Colorectal and General Surgeon
Auckland

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- NZ
  - low rate of early stage diagnosis of CRC and surgically curable localised disease.
  - 20% of disease at diagnosis in NZ is metastatic
- CRC typically has a long asymptomatic phase
- Unawareness of the significance of aspects of their family history
- Screening for CRC in NZ is still in its infancy.

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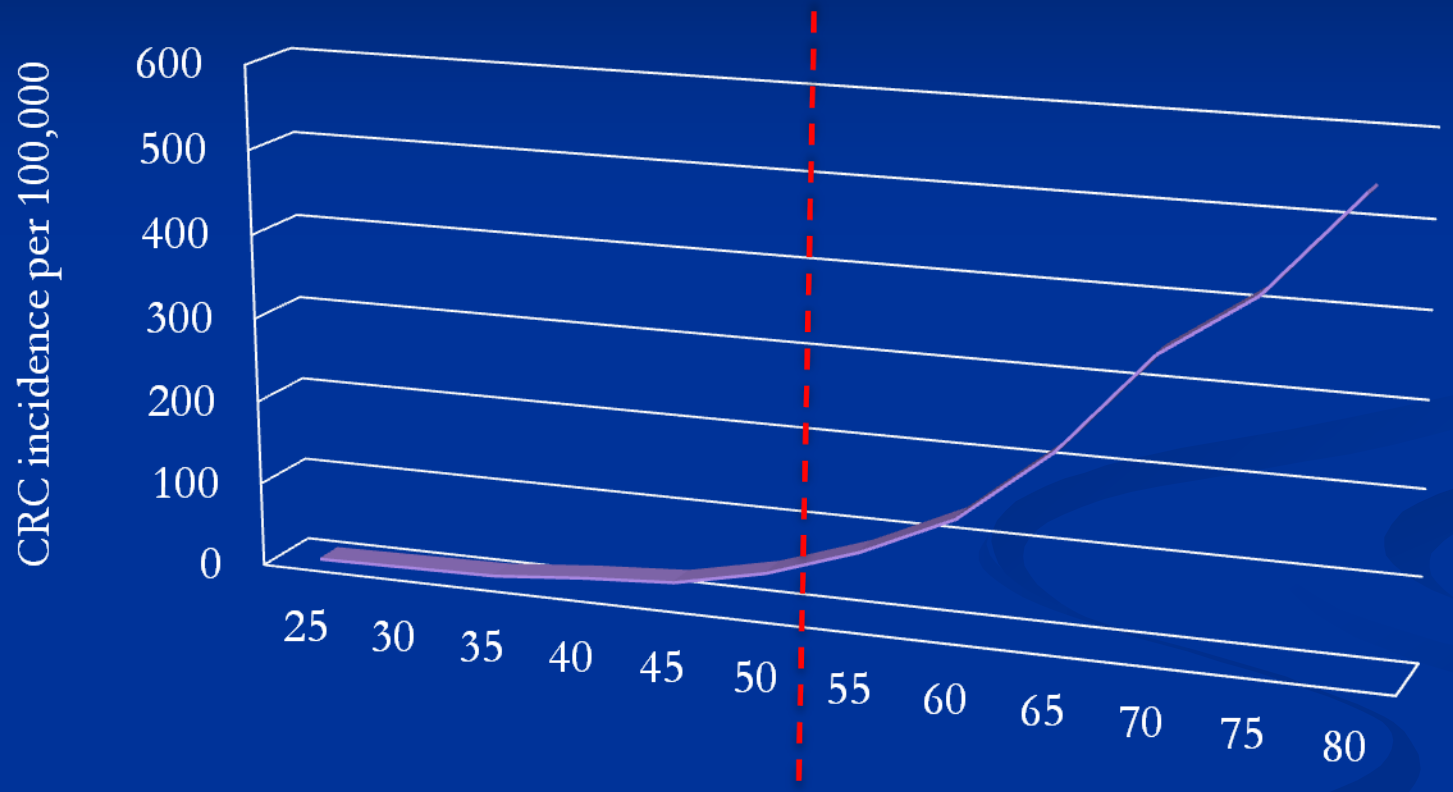
Age-specific incidence of CRC per 100,000



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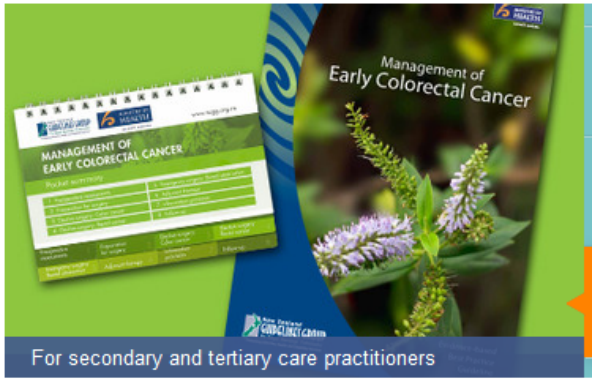

For secondary and tertiary care practitioners

New Zealand Primary Care Handbook 2012 »

Colorectal Cancer Surveillance Guidance »

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Bowel Cancer: Information for people at risk of bowel cancer »

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Surveillance for people at increased risk of colorectal cancer »

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PEARLS

Should I consider cognitive behavioural therapy (CBT) as a treatment for individuals with tinnitus? ›

Popular Resources

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Case 1

- Mr T Pickle
  - 65 yr old man
  - PR blood mixed with stool
  - Altered (loose) bowel habit
  - Hb 105 g/L

- No abdominal pain
- No family history
- No wt loss

Presentation

Table 2. Frequency and Duration of the Symptoms and Signs of Colorectal Cancer (N = 194)

