

Cancer Care: Assuring quality to improve survival

Countries are not doing as well as they could to fight cancer: an estimated one-third of cases could be cured if detected on time and adequately treated. While some countries are lagging behind in cancer care performance, other countries have designed systems that make them global leaders in the fight against cancer.

This report explores policy trends in cancer care across countries over the past decade, identifies which policy approaches are associated with the best cancer survival and makes recommendations for creating and supporting high-quality cancer care systems.

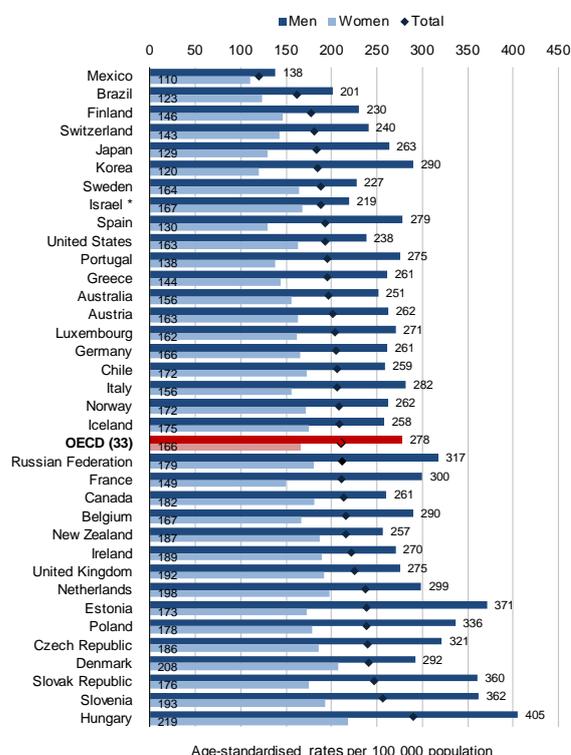
Cancer causes more than a quarter of all deaths in OECD countries

Cancer remains a major health care challenge. More than 5 million new cases of cancer are diagnosed every year in OECD countries, averaging about 261 cases per 100 000 people. Cancer is responsible for more than one-quarter of all deaths and, in terms of potential life years lost, is a bigger problem than heart attacks and strokes for both men and women.

The financial burden of cancer is also growing

Cancer currently consumes around 5% of all health care costs. Increasing incidence, prolonged survival and high costs of novel drugs and technologies mean that growth in spending on cancer is outstripping growth in total health expenditure. Cancer patients and their carers also bear significant costs, both financial and social. Once these are taken into account, the global economic impact of premature death and disability from cancer is around USD 900 billion, larger than that for heart disease.

Figure 1: Cancer mortality varies more than two-fold across OECD countries



* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD Health Statistics 2013, <http://dx.doi.org/10.1787/health-data-en>.

Health systems need to do better in the fight against cancer



Countries are not doing as well as they could in the fight against cancer. It is reckoned that one-third of cancers could be cured if detected on time and properly treated (and another third prevented if more far-reaching public health measures were in place). Although death rates from cancer have declined slightly in most OECD countries since 1995, the decline has been more modest than for heart disease and stroke, and some countries have not shown any reduction in cancer deaths at all.

Comparing survival estimates for breast, cervical, colorectal and lung cancers, it emerges that some OECD countries have top tier survival estimates across all four cancers. Other countries perform consistently poorly. Survival from colorectal cancer (Figure 2), for example, has improved across all countries over the past decade, but Korea has a survival estimate nearly double that of Poland. Consistent patterns of high and low performers suggest that international differences in cancer survival do not arise randomly, but are likely to be the result of systematic differences in the way that cancer care programmes are funded, organised and steered.

