

Is overdiagnosis a concern for Bowel Cancer screening in England? - an analysis of recent trends in colorectal cancer incidence

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Bowel Cancer Screening Programme

Background

Colorectal cancer (CRC) screening using biennial gFOBt was introduced in England in September 2006* and by 2010 was being offered >90% of 60-69yr olds, rising to >95% of 60-74yr olds by 2014.

Overdiagnosis of cancer is a major concern of cancer screening programmes; in breast cancer it has been estimated that around 50% of screen detected cancers might be due to overdiagnosis. This study seeks to examine the trends in CRC incidence and ascertain what impact screening has had on incidence.

Method

Data for the period 2001-16 was extracted from the ONS website (www.ons.gov.uk) and CRC incidence rates by 5yr age bands from age 45 calculated. CRC was defined according to the ICD 10th Revision codes C18 (colon) and C19/C20/C21 (rectum, recto-sigmoid & anus).

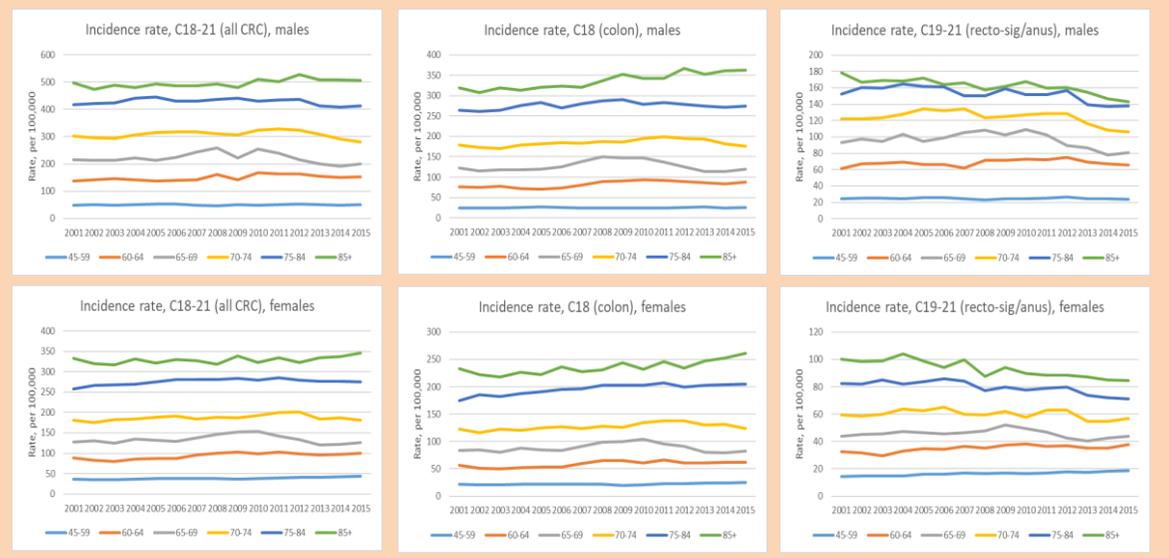
Changes in incidence rates in age groups never offered screening were compared with those offered screening (age group 60-74 years).

Results

Figure 1 shows the incidence rates over the period studied of colon and recto-sigmoid/anal cancers. Total CRC incidence in the 60-64 age band has increased, with a clear step increase in 2009/10 coinciding with the completion of screening roll-out. In the 65-69 age band there were similar peaks in 2008-10 before a decline to below pre-screening rates. In the 70-74 age band for whom screening started in 2010 there were peaks in 2011/12 before declining below pre-screening rates. These patterns were similar for both colon (C18) and for rectal (C19-21) cancers.

As shown in Table 1 there have been increases in CRC incidence in the 60-64 age band, with decreases in the older ages groups.

Figure 1. Colorectal cancer incidence by 5 yr age-band and sex in England & Wales from 2005 to 2015, for colon (C18) and recto-sigmoid/anal (C19-21) cancers



Conclusion

- At this point we could find no evidence of overdiagnosis of CRC.
- While there has been a 13% increase in CRC incidence in the 60-64 age band, consistent with the first (prevalent) screening round there has been no sustained increase in the older age bands offered screening.
- Of note there has been an increase in incidence of rectal cancer in women under age 60.

Table 1. Relative changes in colorectal cancer incidence (C18-21) by 5 yr age-band in England & Wales from 2005 to 2015

	45-49yrs	50-54yrs	55-59yrs	60-64yrs	65-69yrs	70-74yrs	75-79yrs	80-84yrs	85+yrs
Men	+1%	-5%	+1%	+12%	-6%	-11%	-10%	-3%	+3%
Women	+15%	+20%	+18%	+14%	-4%	-4%	-4%	+5%	+8%

References and declarations

*Logan RF, Patrick J et al. Outcomes of the BCSP in England after the first 1 million tests. GUT 2012 Oct; 61:1439-46

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Presenter Declarations 

This presenter has the following declarations of relationship with industry:

- NONE

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