Variable	No.	(%)	Median Duration, Wk (25–75%)*
Fecal occult blood test positive	149	(77)	2 (1–7)
Rectal bleeding	113	(58)	8 (3–19)
Anemia†	110	(57)	2 (1–5)
Abdominal pain	100	(52)	8 (3–20)
Weight loss	76	(39)	27 (9–42)
Anorexia	53	(27)	9 (4–24)
Constipation	53	(27)	10 (3–20)
Altered stools	48	(25)	9 (4–19)
Fatigue	49	(25)	14 (5–27)
Diarrhea	43	(22)	5 (3–15)
Nausea or vomiting	42	(22)	2 (1–5)
Tenesmus	16	(8)	5 (4–21)
Mucus in stools	12	(6)	12 (6–28)
Rectal pain	10	(5)	14 (10–22)
Obstruction	7	(4)	1 (1–4)

* Interquartile range.
† Anemia: a homoglobin of <13.4 g/dl (male) and <12.3 g/dl (female).

Majumdar *et al.* AJG - Vol. 94, No. 10, 1999

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Northern Regional Prioritisation Criteria for Colonoscopy

Category	Types of Patients		Target Time
	Colonoscopy	CT Colonography	
Priority 1	• Known cancer, to pre operatively check for synchronous cancer	CTC with IV contrast i.e. staging at the same time	< 2 weeks
	• Abdominal mass	Either	
	• Imaging (CTC / Barium Enema) suggestive of tumour?	N/A	
	• IBD with severe symptoms	N/A	
	• Palpable / visible rectal tumour (these patients can also be offered rigid sigmoidoscopy during FSA Gastroenterologist / Surgeon	CTC with IV contrast to check for synchronous proximal lesion and stage(MRI Pelvis local staging)	
Priority 2	• Changed Bowel habits (looser, more frequent), age >60	Or Constipated – CTC	< 6 Weeks
	• Rectal bleeding without anal symptoms, age >60	Or CTC	
	• Rectal bleeding plus changed bowel habits (looser, more frequent)	Or CTC	
	• Fe deficiency anaemia (Male Hb<110 any age; Female Hb <100+ post menopausal / GI symptoms / positive family history/ positive FOB)	Or CTC	
	• Positive FOB (appropriately collected in asymptomatic patient), age >50	N/A	
	• IBD diagnostic	N/A	
Priority 3	• Imaging / Sigmoidoscopy shows polyp >10 mm	N/A	< 3 Months
	• Changed bowel habits (looser, more frequent), age 40-60	Or CTC	
Priority 4	• Imaging / Signoidoscopy shows polyp < 10 mm	Or CTC surveillance	< 6 Months
	• Younger patients (age < 40 who require colonoscopy after FSA Gastroenterologist / Surgeon	N/A	
S	All Surveillance	Or CTC	

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		staging)	
Priority 2	• Changed Bowel habits (looser, more frequent), age >60	Or Constipated – CTC	< 6 Weeks
	• Rectal bleeding without anal symptoms, age >60	Or CTC	
	• Rectal bleeding plus changed bowel habits (looser, more frequent)	Or CTC	
	• Fe deficiency anaemia (Male Hb<110 any age; Female Hb <100+ post menopausal / GI symptoms / positive family history/ positive FOB)	Or CTC	
	• Positive FOB (appropriately collected in asymptomatic patient), age >50	N/A	
	• IBD diagnostic	N/A	

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	• IBD diagnostic	N/A	
Priority 3	• Imaging / Sigmoidoscopy shows polyp >10 mm • Changed bowel habits (looser, more frequent), age 40-60	N/A Or CTC	< 3 Months
Priority 4	• Imaging / Signoidoscopy shows polyp < 10 mm • Younger patients (age < 40 who require colonoscopy after FSA Gastroenterologist / Surgeon	Or CTC surveillance N/A	< 6 Months
S	All Surveillance	Or CTC	

