WORLD ENDOSCOPY ORGANISATION CONSENSUS STATEMENTS ON POST-COLONOSCOPY/POST-IMAGING COLORECTAL CANCER

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On behalf of the World Endoscopy Organisation.

INTRODUCTION: Colonoscopy is an imperfect tool. Literature suggests colorectal cancer (CRC) may manifest after a negative colonoscopy.

The term “interval cancer” has been used for such cancers in screening settings. By definition, an interval cancer is a CRC diagnosed after a colorectal screening examination or test in which no cancer is detected, and before the date of the next recommended exam(1). From a colonoscopy Quality Assurance perspective, that term is too restrictive, hence the term Post Colonoscopy Colorectal Cancer (PCCRC) was coined in 2010 (2), to incorporate non-screening settings.

So far, nobody has fully integrated the terminology and methodology for PCCRC rate calculation.

AIMS AND METHODS: Our goal was to provide a framework on terminology, identification, analysis and reporting of cancers appearing after a negative colonoscopy or computed tomographic colonography (PCCRC/PICRC).

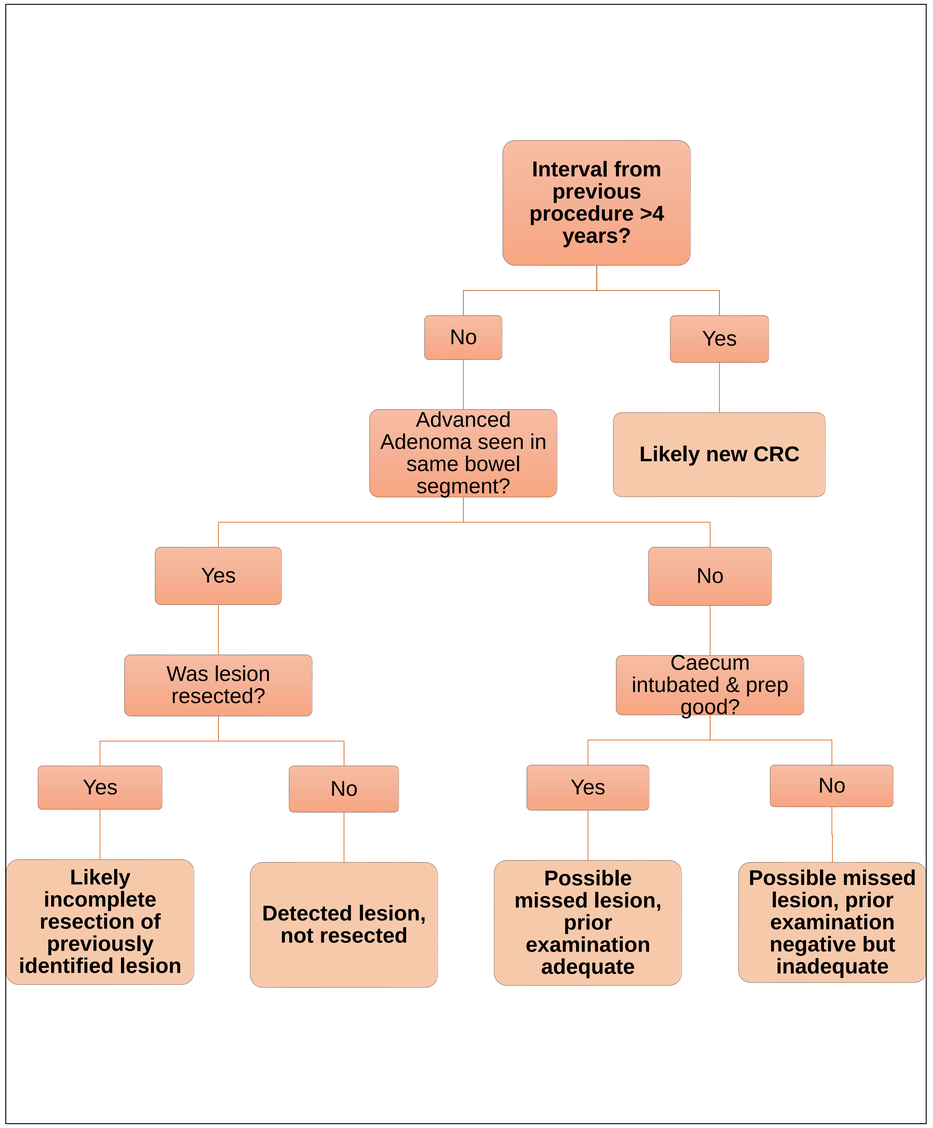
We based our methodology on the AGREE II tool (3). An international team comprising gastroenterologists, pathologists, epidemiologists, a radiologist and a patient representative, formed a panel of 20 members.

Following literature review, 401 articles provided background for proposed statements, which were then subjected to anonymous voting. A modified Delphi approach was followed. The GRADE system was utilised to rate evidence supporting the final statements.

Table 1. PCCRC subtypes

	Interval type	Non-interval type		
		type A	type B	type C
	Detected **prior** to recommended surveillance timepoint	Detected **at** recommended surveillance timepoint	Detected **after** recommended surveillance timepoint	Where **no** surveillance timepoint had been recommended
Examples	Patient with 2 adenomas (2mm, 4mm) is advised to return in 5 years. Four years later develops anaemia; colonoscopy reveals CRC	Patient with a 15mm adenoma is advised to return for surveillance in 3 years. On surveillance, a CRC is found	Patient with 3 small adenomas is advised to return for surveillance in 3 years. Patient misses this, returns 4 years later with CRC	Patient with change in bowel habit – colonoscopy normal. No further investigation advised. 5 years later patient develops symptoms and a colonoscopy reveals CRC.
Implications	Was the recommended interval too long?	Was the recommended interval too long?	Importance of adherence to recommended surveillance	Would surveillance have actually been appropriate?

Figure 1. Proposed algorithm for aetiology attribution of PCCRC cases



RESULTS: The final output consists of 21 statements, providing guidance on key aspects of PCCRC/PICRC:

- **definitions and terminology** (2 statements) (Table1)
- **qualitative** review of cases/**aetiology** attribution (8 statements) (Figure 1)
- **quantitative** assessment/calculation of **PCCRC rate** (7 statements)
- **non-colonoscopic imaging of the colon** (4 statements)

The **PCCRC rate** is calculated as the number of PCCRCs divided by the total of the PCCRCs plus the number of detected cancers, expressed as a percentage

A **Root-Cause-Analysis** checklist, as well as a checklist to assist **PeerReview** of PCCRC manuscripts have also been developed.

CONCLUSION: This is the first consensus aiming to standardise terminology around PCCRC/PICRC. Each previous study defined PCCRC differently, making its use for benchmarking purposes impossible. This consensus presents a methodology for analysis of causation of PCCRC/PICRC and defines its potential role as a key quality indicator, providing recommendations for future investigators, policy makers and patients.

References

1. Sanduleanu S, le Clercq CM, Dekker E et al. Definition and taxonomy of interval colorectal cancers: a proposal for standardising nomenclature. Gut. 2015;64(8):1257-67.
2. Rabeneck L, Paszat LF. Circumstances in which colonoscopy misses cancer. Frontline Gastroenterol. 2010;1(1):52-8
3. Brouwers MC, Kho ME, Browman GP et al. AGREE II: advancing guideline development, reporting and evaluation in health care. CMAJ : Canadian Medical Association journal. 2010;182(18):E839-42