Bowel cancer and symptomatic FIT

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Bowel Cancer in Bradford

• Approx 200 new cases per annum (Increasing)

• 75% suitable for “curative” resection

• 2 year survival 68% (82% if resected, 29% if no surgery)

• 2% 90 day mortality from surgery

• New high risk groups - British Asian, Slovakian and Polish

• 5 year survival unchanged ~55% for last 10 years
Bowel Cancer

- UK survival rates still lag behind Europe
- 5000 + deaths per year could be avoided if we match Europe
- Late diagnosis and emergency presentation = poor outcome
- Estimated that half of difference in survival related to late presentation
GP’s repeatedly missing ‘red flag’ signs of bowel cancer”

GPs are repeatedly missing “red flag” signs of bowel cancer, with one fifth of cases diagnosed in A&E found to have had alarm bell symptoms in the previous year, a study shows.

The UK research found that on average, patients who were not diagnosed until their case became an emergency had visited their GP five times in the 12 months previously.
Primary care problem

- Diagnosis of cancer in primary care not straightforward
- GP likely to see 8-9 cancers per annum and 1000s of symptoms
- Individual GP only likely to see one of each common cancer per year
- 2ww pathways designed to identify high risk patients
Early diagnosis

“I went to see my GP this week and we talked about this and that, and the importance of catching cancer early, which I found a bit annoying as they had not caught my cancer early, but it turned out he was just filling in time and wanted to talk to me about something different”
Dukes A - 5 year survival > 95%

Dukes D - 5 year survival < 10%
Models of diagnostic delay

- Patient delay
- Delay in primary care
- Delay in secondary care
- Doctor delay
- System delay

First symptom
First contact with the GP
Initiation of investigation of cancer-related symptoms
Referral to hospital
First visit at the hospital
Referral to treatment
Treatment initiation

F Olesen BJC 2009
Patients, bloody patients!

I mean it’s like ya know a horse, colic in a horse... it comes on pretty damn quick and ... ya know ye think well, ya know I began to think maybe I’ve got a twisted bowel or summit.

The trouble is with cancer, I think you know it creeps in on you and ... and like there’s a bit of blood there but no pain and you think well if there’d been some pain there you’d have definitely said oh shit there’s something wrong here.

And the old farmers are worse by a long shot. They’re, you know, proper blokes. You know, “I’m not going to the doctor. I’ll be reet, mate.”
Diagnostic delays

- Torring et al 2010
- Waiting list paradox
- Diagnostic delays > 5 weeks associated with worse mortality if ‘alarm symptoms’
- Similar curve of other common cancers
Evidence of increasing mortality with longer diagnostic intervals for 5 common cancers

Torrung 2010

- Increased mortality for delays in patients with ‘red flag’ symptoms

- Very short diagnostic intervals for those with ‘red flag’ symptoms increased mortality

- Patients with ‘vague’ symptoms and long diagnostic pathways had same survival rate as symptomatic patients

We all assume delays lead to poor outcomes
Red flag symptoms

- Rectal bleeding or blood in stools
- Abdominal pain/ Abdominal mass
- Anaemia
- Change in bowel habit for > 6 weeks
- Weight loss (unexplained)
Less ‘red flag’

- Anal canal type bleed in <45 yrs
- Non-specific abdominal pain
- Constipation
Red ‘red flag’ symptoms

