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MINISTRY OF HEALTH
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CZECH

NATIONAL CANCER

CONTROL PLAN | 2030

NOPL CR 2030

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The following table provides a list of abbreviations common to both the strategic and analytical sections of the NOPL CR 2030.

Table 1: List of abbreviations

CCC	Comprehensive Cancer Centre(s)
CHOC	A Centre for Highly Specialised Haemato-oncological Care for Children which does not have a transplantation unit (see MoH Bulletin of 15. 2. 2019)
CHRC	Czech Health Research Council
CHS CzMA JEP	Czech Society of Haematology of the CzMA JEP
CMC	Czech Medical Chamber
COS CzMA JEP	Czech Society for Oncology of the CzMA JEP
CzMA JEP	Czech Medical Society of Jan Evangelista Purkyně
DHC	Department of Healthcare of the MoH
DMH	Deputy Minister for Healthcare at the MoH
EFI	European Funds and Investment Development Department
ERN	Sites connected to the European Reference Networks
GACR	Grant Agency of the Czech Republic
HCQO	Health Care Quality and Outcomes
HOC	Haematology centre/centres for children and adults
ICP	Index of Cancer Preparedness, an international index in the framework of the World Cancer Initiative programme
IHBT	Institute of Haematology and Blood Transfusion
IHIS	Institute of Health Information and Statistics of the Czech Republic
IPME	Institute for Postgraduate Medical Education
MEYS	Ministry of Education, Youth and Sports
MMCI	Masaryk Memorial Cancer Institute
MoH.	Ministry of Health of the Czech Republic
MoLSA	Ministry of Labour and Social Affairs of Czech Republic
MSPC	Mobile specialised palliative care
MT	Malignant tumour
NCC	National Cancer Centres
NCI NOPL	National Council for the Implementation of the NOPL 2030
NCN NMH	National Centre of Nursing and Non-medical Healthcare Fields
NCR	National Cancer Registry of the Czech Republic
NHOP CHS CzMA JEP	National haemato-oncology programme of the CHS of the CzMA JEP
NOP 2030	National Oncology Programme of the COS CzMA JEP
NOPL CR 2030	Czech National Cancer Control Plan 2030 (based, among others, on the NOP 2030)
NSC	National Screening Centre (part of the IHIS)
OGC	Centres for highly specialised onco-gynaecological care
PHPA	Public health protection authorities
PSTO NMP	Programme(s) of specialisation training in oncology for non-medical healthcare professionals
ROG	Regional Oncology Group
SIDC	State Institute for Drug Control
SROBP CzMA JEP	Society of Radiotherapy, Oncology and Biological Physics of the CzMA JEP
SVOD	Oncology Data Visualisation System (www.svod.cz)
UNIFY CR	Union of Physiotherapists of the Czech Republic

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1

INTRODUCTION

1.A Basic information about NOPL CR 2030

Title	CZECH NATIONAL CANCER CONTROL PLAN 2030 (NOPL CR 2030)
Submitter	Minister of Health of the Czech Republic
Administrator of the strategy development	Deputy Minister for the Healthcare Section
Year of strategy	2022
Approver	Government of the Czech Republic
Date of approval	22/06/2022
Form of approval	Government Resolution No. 541 of 22 June 2022
Last update	June 2022
Implementation period	2022–2030
Responsibility for implementation	Minister of Health of the Czech Republic
Estimated implementation budget	CZK 18 billion
Authors' collective	Representatives of the MoH, the IHIS, professional societies of the CzMA JEP, patient organisations, NGOs and health insurance companies
Head of the authors' collective	Ing. Mgr. Venuše Škampová, MBA, Director of the Department of Healthcare of the Ministry of Health
Context of the creation	The NOPL ČR 2030 was formulated on the basis of the analysis of the implementation of the National Oncology Programme of the Czech Republic from 2013, on the basis of the National Oncology Programme of the Czech Republic for the years 2022–2030 developed by the professional societies of the CzMA JEP, on the basis of the National Haematology Programme of the Czech Society of Haematology and on the basis of a thorough analysis of the situation, which is included in Annexe 1. The analyses, objectives and activities of relevant strategic documents at the national and international level were taken into account in the development of the NOPL CR 2030.
Brief description of the issue addressed	<p>The vision of the NOPL Czech Republic 2030 is: "To ensure that every resident of the Czech Republic can prevent the development of cancer and, in the event of its development, to ensure the highest possible quality of care and life, regardless of geographical location or the stage of the disease."</p> <p>Not only is the NOPL CR 2030 essential for the fulfilment of this goal, but so is the need to ensure that the fight against cancer remains part of all relevant national and regional political agendas, across all areas. It is also crucial to stimulate the interest of the general public in prevention, including health protection and promotion, and to increase health literacy in the area of cancer risk factors. The emphasis is on involving patients and informal carers in the whole strategic process. It will also be essential to set up a sustainable pathway to fight cancer, including multidisciplinary collaboration in the diagnosis and treatment of cancer to achieve the best possible treatment outcomes. Close cooperation with payers of health and social services, with non-governmental non-profit organisations and with other collaborating disciplines involved in prevention, diagnosis, treatment and follow-up care must go hand in hand. Last but not least, there will be an emphasis on international cooperation harmonising care within the EU.</p>

1.B Context of the creation and existence of the NOPL CR 2030

In absolute numbers, 60,000 malignant tumours (excluding other skin tumours) are newly diagnosed in the Czech Republic each year, approximately 28,000 deaths from malignant tumours are registered annually and the overall prevalence of people with a history of any tumour is more than 700,000 (diagnoses C00-C97, D00-D48). Every third citizen of the Czech Republic will develop some type of cancer during their lifetime. The incidence of cancer and the prevalence of people affected by it are increasing. By 2030, the prevalence can be expected to exceed 750,000 people. Cancer is the second leading cause of death in the Czech Republic and the first leading cause of death before the age of 65.

Cancer is projected to be the leading cause of death in the EU by 2035, mainly due to an ageing population, lack of health literacy and unhealthy lifestyles. Cancers in adulthood are partly preventable diseases, i.e., the role of prevention should be central to the approach to fighting cancer and is key to ensuring the sustainability of the whole health system in the context of the expected increase in the volume of care required. In addition to the irreversible fact of demographic ageing, the impact of the Covid-19 pandemic, which has rapidly manifested itself in the area of prevention (reduced number of screening procedures and worsening of the population's lifestyle due to numerous restrictions), must also be resisted in the current period, while in the longer term the impact is expected to be an increase in the number of cases of cancers that are more likely to be detected at a more advanced stage of the disease.

For this reason, it is necessary to create the NOPL CR 2030 as a broad strategy setting realistic and feasible goals in the fight against cancer, with regard to the sustainability of the health system, but also to improving the quality of life of patients and cured persons with regard to the expected growth in their number.

The NOPL ČR 2030 was formulated on the basis of the analysis of the implementation of the National Oncology Programme of the Czech Republic from 2013, on the basis of the National Oncology Programme of the Czech Republic for the years 2022–2030 developed by the professional societies of the CzMA JEP, on the basis of the National Haematology Programme of the Czech Society of Haematology and on the basis of a thorough analysis of the situation, which is included in Annexe 1. The analyses, objectives and activities of relevant strategic documents at the national and international level were taken into account in the development of the NOPL CR 2030.

1.B.1 Synergy of the NOPL CR 2030 with international and national strategies

Europe's Beating Cancer Plan

The NOPL CR 2030 is in line with Europe's Beating Cancer Plan, which the European Commission presented on 3.2.2021. This plan places a strong emphasis on the development and sustainability of Sustainable Cancer Prevention, Improving Early Detection, High Standards in Care, Reducing Inequalities and access to cancer care, methodologically led by the National Comprehensive Cancer Centres, effective transfer of knowledge and innovation into clinical practice, especially in the field of Precision and Personalised Medicine and, last but not least, Quality of Life for Patients, Survivors and Carers. In the coming years, the EC wants to focus on research and innovation, harnessing the potential from digitalisation and new technologies, while also supporting Member States with financial allocations totalling €4 billion from the EU4Health programme and other EU instruments. Europe's Beating Cancer Plan should also help Member States by sharing expertise and resources across the EU.

Europe's Beating Cancer Plan also sets measurable targets to be achieved within the EU by 2030. The NOPL CR 2030 wants to contribute to the implementation of all flagship initiatives of the Europe's Beating Cancer Plan and considers the following areas to be highly relevant for the Czech Republic:

1. As part of the so-called flagship initiative 3, which focuses on preventable cancer prevention measures, it aims to, among other things, expand the routine vaccination of girls and boys against human papillomaviruses – with the goal of eliminating cervical and other cancers caused by human papillomaviruses. **The aim is to vaccinate at least 90% of the EU target population of girls and significantly increase vaccination coverage of boys by 2030.**

2. As part of the so-called flagship initiative 4, which focuses on early detection, it aims, among other things, to bring forward a new EU-backed cancer screening scheme to help Member States ensure that **90% of the EU population who qualify for breast, cervical and colon cancer screening are offered screening by 2025**. The programme will focus on improvements in three key areas: access, quality and diagnostics.
3. As part of the so-called flagship initiative 5, focused on ensuring a high standard of cancer care, the EU plans, among other things, to establish a **European network linking recognised national comprehensive cancer centres in each Member State by 2025**. It will facilitate the implementation of quality diagnostics and treatments, including training, research and clinical trials across the EU. This cross-border collaboration will improve patient access to high-quality diagnosis and care and the latest innovative treatments. It can also help with patient mobility and ensure adequate treatment for patients with complex conditions. The new project “Mapping EU Cancer Capacity and Capabilities” will help map and share the different capabilities and expertise available across the EU. This action will help deliver better quality care and reduce inequalities across the EU, while allowing patients to benefit from diagnosis and treatment close to home. **The Europe’s Beating Cancer Plan aims to ensure that 90% of patients in need have access to such centres by 2030**.
4. As part of the so-called flagship initiatives 6 and 7, **provide maximum support for the further development of personalised medicine and its use for the prevention, diagnosis and treatment of cancer**. Flagship initiative 6, “**Cancer Diagnosis and Treatment for All**”, aims to improve access to innovative cancer diagnosis and treatment, particularly through the use of NGS technologies - “next generation sequencing” - and the sharing of cancer genetic profiles between cancer centres. This initiative will ultimately help to optimise cancer diagnoses and treatment and reduce inequitable access to personalised medicine in cancer care. The core activity of flagship initiative 7 is the “**European Initiative for Understanding Cancer (UNCAN.eu)**”, focusing on personalised cancer prevention.
5. As part of the so-called flagship initiative 8 “**Better Life for Cancer Patients Initiative**” and other follow-up initiatives on quality of life for current and former cancer patients and their carers, the EU wants to promote the exchange of information between healthcare providers to improve continuity of care, especially in managing the late and long-term consequences of cancer treatment, including meeting psychosocial needs and rehabilitation. This will include measures to facilitate social integration and return to work, as well as measures to eliminate unfair treatment in access to financial services for former cancer patients (“The right to be forgotten”).

The NOPL CR 2030 fully commits to achieving these European objectives.

STRATEGIC FRAMEWORK FOR HEALTHCARE DEVELOPMENT IN THE CZECH REPUBLIC UNTIL 2030

The overarching national strategic material of the Ministry of Health is the Strategic Framework for Healthcare Development in the Czech Republic until 2030 (hereinafter referred to as “Health 2030”), approved by Government Resolution No. 743/2020 of 13 July 2020, which is implemented through Implementation Plans for individual specific objectives. The implementation of the NOPL CR 2030 will contribute to the achievement of all strategic and specific objectives of the overarching Health 2030 (see the following figure). Individual implementation plans are available from the MoH Strategy Database.

