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Publication date: 2017

Document version Accepted manuscript

Citation for published version (APA):

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Factors influencing colon capsule endoscopy examination quality

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Aim: To evaluate the impact of gender and age on achieving complete colon passage, bowel cleansing and colon transit time in colon capsule endoscopy.

Method: 254 colorectal cancer screening individuals underwent colon capsule endoscopy. Age, gender, capsule excretion within recording, colon transit time and bowel cleansing on a 5 graded scale was recorded. All variables were converted into dichotomous variables and compared using chi-squared test.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Capsule excretion Yes vs. No N=254</th>
<th>Bowel cleansing grade &lt;2.5 vs. &gt;2.5 N=241</th>
<th>Colon transit time (minutes) &lt;239.5 vs. &gt;239.5 N=143</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
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<tr>
<td>&lt;62.5 vs. &gt;62.5</td>
<td>p=0.12 Favour age &lt;62.5</td>
<td>p=0.96</td>
<td>p=0.72 Favour age &lt;62,5</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Male vs. Female</td>
<td>p=0.33 Favour male gender</td>
<td>p=0.18 Favour female gender</td>
<td>p=0.54 Favour male gender</td>
</tr>
</tbody>
</table>

Results: Young age (<62.5 years) and male gender favoured capsule excretion within recording, however non-significant (p=0.12 and p=0.33 respectively). Female gender favoured bowel cleansing (grade >2.5) however non-significant (p=0.18). Male gender and young age (<62.5 years) favoured faster colon transit time (<4 hours) however non-significant (p=0.54 and p=0.72 respectively).

Conclusion: Nor gender or age had a significant impact on capsule excretion, bowel cleansing or colon transit time in this study. Not surprisingly younger age favoured both capsule excretion and faster colon transit time. But interestingly male gender favoured capsule excretion and transit time, while female gender favoured bowel cleansing, suggesting that bowel cleansing and transit time between men and females may be two separate matters to consider when designing bowel preparation and booster regimens for colon capsule endoscopy.