Colorectal Cancer (CRC): Global Epidemiology and Burden

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Outline

• Burden of disease
• Risk factors
• Moving forward
Global Burden
• 1.36 million new cases
  ➢ 55% in developed regions
• 694,000 deaths
Colorectal Cancer Incidence: World (both sexes, per 100,000)

IARC, GLOBOCAN 2012
CRC Incidence Trends (per 100,000): Oceania, North and Latin America

GLOBOCAN 2012 (IARC)

*Regional data
CRC Incidence Trends (per 100,000): Europe

GLOBOCAN 2012 (IARC)

*Regional data
CRC Incidence Trends (per 100,000): Asia

*Regional data

GLOBOCAN 2012 (IARC)
<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>25.6</td>
</tr>
<tr>
<td>Syrian Arab Republic</td>
<td>16.2</td>
</tr>
<tr>
<td>Lebanon</td>
<td>16.1</td>
</tr>
<tr>
<td>Gaza Strip and West Bank</td>
<td>15.4</td>
</tr>
<tr>
<td>Libya</td>
<td>14.5</td>
</tr>
<tr>
<td>Kuwait</td>
<td>12.8</td>
</tr>
<tr>
<td>Qatar</td>
<td>12.6</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>11.6</td>
</tr>
</tbody>
</table>

CRC Incidence (per 100,000)
Cancers in Lebanon

**Males**

- Prostate: 807 cases
- Lung: 625 cases
- Bladder: 618 cases
- Colorectum: 407 cases
- Non-Hodgkin lymphoma: 310 cases

**Females**

- Breast: 1,934 cases
- Colorectum: 338 cases
- Non-Hodgkin lymphoma: 282 cases
- Lung: 272 cases
- Corpus uteri: 187 cases

World Health Organization, Cancer Country Profiles, 2014
Human Development Index (HDI)

What is HDI?

Life Expectancy at Birth

Average Education Levels + Adult Literacy Rates

Standard of Living (GNI/capita PPP)
Colorectal Cancer Incidence and Human Development Index (HDI)

Risk Factors
Factors Associated with CRC

- IBD 1%
- FAP 1%
- HNPPCC 1%
- Family history 15–20%
- Sporadic, average risk 75%
Risk Factors

Half of all cancers are due to these...

Smoking  Alcohol  Physical inactivity  Unhealthy eating

We can’t treat ourselves out of this cancer problem

Chris Wild, IARC
Evidence for Screening
CRC Screening Tests

• Past 25 yrs – evidence to support CRC screening:
  ➢ Fecal occult blood test  ✓ ✓ ✓
  ➢ Sigmoidoscopy ✓ ✓ ✓
  ➢ Colonoscopy ✓ ✓
Fecal Occult Blood Test (gFOBT)

• In randomized controlled trials, biennial gFOBT reduces CRC mortality 15%

Moving from gFOBT to FIT

- gFOBT
- FIT
Starting Screening
How to Begin?

• Organized vs. opportunistic screening
Organized Screening Program

• Defined target population
• Invitations to screen
• Timely access
• Quality assurance
• Tracking of outcomes
How Long Does it Take?

• >10 yrs to plan, pilot and implement CRC screening program

• Additional yrs before full impact of the program can be measured

Toronto Pearson Airport
When to Start Screening?
Proposed Strategies

- CRC incidence >30/100,000
- Resource level

Considerations

• Current and future burden of disease
• Health policy
• Health system infrastructure
• Resources
Getting our ducks in a row…
Moving Forward: Alignment

- Clinical champions
- Lay organizations
- Professional organizations
- Policy-makers (cancer agency)
- Ministry of Health ($)
Moving Forward: Early Diagnosis

• Awareness of symptoms
• Colonoscopy capacity
• Colonoscopy quality
Moving Forward: Screening

- Establish/adopt guidelines
- Consider a pilot or a campaign
- Selected urban region(s)
- Test the steps in the process
- Expand
WEO CRC Screening Cte

• Regional Meetings (2018)
  ➢ NA (DDW, Washington)
  ➢ Europe (UEGW, Vienna)
  ➢ Asia-Pacific (APDW, Seoul)
  ➢ Argentina (Mar del Plata, Sept)
  ➢ Brazil (Sao Paulo, Nov)
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Summary

• Burden of disease
• Risk factors
• Moving forward
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Thank You