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Cancer in Older Patients

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The management of rectal cancer in older patients in England - a retrospective population based study a patients diagnosed between April 2009 and December 2014

Cooperative Study Groups

On behalf of

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**Background** This study sought to examine the use of radical treatment for rectal cancer (neoadjuvant radiotherapy and major surgical resection) and the associated outcomes across the English National Health Service (NHS) in relation to age.

**Materials and Methods** Data for all patients diagnosed with a first primary rectal cancer between 1st April 2009 and 31st December 2014 were included. Data from multiple sources including cancer registration data and Hospital Episode Statistics (HES) data, which were compiled as part of the Bowel Cancer Intelligence UK (BCI UK) hub, were used to obtain information about patient and tumour characteristics, treatments and outcomes. Patients were divided into three groups in relation to their age at the time of diagnosis; <70, 70-79 and ≥80. Descriptive analyses were undertaken to assess the variation in treatment and outcomes. Multilevel binary logistic regression models were used to assess the factors associated with the receipt of a major surgical resection, with patients clustered within NHS trusts.

### Results

In total, 52,922 people were diagnosed with a first primary rectal cancer in England over the study period. Of these, 11,924 (22.4%) were aged 80 or over at the time of diagnosis. The proportion undergoing a major resection decreased with age, falling from 66.5% amongst those aged under 70 to 31.7% amongst those aged 80 and over. The use of neoadjuvant radiotherapy decreased with age, with 48.3% of those aged under 70 receiving pre-operative radiotherapy compared to 26.5% of those aged 80 and over. Stoma creation rates were similar across all age groups. However the proportion of patients having their stoma closed within 18 months fell with age, from 66.3% amongst those aged <70 to 32.4% amongst those aged ≥80.

Deaths within 30 days of a major surgical resection increased with age, from 1.0% to 5.5%. The rate of returns to theatre were consistent between age groups (11.0%, 11.6% and 10.2% respectively). The rate of 30-day post-operative mortality was lower amongst those who received neoadjuvant radiotherapy than those who did not across all age groups (1.6% versus 2.6%).

After adjustment for case-mix factors significant variation in operative rates for the oldest patients between NHS trusts in England remained. Results from adjusted logistic regression models showed no significant difference in 30-day post-operative mortality, length of stay or emergency readmission amongst those aged 80 and over between trusts with high and low operative rates.

### Conclusions

This study demonstrates that older patients with rectal cancer were less likely than younger patients to receive potentially curative treatment. However those who did receive potentially curative treatment for rectal cancer demonstrated outcomes comparable to those of their younger counterparts, suggesting that they have been well selected.

COI:

I/we (in case of co-authors) have no potential conflict of interest to disclose