- Rectal bleeding > 45 yrs
- Increased frequency stools/loose stools
- Anaemia + red flag symptom
<table>
<thead>
<tr>
<th>Constipation</th>
<th>Diarrhoea</th>
<th>Rectal bleeding</th>
<th>Loss of weight</th>
<th>Abdominal pain</th>
<th>Abdominal tenderness</th>
<th>Abnormal rectal exam</th>
<th>Haemoglobin n 10-13g/dl</th>
<th>Haemoglobin n &lt; 10 g/dl</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.9</td>
<td>2.4</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
<td>1.5</td>
<td>0.97</td>
<td>2.3</td>
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<tr>
<td>0.8</td>
<td>1.1</td>
<td>2.4</td>
<td>3.0</td>
<td>1.5</td>
<td>1.7</td>
<td>2.6</td>
<td>1.2</td>
<td>2.6</td>
</tr>
<tr>
<td>1.5</td>
<td>3.4</td>
<td>1.9</td>
<td>2.4</td>
<td>11</td>
<td>2.2</td>
<td>2.2</td>
<td>2.9</td>
<td>2.9</td>
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<td>6.8</td>
<td>4.7</td>
<td>3.1</td>
<td>4.5</td>
<td>8.5</td>
<td>3.6</td>
<td>3.2</td>
<td>Rectal bleeding</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>3.4</td>
<td>6.4</td>
<td>7.4</td>
<td>1.3</td>
<td>4.7</td>
<td>Loss of weight</td>
<td>Abdominal pain</td>
<td>6.9</td>
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<td>3.0</td>
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<td>3.3</td>
<td>2.2</td>
<td>1.7</td>
<td>5.8</td>
<td>2.7</td>
<td>Abdominal tenderness</td>
<td>&gt;10</td>
</tr>
</tbody>
</table>

Highest risk patients are in red, moderate-high risk in orange and moderate risk in yellow.
Suspected Lower GI Malignancy Referral

Referral Criteria

1. Patients over 40 years:
   Unexplained weight loss with Abdominal pain
   Lower abdo mass
   Rectal mass
   Rectal bleeding and one of the following:
   Unexplained change in Bowel Habit
   Unexplained iron deficiency anaemia

2. Patients over 50 years (in addition to 1):
   Unexplained Rectal bleeding
   Positive FOB (no longer recommended)

3. Patients over 60 years (in addition to 1 & 2)
   Unexplained change in bowel habit

FIT????
Does screening make a difference?
Bowel cancer screening uptake in Bradford ~ 50%
(below national average of 60%)
Cochrane review of Hemoccult screening on colorectal cancer mortality

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Screening n/N</th>
<th>Control n/N</th>
<th>Peto Odds Ratio</th>
<th>Weight</th>
<th>Peto Odds Ratio</th>
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<tbody>
<tr>
<td>1 Randomised controlled trials</td>
<td></td>
<td></td>
<td>Peto, Fixed, 95% CI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funen 2004</td>
<td>362/30967</td>
<td>431/30966</td>
<td>0.84 [0.73, 0.96]</td>
<td>26.2%</td>
<td></td>
</tr>
<tr>
<td>Goteborg 2005</td>
<td>252/34144</td>
<td>300/34164</td>
<td>0.84 [0.71, 0.99]</td>
<td>18.3%</td>
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</tr>
<tr>
<td>Minnesota 1999</td>
<td>269/31157</td>
<td>177/15394</td>
<td>0.74 [0.61, 0.90]</td>
<td>13.1%</td>
<td></td>
</tr>
<tr>
<td>Nottingham 2002</td>
<td>593/76466</td>
<td>684/76384</td>
<td>0.87 [0.77, 0.97]</td>
<td>42.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>172734</strong></td>
<td><strong>156908</strong></td>
<td></td>
<td><strong>100.0 %</strong></td>
<td><strong>0.84 [0.78, 0.90]</strong></td>
</tr>
</tbody>
</table>

Total events: 1476 (Screening), 1592 (Control)
Heterogeneity: Chi² = 1.85, df = 3 (P = 0.60); I² = 0.0%
Test for overall effect: Z = 4.89 (P < 0.00001)
Cochrane review of Hemoccult screening on colorectal cancer mortality

- Modest reduction in mortality
- Thought to prevent 1 in 6 colorectal cancer deaths
- Possible reduction in cancer incidence due to removal of adenomas
- Psychological affects of false-positive result
- Risks of false-negative result
- Risks of colonoscopy

