A National Audit: Clinical validation and root cause analysis of true Scottish PCC-3 rate from 2012 to 2015.

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Introduction

Colonoscopy is the gold standard investigation for diagnosis, surveillance and screening of colorectal cancer (CRC).[1,2] Not all CRC is detected or prevented following a colonoscopy and the 3 year post colonoscopy cancer rate (PCC-3) in NHS England has been reported as 7.4%.[3] The 2012-2015 Scottish PCC-3 rate is 8% using linkage analysis from the Scottish Cancer Registry. The aim of this audit was to clinically validate PCC-3 cases between 2012-2015 to ascertain their accuracy and to subcategorise cases using methodology proposed by the World Endoscopy Organisation (WEO).[4]

Method

Colonoscopies performed by individual health boards between 2012-2015 were determined by clinical leads and Public Health Scotland. Linkage to the Scottish Cancer Registry identified cases of CRC. PCC-3 cases were defined as having had a CRC diagnosis 6-36 months after a colonoscopy and these were returned to boards with standardised information. Cases were examined to determine if true PCC-3. Demographics, referral stream, quality of index endoscopy, mode of diagnoses and cancer site were noted for each case.

Results

739 cases were analysed. Of the confirmed 652 PCC-3 cases, 37.9% died from CRC. 56 cases were from high risk groups; 6.9% had IBD and 1.7% had a genetic syndrome. Regarding cancer site, 24.8% were rectal, 22.7% caecal and 20.6% ascending colon. Rates for caecal intubation, caecal photography, rectal retroflexion and rectal photography were 89%, 23.3%, 41.6% and 9.4% respectively. PCC-3 cases were categorised by WEO classification as below.[4]

Type A	Type B	Type C	Type D	Type E
Possible missed lesion prior exam adequate	Possible missed lesion prior exam inadequate	Detected lesion not resected	Likely incomplete resection	Likely new cancer
21.6%	**45.4%**	**14.9%**	**13.3%**	**3.2%**

Conclusions

This is the largest reported series of PCC-3 cases determined by registry linkage and yields valuable information for services on the aetiology of these cases. The most common category is Type B. This emphasises the importance of on-going quality improvement measures. With improved awareness, advancing technology, standardisation of training and upskilling of the workforce supported by the National Endoscopy Academy, we hope that future PCC-3 rates will fall.

References

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4.Rutter et al. WEO Consensus Statements on Post-Colonoscopy and Post-Imaging Colorectal Cancer. Gastroenterology. 2018 Sep;155(3)