**EMRO (EASTERN MEDITERRANEAN REGION)**

**BURDEN OF CANCER**

**Total population (2019)**

712'276'300

**Total # cancer cases (2018)**

676'508

**Total # cancer deaths (2018)**

418'955

**Premature deaths from NCDs (2016)**

1'075'171

**Cancer as % of NCD premature deaths (2016)**

23.5%

**Most common cancer cases (2018)**

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Incidence</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>17.7%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Colorectum</td>
<td>6.5%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Lung</td>
<td>6.3%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Liver</td>
<td>5.8%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Bladder</td>
<td>4.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>4.7%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>4.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Stomach</td>
<td>4.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Lip, oral cavity</td>
<td>3.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Prostate</td>
<td>3.8%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

**TRENDS**

**Estimated past and future trends in total cases per year (breast and lung)**

![Graph showing past and future trends in cancer cases](image)

**Probability of premature death from cancer per year**

![Graph showing probability of premature death from cancer](image)

**INVESTMENT CASE (2019)**

At this income level, investing in a package of essential services and scaling-up coverage will:

**Costs per year**

![Graph showing costs per year](image)

**Projected lives saved per year**

![Graph showing projected lives saved per year](image)
HEALTH SYSTEM CAPACITY

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline 2007-2016</th>
<th>Baseline 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of population-based cancer registry (PBCR)**</td>
<td>29% of countries high-quality PBCR</td>
<td>20% of countries high-quality PBCR</td>
</tr>
<tr>
<td>Quality of mortality registration***</td>
<td>0% of countries have high quality coverage</td>
<td>0% of countries have high quality coverage</td>
</tr>
<tr>
<td># of external beam radiotherapy</td>
<td>9.2 (median), 0-23.8 (range)</td>
<td>1.9 (median), 0-30.7 (range)</td>
</tr>
<tr>
<td># of mammographs</td>
<td>41.1 (median), 0.9-185.6 (range)</td>
<td>31.5 (median), 1.5-373.9 (range)</td>
</tr>
<tr>
<td># of CT scanners</td>
<td>77.5 (median), 3.6-422.8 (range)</td>
<td>1.9 (median), 0-30.7 (range)</td>
</tr>
<tr>
<td># of MRI scanners</td>
<td>31.5 (median), 1.5-373.9 (range)</td>
<td>1.9 (median), 0-30.7 (range)</td>
</tr>
<tr>
<td># of PET or PET/CT scanners</td>
<td>1.9 (median), 0-30.7 (range)</td>
<td>1.9 (median), 0-30.7 (range)</td>
</tr>
</tbody>
</table>

WORKFORCE

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline 2007-2016</th>
<th>Baseline 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td># Public cancer centres per 10,000 cancer patients</td>
<td>3.5 (median), 0.44 (range)</td>
<td>3.5 (median), 0.44 (range)</td>
</tr>
<tr>
<td>Early detection programme/guidelines for 4 cancers (breast, cervix, colon, childhood)</td>
<td>10% of countries have all 4 cancer early detection programme/guidelines</td>
<td>10% of countries have all 4 cancer early detection programme/guidelines</td>
</tr>
<tr>
<td>Pathology services</td>
<td>90% of countries have generally available pathology services</td>
<td>90% of countries have generally available pathology services</td>
</tr>
<tr>
<td>Palliative care availability: community/home-based care</td>
<td>19% of countries have generally available palliative care</td>
<td>19% of countries have generally available palliative care</td>
</tr>
<tr>
<td># of medical &amp; pathology lab scientists*</td>
<td>225 (median), 14,000 (range)</td>
<td>225 (median), 14,000 (range)</td>
</tr>
</tbody>
</table>

FORMULATING RESPONSE

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline 2007-2016</th>
<th>Baseline 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated NCD plan</td>
<td>67% of countries have operational NCD plan</td>
<td>67% of countries have operational NCD plan</td>
</tr>
<tr>
<td>NCCP (including cancer types)</td>
<td>48% of countries have operational cancer plan</td>
<td>48% of countries have operational cancer plan</td>
</tr>
<tr>
<td>MPOWER measures fully implemented and achieved</td>
<td>1 (median), 0-3 (range)</td>
<td>1 (median), 0-3 (range)</td>
</tr>
<tr>
<td>Cancer management guidelines</td>
<td>76% of countries have cancer guideline</td>
<td>76% of countries have cancer guideline</td>
</tr>
<tr>
<td>Palliative care plan</td>
<td>57% of countries have operational NCD integrated plan that includes palliative care</td>
<td>57% of countries have operational NCD integrated plan that includes palliative care</td>
</tr>
<tr>
<td># of treatment services (surgery, radiotherapy, chemotherapy)</td>
<td>71% of the countries have generally available treatment capacity</td>
<td>71% of the countries have generally available treatment capacity</td>
</tr>
<tr>
<td>Breast cancer screening program</td>
<td>76% of countries have breast cancer screening</td>
<td>76% of countries have breast cancer screening</td>
</tr>
<tr>
<td>Breast cancer screening program: Starting age, target population</td>
<td>43% of countries adhere to best practices</td>
<td>43% of countries adhere to best practices</td>
</tr>
</tbody>
</table>

GLOBAL INITIATIVES

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline 2007-2016</th>
<th>Baseline 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPV vaccination programme coverage</td>
<td>0% of countries have ≥ 50% coverage; 0% have ≥ 90% coverage</td>
<td>0% of countries have ≥ 50% coverage; 0% have ≥ 90% coverage</td>
</tr>
<tr>
<td>Cervical cancer screening</td>
<td>48% of countries have cervical cancer screening programme</td>
<td>48% of countries have cervical cancer screening programme</td>
</tr>
<tr>
<td>Screening programme type</td>
<td>29% of countries have organized, population-based programme</td>
<td>29% of countries have organized, population-based programme</td>
</tr>
<tr>
<td>Screening programme method</td>
<td>5% of countries use HPV test as their screening programme method</td>
<td>5% of countries use HPV test as their screening programme method</td>
</tr>
<tr>
<td>Screening participation rates</td>
<td>0% of countries have &gt;70% coverage</td>
<td>0% of countries have &gt;70% coverage</td>
</tr>
<tr>
<td>Early detection programme/guidelines</td>
<td>52% of countries have early detection programme/guidelines</td>
<td>52% of countries have early detection programme/guidelines</td>
</tr>
<tr>
<td>Defined referral system</td>
<td>62% of countries have defined referral system</td>
<td>62% of countries have defined referral system</td>
</tr>
</tbody>
</table>

Global Initiative for Childhood Cancer

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline 2007-2016</th>
<th>Baseline 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual cancer cases (0-14 years old)</td>
<td>33'808</td>
<td>33'808</td>
</tr>
<tr>
<td>Early detection programme/guidelines</td>
<td>10% of countries have early detection programme/guidelines</td>
<td>10% of countries have early detection programme/guidelines</td>
</tr>
<tr>
<td>Defined referral system</td>
<td>38% of countries have defined referral system</td>
<td>38% of countries have defined referral system</td>
</tr>
<tr>
<td>Annual cancer cases (0-14 years old)</td>
<td></td>
<td>38% of countries have defined referral system</td>
</tr>
</tbody>
</table>

- Acute lymphoid leukaemia
- Hodgkin lymphoma
- Burkitt lymphoma
- CNS, low grade tumours
- Retinoblastoma
- Wilms tumour
- Other childhood cancer

WHO Cancer Regional Profile 2020