Waitemata District Health Board Te Wai Awhina

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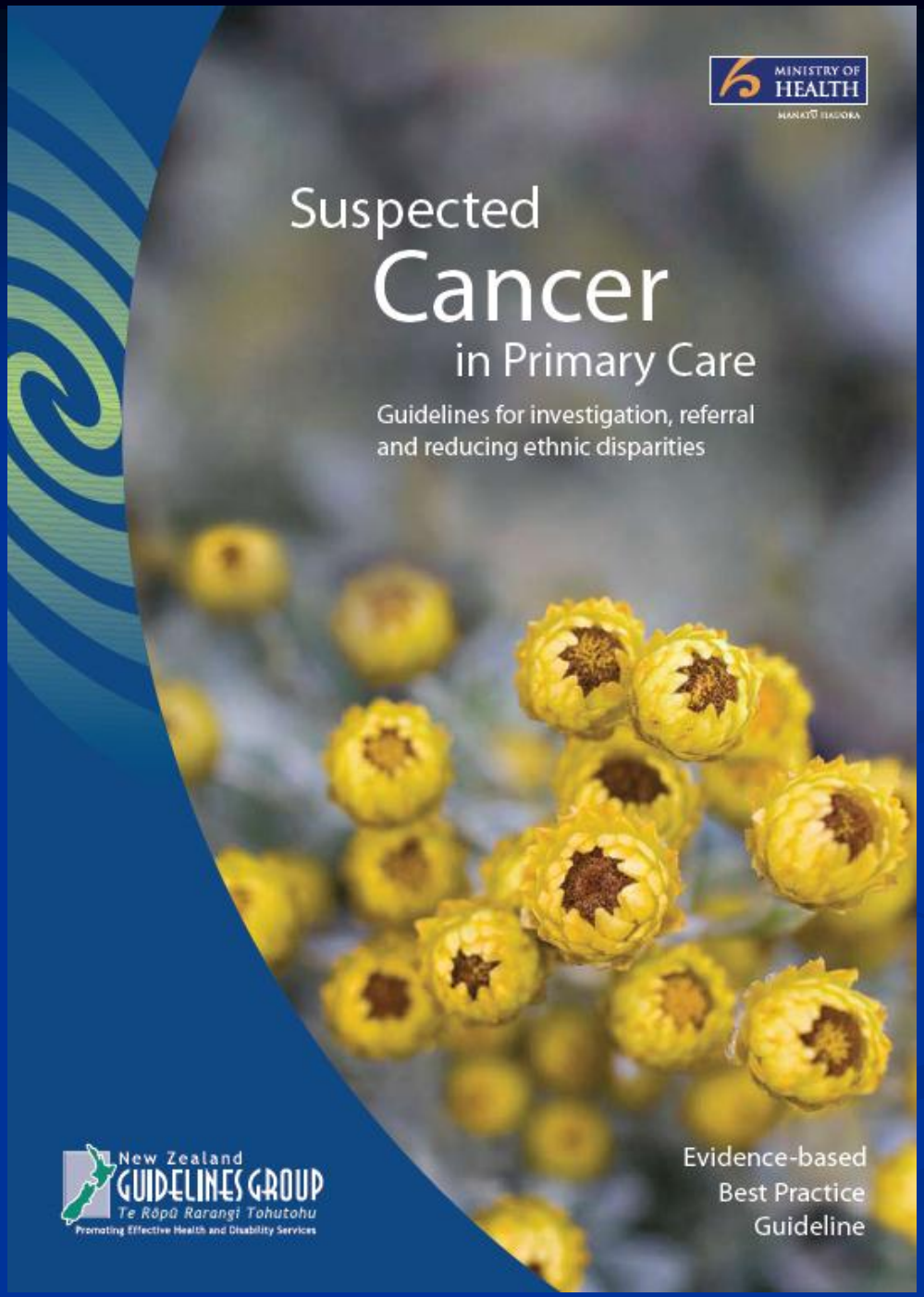

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Case 2

- Mrs Y Me
  - 55 yr old woman
  - Has a friend in Auckland who had a colonoscopy in the pilot screening programme and had a cancer found
  - Worried and would like a colonoscopy too
- No red flag symptoms
- Normal haemoglobin

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FREE BowelScreening programme

- Free programme to check people for early signs of bowel cancer
- Four-year pilot to test whether bowel screening should be introduced throughout NZ
- Offered to anyone aged 50 – 74, living in the Waitemata DHB area and eligible for publicly funded healthcare
- Invitation-based programme
- Central coordination centre
- Dedicated endoscopy
- Fully funded by Waitemata DHB

Bowel Cancer

- Good understanding of disease process and of early stages
- Polyp to carcinoma sequence
- Long lag time from early to late stages
- Stage 1 approx 94% 5 year survival
- Stage 4 approx 8% 5 year survival
- Well established treatment protocols

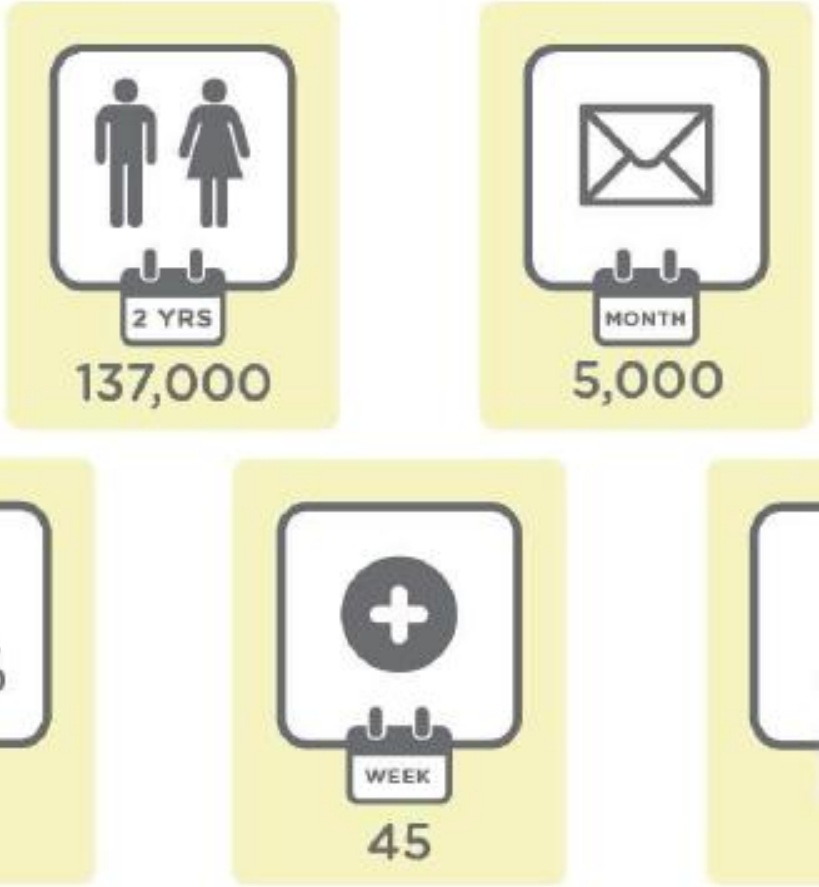
Primary care's role in the BowelScreening programme

- Inform eligible patients about Bowel Screening
- Encourage eligible patients to take part
- Management of positive results
- Refer to colonoscopy
- Support patient along the screening pathway
- Waitemata DHB funds GP contact with patient to discuss positive results and any follow-up appointments

Positive results management

- GP receives patient's results 3 days after patient posts sample
- If blood is found in sample GP contacts patient to discuss results and refer to colonoscopy
- If no blood found in sample GP doesn't need to do anything and patient automatically recalled for screening within the 24 months of initial test
- GP refers patient to colonoscopy within 10 days
- Co-ordination centre is a safety net

Programme planning assumptions



- Mrs Young Ster
  - 42 yr old
  - Concerned about her family history
  - Should she have a colonoscopy?

