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.

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.

Table 1. PCCRC subtypes

<table>
<thead>
<tr>
<th>Interval type</th>
<th>Non-interval type</th>
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<td>Detected prior to recommended surveillance timepoint</td>
<td>Detected at recommended surveillance timepoint</td>
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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

Interval from previous procedure >4 years?

Advanced Adenoma seen in same bowel segment?

Caecum intubated & prep good?

Was lesion resected?

Possible missed lesion, prior examination inadequate

Possible missed lesion, prior examination negative but inadequate

References