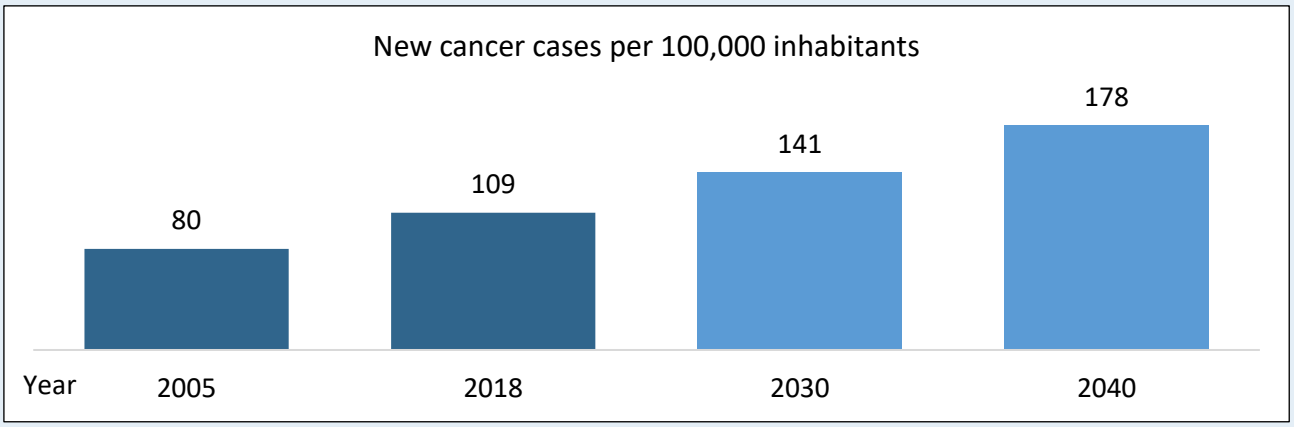
JORDAN

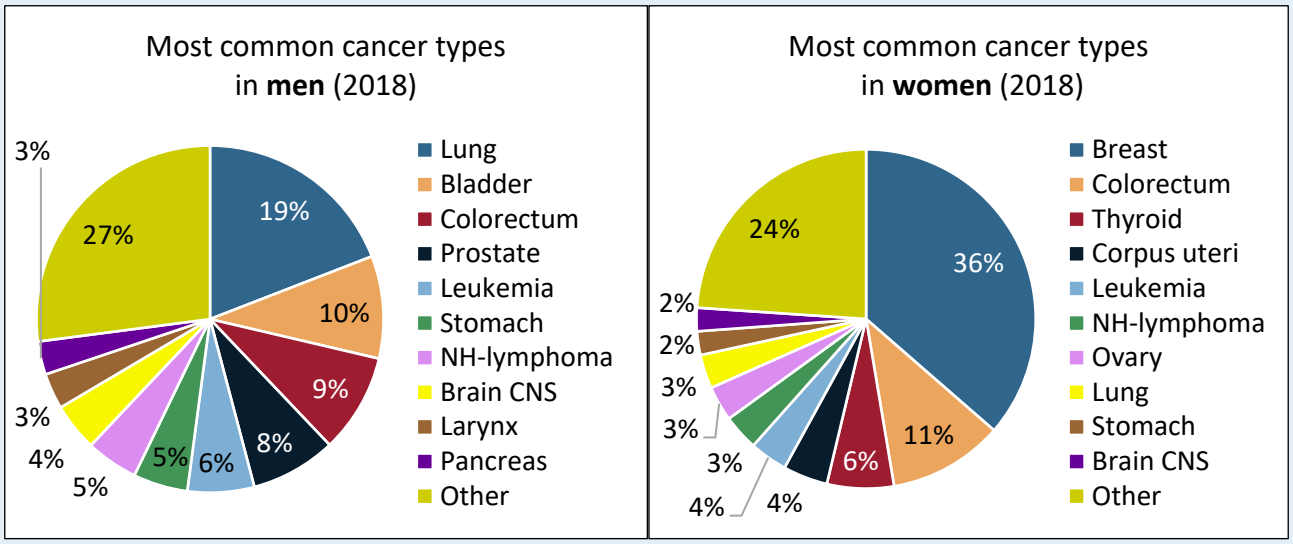
Population: 10.1 million
GDP per capita: USD 4,405
Life expectancy: 74.3 years
Total health expenditure: 7.8% of GDP
(in 2018)

