TITLE: Colonoscopy Surveillance in Patients with Colon Cancer: Clinical Effectiveness and Guidelines

DATE: 26 March 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of colonoscopy surveillance in patients with colon cancer following surgery?

2. What are the evidence-based guidelines for colonoscopy surveillance in patients with colon cancer following surgery?

KEY FINDINGS

Three systematic reviews and four evidence-based guidelines were identified regarding colonoscopy surveillance in patients with colon cancer following surgery.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 3), University of York Centre for Reviews and Dissemination (CRD) and ECRI databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and March 16, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<td><strong>Comparator</strong></td>
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<td><strong>Outcomes</strong></td>
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<td><strong>Study Designs</strong></td>
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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.

Three systematic reviews and four evidence-based guidelines were identified regarding colonoscopy surveillance in patients with colon cancer following surgery. No relevant health technology assessments were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Three systematic reviews\(^1\)\(^-\)\(^3\) and four evidence-based guidelines\(^4\)\(^-\)\(^7\) were identified regarding colonoscopy surveillance in patients with colon cancer following surgery.

One systematic review\(^1\) regarding follow-up strategies following curative surgery in patients with colorectal cancer reported a statistically significant improvement in overall survival, detection of asymptomatic recurrences, and curative surgery at recurrence with more intensive follow-up post-surgery. The authors concluded that follow-up with serum carcinoembryonic antigen and colonoscopies were associated with greater overall survival. However, this systematic review did not specify optimal follow-up intervals for screening.\(^1\) The authors of another systematic review,\(^2\) whose objectives were to assess the frequency of local recurrence after endoscopic muscular resection (EMR), identified risk factors for cancer recurrence and reported that the mean recurrence risk after EMR was 15%. With more than 90% of recurrences being detected at six months, the authors proposed an optimal initial follow-up interval of six months.\(^2\) A third systematic review\(^3\) reported that colonoscopies performed within 12 months of surgery reduced the incidence of high-risk lesions at one year, including new cancer diagnoses and recurrent malignancy.

Four evidence-based guidelines\(^4\)\(^-\)\(^7\) were identified regarding colonoscopy surveillance in patients with colon cancer following surgery. Detailed recommendations are provided in Table 2.
Table 2: Summary of Guidelines and Recommendations

<table>
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<tr>
<th>Organization (Year)</th>
<th>Recommendations</th>
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<tr>
<td>NICE (2014)\textsuperscript{a}</td>
<td>“Offer a surveillance colonoscopy at 1 year after initial treatment. If this investigation is normal consider further colonoscopic follow-up after 5 years, and thereafter as determined by cancer networks. The timing of surveillance for patients with subsequent adenomas should be determined by the risk status of the adenoma.” Recommendation 1.4.1.3</td>
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<td>ESMO (2013)\textsuperscript{b}</td>
<td>“A minimum provisional recommendation is as follows: Clinical assessment: if possible every 6 months for 2 years [V, D]. A completion colonoscopy should be carried out within the first year if not done at the time of diagnostic work-up (e.g. if obstruction was present) [I, A]. a) History and colonoscopy with resection of colonic polyps every 5 years up to the age of 75 years [I, B].” page 86</td>
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<tr>
<td>CCO (2012)\textsuperscript{b}</td>
<td>“A surveillance colonoscopy should be performed approximately one year after the initial surgery. The frequency of subsequent surveillance colonoscopies should be dictated by the findings of the previous one, but they generally should be performed every five years if the findings of the previous one are normal.” page 4</td>
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| CCA (2011)\textsuperscript{c} | “3.4 Intervals for surveillance colonoscopy following resection for colorectal cancer

Colonoscopy should be performed one year after the resection of a sporadic cancer, unless a complete post-operative colonoscopy has been performed sooner.

If the peri-operative colonoscopy or the colonoscopy performed at one year reveals advanced adenoma, then the interval before the next colonoscopy should be three years.

If the colonoscopy performed at one year is normal or identifies only one or two non-advanced adenomas, then the interval before the next subsequent colonoscopy should be five years.” page xiii |

\textsuperscript{a} Verbatim recommendations.

CCA = Cancer Council Australia; CCO = Cancer Care Ontario; ESMO = European Society for Medical Oncology; NICE: National Institute for Health and Care Excellence.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Guidelines and Recommendations


7. Cancer Council Australia Colonoscopy Surveillance Working Party. Clinical practice guidelines for surveillance colonoscopy – in adenoma follow-up; following curative resection of colorectal cancer; and for cancer surveillance in inflammatory bowel disease
See: 3.4 Intervals for surveillance colonoscopy following resection for colorectal cancer, pages xiii-xiv, pages 41-44

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APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies


Guidelines and Recommendations – Unclear Methodology


Review Articles