Royal College of General Practitioners
Bowel Cancer Bradford

- 3000+ lower GI FT referrals per year
- ~200 cancers diagnosed per year in total
- 6% pick up rate from FT referrals if all CRC diagnosed through FT pathway
- 1/5 patients have metastatic disease at presentation
- Very small number through screening
What next - how can we use resources better?
FIT v FOB
GUAIAC TESTS - TRADITIONAL FOB TEST

• Most common type in U.K. used in BCS

• Solid evidence (3 RCT’s)

• 30 year f/u (NEJM Oct 2013)

• Need **specimens from 3 bowel movements** - low uptake

• **Non-specific to human blood** - reaction with guaiac paper/ turns blue if blood present

• Results influenced by **foods and medications**

• **Relies upon human judgement** to detect a colour change
Faecal Immunochemical Tests (FIT)

- FIT detects only human blood
- Results not influenced by foods or medications
- Most types require only 1 stool specimen
- Higher sensitivity than forms of guaiac-based FOBT
- More user friendly - up take higher
- Automated process to provide a numerical value
FIT in symptomatic groups

• NICE DG-30 (July 2017)

• “FIT recommended for adoption in primary care to guide referral for suspected colorectal cancer in people without rectal bleeding who have unexplained symptoms but do not meet criteria for fast track referral”

• FIT has a high negative predictive value (0.05%), so negative result makes colorectal cancer unlikely
Which patients are eligible for FIT?

- NICE guidance for suspected cancer NG-12 be referred for FIT in patients without rectal bleeding but are ‘low risk’ not ‘no risk’ of CRC
Pathway for Symptomatic FIT

Patient presents at GP practice with lower GI symptoms

Patient has high risk symptoms

- Patient referred on a lower GI 2ww pathway

Patient has ‘low risk’ but not ‘no risk’ symptoms

- GP offers FIT test to eligible patient.
- Patient completes test and returns the kit to the GP practice.
- GP practice sends completed kit to pathology for processing

Result sent to GP practice via ICE. GP to communicate results with the patient

Negative FIT test

- Patient safety netted by GP

Positive FIT test

- Symptoms resolve
  - Patient referred on a lower GI 2WW pathway
- Symptoms persist
  - No Further Action
  - Further investigations

Patient safety netted by GP practice
What do I need to do with the results?

If the FIT test result is $> \text{ or } = 10 \, \mu\text{g} \, \text{Hb/g faeces}$: The GP should consider a lower GI 2ww referral for suspected cancer. The 2ww referral form has been updated to include a FIT test result.

If the test result is $< 10 \, \mu\text{g} \, \text{Hb/g faeces}$: Although a negative FIT test should give us a very high degree of confidence of the absence of a cancer, it is important to note that a negative test result cannot absolutely rule out colorectal cancer as occasionally tumours do not bleed, or bleed intermittently.

FIT negative patients have an extremely low risk both of colorectal cancer, or of high risk adenoma. Your patient therefore does not need referral for suspected colorectal cancer, but as always you should consider seeking specialist advice if worrying symptoms persist and safety net the patient.
What do FIT studies tell us

Figure 1: Applying FIT using a cut off of 10µg/g

Presenting disease: 1000 patients

FIT Result using 10µg/g cut off

FIT +ve: 140 patients

FIT -ve: 860 patients

- IBS
- CRC
- Polyps
- OED
- Diminutive polyps
- Other
Summary

• Colorectal cancer presents in 3 ways
  - emergency, suspicious symptoms, screening

• Early disease rarely gives symptoms
  - need for increased screening

• 1 in 5 patients present with metastatic disease

• Positive faecal occult blood test higher predictive value for CRC than any symptoms
Recommendations

- Be aware of high risk red flag symptoms
- Refer early
- Stick to 2WW guidelines
- Use FIT to exclude risk of CRC
- Encourage screening
Any questions?