Cancer epidemiology

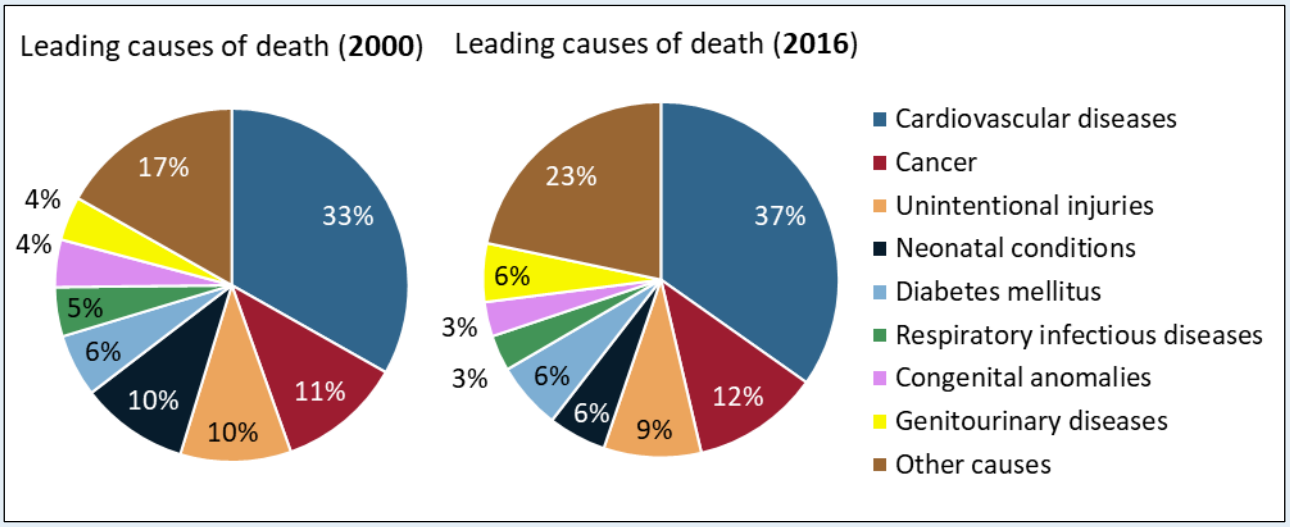
- The number of newly diagnosed cancer cases (incidence) has been increasing and is expected to increase further in the coming decades.



- There are many different cancer types diagnosed in men and women.



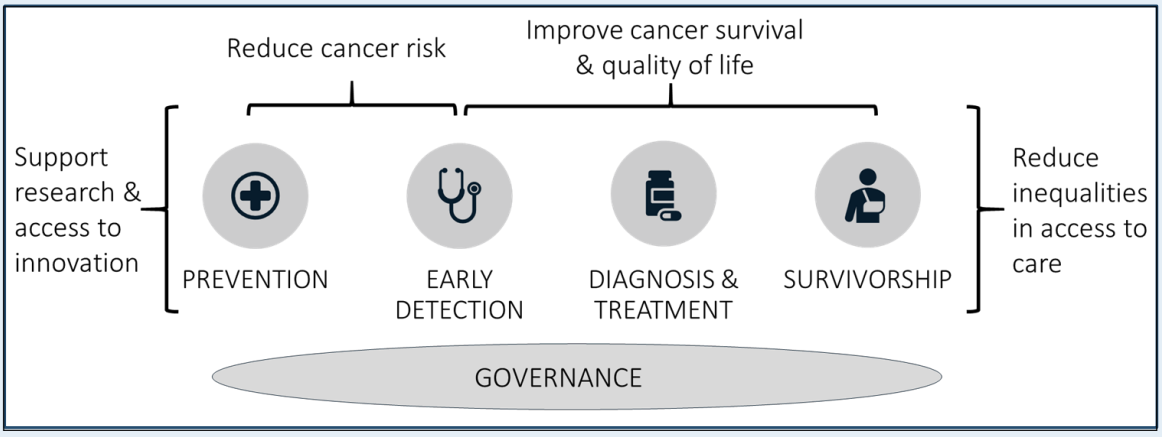
- Cancer is gradually becoming one of the leading causes of death.



