**BAHRAIN**

**BURDEN OF CANCER**

<table>
<thead>
<tr>
<th>Total population (2019)</th>
<th>1,641,164</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # cancer cases (2018)</td>
<td>1,048</td>
</tr>
<tr>
<td>Total # cancer deaths (2018)</td>
<td>603</td>
</tr>
</tbody>
</table>

Premature deaths from NCDs (2016) | 1,081 |

Cancer as % of NCD premature deaths (2016) | 27.7% |

**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>21.7%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Bladder</td>
<td>4.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Colorectum</td>
<td>11.5%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>4.8%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Lung</td>
<td>7.7%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>5.8%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Ovary</td>
<td>3.3%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Prostate</td>
<td>3.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Thyroid</td>
<td>3.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Brain, CNS</td>
<td>3.2%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

**PAFs**

(population attributable fractions)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.9%</td>
<td>2.1%</td>
<td>9.7%</td>
<td>5.2%</td>
<td>n/a</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

*PAF, cancer deaths, † PAF, cancer cases, ‡ PAF, melanoma cases

**TRENDS**

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

Probability of premature death from cancer per year

**INVESTMENT CASE (2019)**

*High income*

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

**Costs per year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost (US$ per capita)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>0.10</td>
</tr>
<tr>
<td>2022</td>
<td>0.20</td>
</tr>
<tr>
<td>2024</td>
<td>0.30</td>
</tr>
<tr>
<td>2026</td>
<td>0.40</td>
</tr>
<tr>
<td>2028</td>
<td>0.50</td>
</tr>
<tr>
<td>2030</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Projected lives saved per year

<table>
<thead>
<tr>
<th>Year</th>
<th>Lives Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>1</td>
</tr>
<tr>
<td>2022</td>
<td>1</td>
</tr>
<tr>
<td>2024</td>
<td>1</td>
</tr>
<tr>
<td>2026</td>
<td>1</td>
</tr>
<tr>
<td>2028</td>
<td>0</td>
</tr>
<tr>
<td>2030</td>
<td>0</td>
</tr>
</tbody>
</table>
### Health System Capacity

**per 10,000 cancer patients**

- **Availability of population-based cancer registry (PBCR)**
  - 2019: High quality PBCR

- **Quality of mortality registration***
  - 2007-2016: Low

- **# of external beam radiotherapy (photon, electron)**
  - 2019: 19.1

- **# of mammographs**
  - 2020: 9.5

- **# of CT scanners**
  - 2020: 162.2

- **# of MRI scanners**
  - 2020: 133.6

- **# of PET or PET/CT scanners**
  - 2020: 9.5

### Workforce

**per 10,000 cancer patients**

- **Available staff in Ministry of Health who dedicates significant proportion of their time to cancer**
  - 2019: yes

- **# of radiation oncologist**
  - 2019: n/a

- **# of medical physicists**
  - 2019: 286.3

- **# of surgeons**
  - 2012: 1917.9

- **# of radiologists**
  - 2019: n/a

- **# of nuclear medicine physicists**
  - 2019: 47.7

- **# of medical & pathology lab scientists**
  - 2015: n/a

### Formulating Response

- **Integrated NCD plan**
  - 2019: operational

- **NCCP (including cancer types)**
  - 2019: operational

- **MPower measures fully implemented and achieved**
  - 2018: 1

- **Cancer management guidelines**
  - 2019: yes

- **Palliative care included in their operational, integrated NCD plan**
  - 2019: yes

- **# of treatment services (surgery, radiotherapy, chemotherapy)**
  - 2019: 3

- **Breast cancer screening program**
  - 2019: yes

- **Breast cancer screening program: Starting age, target population**
  - 2019: 40

### Global Initiatives

#### Elimination of Cervical Cancer

- **HPV vaccination programme coverage**
  - 2018: n/a

- **Cervical cancer screening**
  - 2019: yes

- **Screening programme type**
  - 2019: opportunistic

- **Screening programme method**
  - 2019: PAP smear

- **Screening participation rates**
  - 2019: <10%

- **Defined referral system**
  - 2019: yes

#### Global Initiative for Childhood Cancer

- **Annual cancer cases (0-14 years old)**
  - 2020: 46

- **Early detection programme/guidelines**
  - 2019: yes

- **Defined referral system**
  - 2019: yes

- **Annual cancer cases (0-14 years old)**

### Diagram

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

***The mortality estimates for this country have a high degree of uncertainty because they are not based on any national NCD mortality data**

*Defined daily doses for statistical purposes (S-DDD) per million inhabitants per day