Figure 1: Hierarchy of Health 2030 objectives

Specific Objectives no. 1	Specific Objectives no. 2	Specific Objectives no. 3
<p>1.1 Primary care reform</p> <p>1.2 Disease prevention, health promotion and protection, increasing health literacy</p>	<p>2.1 Implementation of integrated care models, integration of health and social care, mental health care reform</p> <p>2.2 Personnel stabilization of the Ministry of Health</p> <p>2.3 Digitalization of healthcare</p> <p>2.4 Optimization of the reimbursement system in healthcare</p>	<p>3.1 Involvement of science and research in the solution of priority tasks in healthcare</p>

Source: *Health 2030*, p. 51

Other relevant strategies

NATIONAL EHEALTH STRATEGY OF THE CR

The National eHealth Strategy fully respects the six principles promoted by the Czech Medical Association J. E. Purkyně and demonstrated by Czech and foreign experience. The digitalisation of healthcare in the scope of the implementation plan is based on the Health 2030 strategy and its specific objective 2.3 Digitalisation of healthcare and its sub-objectives. The digitalisation of healthcare has its irreplaceable place in the Digital Transformation pillar of the National Recovery Plan and the Digital Czech Republic programme.

1. The primary objective of eHealth development must be to benefit patients and the quality of healthcare.
2. The patient's right to adequate care, protection of personal dignity and protection of personal data must not be weakened by the introduction of eHealth, but instead strengthened.
3. Doctors and other health professionals need to be involved in projects at the planning and design stage. The views of the professional public must be actively sought and adequately taken into account in the projects.
4. Before introducing new eHealth tools and services into practice, their usability, quality, stability, performance, efficiency and sustainability must always be sufficiently verified and evaluated.
5. Introducing eHealth on the basis of a blanket obligation is fundamentally wrong. When introducing new eHealth services and tools, it is necessary to use positive motivation and introduce new technologies gradually and judiciously so as not to endanger the patient or worsen the working conditions of health professionals.
6. The development of new solutions should make use of all available scientific research knowledge and proven technologies, including standards for the exchange and display of health information.

PROGRAMME FOR THE SUPPORT OF APPLIED HEALTH RESEARCH 2020–2026

The main objective of the Programme is to contribute to the improvement of the health of the Czech population in the medium and long term through the outputs and impacts of the supported projects and to continue to provide for the current healthcare needs in the Czech Republic. The supported projects will provide new knowledge that will contribute to the improvement of clinical practices in the diagnosis, treatment and prevention of the most common, but also rare or completely new diseases. The aim of the Programme is also to contribute to making the level of medical research in the Czech Republic comparable to that of the developed countries of the European Union. The programme has three main areas: The onset and development of diseases; New diagnostic and therapeutic methods and Epidemiology and prevention of the most serious diseases.

NURSING CONCEPT

The Concept addresses the development of nursing in the Czech Republic in the years 2021–2030, reflecting the predicted needs of individuals, families and society for improving the quality of life under conditions of sustainable economic development.

CONCEPT OF HOME CARE IN THE CZECH REPUBLIC

It defines the development of healthcare provided in the patient's own social environment, which, with reference to the Health Services Act, is understood as nursing care, medical rehabilitation care or palliative care, with reference to the Public Health Insurance Act as a special type of outpatient care, through which professional care is provided to insured persons with acute or chronic illness, insured persons with physical or mental disabilities and those dependent on foreign assistance in their own social environment.

1.B.2 Process of preparation of the strategic material

The NOPL CR 2030 is the result of intensive cooperation of the Ministry of Health (as the coordinator) with all key stakeholders and integrates inputs from the National Oncology Programme for 2022–2030 (NOP 2030), the National Haemato-oncology Programme of the Czech Republic (both prepared by representatives of the CzMA JEP) and inputs for the specific area of childhood cancer. Analytical and statistical support was provided by the Institute of Health Information and Statistics of the Czech Republic. The proposals in the strategic section are based on the data and analysis presented in Annexe 1 Analytical Section.

The analytical phase was developed during the course of 2021. In early 2022, it was updated with the latest data, and this update was reflected in the strategic (design part) as well as in the implementation design. The updated material was discussed with representatives of the stakeholders (due to coronavirus measures in the form of online discussions, comments). After the discussions and modifications, the material was submitted for the obligatory internal ministerial and external inter-ministerial comment procedure, which was extended to include all interested parties.

After the approval of the NOPL CR 2030 by the Government of the Czech Republic, the work will continue with the formulation of the implementation Action Plans, i.e., the elaboration of the draft section below into detailed implementation documents covering the implementation always in predefined short-term time horizons so that the relevant projects can be elaborated on their basis.

1.C Users of NOPL CR 2030

At the centre of the action is the **general public**, which is not only the target group of a number of interventions of the NOPL CR 2030 (preventive, curative, rehabilitative or palliative), but at the same time is an active co-organiser of activities in a number of sub-objectives, because without the participation of the general public of all age groups it will be impossible to achieve the objectives and vision of the NOPL CR 2030.

The other users on whom most of the responsibility for delivery rests (see the strategic and implementation section) are the:

- Ministry of Health
- Institute of Health Information and Statistics of the Czech Republic
- Ministry of Education, Youth and Sports
- Ministry of Labour and Social Affairs of Czech Republic
- Health insurance companies
- members of the professional societies of the CzMA JEP
- National Cancer Centres
- Comprehensive Cancer Centres
- Haemato-oncology Centres
- Regional Oncology Groups
- Other Highly Specialised Care Centres
- Hospitals
- Cancer patients and patient organisations
- Regions and cities of the Czech Republic from the position of policy makers for the development of healthcare in the regions and at the same time from the position of providers of health services and educational facilities

Among the entities without whose active cooperation the NOPL CR 2030 cannot be implemented are:

- Primary healthcare providers
- Outpatient specialists
- Follow-up, palliative, hospice and home care providers
- Social service providers
- Informal carers
- Educational organisations for physicians and health professionals
- Educational organisations for children and adolescents
- Professional organisations
- Czech Social Security Administration
- Czech Health Research Council
- State Institute for Drug Control
- Association of Innovative Pharmaceutical Industry
- Czech Association of Pharmaceutical Companies
- State Institute of Public Health and public health offices
- Media
- General public
- International partners

1.D Summary and conclusions from the analytical section

1.D.1 Key outputs from the international comparison and analysis section

International comparisons show that the Czech healthcare system has undergone significant development in the last two decades in terms of the organisation of cancer care and in increasing the availability of highly specialised anticancer therapy. Great progress has also been made in strengthening organised screening programmes. The achieved results of care are comparable to the EU average, with Czech oncology achieving the best results in Central and Eastern Europe in most indicators. Most of the significant improvements have resulted from the progressive centralisation of specialised care into highly specialised care centres. However, in a number of key indicators, such as 5-year relative survival or early detection rates, the achieved values are still lower compared to Western and Northern European countries. Organised cancer screening programmes also show some gaps in population coverage and there is significant room for improvement in primary prevention programmes and the elimination of major risk factors for cancer related to an unhealthy lifestyle.

The epidemiological burden of malignant tumours in the Czech population remains high, although the trend has significantly changed for the better in the last decade. In the overall incidence of cancer, the Czech population ranks 16th–17th in Europe and 21st–22nd in the world. This is a positive development; at the beginning of the millennium the Czech Republic was one of the most burdened countries in Europe. A very positive fact is the stabilisation and, for many diagnoses, decrease in overall mortality. In the comparison of standardised mortality rates, the Czech Republic ranks 22nd in Europe and 48th in the world. Nevertheless, cancer mortality in the Czech Republic has long been the second most common cause of death and the second most common cause of premature death in people under 65 years of age.

The widening trend between incidence and mortality inevitably increases the prevalence of oncological diseases which the health system needs to take care of in the longer term. In the comparison of the prevalence of the disease within 5 years of diagnosis, the Czech Republic ranks 15th among European countries and 20th in the world. In absolute numbers, 60,000 malignant tumours (excluding other skin tumours) are newly diagnosed in the Czech Republic each year, approximately 28,000 deaths from malignant tumours are registered annually and the overall prevalence of people with a history of any tumour is more than 700,000 (diagnoses C00–C97, D00–D48). The most common diagnoses include prostate cancer, breast cancer, colorectal cancer and lung cancer. The order of mortality is significantly different, with lung cancer dominating the annual number of deaths, followed by colorectal cancer and pancreatic cancer. The spectrum of cancer diagnoses varies considerably for different age groups. While the most common malignancies in young adults (20–29 years) are testicular cancer (C62) and thyroid cancer (C73), breast cancer is the most common in people aged 30–59 years. People aged 60–79 years are most commonly diagnosed with prostate cancer, and colorectal cancer is predominant in elderly people aged 80 years and over.

Stabilised mortality with increasing incidence is increasing the prevalence of patients on long-term treatment, especially in haemato-oncology, where this trend is one of the main reasons for the rising total cost of treatment. The system of haematological care in the Czech Republic is highly functional from the point of view of the organisation of healthcare; with a slightly increasing incidence of haematological malignancies, the mortality rate from these diseases has been decreasing and the number of patients in the population surviving with this disease (prevalence) has been increasing dramatically over the years. For some diagnoses, prolonged survival has changed the nature of the disease from acute high-risk to chronic, lifelong (e.g., chronic myeloid leukaemia). More than 5,000 lymphatic and haemopoietic cancers are newly diagnosed annually, the annual mortality rate exceeds 2,000, and nearly 40,000 patients with haematological malignancies live in prevalence. The most common diagnoses in this category of tumours are non-Hodgkin's lymphoma, multiple myeloma and chronic lymphocytic leukaemia.

In the Czech Republic, 350 children and adolescents under the age of 18 are diagnosed with malignant tumours every year. The trend of age-standardised cancer incidence in children aged 0–19 years shows a statistically significant long-term slight increase in new cases, with an average annual increase of +0.5 to 1.0%. Childhood cancer care in the Czech Republic is highly organised and efficiently centralised in an adequate number of centres with a catchment area of 3–5 million inhabitants. The most common malignant tumour in

children is leukaemia, which accounts for 30% of all tumours and patients are treated in eight centres located in university and large regional hospitals in Ostrava, Olomouc, Brno, Prague, Hradec Králové, Ústí nad Labem, Pilsen and České Budějovice. Less common types of leukaemia and malignant lymphomas are concentrated in only three centres in Prague, Brno and Olomouc. Haemopoietic stem cell transplantation (HSCT) is performed in Brno and Prague, from unrelated donors only in Prague Motol. Annually, 30 children undergo allogeneic HSCT and 50 paediatric patients undergo autologous HSCT. Children with solid tumours and brain tumours are concentrated in two departments at Motol University Hospital and Brno University Hospital.

The positive trends in cancer mortality are closely related to the prolonged survival of cancer patients. According to the latest international comparisons, the Czech Republic's 5-year relative survival rates for the main diagnoses (prostate cancer, childhood leukaemia, breast cancer, ovarian cancer, colon cancer and lung cancer) are on par with the EU average, with slightly higher rates for some diagnoses. The continuous increase in survival rates is clearly related to the improving availability of treatment, early diagnosis of cancer (including the impact of ongoing screening programmes) and the increasing centralisation of cancer care. Nevertheless, compared to the most advanced EU countries, there are still some reserves in survival rates, which are mainly due to the late detection of cancer. For example, despite a high-functioning screening programme, almost 50% of colorectal cancers are still caught at advanced stages III and IV,¹ and late diagnosis is also recorded in about 15% of breast cancers or more than 21% of prostate cancers. The high proportion of late cancer diagnoses is one of the main challenges of Czech oncology. Improvements in this factor have the potential to increase population treatment outcomes significantly above the EU average.

Long-term population-based organised screening programmes for breast, cervical and colorectal cancer have undoubtedly contributed to the above-mentioned positive trends in mortality and, in the case of cervical and colorectal cancer, even to a reduction in the incidence of these diseases. Between 2000 and 2018, colorectal cancer incidence and mortality decreased by 24% and 40% respectively, while breast cancer mortality decreased by 32% and cervical cancer incidence decreased by 37%. However, an insufficient proportion of the population still attends screening at the prescribed intervals, i.e., about 60% for breast cancer screening, 30% for colorectal cancer screening and more than 55% for cervical cancer screening among the target groups of these programmes. The big challenge, therefore, is to increase the regular participation of people and, in particular, to increase the overall coverage of these programmes to achieve better population outcomes.