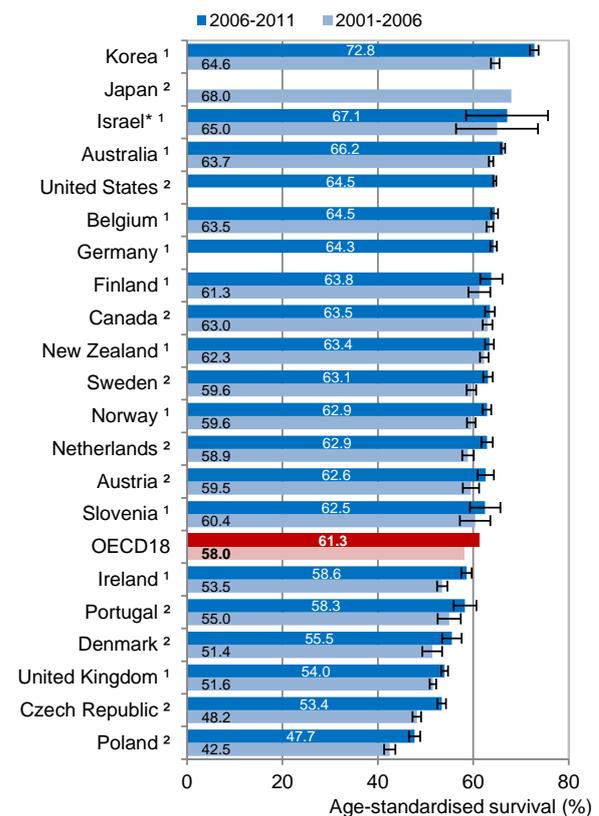
The characteristics of good clinical care for cancer are well established, but policy makers remain unclear on how best to design the system for cancer care

For any cancer, high-quality clinical care consists of early detection, accurate diagnosis and staging, prompt access to the right combination of surgery, radiotherapy, chemotherapy or supportive care, and regular specialist follow-up. Preventive strategies and palliative care are also crucially important phases of care. Across the cancer care pathway, a holistic approach, including psychosocial support and effective communication between clinical teams, patients and carers is critical.

But how do policy makers design a cancer care system to ensure that these elements of high-quality care are consistently available to all cancer patients? And how can they ensure that the quality of care is continuously improving?

Whilst some countries are lagging behind in cancer care performance, other countries' survival estimates suggest that they have designed cancer care systems that make them global leaders in the fight against cancer. This report aims to identify which policy approaches are associated with better survival after a diagnosis of cancer.

Figure 2: Survival from colorectal cancer varies almost two-fold across OECD countries



1. Period analysis. 2. Cohort analysis.

95% confidence intervals represented by H.

* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD Health Statistics 2013, <http://dx.doi.org/10.1787/health-data-en>.

A very uneven approach to tackling cancer has been taken across OECD countries



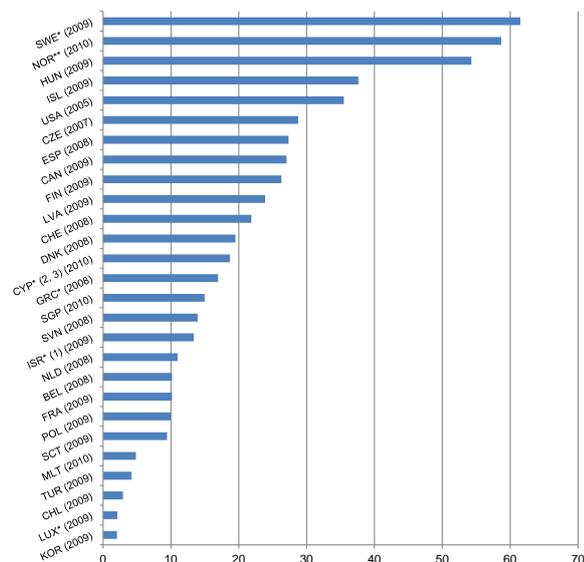
Availability of chemotherapy, diagnostic and therapeutic equipment and cancer specialists varies markedly

The availability of cancer drugs and diagnostic and therapeutic equipment differs considerably across countries. The amount of money spent on drugs to treat cancer, for example, varied between 0.1% and 2.4% of countries' total health expenditure in 2008/09. Access to new treatments also diverged, driven by differences in the length of time for new drugs to be authorised for use or for insurance reimbursement to be agreed. Diagnostic equipment such as CT, MRI and PET scanners (needed to detect cancers early and monitor treatment) are distributed unevenly within and between countries. The density of CT and MRI scanners per head of population in Japan, for example, is 15 times that of Hungary. Radiotherapy equipment (needed to treat cancer) is also unevenly distributed: per head of population, density in Switzerland is 30 times that in Israel.