- No bowel symptoms

- Family history
  - Maternal aunt Colon Ca 45yrs
  - Maternal Grandmother ?gynae cancer 40yrs
  - Brother polyps 42 yrs

Surveillance for people at increased risk of colorectal cancer

A primary care practitioner resource — January 2012

Colorectal cancer in New Zealand

- The second most common cancer registered and second most common cause of death from cancer
- Approximately 2800 new cases, and between 1100 and 1200 deaths each year
- Risk for CRC increases with age – see Table 1

Table 1. Age-specific colorectal cancer incidence in New Zealand 2008

Age group (years)	Rate per 100,000	Risk of developing CRC during 5-year period (%)
25–29	2.9	<0.1
30–34	4.8	<0.1
35–39	6.7	<0.1
40–44	16.5	<0.1
45–49	23.5	0.12
50–54	47.0	0.23
55–59	84.3	0.42
60–64	134.9	0.67
65–69	223.5	1.12
70–74	344.3	1.72
75–79	419.7	2.10
80–84	540.8	2.70

Source: Ministry of Health. Cancer: new registrations and deaths 2008. Ministry of Health, 2011.

People with a personal history of adenomatous polyps, inflammatory bowel disease (IBD), CRC or with a family history of CRC are at increased risk compared to the general population.

The aim of this resource is to assist practitioners to determine the need for and frequency of surveillance colonoscopy for people with:

- personal history of adenomatous polyps
- personal history of inflammatory bowel disease
- personal history of colorectal cancer
- family history of colorectal cancer.

Colonoscopic surveillance: good practice points

Patient age	People aged 75 years or older should be carefully considered before offering surveillance because the potential risks associated with ongoing colonoscopic surveillance are likely to outweigh the benefits
Comorbidities	People with significant comorbidities should be carefully considered before offering surveillance because their fitness for colonoscopy may be impaired and may significantly decrease life expectancy
Ongoing surveillance	At each surveillance test, discuss the potential benefits, limitations and risks of ongoing surveillance. Base a decision to stop surveillance on potential benefits for the person, their preferences and any comorbidities. Make the decision jointly with the person and if appropriate their family or carers
Bowel preparation	Bowel purgatives used for bowel cleansing prior to colonoscopy should be chosen with attention to patient age and comorbidities to mitigate risks of renal impairment. Those associated with severe fluid or electrolyte shifts and renal impairment should be avoided in high-risk groups, and judicious use of oral or intravenous electrolyte replacement should be considered
Patient information	Patients should be given information about the bowel preparation process and possible side effects

This guidance is an update of existing guidance. The information in this resource is drawn from the evidence-based guidance document *Guidance on Surveillance for People at Increased Risk of Colorectal Cancer* (2012) and where specified, the guideline *Management of Early Colorectal Cancer* (2011). Both are available online at www.nzgg.org.nz

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Category 1 Individuals with a slight increase in risk of CRC

- One first-degree relative with CRC diagnosed over the age of 55 years

Recommendations*	Grade
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	✔
Prompt investigation of lower bowel symptoms is advised	✔

Category 2 Individuals with a moderate increase in risk of CRC

- One first-degree relative with CRC diagnosed before the age of 55 years
- Two first-degree relatives with CRC diagnosed at any age

Recommendations*	Grade
Offer colonoscopy every 5 years from the age of 50 years (or from an age 10 years before the earliest age at which CRC was diagnosed in the family, whichever comes first)	C

Category 3 Individuals with a potentially high risk of CRC

- A family history of familial adenomatous polyposis (FAP), hereditary non-polyposis colorectal cancer (HNPCC) or other familial CRC syndromes
- One first-degree relative plus two or more first-degree or second-degree relatives all on the same side of the family with a diagnosis of CRC 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 CRC and one such relative:
  - was diagnosed with CRC before 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, brain)
- At least one first-degree or second-degree relative diagnosed with CRC in association with multiple bowel polyps
- A personal history or one first-degree relative with CRC diagnosed before the age of 50 years, particularly where colorectal tumour immunohistochemistry has revealed loss of protein expression for one of the mismatch repair genes (MLH1, MSH2, MSH6, PMS2)
- A personal history or one first-degree relative with multiple colonic polyps

NZ Familial Gastrointestinal Cancer Registry

Improving Outcomes for New Zealand Families

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The NZ Familial Gastrointestinal Cancer Registry is comprised of a multidisciplinary team that specialises in the assessment and management of familial gastrointestinal cancer. The team consists of family history assessors, gastroenterologists, colorectal surgeons, oncologists and geneticists. We work closely with genetic services in New Zealand.

We are a national service funded by the Ministry of Health with offices in Auckland and Christchurch.

What is Familial Gastrointestinal Cancer?

Is your family at risk?

Where can you get help?