Analyses of epidemiological and demographic data further confirmed that the current trends of increasing cancer burden will inevitably continue over the next two decades. Moreover, the risk of demographic ageing is compounded by “unhealthy” ageing, caused mainly by the unhealthy lifestyle of a significant part of the population. More than 70% of seniors over the age of 65 suffer from at least one serious chronic disease and the Czech population has long been below the European average in terms of healthy life expectancy. All of these factors will lead to an increase in the number of cancers. Even medium-risk scenarios show an increase of 18–20% in cancer incidence by 2040, and of over as much as 40% in prevalence. The increase in cancer prevalence is a certain “price for success”, as the trend reflects the longer survival of cancer patients and the associated increasing likelihood of further, subsequent, primary malignancies in cancer patients.

The number of malignant tumours diagnosed as subsequent primary tumours in cancer patients has increased significantly over the past 20 years. In paediatric oncology, not only the occurrence of second primary tumours, but also third, fourth and other tumours is a topic. However, the problem of subsequent malignancies in cancer patients affects the entire population. In the period 2011–2020, a total of 11,316 cases were newly diagnosed as subsequent primary tumours per year on average in the Czech Republic. These subsequent malignancies accounted for almost 20% of all newly diagnosed cancers. For comparison, in 1991–2000, an average of about 3,700 subsequent malignancies were detected annually, which was only 8.5% of the total annual incidence of cancer.

The analysis of subsequent malignancies in treated or cured cancer patients revealed another challenge for the organisation of cancer care, especially in the area of dispensarisation and tertiary prevention. Even among subsequent malignancies, a very high percentage of advanced clinical stages of cancer are still detected, even in preventable diagnoses such as colorectal cancer, breast cancer in women and prostate cancer. An effective

i Glossary, TNM classification. [Linkos.cz](https://linkos.cz)

monitoring system, coupled with comprehensive preventive examinations of cancer patients and a strong involvement of screening programmes, can make a major contribution in this area.

Late detection of cancer is also reflected in predictions of the financial cost of treatment. Advanced clinical stages of cancer require significantly more expensive treatment, the financial cost of which increases every year with the emergence of new indications for innovative drugs and therapeutic approaches. Thus, Czech oncology faces not only demographically determined growth in the number of patients, but also an inadequate structure of patients in terms of prevalence, in terms of the risk of relapses and progression of cancer. For example, colorectal cancer is predicted to have a prevalence of up to 66,000 patients in 2022, over 21,000 of whom were initially diagnosed at stage III and IV and are therefore at an increased risk of recurrence. The ongoing and inevitable future growth in the cost of treatment is best reflected in the segment of so-called centre-based treatments, i.e., modern innovative medicines. In 2021, more than 23,000 cancer patients were treated with these drugs at a total cost of more than CZK 8.6 billion. The number of patients indicated for this treatment is increasing by at least 10% per year in adult solid tumours and in haemato-oncology. Cost forecasts also point to an annual growth of 10% - 12% in both these areas of oncology for the coming years.

In conclusion, the analyses suggest that most of the significant improvements in cancer care outcomes are due to better organisation of care and effectively organised screening programmes. In particular, the developing network of highly specialised centres represents an important fulcrum for the organisation of cancer care in the regions of the Czech Republic. The proportion of oncology patients treated in CCCs is significantly increasing over time and currently exceeds 70%. Centres for specialised haemato-oncology care also achieve a significant degree of centralisation of care (e.g., up to 83% for chronic myeloid leukaemia, 70% for acute myeloid leukaemia). Over time, the coverage of the Czech population with highly specialised care has been improving, as has the geographical and temporal availability of modern therapies. One of the indirect indicators of this progress is the reporting of multidisciplinary diagnostic team (MDT) activities; in 2015, approximately 51 thousand MDT consultations were reported, and in 2019–2020 it was over 91 thousand per year. The conditions for follow-up dispensarisation of cancer patients are also being improved, including cooperation between oncology departments and general practitioners. In 2019, the GP network took over 4,600 cancer patients into dispensarisation care, and in 2020 it was more than 6,550.

Support from European funds has contributed to the better organisation of care in the field of oncology, with projects to increase the quality and standardisation of care in CCCs costing approximately CZK 1.9 billion in the 2007–2013 programming period. In the following period 2014–2020, funding was focused on onco-gynaecological care, with a volume of approximately CZK 980 million. The REACT-EU funds provided by the European Union to address the impact of the covid-19 pandemic amounting to approximately CZK 2.8 billion will also be used in 2021–2023 to upgrade infrastructure and increase the resilience of providers of specialised cancer and haemato-oncology care.

Despite the positive trends mentioned above, a number of very serious challenges remain for the organisation of cancer care in the Czech Republic. In particular, it is necessary to further strengthen the organisational role of Comprehensive Cancer Centres, Centres for Highly Specialised Haemato-oncological Care for Adults and the Centres for Highly Specialised Oncological and Haemato-oncological Care for Children in their catchment areas. There are large gaps in the cooperation between regional hospitals and CCCs (HOCs). There are still significant differences in the availability of treatment in comprehensive centres between regions of the Czech Republic. The Karlovy Vary Region (KVK) deserves the most attention in this respect, where only 43% of patients with cancer undergo treatment in a CCC of another region (the KVK does not have its own CCC). There are also substantial differences between regions in the early detection of cancer and in the coverage of the population by ongoing screening programmes.

A specific area is the issue of human capital essential for the provision of all activities in the field of oncology and haemato-oncology, from prevention through diagnosis, treatment, follow-up and support services to palliative care, in all its forms (institutional, outpatient, home-based) according to the needs of the patient. As the text above, and especially the analytical study (see Annexe 1 and also the analytical section of the Strategic Framework for Healthcare Development in the Czech Republic “Health 2030”), shows, this is a series of changes in a large and interconnected ecosystem including medical and non-medical healthcare personnel of the CCC/HOC, but also a number of other healthcare providers, i.e. regional hospitals, outpatient specialists, laboratories, general

practitioners, nurses, home care nurses, etc. The predictions of the National Cancer Information System in the context of demographic development clearly show the need for adjustments in training at all stages for both physicians and non-medical healthcare professionals, not only with regard to the development of knowledge and technological progress, but above all with regard to a more effective distribution of competencies so that a higher level of expertise can also be linked to an adequate increase in reimbursement for these services and thus to the stabilisation of human capital not only in its quality but also in its number. When designing a solution, the entire context of the issue must and will be considered, i.e., available human resources, potential future gains and losses according to the CZ-DRG reference databases, cost models of care, horizon scanning affecting new drug indications and the implementation of new technologies, demands on quality of care and employee satisfaction, hand in hand with operational and personnel data sources and internal data sources of hospitals. The hitherto neglected dialogue with medical students and professionals in postgraduate training or at the beginning of their careers must not be overlooked. This is the only way to identify the real barriers to entry or reasons for leaving the field. Through a constructive dialogue with young doctors and young nurses, we need to set up system changes leading to their maximum support and preparation for a demanding lifelong profession requiring high quality standards. Just as the issue of training for the profession of oncology cannot be addressed in the context of changes relevant to other areas of healthcare, the NOPL CR 2030 (see below) is closely linked to other strategic documents of the Ministry, specifically the Strategic Framework for Healthcare Development in the Czech Republic until 2030 (Implementation Plan 1.1 Primary Care Reform, 2.2 Personnel stabilisation of the Ministry of Health and 2.4 Optimisation of the reimbursement system in healthcare)ⁱ. Furthermore, the Nursing Concept (Action Plan to the Nursing Concept 2030) and the Concept of Home Care in the Czech Republic (Action Plan to the Nursing Concept 2030).

Given that the NOPL CR 2030 is a comprehensive strategic document, it was necessary to honestly assess the strengths and weaknesses of the entire ecosystem of cancer care and identify areas for development, change or implementation, from the perspective of disease prevention and ensuring equal access to excellent cancer care when needed, as well as follow-up services to ensure the quality of life of cancer patients and their formal and informal caregivers. According to a number of international recommendations, Czech oncology is thus facing a number of significant organisational changes that must respond to the development of treatment options, the need to ensure equal access to care for all residents, and at the same time manage a reasonable degree of centralisation as a basic way of increasing the cost-effectiveness of diagnostic and treatment procedures and addressing the growing shortage of specialist staff. In addition to the necessary primary prevention, organised screening programmes need to be further strengthened and the proportion of cancers caught early needs to be substantially increased. For patients in the final stages of life, a new national concept of palliative and end-of-life care needs to be put in place, setting standards for the work of hospital palliative care teams and subsequently strengthening mobile specialist palliative care and all forms of home care or care at the health-social interface. All these areas need to be standardised through comprehensive diagnostic and treatment guidelines and recommendations based on evidence-based medicine, and to ensure that they are shared and audited jointly by providers and health insurance companies. Last but not least, the building of the National Health Information System and the follow-up processes of digitalisation and computerisation of health and health and social services management will play a strategic role in all of these tasks.

A detailed mapping of the situation in cancer prevention, treatment and follow-up care is provided in Annexe 1. Only the SWOT analysis is presented below for context.

ⁱ A comprehensive analysis, including an analysis of human capital in the health sector, is available at [Health 2030 \(mzcr.cz\)](https://mzcr.cz)

1.D.2 SWOT analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Internationally, the level of cancer prevention and treatment measuresⁱ and cancer care infrastructure rank high. • There are clear signs of effective cancer control in the Czech Republic – the mortality/incidence ratio (M:I) in the Czech Republic is below the average of the ten European countries assessed in the ICP index and is at a similar level to France, Germany and Spain. • The Czech Republic has little difference in five-year survival rates compared to richer European countries. It is lowest in breast cancer, higher in prostate cancer and colon cancerⁱⁱ; the survival rate of cancer patients is continuously improving over time. • The main pillar of care is a highly functional network of Comprehensive Cancer Centres (CCC), Highly Specialised Adult Haemato-oncology Centres (HOC) and Highly Specialised Children’s Haemato-oncology Centres (DOC). The principles of collaboration in patient care within regions, centres and regional oncology groups are set. There is an approved concept for the organisation of cancer care in the regions of the Czech Republic. • The Czech Republic has an excellent level of cancer data and research evaluation (the National Cancer Registry has been in operation since 1976, a completely new concept of the National Health Information System is being developed, a new act on eHealth has been adopted). 	<ul style="list-style-type: none"> • Cancer is the second most common cause of premature mortality (after cardiovascular disease). Lower rates of participation in population screening compared to the usual rates in developed EU countries, despite the introduction of targeted invitations. Low level of health literacy of the population. Existing regional differences in the local and temporal availability of screening clinics. Low visibility and weak impact of primary prevention programmes. Limited offer of professional services in the field of tobacco and alcohol dependence treatment, obesity treatment, lack of significant support (positive motivation – bonuses) for payers. • Significant regional differences in access to care, reduced availability of specialised care in some regions of the Czech Republic. The availability of CCC care differs significantly between the capital city of Prague, where almost 90% of patients with MT are treated in CCCs, and other regions, where in the Karlovy Vary Region about 43% of patients with MT are treated in CCCs. • Regional differences in the availability of health and social services related to cancer treatment itself (including, for example, palliative care in some regions). The development of palliative care services is still ongoing; there are also regional differences for the necessary range of long-term follow-up supportive care. • Misinformation about vaccines reduces the effectiveness of relevant vaccination programmes, e.g., declining vaccination rates of girls against human papillomavirus (HPV) and low awareness of the possibility of vaccinating boys against the same. • Inconsistent implementation of patient-centred approaches within the health system. Low involvement of patients, their families and patient organisations in decision-making mechanisms. Services such as supportive therapy, nutritional counsellors, physiotherapy, psychological care, etc. are not available in every facility.

