LETTER

Management strategies for the colonoscopic surveillance of people with Lynch syndrome during the COVID-19 pandemic

The recent publication of UK guidelines for the management of hereditary colorectal cancer[1] immediately preceded the COVID-19 pandemic.

We commend the response by the British Society of Gastroenterology (BSG) relating to GI endoscopy activity amidst this pandemic.[2] Such urgent measures are required to curtail the rate and breadth of coronavirus transmission throughout the country, and we are of the belief that the adherence to these guidelines during the early stages of this global pandemic was crucial in saving lives, and further guidance relating to the 'recovery' phase will be crucial in delivering diagnostic and cancer preventing endoscopic interventions.

Though the emergency endoscopy COVID-19 guidance expressed clear and justified recommendations for the suspension of these services in non-urgent or routine screening populations, the management of patients deemed as being 'high risk' and subsequently prioritised for colonoscopy during this time is not currently well defined. For example, specific guidance for surveillance of individuals with conditions such as Lynch syndrome appeared vague in some statements and altogether omitted from early guidance announcements.[3]

Lynch syndrome is an inherited cancer predisposition syndrome defined by the presence of pathogenic or germline variants within any one of the mismatch repair (MMR) genes. Lynch syndrome is known to affect up to 1:125 of the UK population and presents a high lifetime risk of colorectal cancer (observed anywhere between 10% and 47% dependent on age and MMR mutation).[4]

In this patient population, routine 2-yearly colonoscopy may have been cancelled or postponed until further notice in response to emergency COVID-19 guidelines, and given the present backlog of patients awaiting colonoscopy, we imagine that local centres may opt to classify these patients as falling into a 'category 3', that is, potentially deferred for colonoscopy for the indefinite future.

The cancer prevalence in the Lynch syndrome patient population undergoing 2-yearly colonoscopy is observed at 4%–5%,[4 5] with an annual incidence rate of 1%–4% (depending on age and affected MMR gene). These surveillance-detected cancers are usually identified at an early stage and are thus associated with good survival outcomes. The prevalence of colorectal cancer in this patient population at the time of their scheduled screening colonoscopy is therefore higher than the 3% threshold used for urgent 2-week wait (2WW) referred of patients with suspected cancer symptoms according to National Institute for Health and Care Excellence guidelines (NG12).[6]

We therefore propose, as in interim solution, the use of faecal immunochemical test (FIT) as a method of risk stratification of individuals with Lynch syndrome who are due surveillance colonoscopy, which may not currently be possible to provide easily. FIT, with a low cut-off at 10 µg/g faeces detects 90% of cancers in low-risk symptomatic primary care populations.[7] However, with the roll-out of FIT in secondary care for symptomatic 2WW patients, endoscopy services throughout the country are now inundated with the task of deploying FIT kits as a strategic intervention in colonoscopy prioritisation.

In addressing the need of people with Lynch syndrome, we have collectively developed and are rolling out a clinical service pilot proposal entitled 'Rapid evaluation of FIT levels in individuals with a Lynch syndrome pathogenic variant to determine a revised threshold for colonoscopy in response to the COVID-19 pandemic'. In our interim testing pathway, patients with a FIT level of 10 µg/g faeces or greater will be prioritised for urgent colonoscopic surveillance. We do not envisage that FIT will permanently replace colonoscopy as the primary method of surveillance for people with Lynch syndrome, but suggest that it is an appropriate solution during a public health emergency. Additionally, the role of FIT as a less invasive surveillance strategy has the potential to avoid harm to these patients and complement colonoscopy as the primary modality.

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REFERENCES

1 Monahan KJ, Bradshaw N, Dolwani S, *et al*. Guidelines for the management of hereditary colorectal cancer

from the British Society of Gastroenterology (BSG)/Association of Coloproctology of Great Britain and Ireland (ACPGBI)/United Kingdom Cancer Genetics Group (UKCGG). *Gut* 2020;69:411–44.
2 British Society of Gastroenterology (BSG). COVID-19 Guidance & Advice. [Online]. British Society of Gastroenterology, 2020. Available: https://www.bsg.org.uk/covid-19-advice/ [Accessed 13 Mar 2020].
3 British Society of Gastroenterology & Joint Advisory Group. Endoscopy activity and COVID-19: BSG and JAG guidance. [Online]. British Society of Gastroenterology, 2020. Available: https://www.bsg.org.uk/covid-19-advice/endoscopy-activity-and-covid-19-bsg-and-jag-guidance/ [Accessed 03 Apr 2020].
4 Møller P, Seppälä T, Bernstein I, *et al*. Cancer incidence and survival in Lynch syndrome patients receiving colonoscopic and gynaecological surveillance: first report from the prospective Lynch syndrome database. *Gut* 2017;66:464–72.
5 Dove-Edwin I, de Jong AE, Adams J, *et al*. Prospective results of surveillance colonoscopy in dominant familial colorectal cancer with and without Lynch syndrome. *Gastroenterology* 2006;130:1995–2000.
6 National Institute for Health and Care Excellence (NICE). Suspected cancer: recognition and referral. NICE guideline [NG12]. [Online]. National Institute for Health and Care Excellence, 2020. Available: https://www.nice.org.uk/guidance/ng12 [Accessed 23 Jun 2015].
7 Nicholson BD, James TJ, Paddon M, *et al*. Diagnostic accuracy of faecal immunochemical testing for patients with symptoms of colorectal cancer: a retrospective cohort study of 14,487 consecutive test requests from English primary care. medRxiv, 2020. Available: https://www.medrxiv.org/content/10.1101/2020.05.15.20077909v1 [Accessed May 15 2020].