There is also a large cross-country variation in access to cancer clinics, hospitals and cancer specialists. Figure 3 shows the 30-fold variation in the number of cancer specialists per head of population. Expanding the number of specialists, whilst setting ever more closely defined standards for their training and professional development, is a struggle that many countries are seeking to resolve.

In an effort to drive up quality, a number of countries are concentrating resources and expertise into a limited number of specialised Cancer Centres, whilst trying to maintain reasonable travel times for patients. The Czech Republic, for example, reduced the number of its hospitals treating cancer from 18 in 2002 to 13 in 2008. This has not led to any reported difficulties in geographic access and variation in survival rates across regions is small.

Figure 3: The number of certified oncologists per million population varies 30-fold across OECD countries



Note: Polish and Turkish data refer only to medical oncologists, while Danish data relate to all employed doctors. Data are estimates for Israel, Korea and the Netherlands. Countries with an * refer to those that do not have licensing and accreditation for doctors specialised in providing cancer care, based on the OECD Questionnaire on Systems of Cancer Care. Norwegian data include 111 doctors in specialist education in the hospitals.

- Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.
- Footnote by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
- Footnote by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD Health Data 2011, <http://dx.doi.org/10.1787/health-data-en>, for population in the OECD countries, Eurostat for population in Malta and Slovenia, and the Office for National Statistics for the English and Scottish population, and OECD HCQI Questionnaires on Systems of Cancer Care.

Patients' chances of accessing evidence-based and timely care are not always the same

Starting treatment quickly is critical when dealing with cancer. Yet referral times to see a specialist and waiting times to start treatment both vary greatly across countries. The waiting time between diagnosis and initial treatment for breast cancer, for example, varies from a few days in Iceland and Luxembourg to a number of months in countries such as Poland or Slovenia.

Countries are also trying to improve access to cancer care by establishing waiting time targets across the care pathway and investing in fast-track pathways. Slovenia, for example, introduced a national waiting list for cancer treatments and dedicated investment into facilities and equipment for radiotherapy, since this was where one of the most significant bottlenecks in the cancer care pathway occurred. Several other countries, however, report ongoing difficulties in making sure cancer patients start treatment without delay.

Tools to measure and improve the quality of cancer care services are often lacking

Health systems need a set of tools in place to measure and improve the quality of care. Clinical guidelines, which support clinicians and patients to choose the best course of treatment, have come into widespread use for a variety of cancers, but significant variation still exists in the extent and depth of penetration of guidelines across countries. Norway, for example, has been developing guidelines for treatment of specific cancers for over three decades, whereas guidelines for the treatment of breast and lung cancer were published in Portugal for the first time around 2009.

The extent to which guidelines are followed can be monitored through surveys or registers of patients, documenting treatments received and relevant outcomes. Monitoring arrangements have been developing in recent years across countries, with responsibility often assigned to agencies that are independent of the health care providers. Monitoring often focussed initially on outcomes (such as survival) or on processes (such as adherence to guidelines and waiting times) but has recently broadened its focus to include additional dimensions such as quality of life, functional ability and the patient experience. England's experience with PROMs (patient reported outcome measures), for example, is well known, but in several other OECD countries the monitoring of cancer care performance remains limited.

Robust monitoring arrangements allow targets and minimum thresholds to be set, which can be useful in setting out the priorities for national cancer control, improving care and reducing variation. Increasingly, target-setting is moving away from a restricted focus on prevention and screening and towards a wider set of challenges, such as treatment, follow-up, integrated care, palliative care and patient-centred care.

In most countries, systematic and comprehensive quality assurance (QA) mechanisms are now in place, comprising formal accreditation to identify institutions where minimum standards for providing cancer care are met, and the licensing of health care professionals who have met minimum standards of training and on-going professional development. A few countries, however, do not have comprehensive QA mechanisms in place.

A final, unifying element, in the quality architecture surrounding cancer care is a national cancer control plan (NCCP). These national plans, which became common in the early 2000s, offer a strategic vision of how the fight against cancer should proceed. Typically, they specify national targets around prevention, screening and treatment, establish frameworks for how care should be organised and delivered and aim to strengthen mechanisms for monitoring and quality improvement (see Box 1).

What works to improve survival?



An adequate level of resourcing is vital

Quantitative work using data from OECD countries shows that the resources put into cancer care explain a significant part of the cross-country differences in cancer survival (as shown in Figure 4).