i Index of Cancer Preparedness (ICP) - international index in the framework of the World Cancer Initiative programme (Source: Cancer control in the Czech Republic: findings from the Index of Cancer Preparedness are in an Economist Intelligence Unit report, commissioned and sponsored by SOTIO and PPF Group, 2021. Available: [PPF Group | Fighting cancer in the Czech Republic: findings from the Index of Cancer Preparedness \(2021\)](#))

ii Source: C Allemani et al, ‘Global surveillance of trends in cancer survival 2000-14 (CONCORD-3): analysis of individual records for 37,513,025 patients diagnosed with one of 18 cancers from 322 population-based registries in 71 countries’, Lancet, 2018 in [PPF Group | Fighting cancer in the Czech Republic: findings from the Index of Cancer Preparedness \(2021\)](#)

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • The Czech Republic is one of the leaders in the field of oncology in immunisation, screening and early detection of diseases (existence of a National Screening Centre; three fully functional widely available population-based screenings are established – cervical cancer, breast cancer and colorectal cancer; a fourth population-based screening for lung cancer will be introduced from 2022). In the Czech Republic, thanks to public health insurance, a wide range of cancer detection and treatment services are widely available, including HPV DNA tests, testing for mutations in the BRCA1 or BRCA2 gene, etc. • The Czech Republic has high quality and qualified personnel capacities. The health service infrastructure is robust and widely available. The concentration of specialised care in comprehensive cancer (CCC) and haemato-oncology centres ensures high quality of care for cancer patients. • The Czech Republic supports cancer research, including preclinical research and development and production in the field of biotechnology, including ATMPs, and participation in international clinical trials. For this purpose, there exists an infrastructure and expertise in the Czech Republic; a number of centres function also as university departments, cooperating with institutes of the Czech Academy of Sciences and are part of large research infrastructures (e.g., CZECRIN, BBMRI-CZ, EATRIS and others). 	<ul style="list-style-type: none"> • There is no uniform standard set across all institutions in terms of permeability through the system; an inconsistent handover of patients from primary to specialised care, which can mean delays of months before patients reach care in the centres. Unclear system of lifelong care for cured paediatric patients after the age of 18, e.g., in terms of monitoring the long-term toxicity of chemotherapy or other treatments • Planning and collaboration across actors and regions have so far been constrained by the lack of policy and planning, particularly the support of the plan at government level (ranked 15th in the ICP index). There is no medium-term plan for investment in cancer care, which makes it impossible to plan treatment with respect to the costs that will be incurred, especially as a result of the introduction of new technologies. • Human capacities in the field of oncology are ageing, locally there is a shortage of them, where besides the financial evaluation of workers, the psychological impact of the consequences of work in oncology on workers is not systematically addressed (measures for greater psychological well-being and for maintaining motivation and against burnout syndrome).
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Creation of a consensus strategy for 2030 approved by the government for intensive cooperation and better coordination of all stakeholders and available resources in the implementation of NOPL 2030 (MoH, Czech Society for Oncology, MoLSA, insurance companies, regions, patient organisations, etc.). Formulation of a clear strategic vision, objectives and activities to be achieved in a predefined period, including specifications of tools, resources, responsibilities, measurement of progress, etc. – conceptual work, a source of motivation and stability, elimination of chaotic processes and regional disparities across related areas while involving all stakeholders. 	<ul style="list-style-type: none"> • Poor lifestyle compared to developed EU countries (high prevalence of risk factors: tobacco use (34.4% of adults), alcohol, obesity (28.5% of adults) and lack of exercise (31.1% of adults). These are lifestyle characteristics very resistant to educational and awareness-raising interventions. In the ICP index, the Czech Republic has the second worst obesity rate (after the UK) and the second worst tobacco consumption (after Russia) among the ten European countries assessed. • Demographic ageing of the population and the correspondingly increasing cancer burden. • Lack of resources for healthcare due to unforeseen events (e.g., economic crisis, acute need to redistribute resources to other health areas, etc.). • Lack of resources to pay for innovative cancer care.

OPPORTUNITIES

- Strengthening the position and role of highly specialised care centres in all regions, in particular by standardising recommended procedures for referring patients at different stages of treatment. Introducing new incentive schemes for the reimbursement of care, payment according to real costs based on quality indicators. Strengthening the position of centres in health insurance plans. Implementing clinical guidelines and other mechanisms to standardise prevention and care.
- Intensification of international cooperation, including involvement in the implementation of Europe's Beating Cancer Plan. Effective use of EU funds (Integrated Regional Operational Programme 2021–2027 for investment projects, Operational Programme Employment + for systemic projects and National Recovery Plan – Component 6.2).
- Systematic promotion of health literacy and health promotion (in collaboration with non-healthcare actors). There is also room for improvement in the area of inter-ministerial cooperation in healthcare between educational and health institutions in promoting healthy lifestyles (more prevalent lifestyle-related cancers). Further strengthening the availability of screening programmes for the target population and improving the quality of the whole screening process, introducing new early detection programmes in line with scientific knowledge.
- There is also room for improvement in the area of health financing to accommodate the increasing intensity of the needs of the population (e.g., extending HTA to non-medical innovations and technologies).
- The opportunity to improve detection and treatment also lies in the levelling of geographical disparities within the Czech Republic.
- Increased efficiency of the organisation of care through the introduction of digitalisation and technological advances (the possibility of better patient care, assessment of the scope of care provided, identification of interactions between the drugs used, etc.).
- Effective use of new research findings. There is a persistent belief in the population that “the state will take care of me”; personal responsibility needs to be emphasised.

THREATS

- Consequences of the COVID-19 pandemic.
- Ageing human resources in the field of oncology (physicians, healthcare professionals, social workers, etc.).
- Political reluctance to address strategic issues of financing cancer care.

2

STRATEGIC SECTION

The strategic section presented below is based on the analytical section, which is part of the Annexe to the NOPL CR 2030 (see Annexe 1 – Analytical Section). All the objectives, as well as specific proposals for solutions, formulated in the individual measures of the strategic section, are based on a detailed description of the problem areas, which are specified in more detail in the analysis in question (description of the problem, summary of the current development, zero option, key trends and foreign approaches). **The two sections, analytical and strategic, must therefore be seen inseparably and in context.**

2.A Vision of the NOPL CR 2030

The vision of the NOPL Czech Republic 2030 is:

„To ensure that every resident of the Czech Republic can prevent the development of cancer and, in the event of its development, to ensure the highest possible quality of care and life, regardless of geographical location or the stage of the disease.“

Not only is the NOPL CR 2030 essential for the fulfilment of this goal, but so is the need to ensure that the fight against cancer remains **part of all relevant national and regional political agendas**, across all areas. It is also crucial to **stimulate the interest of the general public** in prevention, including health protection and promotion, and to **increase health literacy** in the area of cancer risk factors. The emphasis is on **involving patients and informal carers** in the whole strategic process. It will also be essential to **set up a sustainable pathway to fight cancer**, including **multidisciplinary collaboration** in the diagnosis and treatment of cancer to achieve the best possible treatment outcomes. **Close cooperation with payers of health and social services**, with non-governmental non-profit organisations and with other collaborating disciplines involved in **prevention, diagnosis, treatment and follow-up care** must go hand in hand. Last but not least, there will be an emphasis on **international cooperation harmonising care** within the EU.

The progress in the implementation of the vision will be monitored and evaluated on the basis of **monitoring the basic indicators set at the level of individual objectives**. The fulfilment of the vision of the NOPL CR 2030 will also contribute to a high degree to the fulfilment of the objectives of the top strategic material of the Ministry – the Strategic Framework for Healthcare Development 2030 (“Health 2030”) and thus also the overarching Strategic Framework Czech Republic 2030 (“CR 2030”).

The vision of the NOPL CR 2030 will be fulfilled through four strategic objectives, which are subsequently broken down into specific objectives (see the Hierarchy of Objectives below and the table in Annexe 2). The specific objectives specify the nature of the interventions of the strategic objective and enable the assessment of the conditions for their implementation (identification of stakeholder involvement, quantification of resources, etc.). The specific objectives are further broken down into specific sub-objectives, to which the relevant indicators are attached.

2.B Hierarchy of objectives of the NOPL CR 2030

SO 1	The effectiveness of all phases of prevention is increased and cancer is prevented
1.1	Increase positive motivation for lifestyle change, health literacy and prevention of cancer caused by infections
1.2	Increase the efficiency of early cancer detection
1.3	Increase the effectiveness of tertiary cancer prevention
SO 2	Patient-centred care leads to the highest possible quality of life during the illness, after curing and in the terminal phase
2.1	Ensure temporal and local availability of medical rehabilitation and follow-up care for cancer patients at all stages of the disease
2.2	Ensure the availability of all forms of palliative care
2.3	Increase the involvement of patients and patient organisations
2.4	Setting up a system of lifelong care for cured paediatric patients
SO 3	The coordination of the entire cancer system is modern, efficient, and meets the needs of care providers and patients
3.1	Setting up the integration of prevention, cancer care and follow-up care systems
3.2	Ensure the development of personalised medicine
3.3	Improve planning and increase access to care
SO 4	The fight against cancer is conducted to a high standard, in line with advances in science and new technologies
4.1	Ensure sufficient numbers of quality, qualified and motivated human capital in oncology
4.2	Improvement of the infrastructure of individual providers of oncological and haemato-oncological care
4.3	Monitor the quality of care at individual cancer care providers
4.4	Ensure access to innovative practices and maintain high quality in cancer care
4.5	Promote research and international cooperation in oncology
4.6	Reaping the benefits of digitalisation

On the following pages, the specific objectives are elaborated into sub-objectives with examples of specific measures and activities, possible sources of funding, responsibilities and a definition of the link to the Health 2030 Strategic Framework. A more detailed elaboration of the activities will be contained in the individual Action Plans.

The content of the individual specific objectives is complementary and only the implementation of interrelated objectives will lead to the achievement of the vision by 2030. The mutual synergy of the specific objectives and the relation of the specific objectives of the NOPL CR 2030 to the basic strategic document of a higher order, the Strategic Framework Health 2030, are shown in Annexe 2.

STRATEGIC OBJECTIVE 1

The effectiveness of all phases of prevention is increased and cancer is prevented

SPECIFIC OBJECTIVE 1.1

Increase positive motivation for lifestyle change, health literacy and prevention of cancer caused by infections

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Inadequate and ineffective prevention leads to an increase in cancer morbidity and mortality, which significantly increases the costs of cancer. Interventions that lead to a marked change in people's attitudes towards their own health are therefore a prerequisite in the fight against cancer (and many other serious non-communicable diseases), which goes hand in hand with ensuring sufficient funding for primary cancer prevention.

Malignant tumours are preventable diseases. The World Health Organisation (WHO) estimates that approximately half of all cancers arise from modifiable risk factors or can be detected as a precursor lesion before the development of a disease with metastatic potential. In terms of the importance of prevention in relation to cancer mortality, more than 60% of deaths can be prevented. Primary and secondary cancer prevention programmes are essential and effective tools for reducing cancer morbidity and mortality.

The essence of cancer prevention is the **identification of influential risk factors for cancer and the prevention of their effects**. Preventable risk factors can be influenced by lifestyle interventions (primary prevention). It is estimated that primary prevention can reduce the incidence of cancer by up to 40%. Primary prevention is therefore not only the most cost-effective way of reducing cancer mortality, but its principles also lead to a **reduction in the risk of other serious diseases**, especially cardiovascular and respiratory diseases. In addition, targeted measures that lead to early detection of tumours or precancerous lesions and thus have a positive impact on mortality (secondary prevention) are an effective approach to preventing cancer deaths.