Economic burden of cancer

- **Direct costs** within the health care system: USD 24–36 per capita in 2018 (≈7–11% of total health expenditure)
- **Indirect costs** of productivity losses (premature death, sick leave, early retirement): USD 9 per capita in 2018
- **Informal care costs**: not quantifiable

Areas of cancer control and overarching goals



Recommendations to improve cancer care

General steps to improve cancer care:

1. **Measure and understand** the magnitude and the development of the disease burden of cancer
2. **Plan, coordinate, and implement** – financial and non-financial – actions to address cancer
3. **Monitor and evaluate** actions on cancer control

Governance of cancer care

- There is no current or recent national cancer plan and neither a current NCD plan that includes cancer. Establishing a national cancer plan needs to be a priority. The KHCC as the dominating cancer care provider needs to be involved in the planning phase, drawing on their competence and experience, while at the same time making sure that the plan improves access to equitable cancer care across the whole country. The plan would need clear aims to reduce incidence and improve survival as well as include a funding plan for all planned actions. The actions would need to be monitored including using the national cancer registry to analyze treatment patterns and efficient use of resources.

Organization and financing of health care and cancer care

- Public spending on health care amounts to close to 4% of GDP, which falls short of the informal WHO spending target of 5% of GDP. Additional spending to bring the country closer to the benchmark and as part of implementing UHC would be needed.
- UHC still needs to be achieved, with 68% of Jordanian citizens covered by public and private health insurance in 2015. Since 2015, the civil health insurance fund by the MoH has already been expanded to cover young children and older citizens. Ways to cover the remaining uninsured citizens need to be explored.
- Access of UNHCR-registered refugees to public health care facilities has worsened in recent years. A permanent solution that is both financially sustainable and allows good access needs to be found in collaboration with international stakeholders.
- All – insured and uninsured – Jordanian receive free cancer care in the public sector. But there is unequal access to cancer care services. Cancer patients treated at the KHCC (around 60–70% of patients) receive better care than those treated at small non-specialized hospitals with a low expertise in treating cancer. Funding cuts

by the government to the KHCC also meant that fewer patients could have been referred to the KHCC in recent years. Ways to ensure more equal care provision need to be explored.

- Long-term planning of the supply of cancer care services for the projected growing demand needs to be made. This would also need to ensure the sustainability of covering costs of cancer treatment.
- A new integrated model of cancer care could be considered which regulates the competences of cancer centers and primary care clinics. Structured primary care programs and services that aim to address treatment-related complications and co-morbidities during and after treatment would need to be introduced in the whole country. A greater role of primary care clinics in engaging in cancer prevention activities and also in providing screening services could be considered. This would reduce the burden on cancer centers and help them focus on their core competences.

Cancer registration

- Continuing to improve cancer registration and its analysis in the national cancer registry is important. The long delays in the public publication of aggregated data needs to be addressed.
- Only cancer incidence is captured in the national registry, while information on cancer mortality is missing. Linking information on mortality to the registries and assessing survival needs to be prioritized.

