Motion - Colonoscopic surveillance is more cost effective than colectomy in patients with ulcerative colitis: Arguments for the motion

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Patients with ulcerative colitis (UC) are at increased risk for colorectal cancer (CRC), especially those with longstanding disease, pancolitis or primary sclerosing cholangitis. The incidence of colitis-associated cancer is increasing, and the mortality rates from CRC are higher in UC patients than in the general population. Case control studies have demonstrated that surveillance colonoscopy reduces the risk of dying from CRC. A well conducted decision analysis found that surveillance colonoscopy decreases cancer-related mortality and increases life expectancy. The results with surveillance programs were almost as good as with prophylactic colectomy. A subsequent cost-effectiveness analysis using the same model found that, compared with a policy of no surveillance, colonoscopic surveillance was more effective at preventing death from CRC and was less costly. The best strategy appears to be to perform colonoscopies every three years. The analysis also showed that colectomy should be recommended in patients with low-grade dysplasia. Patients at very high risk for CRC should undergo yearly colonoscopy, and patients who are concerned about the limitations of this technique should be offered prophylactic colectomy.

Key Words: Cancer surveillance; Colorectal cancer; Ulcerative colitis.

Motion - La surveillance par coloscopie est plus rentable que la colectomie chez les patients atteints de rectocolite hémorragique : arguments en faveur de la motion

RÉSUMÉ : Les patients atteints de rectocolite hémorragique (RCH), notamment ceux qui souffrent de la maladie depuis longtemps, de pancolite ou de cholangite sclérosante primitive, sont prédisposés au cancer colorectal (CCR). L’incidence du cancer associé à la colite augmente, et les taux de mortalité attribuables au CCR sont plus élevés chez les patients atteints de RCH que dans la population en général. Les études cas-témoins ont montré que la coloscopie de contrôle réduisait les risques de succomber à un CCR. Selon une analyse décisionnelle bien conçue, la coloscopie de contrôle diminue la mortalité liée au cancer et augmente l’espérance de vie. Les résultats de programmes de surveillance se sont montrés presque aussi bons que ceux de la colectomie prophylactique. U ne analyse ultérieure de rentabilité réalisée à l’aide du même modèle a montré que la surveillance par coloscopie s’avérait plus efficace que la non-surveillance pour prévenir la mort due à un CCR tout en étant moins coûteuse. La fréquence optimale consisterait en la pratique de coloscopies tous les trois ans. L’analyse a également révélé que la colectomie devrait être recommandée dans les cas de dysplasie de faible degré de malignité. Les patients fortement prédisposés au CCR devraient subir une coloscopie annuelle, et la colectomie prophylactique devrait être proposée aux patients qui se montrent inquiets des limites de la technique.

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TABLE 1
Costs of surveillance strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Number of colonoscopies per patient</th>
<th>Percentage undergoing elective surgery</th>
<th>Percentage undergoing urgent surgery</th>
<th>Percentage of remaining life expectancy after surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>No surveillance</td>
<td>2.69</td>
<td>55</td>
<td>16.7</td>
<td>44</td>
</tr>
<tr>
<td>Surveillance</td>
<td>5.14</td>
<td>84</td>
<td>8.9</td>
<td>73</td>
</tr>
<tr>
<td>Prophylactic colectomy</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Data from Provenzale et al (14)
opposed to high grade dysplasia, results in a higher cost (increased number of colectomies) but a disproportionately higher effectiveness (increased number of life-years saved), and thus a lower cost effectiveness ratio. As already stated, the marginal cost effectiveness ratios are reasonable when colonoscopy is performed every three years, or when the testing interval is adjusted according to the patient's individual risk (17). A new testing is not cost effective for patients with moderately high risk, nor is it an efficient use of scarce resources, but is appropriate for patients who are at very high risk for CRC, such as those with either PCS or extensive disease for more than 30 years.

**SURVEILLANCE VERSUS PROPHYLACTIC COLECTOMY**

A perfectly effective cancer surveillance colonoscopy program does not exist. For a variety of reasons, some patients develop cancer even though dysplasia was not detected at earlier colonoscopy. Patients who are concerned about the risk of cancer and cannot accept the limitations of cancer surveillance should undergo prophylactic colectomy. The ability to eliminate the risk of cancer should be weighed against the decrease in quality of life after colectomy. This personal decision is not necessarily based on cost effectiveness calculations.

### REFERENCES
