Strategies for detecting colon cancer in IBD

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IBD surveillance guidelines = chromoendoscopy

Colonoscopic surveillance for

European evidence based consensus for

Advanced imaging for detection and differentiation of colorectal neoplasia: European Society of Gastrointestinal Endoscopy (ESGE) Guideline

SCENIC
Surveillance for Colorectal Endoscopic Neoplasia Detection and Management in Inflammatory Bowel Disease Patients: International Consensus Recommendations

NICE clinical guideline 118
guidance.nice.org.uk/cg118
Meta-analysis chromoendoscopy studies
SCENIC guidelines

Relative Risk - Visible Dysplasia

Hlavaty 2011
Gunther 2011
Marion 2008
Kiesslich 2007
Rutter 2004
Matsumoto 2003
Summary

1.8 (1.2-2.6)
Chromoendoscopy in “real life”

SCENIC
1.8 (1.2-2.6)
Dysplasia risk by lesion morphology


Field cancerization in IBD

Choi CR et al. Nat Rev Gastroenterol Hepatol 2017;14:218-229
Systematic review: Strategies for detecting colon cancer in IBD

**Participants:** Patients of any age with IBD selected for CRC surveillance, based solely on the duration and extent of disease

**Types of studies:** RCTs, cohort and case-control studies

**Intervention:** Any form of CRC surveillance aimed at early detection

**Primary outcome(s):** Proportion of patients with a colorectal cancer diagnosis
Does colonoscopic surveillance in IBD prevent colorectal cancer?

Outcome: Proportion of patients with CRC

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Surveillance Events</th>
<th>Control Events</th>
<th>Weight</th>
<th>Risk Ratio M-H, Fixed, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ananthakrishnan 2014</td>
<td>43</td>
<td>111</td>
<td>84.9%</td>
<td>0.57 [0.40, 0.81]</td>
</tr>
<tr>
<td>Karlen 1998a</td>
<td>2</td>
<td>18</td>
<td>9.6%</td>
<td>0.28 [0.07, 1.17]</td>
</tr>
<tr>
<td>Lashner 1990</td>
<td>8</td>
<td>6</td>
<td>5.5%</td>
<td>1.39 [0.50, 3.86]</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>2895</strong></td>
<td><strong>4256</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>0.59 [0.43, 0.81]</strong></td>
</tr>
</tbody>
</table>

Total events: 53, 135

Heterogeneity: $\chi^2 = 3.81$, df = 2 ($P = 0.15$); $I^2 = 47\%$

Test for overall effect: $Z = 3.28$ ($P = 0.001$)
Does colonoscopic surveillance in IBD prevent CRC death?

Outcome: Proportion of patients who died from CRC

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Surveillance Events</th>
<th>Surveillance Total</th>
<th>Control Events</th>
<th>Control Total</th>
<th>Weight</th>
<th>Risk Ratio M-H, Random, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ananthakrishnan 2014</td>
<td>14</td>
<td>2764</td>
<td>34</td>
<td>4059</td>
<td>50.6%</td>
<td>0.60 [0.33, 1.12]</td>
</tr>
<tr>
<td>Choi 1993</td>
<td>4</td>
<td>19</td>
<td>11</td>
<td>22</td>
<td>20.9%</td>
<td>0.42 [0.16, 1.11]</td>
</tr>
<tr>
<td>Lashner 1990</td>
<td>6</td>
<td>91</td>
<td>14</td>
<td>95</td>
<td>23.4%</td>
<td>0.45 [0.18, 1.11]</td>
</tr>
<tr>
<td>Lutgens 2009</td>
<td>1</td>
<td>23</td>
<td>29</td>
<td>126</td>
<td>5.2%</td>
<td>0.19 [0.03, 1.32]</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>2897</td>
<td>4302</td>
<td>100.0%</td>
<td></td>
<td></td>
<td>0.49 [0.32, 0.77]</td>
</tr>
</tbody>
</table>

Total events: 2897 Favor surveillance; 4302 Favor control

Heterogeneity: Tau² = 0.00; Chi² = 1.52, df = 3 (P = 0.68); I² = 0%

Test for overall effect: Z = 3.15 (P = 0.002)
Colitis-associated cancer stages

Outcome: Proportion of patients with Duke’s stage C or D

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<th>Weight</th>
<th>Risk Ratio M-H, Fixed, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choi 1993</td>
<td>4</td>
<td>19</td>
<td>13</td>
<td>22</td>
<td>62.2%</td>
<td>0.36 [0.14, 0.91]</td>
</tr>
<tr>
<td>Lashner 1990</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>37.8%</td>
<td>0.78 [0.49, 1.23]</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>27</strong></td>
<td><strong>28</strong></td>
<td></td>
<td></td>
<td>100.0%</td>
<td>0.52 [0.30, 0.87]</td>
</tr>
</tbody>
</table>

Total events 10

Heterogeneity: Chi² = 3.75, df = 1 (P = 0.05); I² = 73%

Test for overall effect: Z = 2.46 (P = 0.01)
Key message

• In IBD colonoscopic surveillance reduces the risk of colorectal cancer or colorectal cancer-related death by roughly half.
Personalised care in IBD: the interface between science and practice

Oxford IBD Masterclass 2017

11th - 12th September

Examination Schools Oxford UK

Joining forces with Oxford Centre for Personalised Medicine