Evaluating the impact of 2020 post-polypectomy surveillance guidelines in the Northern Ireland bowel cancer screening programme

We note with interest the new postpolypectomy and postcolorectal cancer resection surveillance guidelines by Rutter *et al*, representing an overdue update on preceding guidelines originally published

in 2002 and last revised in 2010.[1–3] The new guidelines include evidence from the English bowel cancer screening programme (BCSP) and, for the first time, address risk stratification in individuals found to have both adenomas and serrated polyps. An age cut-off for surveillance is recommended. The overarching guidance is towards more selective and less frequent surveillance, focusing limited resources on those most in need.

We have examined data from the Northern Ireland (NI) BCSP, to ascertain the potential impact of introducing the new guidelines. The NIBCSP has maintained a pathology database of all endoscopic specimens procured at screening-related index and surveillance colonoscopies, since inception of the faecal occult blood (FOB)-based programme in 2010. In parallel, a Bowel Screening Information Management System collates participant level endoscopy findings and records risk stratification and surveillance recommendations, until now based on the 2010 British Society of Gastroenterology (BSG) algorithm.[3] Distillation of data from these two systems allows retrospective reclassification of participants applying the new criteria, comparison of old and new surveillance recommendations and determination of the impact of implementing the new guidance. A minor limitation is that rare cases needing surgical removal of large polyps would not be captured by these systems.

Analysis was restricted to individuals aged 60–74 years, who underwent a full index colonoscopy (from 2016–2019), had polyp specimen(s) submitted for pathology assessment, did not have a diagnosis of cancer, and for whom polyp size data was available (82.7% of all polyps).

Table 1 summarises risk stratifications for the resultant n=3122 individuals applying the 2010 and 2020 BSG guidance. Of these, 81.5% met 2010 criteria for any surveillance (1, 3 or 5 years) compared with only 19.5% under 2020 criteria. This represents a 76.1% reduction in numbers of individuals meeting surveillance criteria, narrowly exceeding the predicted impact by Rutter *et al*.[1]

Specifically, the new criteria remove 98.2% of previous 'low-risk' individuals and 70.5% of previous 'intermediate risk' individuals from surveillance recommendation. However, within the restricted BCSP setting, in practice low-risk individuals are typically offered repeat FOB test at two years ('routine recall'), rather than surveillance colonoscopy at 5 years. Excluding the 'low-risk' group represents a 50.3% reduction (39.2%–19.5%) in numbers of individuals offered surveillance in the BCSP setting.

Table 1 Comparison of 2010[3] and 2020[1] risk stratifications of participants in the Northern Ireland bowel cancer screening programme, for those having polyp specimens submitted at index colonoscopy (n=3122)

	2010 surveillance algorithm				
2020 surveillance algorithm	High risk (%) (1 year)	Intermediate risk (%) (3 years)	Low risk (%) (5 years)	No risk (%) (no surveillance)	Totals (%)
High risk (3 years)	316 (100)	268 (29.5)	24 (1.8)	1 (0.2)	**609 (19.5)***
Not high risk (no surveillance)	0 (0.0)	640 (70.5)	1296 (98.2)	577 (99.8)	**2513 (80.5)**
Totals (%)	**316 (10.1)**	**908 (29.1)**	**1320 (42.3)**	**578 (18.5)**	**3122 (100)**

*These 609 high-risk cases under 2020 guidance (see ref. 1 for definitions) comprise: 371 cases with advanced polyp (AP) plus 1–3 other premalignant polyps (PMP) but total <5; 114 cases with ≥5 PMPs but no APs; 101 cases with ≥5 PMPs and at least 1 AP; 23 cases with an isolated large (≥20 mm), large non-pedunculated colorectal polyp and no other PMPs.

Notably, 25 (1.3%) previously 'low-risk/no-risk' individuals under 2010 criteria, meet 2020 'high-risk' criteria on the basis of hyperplastic/serrated polyps detection, which were not considered for entry into surveillance under the 2010 guidance. This impact is vastly offset by the reduction in surveillance need related to adenomas and importantly this small but significant group of serrated pathway individuals is now captured for surveillance.

The calculated percentage reduction in surveillance colonoscopy need represents the minimum impact as no consideration has been given in this short report to the impacts of (1) the abolition of the 1-year surveillance for high-risk individuals, comprising 10.1% of this cohort, in favour of 3 years and (2) the introduction of a suggested age cap of 75 years for performing surveillance colonoscopy. Both of these will further reduce demand on overburdened colonoscopy capacity.

In summary, this population-based series from the NIBCSP confirms significant potential savings in colonoscopy related to implementation of new postpolypectomy surveillance guidelines. These should be applicable to BCSP and non-BCSP settings. This will be welcome news, even moreso given the need to wisely allocate limited colonoscopy resources, once activity recommences following the current cessation of all non-urgent colonoscopy due to the COVID-19 crisis.

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