Certain characteristics, such as the existence of nationwide screening programmes (particularly for breast cancer), shorter waiting times and the reported provision of evidence-based best practice,

are also independently associated with improved cancer survival.

The nature of cancer governance also explains a proportion of the observed differences in survival. Few countries had established comprehensive NCCPs at the baseline of the analysis, but even in the absence of a comprehensive plan, setting national targets with a specified time frame, having guidelines, using case management and having mechanisms for monitoring and quality assurance were each independently associated with improved cancer survival.

Overall an adequate level of resourcing is fundamental to improving cancer survival. The better-performing countries have also invested in early diagnosis and evidence-based cancer care delivery. They have also set out their national cancer control priorities with timeframes and promoted monitoring and quality assurance as part of an effort to continuously improve the quality of cancer care.

Policy actions to assure quality and improve survival after cancer



Resources must be put to best use: adapting international evidence to local contexts

As implied by Figure 4, higher spending on health is associated with better cancer survival estimates. This association is particularly strong at lower spending levels, emphasising the importance of adequate resource allocation for countries in this group.

All countries, however, should ensure **sufficient investment** in cancer care facilities, professionals, diagnostic and therapeutic technologies and medications. Flexible and policies with a mid- to long-term view, underpinned by a sound evidence base and a cost-effectiveness assessment, adapted to the local context, are needed.

Box 1. National cancer control plans (NCCPs) in a selection of OECD countries

- Early examples of NCCPs include the United States' National Cancer Act of 1974 and Germany's national cancer strategy of 1979.
- Belgium, Italy, the Netherlands and Sweden are good examples of how a suite of discrete cancer policies formed the basis on which a more ambitious and comprehensive NCCP was built.
- In a federalised health system such as Australia's, regional governments participated extensively in the development of the first NCCP in 1996. Regions have implemented the NCCP consistently and successfully.
- Canada, Denmark, France, Germany and Turkey have established an independent body to oversee the overall implementation of cancer control.

Doing the right thing at the same time: good practice needs to be embedded across the care pathway

One-third of cancers are preventable. Countries need to invest in prevention programmes (such as support to help people quit smoking and prevent young people from starting to smoke). **Prevention programmes** should generate social multiplier effects through a mutual reinforcement of healthy life styles within families and peers. The implementation of multiple interventions involving diverse stakeholders is also needed, as this effectively generates effects over different time horizons.

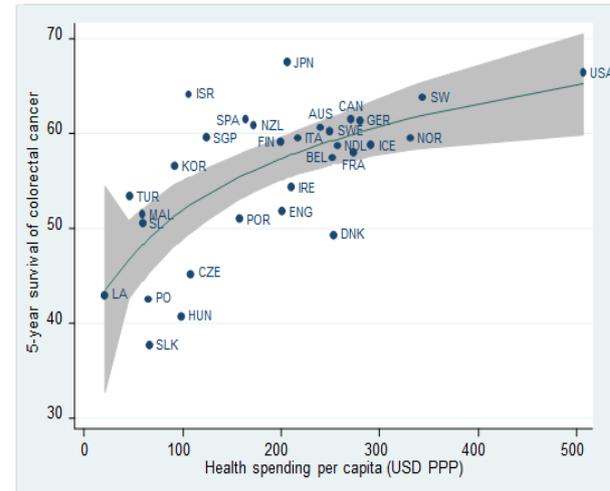
Countries must put systems in place that maximise the chances of cancer being diagnosed early. Systematic **screening** of at risk populations should be offered where it is proven to reduce mortality in the local population, where cost-effectiveness is acceptable, where high quality is assured and the public is informed of benefits and potential harms. Population-based call/recall systems generally achieve a higher rate of coverage than programmes which rely on opportunistic uptake. Supply-side incentives are likely to have a role, such as giving performance assessment feedback to providers. On the demand side too, countries can make additional efforts to increase public awareness about the benefit of regular screening, particularly among disadvantaged populations.

To reduce the likelihood of unacceptable variations in care standards or processes, countries should develop **national clinical guidelines** around the management of the most common cancers. The quality of care can also be improved and efficiency enhanced by multidisciplinary care at specialised centres, thereby pooling the expertise of different specialists and ensuring that each centre has sufficient patient volumes to support safe, effective and continuously improving care.