Prevention

- Work on prevention currently lacks financial resources. Investment in prevention needs to be increased.
- The fight against tobacco consumption needs to be stepped up, given that smoking rates in men are the highest in the world. A special focus needs to be placed on children and young people and existing age limits need to be enforced. The newly introduced smoking bans in public indoor places also need to be enforced. Excise taxes on cigarettes could be increased further.
- Obesity needs to be addressed. Measures taken so far to change dietary habits away from unhealthy fast food and to increase physical activity have not been successful so far. New strategies need to be explored. One measure could be the introduction of excise taxes on sugary drinks.
- Repeated epidemiological studies to monitor the prevalence of HPV could be conducted. This would help to assess the optimal timing for a rollout of a vaccination program against HPV in children.

Early detection

- Health literacy in the general population on early symptoms of cancer needs to be improved.
- As part of a new integrated model of care (see recommendation above), primary care clinics could be tasked with the responsibility for screening programs.
- The existing breast cancer screening program needs to be turned into an organized program to address access challenges and to ensure that women regularly return to screening.
- The introduction of a colorectal cancer screening program could be considered, given the increasing obesity rates.
- The cost-effectiveness of the introduction of a lung cancer screening program could be assessed, given the exceptionally high smoking rates.

Diagnosis and treatment

- Imbalances in the quality of care – high quality at the KHCC and lower quality elsewhere – need to be addressed. This is partly a question of lower availability of modern health care infrastructure in all areas outside of Amman.
- There are no national treatment guidelines except for breast cancer. The KHCC could be tasked to develop national treatment guidelines for more cancer types which are then to be applied consistently to ensure more equitable care all over the country.
- There is no good quality management of cancer care across the whole country. There is a lack of quality standards. There is also no monitoring system in place in hospitals (except in the KHCC). The lack of outcome

data in the national cancer registry also inhibits proper monitoring. The establishment of a quality management system and the recording of relevant data need to be prioritized.

- Time to treatment for patients diagnosed outside of the KHCC and later referred to the KHCC is long, because patient data are not properly transferred when patients are referred. The referral system to the KHCC needs to be defined more clearly and address inconsistencies.
- Ways to stop the significant brain drain of young and trained oncologists need to be explored.
- The number of modern diagnostic imaging units is limited, which restricts accurate diagnosis for the vast majority of patients. Investment in additional scanners could be considered to enable greater patient access.
- Molecular diagnostic testing needs to be improved in all hospitals apart from the KHCC to establish the prerequisites to administer modern cancer drugs.
- The number of radiation therapy machines is fairly close to recommended standards. An assessment of underserved areas could be conducted to determine where the installation of additional machines is of greatest benefit.
- The availability of modern cancer drugs (targeted therapies and immunotherapies) is very limited. More modern drugs are available at the KHCC due to its own reimbursement process compared to the rest of the country. The main bottleneck for reimbursement of more modern drugs is the lack of public financial resources. Ways to create budget headroom for new drugs such as through a review of the generic pricing policy and mandatory generic substitution could be explored.
- The reimbursement decision of drugs is based on a review of their cost-effectiveness. No cost-effectiveness studies with local data are required and no real cost-effectiveness threshold exists though. The establishment of an HTA unit along with a transparent HTA process relying on more local data analysis and with clear decision criteria could be considered.

Survivorship

- There is a survivorship program at the KHCC, but it is not integrated with primary care. As part of a new integrated model of care (see recommendation above), these activities could be considered to be shifted to primary care and thus also to ensure greater access of patients across the country to psycho-oncology services.
- Informal caregivers with regular jobs could be better supported, such as through a right to flexible working arrangements and paid leave.
- The reintegration in the labor market of cancer survivors could be supported by flexible working arrangements.
- Cancer survivors could be protected from discrimination in the acquisition of certain services (e.g., health insurance, life insurance, loans, mortgages), by imposing time limits up to which a previous cancer diagnosis needs to be disclosed.