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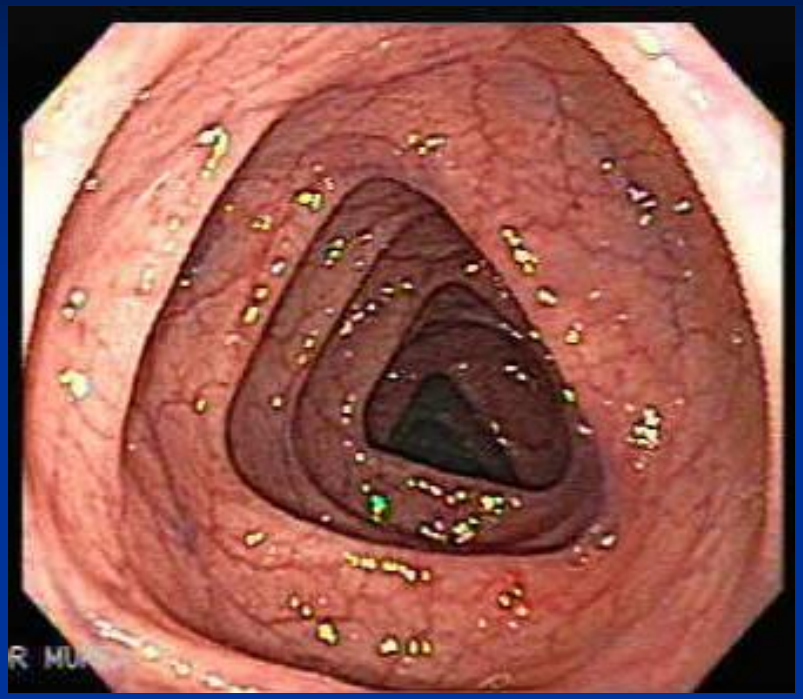
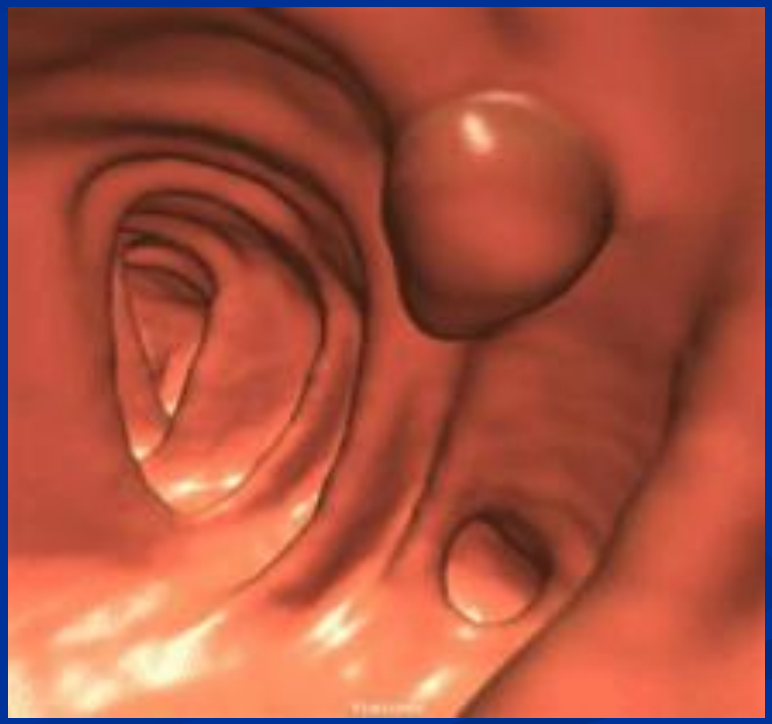
- Mr O Generian
  - 85 yr old
  - Altered bowel habit (constipation)
  - Borderline Fe deficiency anaemia

- Comorbidities
  - COPD – requiring frequent short-course oral steroid
  - Atrial fibrillation on Warfarin
  - Mild chronic renal failure

Colonoscopy?



CT Colonography?



