Optimizing surveillance: Less overall – but what to do in high-risk patients?

Rodrigo Jover, M.D., Ph.D.
Uri Ladabaum, M.D., M.S.
Surveillance Working Group
Burning questions

- Who benefits from surveillance?
- How should we do surveillance?
- Is surveillance working well enough in high-risk patients?
- If not, then:
  - What research do we need?
  - What should we do differently today?
Who benefits from surveillance?

Baile-Maxía et al., Systematic review, in preparation
Burning question 1

- Who benefits from surveillance?
  - Best candidates: those with high metachronous CRC risk: HGD and >20mm
  - What is actually high risk?
    - Role of multiplicity
    - Role of size
    - Role of pathology
  - Is that really high risk? Absolute risk
Absolute risk and number needed to scope

NNS to detect one CRC

Baile-Maxía et al., Systematic review, in preparation
Burning question 2

- **How should we do surveillance?**
  - Room for innovation: non-colonoscopy approaches
  - Optimize intervals to level of risk
  - What should be standard of care at SCREEN and SURVEILLANCE?
    - Devices (e.g. Endocuff)?
    - Artificial Intelligence?
    - Proven level of detection by endoscopist?

*Wieszczy, Gastro 2021*
Burning question 3

- Is surveillance working well enough in high-risk patients?
  - After high-risk lesion removal, you accept a remaining high risk for metachronous advanced polyps…
  - …but you would like to see a LOW risk of CRC
CRC incidence (mortality) AFTER removal

- ≥10 mm adenomas
- Villous / HGD
- ≥3 adenomas

**Odds ratio**

HRA : No adenoma

2.92 [2.31-3.69]

Duvvuri et al., Gastroenterology 2021
High advanced colorectal polyp yield

- Cohort is at risk
- Either current surveillance is ineffective, or the quality of the prior colonoscopy was inadequate
- Colonoscopy interval is too long

High CRC yield (including interval cancers)

Rutter et al., Gastroenterology 2020;158:1529
Burning question 3

- Is surveillance working well enough high-risk patients?
- Which is the acceptable level of risk?
- Delphi process, no agreement on:
  - Risk should be reduced to general population level
  - vs. Risk should be LOWER than general population
- “Higher than general population” was not an option…

Rutter et al., Gastroenterology 2020;158:1529
Risk of Death from Colorectal Cancer (%)

- General Population
- Adenoma Cohort
- Low-Risk Adenoma
- High-Risk Adenoma

Loberg, NEJM 2014
Why do post-colonoscopy CRCs happen?

- Missed CRC
- Missed CRC precursor
- CRC precursor incompletely resected
- Completely de novo lesion / fast growth / field effect?
Why do post-colonoscopy CRCs happen?

- Missed CRC
- Missed CRC precursor
- CRC precursor incompletely resected
- Completely de novo lesion /
Further decreasing metachronous CRC risk

<table>
<thead>
<tr>
<th>Problem</th>
<th>Improve detection at SCREEN</th>
<th>Improve resection at SCREEN</th>
<th>Shorter interval?</th>
<th>Better targeting?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missed CRC at screening</td>
<td>✓</td>
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<tr>
<td>Missed CRC precursor at screening</td>
<td>✓</td>
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<tr>
<td>Incomplete resection at screening</td>
<td></td>
<td>✓</td>
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</tbody>
</table>
| De novo / fast                 |                             |                             | ✓                 | • Subgroup at risk?  
                                           |                             |                             |                   | • Molecular marker?  
                                           |                             |                             |                   | • Field effect?     |
What research do we need?
- Intervals: EPoS trials
- Alternative methods for surveillance
- Ascertain real high risk
- Ascertain causes for metachronous CRC or adenoma
- Field effect