Key modifiable risk factors for cancer include poor nutrition, physical inactivity, obesity, smoking, alcohol, inappropriate sexual behaviour, certain infectious agents and environmental and workplace influences. These factors can be influenced not only by targeted primary prevention activities and education, but also by targeted political and economic measures. The incidence of tumours caused by infectious agents can be influenced in some cases by vaccination.

The situation with regard to primary prevention of cancer is unfavourable, which is reflected in the increasing incidence of many of these diseases. In 2019, 24.9 per cent of the Czech population were daily and occasional smokers over the age of 15. The incidence of lung cancer in women is on the rise. There has been a steady rise in the incidence of prostate cancer in men. Obesity, especially with visceral body fat deposition, affects 18.5% of Czechs, of whom almost 20% are men and 18% women, while 47% of men and 33% of women are moderately overweight. On the other hand, the Czech Republic has a network of smoking cessation counselling centres and a well-organised programme of HPV vaccination for teenagers, regular hepatitis B vaccination (HBV) in infancy, HBV vaccination of unvaccinated persons from risk groups, prevention of risky behaviour in children and adolescents and brief intervention in general practitioners' offices for children and adolescents (GPCAs), and a programme of nutritional counselling in GPCAs' offices.

The primary prevention of oncological diseases, as well as the protection and promotion of health in relation to cancer risk factors is, in particular on the basis of the Act on the Protection of Public Health, the **task of the public health service, i.e., the National Institute of Public Health, public health institutes and regional public health offices**. However, as in the past, this primary prevention is currently quite inadequate and therefore ineffective, mainly due to insufficient funding and staffing, as the data in the previous paragraph shows. General practitioners and specialist physicians, like cancer centres, are not sufficiently involved in the primary prevention of cancer. **Primary prevention, which has been proven to be the most effective means of reducing morbidity and, to some extent, mortality of cancer, has so far received insufficient attention. Primary prevention is essential to prevent cancer. It is always more advantageous from a health, medical, social, economic and societal point of view not to get sick at all than to treat cancer. Effectively organised and**

implemented primary prevention, increasing health literacy and improving the lifestyle of the population can ensure the most important thing, i.e., a significant reduction in the incidence of cancer.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

The primary prevention goals appeal to all citizens of the Czech Republic. Primarily, the proposed measures will lead to **strengthening the health literacy of the population in the field of cancer prevention, especially in taking responsibility for one's own health. This change must no longer be merely declared, as in the past, but must be promoted and demanded of everyone.** One of the options for improving healthcare among the Czech population is to take into account the relationship of the insured person to their health in the setting of public health insurance.

Cancer prevention needs to be aimed at the general population as well as targeted and specific risk groups defined by age, occupation or comorbidities. Personalised prevention based on the identification of genetic predispositions of individuals with the possibility of targeted prevention must be a part of this.

Education and training should focus primarily on healthy lifestyles, but also on the proper handling of carcinogens in the work environment, proper nutrition, sufficient physical activity, prevention of being overweight and obese (healthy eating counselling), prevention of smoking and other forms of tobacco use, alcohol consumption, prevention of inappropriate sexual behaviour and support and promotion of vaccination. At the same time, a healthy environment must be promoted and infrastructure must be developed, for example, to ensure conditions for healthy movement of the inhabitants of individual regions and municipalities. Intensify the implementation of existing cancer programmes and introduce new long-term sustainable primary prevention programmes. Implement effective health promotion programmes, programmes and activities to increase the awareness and health literacy of the general public, to combat myths in the field of lifestyle and cancer prevention.

Methodological guidance, standardisation and quality assessments of primary prevention programmes must be addressed. Primary preventive cancer programmes must be implemented in a systematic and standard way. Standard manuals for individual programmes will therefore be created, methodological guidance will be provided, inter alia, to coordinate the implementation of these programmes and, subsequently, their ongoing evaluation, i.e., in particular the evaluation of the quality and effectiveness of these programmes.

Implement clearly defined recommendations, such as the European Code Against Cancer, both at the level of public health and individual citizens to significantly reduce the risk of cancer.

Provide financial and material-technical support for methodological guidance, standardisation, monitoring, data collection and evaluation of the quality of prevention programmes.

Ensure sufficient, effective and transparent funding for the primary prevention of cancer.

Increase the vaccination coverage of the target population of girls and boys against human papillomavirus (HPV) and halt the decline in vaccination coverage in the population and emphasize the importance of hepatitis vaccination.

Support the use of modern electronic communication technologies to improve informing and communication with the public, maintain the high level of the website of the Czech Society for Oncology www.linkos.cz and other professional societies of the CzMA JEP, and other professional groups.

Strengthen cross-sectoral cooperation on prevention. Create favourable conditions for health promotion at all levels. Motivate regional and municipal leaders to create a healthy and safe environment for their citizens.

RESPONSIBILITY

MoH

COOPERATION

MEYS, NIPH, IHIS, MoF, MIT, health insurance companies, professional societies of the CzMA JEP, GPs, outpatient specialists, providers of occupational health services, NGOs, patient organisations, Regional Public Health Offices, National Institute of Public Health

LIST OF SUB-OBJECTIVES

1.1.1	Reduce dependence on harmful addictive substances and increase access to addiction treatment	MoH, health insurance companies
1.1.2	Make primary prevention tools more effective and increase the health literacy of the population	MoH, NIPH, IHIS
1.1.3	Increase the effectiveness of preventive vaccination programmes against cancer	MoH, NIPH, IHIS

INDICATORS

1.1.1	Proportion of active smokers in the population
1.1.1	Proportion of active smokers who have undergone cessation therapy
1.1.2	Proportion of the population who underwent a preventive examination with a GP for adults in the previous two years
1.1.3	Proportion of girls and boys aged 13 years vaccinated against the human papillomavirus (HPV)
1.1.3	Proportion of persons vaccinated against the hepatitis B virus

POSSIBLE SOURCES OF FUNDING

Operational Programme Employment Plus, national subsidy programmes, prevention funds of insurance companies, regional subsidy programmes

SPECIFIC OBJECTIVE 1.2

Increase the efficiency of early cancer detection

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

The available data show that in addition to the growing overall epidemiological burden of cancer in the population, the late detection of these diseases is another problem in the Czech Republic. Still, a high percentage of cancers (even in diagnoses with organised screening) are caught at an advanced stage, when treatment is very expensive and the likelihood of curing is significantly reduced.

If primary prevention is not working well, the next level of defence is to reduce the incidence of cancer through secondary prevention. The aim of secondary prevention is to **catch cancers at an early, fully curable stage**. The basis of secondary prevention are screening programmes, preventive cancer examinations and the self-care of a properly educated citizen.

The National Screening Centre (NSC), which is part of the IHIS CR, provides a coordinating management structure, methodological background and technical infrastructure for the introduction, implementation and evaluation of early detection programmes in the Czech Republic. The NSC cooperates with the Ministry of Health and the professional community in the implementation of strategies for the prevention of serious diseases. Within the NSC, there is a “National Council for the Implementation and Management of Early Disease Detection Programmes” and pilot project working groups established on an ad hoc basis for pilot projects implemented by the NSC. The NSC is part of the steering committees of existing population screening programmes.

Cancer screening must be based on evidence, especially from controlled clinical trials on its effectiveness and safety. Screening programmes must be subject to regular quality control and their results must be evaluated and published. It is advisable to conduct a time-limited pilot phase prior to the full-scale roll-out of screening programmes in order to obtain data for an effective full-scale roll-out.

Early detection through screening is mainly implemented through centrally-managed screening programmes (breast cancer screening – <https://www.mamo.cz>; colorectal cancer screening – <https://www.kolorektum.cz>; and cervical cancer screening – <https://www.cervix.cz>), which includes targeted invitations to clients, as well as preventive examinations by primary care physicians (general practitioners for children and adults and general gynaecologists, dentists) and specialists (e.g., urologists and dermatovenerologists).

In the long term, lung cancer is one of the most common causes of cancer deaths. The reason for the high mortality rate is late detection of lung cancer, with only one-fifth being caught in the earliest stages. From 1.1.2022, a population-based early lung cancer screening pilot programme was launched for people aged 55–74 years with a smoking history of at least 20 pack-years, with the primary aim of early and accurate diagnosis of the disease, which, combined with appropriate follow-up treatment, will lead to a reduction in mortality from the disease. The early detection programme involves general practitioners, outpatient pulmonologists and accredited radiological diagnostic centres. The programme includes a smoking cessation intervention. The NSC provides detailed monitoring of the programme, and a five-year initial evaluation phase is planned.

Prostate cancer is still one of the most common causes of cancer death in men. Current international recommendations tend to suggest that individualised screening may be beneficial for a group of informed men, while grey screening may lead to a lower efficiency and safety of the process. This presents the potential for optimising investment in this type of care. The Ministry of Health, representatives of professional societies and the NSC started a discussion on a possible way to prepare a pilot population-based programme of individualised prostate cancer screening.

Furthermore, there is a standardised system of follow-up of cancer patients after previous curative treatment by oncologists and other interested outpatient specialists aimed at the early detection of recurrences and new primary and secondary malignancies in these patients. Unfortunately, unlike in children, the participation of adults in prevention programmes does not reach the necessary level. Almost 60% of the target groups of these screening programmes receive breast cancer screening, 30% colorectal cancer screening and more than 55% cervical cancer screening at the prescribed intervals. The National Colorectal Cancer Screening Programme has been running in the Czech Republic since 2000. It involves general practitioners, gynaecologists, clinical biochemistry departments and specialised endoscopic departments. Between 2000 and 2018, colorectal cancer

incidence and mortality decreased by 24% and 40% respectively, while breast cancer mortality decreased by 32% and cervical cancer incidence decreased by 37%.

In the Czech Republic, there is no standardised preventive care for citizens with a genetically determined increased risk of malignancies (hereditary cancer syndromes). This preventive care takes place in only a few cancer centres, and is based on the enthusiasm of specific doctors.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Proposals for specific interventions will be developed into project plans within the activities of the National Screening Centre (NSC), which is part of the Institute of Health Information and Statistics.

To create conditions so that this issue continues to be perceived by all stakeholders (legislative and executive representatives, payers and providers of healthcare, educational institutions and citizens) as extremely important, deserving long-term political, media, financial and material support and legislative anchoring. At the same time, it is necessary to remove barriers that limit the effectiveness of prevention programmes.

Increase awareness of, and especially participation in, population-based screening programmes for colorectal cancer, breast cancer, cervical cancer and lung cancer. To not give up on, but instead strengthen targeted invitations and other incentives to ensure the maximum participation of residents in these programmes. At the same time, sufficient attention will be paid to new possibilities (testing and implementation) for the early detection of other cancers, e.g., screening for anal cancer, prostate cancer in men, skin tumours in the population at risk, genetic testing programme for the risk assessment of haemato-oncological disease in specific groups of people at increased risk, support for genetic counselling, preventive surgery and pre-implantation diagnostics, etc.

Develop genetic counselling for haematological disease risk assessment and genetic testing for families with a history of long-standing blood count abnormalities of unknown cause, or for persons with a personal or family history of haemato-oncological disease.

Establish a special cancer prevention programme for patients at risk (autoimmune diseases, HIV patients, patients on long-term immuno-suppressive therapy after the transplantation of failing organs, congenital and acquired diseases/states with a higher risk of solid tumours and haemato-oncological disease).

Strengthen the promotion of HPV vaccination, especially targeting parents of children and the general public, and set up the monitoring and regular evaluation of HPV vaccination as well as hepatitis B vaccination.

Provide legislative, financial and material-technical support for methodological guidance, standardisation, monitoring, data collection and evaluation of the quality of prevention programmes.

Establish **cancer prevention** units or **centres** within the network of backbone hospitals forming the CCCs or ROGs that can be involved in all the above activities. Support for the establishment of the centres as a new organisational unit focused on patient education, screening for risk factors, primary-preventive interventions with an emphasis on local conditions and care coordination in the field of individualised early detection of serious diseases.