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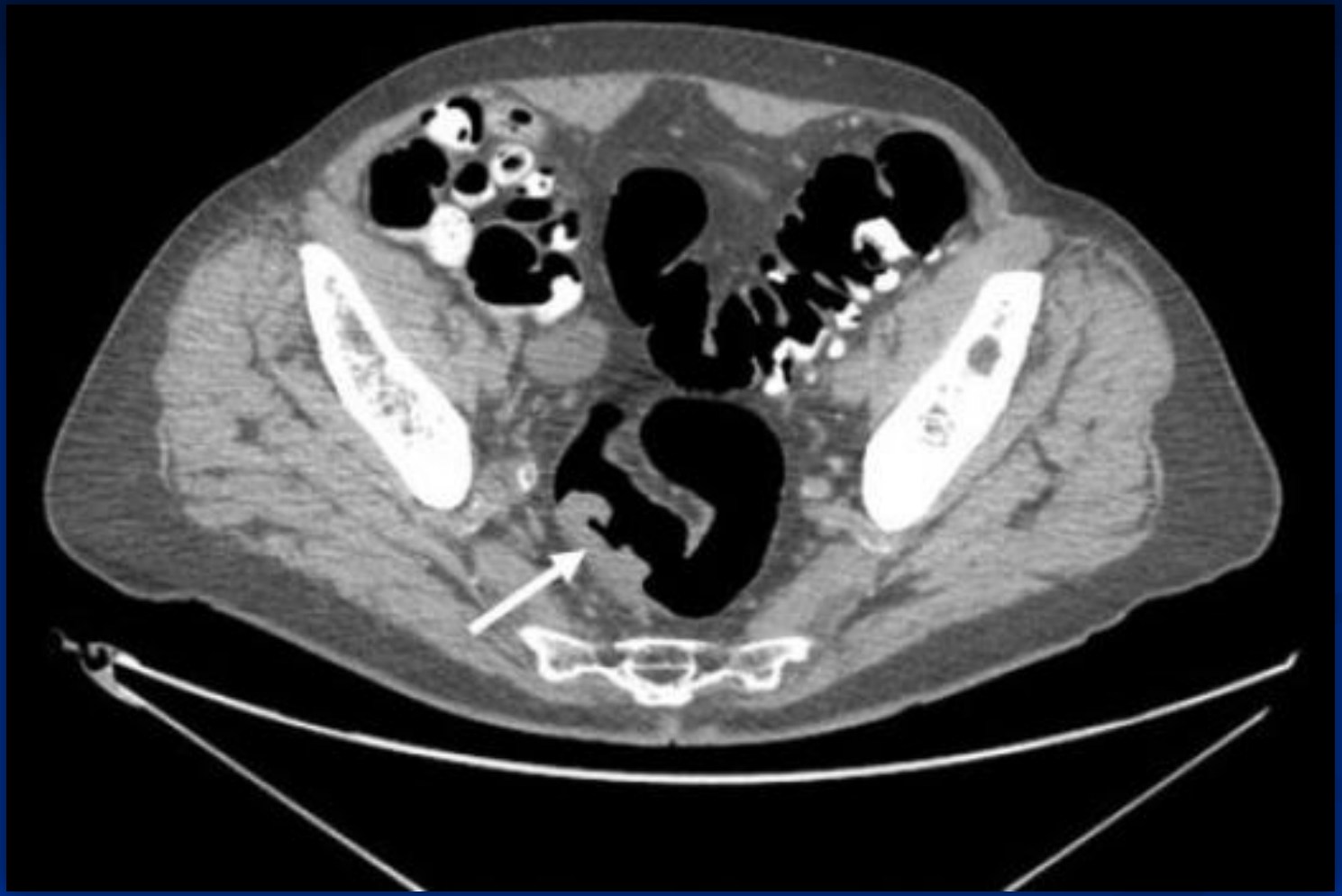
- Consider ‘limited prep’ CT colonography
  - No mechanical bowel prep
  - A few different types
  - Stages the rest of the abdomen at the same time



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- Limited-prep CT colonography shows
  - Obstructing mid-sigmoid tumour
  - Bilobar liver metastases

- Options
  - Colostomy?
  - Non-operative options?

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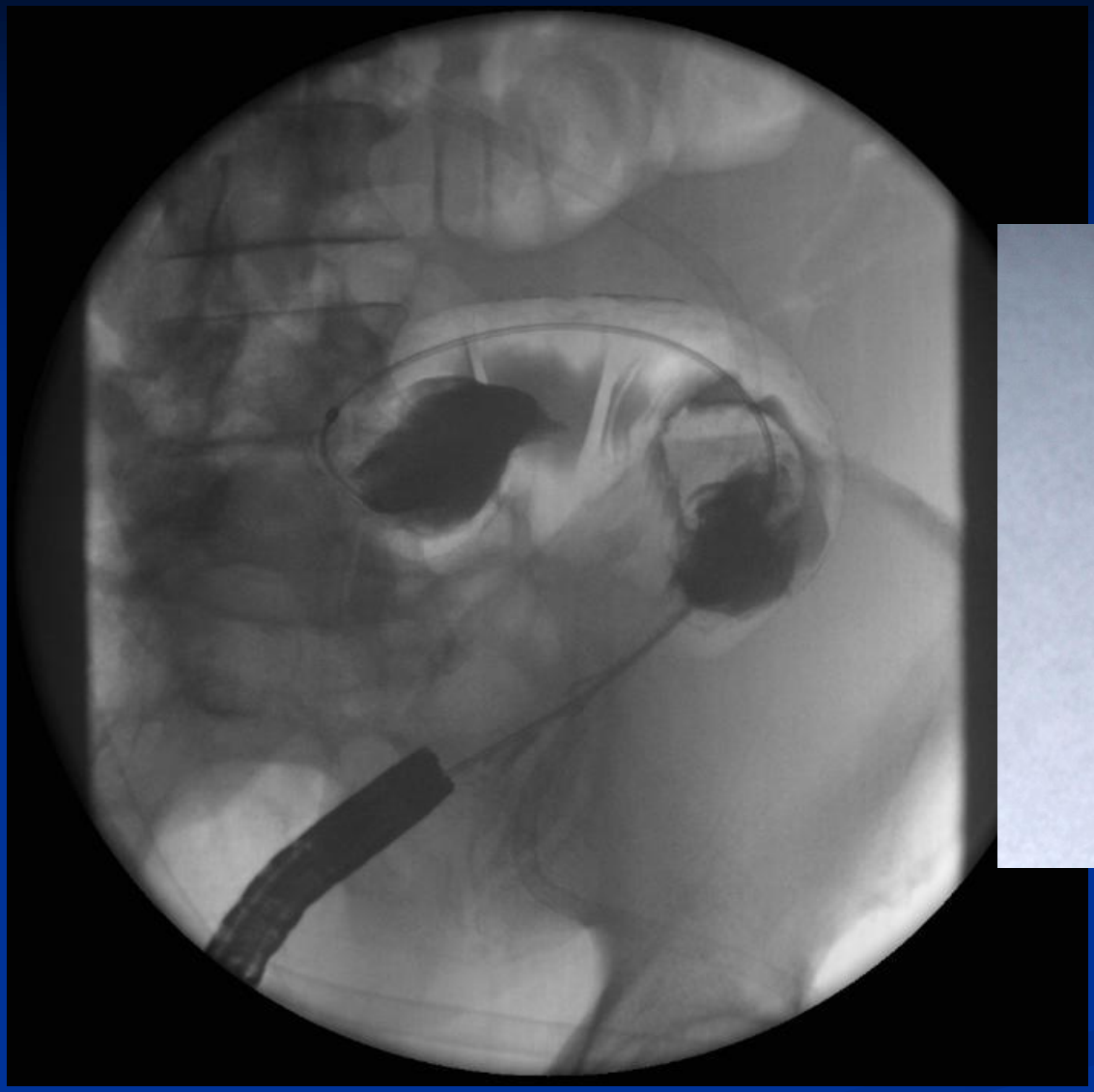

