**Diagnosis**

**Computed tomography pneumocolon had a low sensitivity for detecting colorectal neoplasms**

**QUESTION:** How accurate is computed tomography (CT) pneumocolon for detecting colorectal neoplasms in patients scheduled for colonoscopy?

**Main results**

Of the 72 patients (36%) with neoplasms, 13 had invasive carcinomas, 63 had polyps, and 4 had both. 118 polyps were found in 63 patients. CT pneumocolon detected 38% of the patients with neoplasms (table), 100% of the patients with invasive carcinomas, and 29% of the patients with polyps. CT pneumocolon was associated with more pain than colonoscopy (median scores 3 v 1, p < 0.001) and the procedure took more time (33 v 25 min, p < 0.001). 83 patients preferred CT pneumocolon, 90 preferred colonoscopy, and 20 had no preference.

**Conclusion**

Computed tomography pneumocolon had a low sensitivity for detecting colorectal neoplasms but a high sensitivity for detecting invasive carcinomas.

**TABLE 1**

Characteristics on computed tomographic pneumocolon for patients receiving colonoscopy

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (CI)</th>
<th>+LR</th>
<th>−LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal neoplasms</td>
<td>38% (26 to 50)</td>
<td>86% (79 to 92)</td>
<td>2.69</td>
<td>0.73</td>
</tr>
<tr>
<td>Invasive carcinoma (IC)</td>
<td>100% (81 to 100)</td>
<td>99% (97 to 100)</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>IC or polyps ≥ 1 cm, or both</td>
<td>73% (56 to 90)</td>
<td>94% (91 to 98)</td>
<td>12.2</td>
<td>0.29</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; LRs and CIs calculated from data in article.

**COMMENTS**

New screening procedures always bring into play the concepts of sensitivity, specificity, and predictive value. Assessment of the new procedures for these features is crucial and should ideally be followed by randomised trials for efficacy in reducing morbidity and mortality. In some instances, higher sensitivity and earlier diagnosis may lead to trade-offs with over detection and increased numbers of false positive results. Alternatively, a new test may not be superior to the current standard. Miao *et al.* have provided a carefully done, well described comparison of the sensitivity and specificity of CT pneumocolon and colonoscopy for the detection of colorectal neoplasia. Their results confirm those of several recent studies by using virtual colonoscopy.*

The sensitivity of CT for invasive tumours is certainly good, but the new technology falls short in detecting polyps. Furthermore, colonoscopy was superior to CT pneumocolon for comfort level. The disutility of CT pneumocolon depends on the importance one places on polyps and their elimination, something that is believed to have led to a decline in the incidence of colorectal cancer in the US.*

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