



Is There Still a Role for Physical Consultation in Colorectal Cancer Surveillance?

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This study was conducted to evaluate how cancer recurrence was initially suspected/diagnosed for all colorectal cancer (CRC) patients from the National University Hospital, Singapore over a 5-year period, with the aim of exploring the role of community-based CRC surveillance.

After obtaining ethical approval, a review of all CRC patients without metastatic disease who underwent curative surgery from January 2012 to December 2014 was performed. All patients were followed up in the outpatient clinics in accordance to protocols adapted from the American Society of Clinical Oncology (ASCO) and National Comprehensive Cancer Network (NCCN) guidelines over 5 years.^{1,2} Typically, patients are reviewed 3-monthly for the first 2 years and then 6-monthly for the remaining 3 years. Apart from history taking and appropriate physical examination, the surgeons or medical oncologists will go through the results of the serum carcinoembryonic antigen (CEA) levels, radiological and endoscopic investigations with the patients. Patients with early cancers are typically discharged after 5 years, while those with more advanced cancers can opt to continue surveillance in the hospital.

From a total of 507 CRC patients, 437 underwent surgery with curative intent after staging scans (Table 1). Over a median follow-up of 50 months, 81 patients (18.54%) developed disease recurrence (Table 2). In the

remaining 356 patients, 38 (8.70%) were lost to follow-up, 49 (11.21%) died with no documentation of disease recurrence, and 268 (61.33%) remained disease-free. In these 81 patients, the index modality of suspicion was a raised CEA ($n = 24$, 29.63%), surveillance CT scans with normal CEA levels ($n = 29$, 35.80%), both elevated serum CEA levels and abnormal CT scans concurrently ($n = 13$, 16.05%). Twelve (14.81%) other patients presented with non-specific symptoms. Only two (2.47%) patients had asymptomatic recurrence diagnosed on physical examination, one of them at 7 years from the index operation.

Within the 5-year period, 436 (99.77%) patients were physically assessed with no clear benefit in oncological outcomes. CRC recurrences were primarily asymptomatic and/or detected objectively via CEA and radiological scans. This echoed studies demonstrating poor sensitivity of physical examination in detection of recurrence.^{3,4} These findings question the advocacy of routine physical examination in guidelines for CRC surveillance post-resection.

Patients with early-stage CRC often recover well, with early resumption of activities of daily living. The yield of a physical consultation is likely limited. CEA and CT scans can be performed in dedicated community health facilities, and the results traced and relayed via teleconsultation to ensure that the patients remain asymptomatic, thereby minimizing unnecessary visits to the hospitals.

Dedicated oncology-trained general practitioners can assist by overseeing the cancer surveillance alongside the management of their various other medical conditions. The existing trust and rapport between patients and their regular providers will likely improve care access, and facilitate care coordination across disciplines.⁵ Studies comparing CRC surveillance outcomes between GPs and specialists showed comparable outcomes in

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Table 1 Description of final sample and patients with recurrence

Characteristics	Final sample (n = 437)	Recurrence (n = 81)
Duration of follow-up (in months), median (IQR)	50 (IQR = 26, 62)	38 (IQR = 22, 62)
Age at diagnosis (in years), median (IQR)	65 (IQR = 57, 74)	67 (IQR = 58, 76)
Gender, n (%)		
Male	228 (44.97)	36 (44.44)
Stage of disease, n (%)		
Stage I	55 (12.59)	5 (9.09)
Stage II	194 (44.39)	30 (15.46)
Stage III	186 (42.56)	46 (24.73)
Outcomes, n (%)		
Local recurrence	–	5 (6.17 ^a)
Distant recurrence	–	69 (85.19 ^a)
Local and distant recurrence	–	7 (8.64 ^a)
Metachronous lesion, n (%)	1 (0.23)	–
Disease-free, n (%)	270 (61.78)	–
Lost to follow-up, n (%)	38 (8.70)	14 (17.28 ^a)
Mortality, n (%)	49 (11.21)	58 (71.60 ^a)

^a Calculated as a proportion of patients with recurrence (n = 81)

quality of life, disease recurrence rates, and time to detection of recurrence.⁶

Nonetheless, there is still a role for a physical consultation with the specialists or oncology-trained advanced nurse practitioners (APNs). Patients who undergo adjuvant therapy or proctectomy often express symptoms that may require active treatment, or simply a listening ear even if no solution is available to alleviate the concerns.

Regardless, much work is required before any overhaul of CRC surveillance. Although outcomes may be comparable between GPs and oncologists, patient acceptability and adherence to these alternatives must be evaluated. Infrastructural or logistical factors, such as existing models of care, finances,

and provider availability, must also be considered. The current COVID-19 pandemic is unfortunately the best opportunity to imagine and innovate.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethics Approval Ethical approval to conduct this study was obtained from the National Healthcare Group’s Domain Specific Review Board (NHG-DSRB 2013/00870).

Table 2 Disease recurrence and overall modality of disease detection

Mode of investigation	Recurrence (n = 81)
CEA, n (%)	24 (29.63)
CT, n (%)	29 (35.80)
CEA and CT, n (%)	13 (16.05)
Endoscopy, n (%)	1 (1.23)
Symptoms, n(%)	12 (14.81)
Chronic cough	3
Abdominal pain	5
Symptomatic anemia	1
New onset confusion with behavioral change	1
Per-vaginal bleed	1
Altered bowel habits	1
Sign, n (%)	2 (2.47)

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