Operation of the National Health Information Portal and other information resources for patients (e.g., LINKOS and online counselling services of COS departments, the League Against Cancer line, etc.), a free cancer helpline, distribution of basic information materials in printed and electronic form about cancer, prevention, care and services.

RESPONSIBILITY

MoH

COOPERATION

IHIS/NSC, NIPH, professional society of the CzMA JEP, screening and prevention centres, educational institutions, patient organisations, health insurance companies, IFMSA cz, SCORA unit, NGOs

LIST OF SUB-OBJECTIVES

1.2.1	Enhance the effectiveness of existing population-based screening including the use of innovative approaches	IHIS/NSC, MoH, health insurance companies,
1.2.2	Successful implementation of an early detection programme for lung cancer	IHIS/NSC, MoH, health insurance companies,
1.2.3	Gradual introduction of new proven screening and early detection programmes for cancer	IHIS/NSC, MoH, health insurance companies,
1.2.4	Creation of special cancer prevention programmes for patients at risk (autoimmune diseases, HIV patients, patients on long-term immuno-suppressive therapy after the transplantation of failing organs, congenital and acquired diseases/states with higher risk of solid tumours and haemato-oncological disease).	IHIS/NSC, MoH, health insurance companies, health service providers

INDICATORS

1.2.1	Coverage of the target population by population-based screening programmes
1.2.1	Mortality from cancers targeted by population-based screening programmes
1.2.2	Number of participants in the new early lung cancer screening programme
1.2.3	Number of new organised cancer screening or early detection programmes (population-based programmes)
1.2.4	Number of new organised cancer screening or early detection programmes introduced (individuals at risk)

POSSIBLE SOURCES OF FUNDING

National Recovery Plan – Component 6.2; Operational Programme Employment Plus - Specific Objective 2.3

SPECIFIC OBJECTIVE 1.3

Increase the effectiveness of tertiary cancer prevention

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Advances in cancer diagnosis, effective treatment and supportive care have dramatically increased survival rates for cancer patients. The number of patients who have achieved a long-term cure is increasing every year. Paradoxically, however, this state of affairs brings problems for cancer patients and their families, not only in terms of health complications as a remnant of cancer treatment, but also largely due to social and financial uncertainties. Part of the cancer care strategy is not only to ensure that cancer patients survive their illness, but also to ensure that they live long and fulfilled lives free from discrimination and unfair barriers after cancer treatment.

Tertiary prevention is intended for people who have been cured of cancer **with the aim of early detection of disease recurrence or treatment-related complications/late effects associated with treatment** such as **secondary tumours**. It is essentially dispensarisation for cancer patients with regular check-ups and examinations at intervals of 3–12 months over a period of several years. The choice of tests for follow-up is individualised depending on the type of disease and the type of treatment the patient has received.

A large group of haemato-oncology patients requiring long-term dispensarisation are patients after allogeneic bone marrow transplantation (allo-HSCT). Late effects are individual, depending on the preparatory regimen, whole-body radiotherapy and other factors, among others. However, multidisciplinary dispensarisation is appropriate. Transplant recipients are at higher risk of infection, including the reactivation of herpes viruses, so vaccination according to the vaccination schedule is recommended. Available studies show that up to half of patients suffer from impaired lipid metabolism, which increases the risk of atherosclerosis, myocardial infarction and stroke. Within 10 years after transplantation, 50% to 70% of patients develop signs of chronic graft-versus-host disease (cGVHD), which may be associated with the emergence of tumours; therefore, examination and comprehensive care in collaboration with a dermatologist, ophthalmologist, and dentist is advisable. In the case of whole-body irradiation as part of the preparatory regimen, a sonographic examination of the thyroid gland is recommended between 6 and 12 months and an endoscopic examination of the gastrointestinal tract at least once every 10 years. The risk of secondary tumour after allo-HSCT is up to 2 times higher than in the general population. Significant risk factors include age, whole-body radiation exposure and a history of chronic GVHD.

With the increase in survivorship, it is necessary to ensure long-term follow-up outside oncology departments and to integrate long-term survivorship care into the primary care system, including the development of specific recommendations for individual cancers. In the case of paediatric oncology patients, a system of shared care between the specialised outpatient clinics at paediatric CCCs and general practitioners, which takes into account the individual risk level of cured paediatric oncology patients.

Considering the most common problems faced by former cancer patients (lack of coping with the delayed and long-term effects of treatment, lack of coordination and communication between healthcare providers, unmet psychosocial needs and issues, mental illness including addictions), it is important to create a platform for communication between health, social services and legislation to create possible scenarios of patient needs.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Develop existing, and design and implement new care programmes for groups of patients at high risk of developing secondary tumours after previous curative cancer treatment (e.g. after radiotherapy or certain systemic anticancer treatments, especially if they were administered during childhood to middle adulthood).

Strengthen rehabilitation and mental hygiene with possible psychological and psychiatric support.

Minimise the risk of recurrence and, if recurrence occurs, catch it early.

Minimise the risk of other malignancies and their early detection.

Continuous monitoring and treatment of long-term side effects of cancer treatment.

Develop a basic code of conduct for long-term survivors, with an emphasis on social and financial justice, to enable the patient's dignified and fair integration back into society. Consideration of the implementation of the "right to be forgotten" in the Czech legal system.

Regular dispensarisation of patients after cancer treatment in the prevention of secondary cancer within the framework of CCCs and ROGs. Creation and implementation of care programmes for groups of patients at high risk of developing secondary tumours after previous curative cancer treatment.

Development and updating of recommendations for the monitoring of long-term survivors by general practitioners and other specialists. These recommendations should establish a division of tasks between oncologists and general practitioners and other specialists with a clear definition of competences, activities and interdisciplinary collaboration and communication.

Ensure long-term dispensarisation for patients at high risk of cancer recurrence within the framework of CCCs and ROGs.

Dispensarisation of patients after HSCT and stem cell therapy in general, their vaccination and multidisciplinary complex care.

Develop guidelines and indication criteria for rehabilitation, physical medicine and spa care to facilitate access to such care for cancer patients. Inform professionals and other segments of the public about the importance of rehabilitation.

Introduce a system of screening and evaluation of adverse effects of cancer and evaluation of treatment outcomes from the patient's perspective, which ultimately lead to an improvement in the quality of life of the individual.

RESPONSIBILITY

MoH

COOPERATION

COS CzMA JEP, CHS CzMA JEP, SROBP CzMA JEP and other professional societies, CCCs, ROGs, other centres of highly specialised cancer care, IHIS/NSC

LIST OF SUB-OBJECTIVES

1.3.1	Setting up a widely available dispensarisation system including the involvement of primary care physicians (among others, the prevention of subsequent cancer in already treated or cured cancer patients)	MoH, relevant health service providers, relevant societies of the CzMA JEP, IHIS/NSC, health insurance companies
1.3.2	Develop and implement care programmes for groups of patients at high risk of developing further primary cancers after completion of treatment for malignancies	MoH, relevant health service providers, relevant societies of the CzMA JEP, IHIS/NSC, health insurance companies
1.3.3	Ensure continuous and long-term monitoring of the consequences of anticancer treatment	MoH, relevant health service providers, relevant societies of the CzMA JEP, IHIS/NSC, health insurance companies
1.3.4	Strengthen regular systematic monitoring of patients with the aim of the early detection of a disease relapse	MoH, relevant health service providers, relevant societies of the CzMA JEP, IHIS/NSC, health insurance companies

INDICATORS

1.3.1	Number of cancer diagnoses with a clinical guideline / EBM recommendation for dispensarisation
1.3.1	Percentage of patients meeting criteria (selected diagnoses) who are followed up in accordance with the relevant guideline (according to the physician performing dispensarisation)
1.3.2	Number of developed and implemented care programmes for groups of patients at high risk of developing further primary cancers after the treatment of malignancies
1.3.3	Proportion of CCCs with a programme to ensure the continuous and long-term follow-up of the consequences of anticancer treatment
1.3.4	Proportion of CCCs with a systematic patient monitoring programme for early detection of a relapse

POSSIBLE SOURCES OF FUNDING

National Recovery Plan – Component 6.2; Operational Programme Employment Plus - Specific Objective 2.3

STRATEGIC OBJECTIVE 2

Patient-centred care leads to the highest possible quality of life during illness, after curing and in the terminal phase

SPECIFIC OBJECTIVE 2.1

Ensure temporal and local availability of medical rehabilitation and follow-up care for cancer patients at all stages of the disease

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Although improving survival time is and will remain an essential parameter to be monitored, it is equally important that the years of life gained represent a full life with a full return to work and social activity as far as possible. Factors that negatively affect quality of life in terms of health, physical, social, work, relationships and mental health include:

- the cancer itself, which often poses an immediate threat to the patient's life and, if left untreated, leads to a gradual, sometimes very rapid, decline in quality of life and even death;
- anticancer therapy, which usually only reduces quality of life for a temporary period, with patients who achieve remission or cure experiencing a significant improvement in quality of life, often to pre-cancer levels;
- recurrence of cancer often reduces quality of life to a level lower than at the initial diagnosis;
- long-term side effects of anticancer therapy (cardiac, secondary tumours, cognitive, endocrinological, including loss of fertility, long-term immunocompromise, a new group of side effects associated with immunotherapy in the form of autoimmune organ damage and others);
- social exclusion of patients dependent on palliative care, which in many cases is only available during hospitalisation, and even then often with difficulties, mainly due to economic, logistical and staffing reasons.

The price for the success of the treatment is the increase in the number of patients in remission after the completion of the therapy, but also the number of patients who survive subsequent malignancies.

The increase in the number of patients with cancer diagnoses who have completed treatment has necessitated a new form of collaboration with other healthcare providers and payers. In the area of the follow-up of patients after the completion of therapy, the CCC cooperates with regional workplaces as well as with primary care providers, general practitioners and specialists. Patients are more at risk of further malignant disease or other diseases of civilisation than of relapse of the original cancer as they grow older. It is essential for the patient to undergo regular comprehensive preventive examinations and to be included in screening programmes. The aim is to prolong survival and prevent and treat late complications of cancer and anticancer treatment. Due to the successes in treatment, CCCs are increasingly burdened by the number of patients under follow-up and therefore an agreement has been reached with GPs and other specialists to take patients into their care in order to monitor for possible recurrence of disease, complications and other malignancies. This established procedure has proven to be very rational and clearly contributes to the quality of life of patients who have completed anticancer treatment.

The exception to this decentralised model is cured high-risk paediatric cancer patients, who clearly benefit from follow-up in highly specialised follow-up clinics of the CCC, both in childhood and after transition of care in adulthood. Again, however, close collaboration with GPs and differentiated shared care is essential, taking into account the individual risk of developing serious sequelae of treatment, including secondary and other subsequent tumours – see SO 2.4.

Successful treatment does not only depend on the correct diagnosis and administration of optimal anticancer therapy, but also on the effective management of complications and overall support of the patient from the medical, social and existential level at all stages of the disease.

From this point of view, basic information on the prevention, diagnosis and treatment of cancer and its consequences, as well as information on the services provided and their availability in both printed and electronic form, is essential for patients. The information provided to the patient is from guaranteed sources, adapted to their information needs and takes into account the social, emotional, cultural and psychological aspects of the person's life and their level of health literacy.

When anticancer therapy is indicated, rehabilitation is an integral part of the care, both in the area of physiotherapy from the very beginning of anticancer therapy and psychosocial care, which aims to facilitate the patient's return to normal family and working life. An important point in improving the quality of life of survivors is to enable them to return to professional life. From this point of view, it is necessary to create an adaptation programme for these patients and at the same time it is necessary to realise that even patients in long-term remission of the disease are disadvantaged when arranging insurance, including life insurance. Close cooperation with experts in physiotherapy, psychiatry, psychology, social sciences and occupational medicine is needed in this area. In order to achieve these goals, discussion and cooperation with healthcare payers, the MoH, the MoLSA and representatives of post-acute medicine is necessary. In the case of paediatric cancer patients, in addition to the above, specialised counselling on education and career choices.

