Colorectal cancer screening and establishment of the positive cut–off level.

Are French decision-making criteria optimal in regard to a person’s equal access to colonoscopy?

Aldis Kaufmanis MD
Regional Medical Director CRCDC-IDF
Possible conflicts of interest

No conflicts of interest
FIT positivity
Different positive cut-off levels within the different programs

France 30µgHb/g
Pool of colonoscopies for positive FIT

Colonoscopies after positive test separated from the general pool (UK, Netherlands)

Colonoscopies after positive test within the same general pool (France)
French colorectal cancer (CRC) screening guidelines.

- Personal history of adenoma or CRC
- Ulcerative colitis, Crohn’s disease
- Family history:
  - adenoma >10 mm, first degree, < 65 y
  - CRC, first degree, one relative, < 65 y
  - CRC, first degree, two or more relatives

- Familial adenomatous polyposis
- Hereditary nonpolyposis colorectal cancer (HNPCC)
CRC history in first-degree relative and CRC risk

RR 2x -> colonoscopy

Quantitative FIT result as a risk factor

**FIT R1 2015-2016**

- **A** [00-10 µgHb/g]
- **B** [10-20 µgHb/g]
- **C** [20-30 µgHb/g]
- **Positives** [30 + µgHb/g]

**FIT R2 2017-2018**

- **A** % AA % CRC
- **B** % AA % CRC
- **C** % AA % CRC
- **Reference** % AA % CRC
3 011 608
Screening population, 50-74 y

2 713 459
Average risk screening population to invite

612 816
Performed FIT

602 730
Analysed

9.9 %
excluded for known risk factor

1.6 %
non-analysed

A
90.3 %
[00-10]

B
3.6 %
[10-20]

C
1.4 %
[20-30]

Positives
4.6 %
R1 2015-2016 and R2 2017-2018

test interval = 2.2 y

<table>
<thead>
<tr>
<th></th>
<th>age, y</th>
<th>women, %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women</td>
<td>61.4</td>
<td>54.5</td>
</tr>
<tr>
<td>men</td>
<td>61.0</td>
<td></td>
</tr>
<tr>
<td><strong>R2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women</td>
<td>63.1</td>
<td>55.7</td>
</tr>
<tr>
<td>men</td>
<td>62.8</td>
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</tbody>
</table>
## R1 2015-2016
CRC and advanced adenoma (AA) detection rates

<table>
<thead>
<tr>
<th>Screened, n</th>
<th>positives, n (%)</th>
<th>colo, n (% of positives)</th>
<th>AA (PPV, %)</th>
<th>CRC (PPV, %)</th>
<th>AA tx, ‰</th>
<th>CRC tx, ‰</th>
</tr>
</thead>
<tbody>
<tr>
<td>602 730</td>
<td>27 939 (4.6)</td>
<td>22 848 (81.8)</td>
<td>7 862 (34.4)</td>
<td>1 746 (7.6)</td>
<td>12.8</td>
<td>2.8</td>
</tr>
<tr>
<td>µgHb/g in R1</td>
<td>screened R2, n</td>
<td>positives, n (%)</td>
<td>colo, n (% of positives)</td>
<td>AA (PPV, %)</td>
<td>CRC (PPV, %)</td>
<td>AA tx, ‰</td>
</tr>
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<td>--------------</td>
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</tr>
<tr>
<td>A [00-10[</td>
<td>342 994</td>
<td>9 940 (2.9)</td>
<td>7 371 (74.2)</td>
<td>1 832 (24.9)</td>
<td>280 (3.8)</td>
<td>5.3</td>
</tr>
<tr>
<td>B [10-20[</td>
<td>13 129</td>
<td>1 417 (10.8)</td>
<td>1 068 (75.4)</td>
<td>484 (45.3)</td>
<td>99 (9.3)</td>
<td>36.6</td>
</tr>
<tr>
<td>C [20-30[</td>
<td>5 048</td>
<td>735 (14.6)</td>
<td>555 (75.5)</td>
<td>265 (47.7)</td>
<td>51 (9.2)</td>
<td>51.9</td>
</tr>
</tbody>
</table>
RR for CRC, AA

<table>
<thead>
<tr>
<th></th>
<th>AA tx, %</th>
<th>CRC tx, %</th>
<th>RR AA (95% CI)</th>
<th>RR CRC (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 2015-2016</td>
<td>12.8</td>
<td>2.8</td>
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<tr>
<td>A (0-10 µgHb/g R1)</td>
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<tr>
<td>R2 2017-2018</td>
<td>5.3</td>
<td>0.8</td>
<td>0.4 (0.39-0.43)</td>
<td>0.3 (0.25-0.32)</td>
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<tr>
<td>B (10-20 µgHb/g R1)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>R2 2017-2018</td>
<td>36.6</td>
<td>7.5</td>
<td>2.8 (2.6-3.1)</td>
<td>2.6 (2.2-3.2)</td>
</tr>
<tr>
<td>C (20-30 µgHb/g R1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2 2017-2018</td>
<td>51.9</td>
<td>10.0</td>
<td>4.0 (3.6-4.6)</td>
<td>3.5 (2.7-4.6)</td>
</tr>
</tbody>
</table>
Conclusions

• Test with fecal hemoglobin level [10-20] and [20-30] µgHb/g faeces is a risk factor that increases probability to detect CRC and AA with a second test within a screening program.

• For an individual who had a negative test within levels [10-20] and [20-30] µgHb/g faeces the probability to detect a cancer with a second test is more than two-fold in comparison to one from the average risk population.

• If a person with an identified two-fold risk for a colorectal cancer (personal or family history) is advised to have a colonoscopy instead of FIT test, shouldn't the person with known fecal Hb level [10-20] and [20-30] µgHb/g receive the same advice?
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