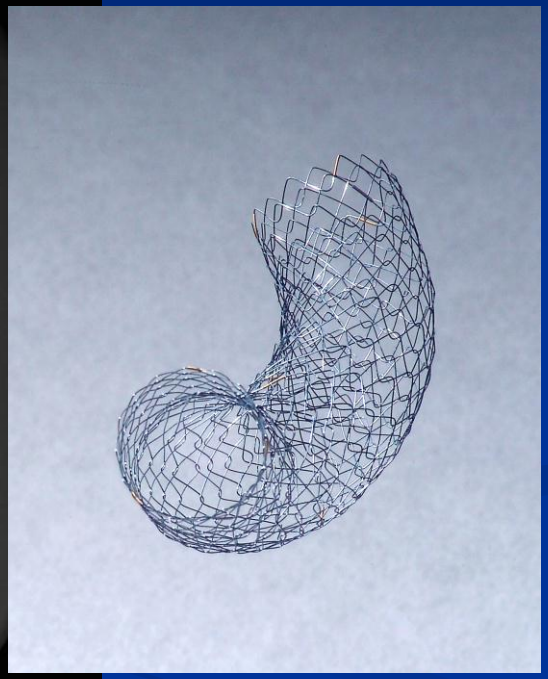

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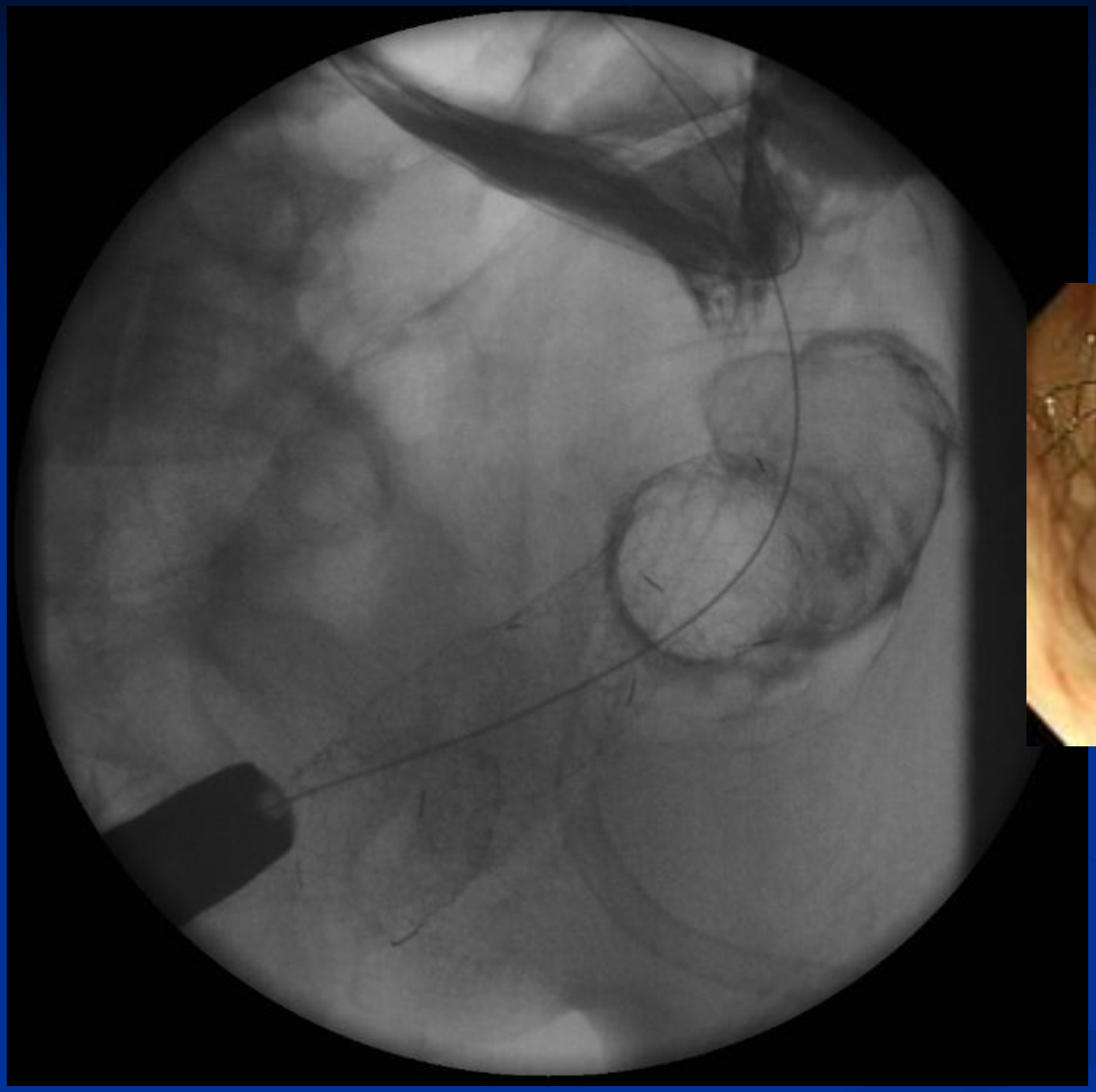