The diagnosis and treatment of cancer is not an issue of one or two disciplines, but practically all medical disciplines are involved according to their professional competences. The multidisciplinary team (MDT) is crucial in making the diagnosis and determining the treatment approach.ⁱ

A multidisciplinary team is a group of experts from different medical disciplines who meet regularly to discuss individual medical cases with the aim of recommending the optimal diagnostic and therapeutic approach for a given patient. The MDT aims to improve the quality of patient care and better organisation of care. The MDT assumes that the patient will be offered optimal treatment due to the knowledge of the individual professionals represented regarding the best treatment options for the situation, including the possibility of enrolling the patient in a clinical trial. Having physicians from multiple specialisations working together reduces the risk of treatment delays and reduces the likelihood of suboptimal patient management. Regular meetings of the MDT members gradually set the optimal way of presenting the patients' case and the requirements for examination, while reducing the risk of duplicate examinations.

The need for follow-up care (and especially medical rehabilitation care) usually increases in patients with serious diagnoses. Follow-up care is usually provided after acute care and is provided in a variety of specialisations, focusing on the individual needs of patients. Some of them may require specific care (e.g., more rehabilitation or more nursing), or longer stabilisation after an acute condition, or specialist help with transition from follow-up care to long-term or home care. The need for follow-up care in cancer patients is not always and in all cases actively assessed and as a result of this practice some patients do not get the opportunity to recover or enhance their health potential after or during the demanding treatment, improve their performance and strengthen their psychological resilience.

Psychosocial support is an essential part of cancer care at all stages of the disease. Each patient's needs must be identified and provided for to help maintain or improve their quality of life. Primarily, these are screening tools to identify early symptoms that require intervention by supporting disciplines (e.g., psycho-oncology screening, nutritional screening, pain screening), healthy lifestyle programmes and others. An integral part of cancer patient care is the provision of individualised social and vocational rehabilitation. In the field of social rehabilitation, it is necessary to think first of all about the disruption of the patient's social status, which may also be associated with the disruption of their family life. The system of early identification of persons who, due to their health condition and life situation, need, in addition to health services, the provision of occupational or social support in the form of vocational or social rehabilitation, currently has serious shortcomings, the cause of which lies mainly in the lack of interconnection between the health and social systems. A particular challenge is the lack of continuity in the patient's transition from the provision of oncological healthcare, medical rehabilitation care, and possibly follow-up care to psychosocial support services and social services. This is the reason why many cancer patients do not receive the necessary individualised help in time, or have problems with local accessibility, or are not sufficiently informed about the possibilities of help. Problems also arise in the transfer of data and information. Insufficient psychosocial support and limited use of the work potential of cancer patients are very serious causes of deterioration in the quality of life of cancer patients and their families, and it is certain that these shortcomings can be prevented by creating a system of early psychosocial and vocational rehabilitation coordinated with the provision of health services.

ⁱ Exceptions are situations where the nature and extent of the tumour allows for a standardised procedure that would not be changed by the decision of the multidisciplinary team (for example, some skin tumours).

Closely linked to this area are the so-called indirect costs of cancer, which arise in particular as a result of incapacity for work, disability and premature mortality of cancer patients and, in addition, in the case of child patients, the failure to achieve optimal educational outcomes and reduced labour market participation. Other important indirect costs relate to the transport of patients to treatment, nursing fees and the role of caregivers, rehabilitation, retraining, psychosocial support, compensatory aids, and the cost of volunteer programmes in healthcare facilities.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Define and anchor the establishment of multidisciplinary teams in cancer care.

Proposal of the principle of individualised supportive healthcare so that, based on the identification of risk factors for the disease, the patient's condition, and the planned anticancer care, measures can be taken that minimise risks and improve the overall tolerability of therapy and relieve the symptoms of the disease. This applies to all stages of the disease, including terminal.

Develop a model to identify the social conditions of the patient, their self-sufficiency and background to help find the optimal method of care, at home or during hospitalisation. Psychological support, existential or spiritual supportive care, help with any change in value orientation and support mechanisms for coping with the new life situation and role are important. This is not only a patient issue, but also a family or other social support issue.

Measures to achieve the objective include, but are not limited to, the following main means:

- support for the creation of multidisciplinary teams (e.g., nutritionist, nutrition therapist, physiotherapist, intensivist, cardiologist, neurologist and others) with expertise in their field but also experience in caring for haemato-oncology patients;
- involvement of health and social workers or social workers in the creation of support, e.g., home care support, for patients in the terminal phase of the disease by creating home or inpatient hospices;
- involvement of psychologists and professionals helping with existential or spiritual problems.

The design of a communication model based on empathic and thorough communication, as well as the participation of relatives, friends and family members, will also be included. Educational activities designed to improve the patient's health behaviour and/or quality of life or understanding of the importance of cancer research are supported. Educational activities designed for health professionals to acquire the necessary communication skills (soft skills) are supported. In the communication model, the support of proven resources and their development (see the National Health Information Portal and other information resources for patients (e.g., LINKOS and online counselling services of COS sections, lines of the League Against Cancer, etc.) also play a significant role.

Proposals for action will include strengthening rehabilitation and mental hygiene with possible psychological and psychiatric support during and after treatment.

Develop a system of supportive care and ensure good continuity of social services after care is provided, so that social services also minimise the social consequences of cancer (loss of employment, reduced income, risk of poverty due to the disease, loss of housing, return to the family and childcare, return to the community).

RESPONSIBILITY

MoH

COOPERATION

MoLSA, CzMA JEP, other professional societies, health insurance companies, patient organisations

LIST OF SUB-OBJECTIVES

2.1.1	Ensure the availability of follow-up and medical rehabilitation care (including social services) for cancer patients	MoH, MoLSA, relevant providers of health and social services, relevant associations of the CzMA JEP, health insurance companies
2.1.2	Increase the availability of psychosocial support and social services at all stages of the disease	MoH, MoLSA, relevant providers of health and social services, relevant associations of the CzMA JEP, health insurance companies
2.1.3	Increase the availability of social services after cancer treatment	MoH, MoLSA, regions, relevant providers of health and social services, relevant associations of the CzMA JEP, health insurance companies

INDICATORS

2.1.1	Number of cancer patients successfully treated in medical rehabilitation care or successfully transferred to health and social care
2.1.2	Introduction of social and psychosocial support as a standard in the criteria for the accreditation of CCCs; number of CCCs with staffed and capacitated social and psychosocial support
2.1.3	Number of cancer patients with continuous social support after treatment

POSSIBLE SOURCES OF FUNDING

State budget, National Recovery Plan – Components 3.3, 6.1 and 6.2; Integrated Regional Operational Programme 2021–2027; Operational Programme Employment Plus

SPECIFIC OBJECTIVE 2.2

Ensure the availability of all forms of palliative care

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Although palliative care is comprehensive, proactive care provided to a patient suffering from a serious or life-limiting illness, its incorporation into the cancer care ecosystem remains systemically unaddressed. Therefore, the primary task of this specific objective is to formulate a proposal for the systemic provision of palliative care in the Czech Republic in such a way that a functional model and its future development is proposed not only for oncology patients, but for patients in need of any form of palliative care. The strategy will identify the needs to ensure that palliative care is accessible, taking into account the need not only to relieve pain and other physical and mental suffering, but also to maintain the highest possible quality of life, preserve the patient's dignity and provide support to their loved ones. Interventions include relief from the symptoms and stress associated with serious illness, bringing a different level of care in biological, psychological, spiritual and social needs. The design of the model will take into account the need to provide care at any age and at any stage of the disease, and at the same time treatment aimed at prolonging the patient's life.

Palliative care, as elaborated in the Strategy, means active multidisciplinary care for patients with advanced disease, with the aim of maintaining a good quality of life throughout the course of the disease, so that palliative care includes:

- an individualised treatment plan in the situation of advanced disease based on the clinical condition and the patient's values and preferences (valuable care);
- treatment of pain and other physical and psychological symptoms and syndromes;
- psychological support for the patient and their loved ones;
- social counselling and social support for the patient and their loved ones;
- mental/spiritual support.

In terms of palliative care integration, it is necessary to take into account the specific stages of the disease, i.e., early and terminal palliative care:

- early palliative care is provided during non-curative cancer care (prognosis: months to years);
- terminal palliative care is provided to patients who have exhausted the possibilities of anticancer treatment (prognosis of weeks to months).

In terms of the complexity of care and the qualifications of providers, it is necessary to take into account whether palliative care is general or specialised:

- general palliative care: provided by healthcare professionals in routine clinical practice within their scope of competence (e.g., clinical oncologist);
- specialist palliative care is provided by a multidisciplinary team of professionals with specific training and erudition in the provision of palliative care.

The subject of this objective is the design and implementation of a model that will enable early recognition of specific needs in cancer patients, typically in the context of advanced severe or life-limiting disease, and identify and influence those areas that are relevant to the patient's quality of life (e.g., the rational use of causal therapies in accordance with named treatment goals, symptom management, empathic communication, assistance with the organisation of care and the use of other specialists, provision of home nursing care, etc.).

The target will focus on all health professionals, taking into account the specificities of their specialisations.

Special emphasis must be placed on specialised palliative care in the form of active multi-professional care provided to patients and their families by a team of specialists who have the necessary training, team background and capacity and whose complexity of their needs (somatic, psychological, spiritual and social) exceeds the capabilities of general palliative care providers

The availability of palliative care must be ensured in all forms, taking into account the preferences of the patient and their family. Patients should be able to choose whether they want to live their end of life at home with the help of home-based specialised palliative care, in a hospital or hospice, have outpatient palliative care available, or use a combination of specialised and general palliative care that can also be provided by a GP or home care provider.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Develop a palliative care system and ensure good continuity of social services after care.

Collaborate with patient and non-profit organisations to improve quality of life with the disease.

Ensure functional models of palliative care to be provided to cancer patients:

- in comprehensive cancer centres;
- in haemato-oncology centres;
- in onco-gynaecology centres;
- in oncology centres;
- in regional cancer centres;
- in inpatient and outpatient facilities;
- in the offices of general practitioners and other specialists;
- in the offices of outpatient specialists;
- in a home environment or alternative social environment (e.g., homes for the elderly);
- in specialised palliative care facilities.

The measure will include a proposal for a model of the key role of CCCs as palliative care centres of excellence with the following agendas:

- provision of direct care, coordination of follow-up care;
- consultation service in the field of specialised palliative care for other healthcare institutions and primary care physicians;
- undergraduate, postgraduate and specialty training in palliative care, including the development of national standards and norms;
- research in palliative care.

In terms of infrastructure, it is desirable that all CCCs have the following services (*listed comprehensively, for CCC development see SO 4.2.1*):

- palliative medicine outpatient clinics/inpatient units;
- consultative team of specialised palliative care for hospitalised patients;
- palliative care inpatient unit/acute care unit.

The palliative care services within the COC must then work closely with other support services (e.g., pain management clinic, nutrition clinic, clinical psychology department, social care, chaplaincy service, etc.).

Proposal for the development of regional networks of providers of general and specialised outpatient and inpatient palliative care, in which care is coordinated and enables logical *patient flow* while guaranteeing continuity and quality of palliative care. The building of these regional palliative care networks is in line with the building of a network of cancer care providers.

The following must be addressed:

- promoting the quality of oncological palliative care in regional and provincial healthcare facilities. Development of palliative care consultant teams in inpatient settings (hospitals) and palliative medicine outpatient clinics to support GPs, home care agencies and other general palliative care providers;
- support for the development and increased availability of mobile specialised palliative care (MSPC, the so-called “home hospice”) and inpatient hospices;

- education of general practitioners, outpatient specialists, home care and other community care providers in the field of cancer palliative care. Oncologists and nurses in oncology departments in the field of palliative care. Doctors and nurses in regional and provincial hospitals;
- proposal for the further development of paediatric palliative care (teams of specialists in large hospitals providing early and terminal palliative care in close cooperation with mobile hospice teams operating in patients' homes). Development should be reflected, inter alia, in the increase of reimbursements to payers for care, etc.