Countries should develop a clear understanding of the pattern of excessive or inequitable **waiting times** for cancer care in their population and respond with policies suited to the local context. This may involve increasing the investment in resources such as medical devices, establishing maximum waiting time guarantees and setting up fast-track pathways or a mix of these policy actions.

Monitoring and evaluation, including feedback to providers should underpin any intervention. Targeted, time-limited financial incentives to address specific objectives such as implementation of clinical guidelines or reduction of waiting times may also play a role.

Figure 4: Increased spending on health is associated with improved cancer survival estimates



Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: EUROCARE/SEER (survival), OECD Health Data (TNEH).

Countries need to look beyond survival and seek to optimise quality of life for patients and their carers

Although improving cancer survival is, rightly, the priority for most countries, a more holistic set of outcomes should also be borne in mind. Improving the quality of life of people with cancer and their families should also be a focus of policy. Caring for cancer patients can be challenging; for example, a study in Canada found that 5% of informal caregivers of breast cancer patients had quit their jobs or declined a promotion.

Many countries are facing population ageing, leading to shrinking labour force populations and an expected increase in cancer incidence in the coming years. For economic reasons, as well as promoting individuals' well-being, countries need to implement measures to **support labour market participation** by cancer patients and their carers. Policies might include support for employers to offer accessible and flexible leave for patients and their carers, appropriate levels of social insurance, psychological support and careers counselling to support re-entry into the labour market.

The bedrock of success in the fight against cancer is a national cancer control plan

Countries need to pursue a consistent and ambitious policy response to the challenge of cancer. **National cancer control plans** can focus political and public attention on the performance of the cancer care system and on unwarranted variations in outcomes, and they can attract new resources and force debate on difficult topics, such as resource allocation. They also offer opportunities to consider cancer care in the

round (bringing in social care, for example), thereby improving quality across the entire care pathway, and to reinforce the common goals shared by patients, medical professionals, researchers and other stakeholders at the national and regional levels.

In some instances, a comprehensive nationwide plan may not be an appropriate solution for governing cancer control efforts. Some countries may prefer to pursue a strategy of targeted initiatives addressing specific cancer challenges, integrated into broader national health policy. In addition, cancer care may be the responsibility of sub-national governments in federalised systems.

Monitoring and evaluation are vital

Monitoring progress is a vital element in effective governance. This requires a relatively advanced information and data infrastructure across a country's health care system. A culture of analysis

and action – seeking continuous quality improvement across the cancer care pathway – is equally necessary. Addressing unwarranted variation in the processes and outcomes of care (across regions, providers or patient groups) should be a priority.

Publishing performance data can also serve to focus minds and resources and initiate change, and countries should ensure regular publication of quality data in formats that are easily accessible and understandable by all stakeholders. Regular publication of quality data will encourage providers to make quality improvements and facilitate informed patient choice, generating further quality improvements. A wide range of performance measures should be published, including patient experiences and patient reported outcome measures. **Benchmarking against international comparators** is also vital to ensure continuously improving care.

Did you know? Key facts about cancer care in OECD countries

- The United States has one of the lowest adult smoking rates in the OECD, at 14.8% in 2011, but the highest obesity rate, at 36.5% in 2010. Overall, reported cancer incidence is higher in the US than in most other OECD countries.
- In all OECD countries, men are more often smokers than women except in Norway, where 18% of women and 17% of men smoke, and Denmark, where 20% of each gender smoke.
- Rates of screening for breast and cervical cancer are lower in Australia than in most other OECD countries, at 56.8% and 55.5% respectively. The country has introduced a financial incentive scheme for GPs and public health campaigns to try and increase these rates.
- The Czech Republic has one of the longest running national registers of patients with cancer in the OECD. The register started in 1977, contains details of nearly 2 million patients' diagnoses, treatments and outcomes.

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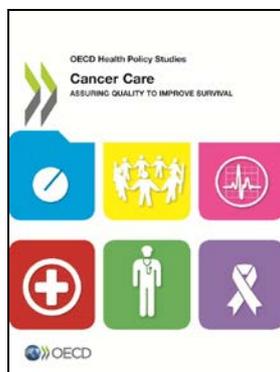
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