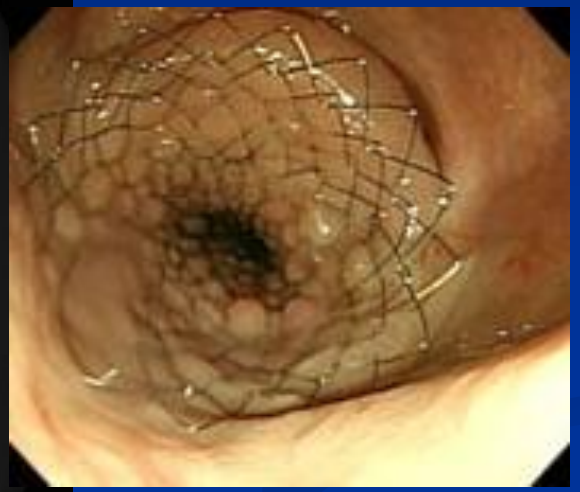

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- Mrs BZ Bee
  - 32 yrs old
  - Mother of two
  - Altered bowel habit
  - Iron deficiency anaemia
    - 'heavy periods'
- Father has 'polyps'
  - Had a few colonoscopies...

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Good practice points

Colorectal cancer: urgent referral (within two weeks)	
A person presenting with a right-sided abdominal mass, should be referred urgently for a surgical opinion	✓
A menstruating woman with unexplained iron deficiency anaemia* and a haemoglobin of 100 g/L or below, should be referred urgently to a specialist * Unexplained iron deficiency anaemia means unrelated to other sources of blood loss, for example, heavy menstrual bleeding, non-steroidal anti-inflammatory drug treatment or blood dyscrasia	✓
Opinion of the Guideline Development Team, or feedback from consultation within New Zealand where no evidence is available.	

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- Colonoscopy
  - Sigmoid cancer
    - Passable with colonoscope
  - 15 polyps throughout the colon
    - 'hyperplastic'
    - Two serrated adenomata
- CT chest/abdo/pelvis
  - Bilobar liver metastases
  - Not resectable

- Discussed in MDTM
  - Chemo
  - ?A role for surgery
- *Resection of primary tumour may carry a survival benefit*

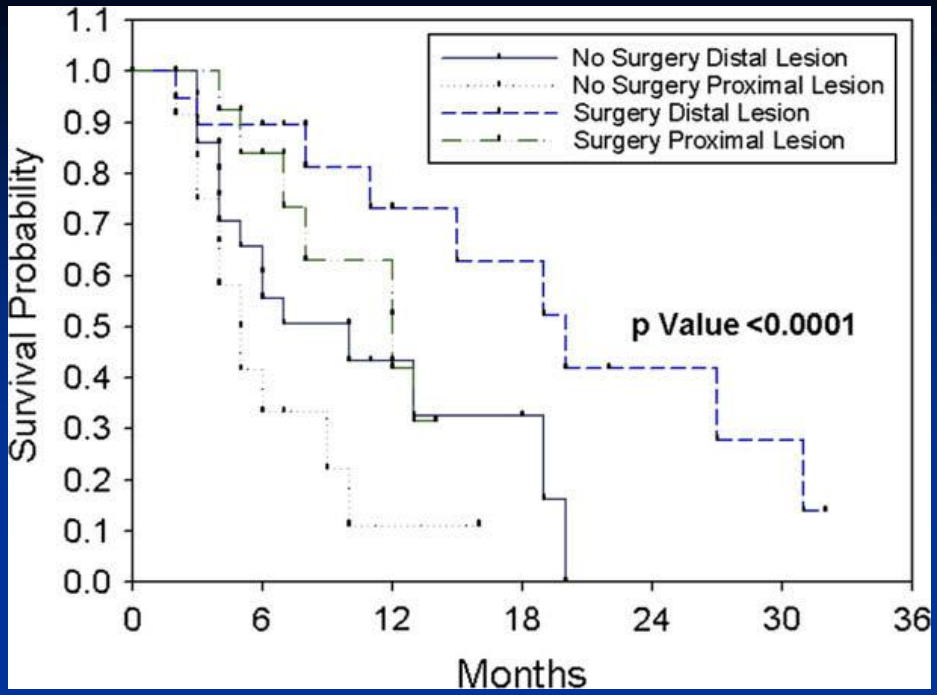

TABLE 3. Independent predictors of overall survival in patients with stage IV colorectal cancer

Variables	*Hazard ratio*	*95% CI*	*P*
Type of surgery			
None	1.000	...	...
Resection/anastomosis	0.507	0.371–0.692	.0001
Resection/stoma	0.578	0.401–0.833	.003
Defunctioning stoma	0.614	0.325–1.161	.134
ASA score			
1	1.000	...	...
3	1.493	1.150–1.941	.003
4	2.532	1.505–4.258	.0001
Chemotherapy			
None	1.000	...	...
Yes	0.636	0.457–0.885	.007
Fluoropyrimidine	0.73	0.51–1.04	.081
Oxaliplatin/Irinotecan	0.25	0.10–0.60	.002
Radiotherapy			
None	1.000	...	...
Yes	0.543	0.352–0.835	.005

CI = confidence interval.

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- Review of pathology reports from Father
  - Mostly hyperplastic polyps found each time...
- Patient now concerned about 'something in the family'
  - 'want my kids checked'

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"Good news—it's not colon cancer, it's tinsel."

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