RESPONSIBILITY

MoH

COOPERATION

CCCs, HOCs, ROGs, providers of inpatient, outpatient and home healthcare and their founders, professional societies of the CzMA JEP, regions, educational institutions, patient organisations and the non-profit sector, health insurance companies

LIST OF SUB-OBJECTIVES

2.2.1	Establishment of the National Strategy for Palliative and End-of-Life Care	MoH, MoLSA, regions, relevant societies of the CzMA JEP, providers of health and social services, health insurance companies, patient organisations, NGOs
2.2.2	Development of general palliative care by inpatient care providers, home care, by and primary care physicians	MoH, MoLSA, regions, relevant societies of the CzMA JEP, providers of health and social services, health insurance companies, patient organisations, NGOs
2.2.3	Increase the availability of specialised palliative care (including a mobile specialised care team – MSPC)	MoH, MoLSA, regions, relevant societies of the CzMA JEP, providers of health and social services, health insurance companies, patient organisations, NGOs

INDICATORS

2.2.1	National palliative care strategy developed
2.2.2	By 2027, 1 MSPC provider per 100,000–150,000 inhabitants (depending on population density, equivalent to approximately one district)
2.2.2	By 2027, the capacity of hospice-type beds will be 5 per 100,000 inhabitants (i.e., 500–550 for the whole country; the current capacity is 4.5 per 100,000 inhabitants)
2.2.3	Proportion of cancer patients (selected diagnoses) admitted to specialised palliative care before death from cancer
2.2.3	Proportion of patients with cancer (selected diagnoses) admitted to the intensive care unit in the last 30 days of life (before death from cancer)
2.2.3	Proportion of cancer patients (selected diagnoses) receiving chemotherapy in the last 2 weeks of life (before death from cancer)

POSSIBLE SOURCES OF FUNDING

Health insurance companies, Integrated Regional Operational Programme 2021–2027, Operational Programme Employment Plus, national subsidy programmes, regional subsidy programmes

SPECIFIC OBJECTIVE 2.3

Increase the involvement of patients and patient organisations

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

The strategy includes the systemic involvement of one of the most important stakeholders – the voice of the patients themselves and their informal carers.

Proposals for the involvement of patients and patient organisations in the whole system of oncological care will take advantage of the best examples from individual oncology centres, the experience of the Patient Council of the MMCI and the MoH, as well as the experience of the paediatric oncology centres in Prague, Brno and Olomouc, which cooperate closely with the civic associations of parents of children treated in these centres. This collaboration also shows that the system still **lacks the official involvement of a nationwide association of parents and cured patients, which would be a partner of care organisers and payers, representing the interests of sick children and their families.**

Changes in the whole comprehensive cancer care system must lead to a state where **doctors and patients work together to make decisions about treatment and treatment plans.** Treatment and treatment plans are discussed, with exceptions (e.g., for non-advanced skin tumours not requiring multidisciplinary care), at meetings of the multidisciplinary team (MDT; indication committee), which is composed of experts from many professions and supported by a wide range of clinical and laboratory measurements characterising the biological individuality of each patient and their disease. The physician presenting the patient's case to the MDT reports the patient's preferences and values that the MDT takes into account. The recommendations of the multidisciplinary team are clearly discussed with the patient by the attending physician and the resulting treatment plan is determined together with the patient. The patient must be informed of all relevant treatment options, expected outcomes and risks. The treatment plan can be updated at any time at the patient's request. Patients should be asked in advance if they want their carers/relatives to be involved in discussions about the treatment plan. If the situation allows, the patient should be given the opportunity to involve their loved ones in the decision-making process. The treatment team supports patients who request a second opinion, providing patients with factual information about the risks of alternative medicine.

The implementation of this goal must result in a situation where patients, their organisations and the non-profit sector are important partners in the provision of cancer care. Patient organisations help patients manage the health, social, work and psychological difficulties resulting from their illness. They are also involved in education about healthy lifestyles and activities that help improve and prolong the lives of the sick. Patients and their organisations can also work together to monitor cancer care and raise concerns about the functioning of social and psychological care and other support services needed by cancer patients and their loved ones. The aim is the sustainability of a model of care that is oriented towards the needs of the patient, assumes the active involvement of patients and their relatives in the processes of monitoring the functionality, complexity and success of the services provided, and at the same time gives them opportunities to apply the information obtained in the process of planning these services at the central (National Council for the Implementation of the NOPL CR 2030) and regional level (Patient Council of the CCC, internal and external satisfaction surveys).

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Designing systemic collaboration with patient and non-profit organisations to improve quality of life with the disease.

Proposal for a system of financing patient organisations, which are an integral part of patient support in many areas – information, education, prevention, psychosocial support, return to life after treatment and others.

Education focused on the quality of life and well-being of patients, including psychological, psychosocial and nutritional support, inclusion of appropriate physical activities and rehabilitation techniques, as well as the empowerment of patients in society.

Proposal of the method of education and informing of patients and family members caring for cancer patients.

Definition of indicators applicable for patient assessment of the functionality, complexity and success of the services provided in key areas of cancer care (information, communication and education, accessibility and

continuity of care, co-determination, emotional, spiritual, physical and work-social support) and a methodology for their monitoring.

Development of recommendations for monitoring health status and quality of life indicators (PROMs - Patient Reported Outcome Measures) in cancer patients.

Ensuring the representation of patient representatives in the working groups of the National Council for the implementation of the NOPL CR 2030.

Creation of a methodology for the establishment and functioning of patient councils at Comprehensive Cancer Centres.

Promotion of patient organisations and other non-profit organisations involved in counselling and supportive care for cancer patients and their loved ones.

RESPONSIBILITY

MoH

COOPERATION

COS CzMA JEP and other professional societies of CzMA JEP, patient organisations, other centres of highly specialised cancer care, healthcare payers, CCC/ROGs, NCI NOPL CR 2030

LIST OF SUB-OBJECTIVES

2.3.1	Increase patient involvement in co-decision making	MoH, patient organisations, relevant health service providers and their founders, relevant societies of the CzMA JEP
2.3.2	Establishment and functioning of patient councils of CCCs	MoH, patient organisations, relevant health service providers and their founders

INDICATORS

2.3.1	Percentage of CCCs with an organised system of patient information and education (patient information centre, patient education and information strategy, etc.)
2.3.1	Percentage of CCCs conducting organised patient-reported experience or patient-reported outcomes measures (PREM/PROM)
2.3.2	By 2025, ensure the establishment and operation of a patient council at each CCC

POSSIBLE SOURCES OF FUNDING

Operational Programme Employment Plus, financial mechanisms

SPECIFIC OBJECTIVE 2.4

Setting up a system of lifelong care for cured paediatric patients and younger patients with haemato-oncological malignancies

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Children cured of childhood cancer have an increased risk of late effects in adulthood. Two-thirds of children cured of cancer suffer from late sequelae of the tumour and its treatment, the incidence of which increases over the follow-up period. Some of them (children with brain tumours, bone tumours) may suffer serious late effects negatively affecting their quality of life, including the need for permanent care for some of them. Their long-term follow-up must therefore be coordinated by specialists in the long-term follow-up clinics at individual paediatric centres, who work together with paediatric and adolescent GPs, adult GPs and specialists for children and adults. This activity needs to be given a formal framework by establishing recommended procedures for the long-term follow-up of cured patients.

The design of the formal framework will be based on the experience in the diagnosis and treatment of children with solid tumours currently concentrated in two centres in Prague and Brno. A complex procedure requiring the cooperation of a number of specialists with great erudition in this field seems to be optimal. An essential part of this care is also applied and translational research, which is funded by grants (CHRC, MoH, GACR), institutional support provided by the Ministry of Health and universities, and foundation funds from private donors. Research and highly specialised diagnostics are carried out by teams of scientists as part of two highly specialised centres at Motol University Hospital and Brno University Hospital.

The issues of access to care will be based on the current geographical distribution of centres for children with leukaemia, which guarantees the availability of centre-based care for all patients from the Czech Republic. Thanks to uniform diagnostic algorithms, the existence of reference laboratories and nationally valid uniform treatment protocols for children with leukaemia, the same level of care is provided in all centres. Some diagnoses (relapsed ALL, AML) are concentrated in fewer centres in the Czech Republic due to the small number of patients.

The exception to the decentralised model (see SO 2.1 above) is cured high-risk paediatric cancer patients, who clearly benefit from follow-up in the highly specialised follow-up clinics of paediatric CCCs, both in childhood and after the transition of care in adulthood. Again, however, close collaboration with GPs and differentiated shared care is essential, taking into account the individual risk of developing serious sequelae of treatment, including secondary and other subsequent tumours.

Intensive haemato-oncological treatment in younger patients, especially when associated with haemopoietic stem cell transplantation, also leaves multi-systemic long-term consequences. The long-term care of these patients is not systematic.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Ensuring treatment in academic international treatment-optimising studies guarantees a superior level of diagnosis and treatment, comparable to Western European countries and the USA.

Address the administrative demands of participating in international academic studies, which are the standard of care in paediatric oncology, are substantial and require the involvement of trained and language-equipped data managers and, in the case of phase I and II studies, of study nurses. These staffing needs cannot be met by the hospital and are provided by sponsorship from foundations. It is desirable to provide hospitals with funds for the salaries of these staff, without whom the current quality of care cannot be ensured.

Ensure sufficient coverage of the costs of modern diagnostic tests necessary for the risk stratification of patients and for the individualisation of treatment by health insurance companies.

Propose a solution to the personnel and financial requirements of bioinformatics processing of large volume data, their analysis and expert interpretation, as well as the material requirements for their storage and protection in accordance with GDPR.

RESPONSIBILITY

MoH

COOPERATION

COS CzMA JEP and other professional societies of THE CzMA JEP, patient organisations, CCC/HOC/ROGs, other centres of highly specialised cancer care, healthcare payers, NCI NOPL CR 2030, CHS

LIST OF SUB-OBJECTIVES

2.4.1	Continuous, long-term follow-up of patients after childhood cancer treatment and younger haemato-oncology patients, including the consequences of anticancer treatment and early therapeutic intervention to minimise them	MoH, patient organisations, relevant health service providers and their founders, relevant societies of the CzMA JEP
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INDICATORS

2.4.1	Number of significant childhood cancer diagnoses with a clinical guideline/ EBM recommendation for long-term follow-up
2.4.1	Proportion of patients with a history of childhood cancer meeting the criteria (selected diagnoses) who are followed up in accordance with the relevant guideline
2.4.1	Number of clinical guidelines for the follow-up of younger patients after completion of haemato-oncology therapy
2.4.1	Number of long-term follow-ups of younger patients after completion of haemato-oncology therapy

POSSIBLE SOURCES OF FUNDING

National sources for research funding, Operational Programme Employment Plus

STRATEGIC OBJECTIVE 3

The coordination of the entire cancer system is modern, efficient, and meets the needs of care providers and patients

SPECIFIC OBJECTIVE 3.1

Setting up the integration of prevention, cancer care and follow-up care systems

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Changes in the organisation with regard to accessibility and continuity of care must be organised in such a way that desirable trajectories (“patient pathways”) for patient access to multidisciplinary, centre-based and innovative care are defined within the region. These must be published on the Comprehensive Cancer Centre’s website. The procedure for referring a patient to another institution must be standardised and efficient. The transfer of documentation between healthcare providers must be electronic. The process by which a patient makes an appointment to see a doctor must be simplified, waiting times for outpatient appointments are reduced to a minimum. A patient returning/referred to the care of a regional centre or GP must be provided with an adequate treatment plan/recommendation to ensure continuity of care. Similarly, the treatment plan must be accessible to every member of the treatment team within a single provider. Barriers at the regional network level and at the level of individual healthcare providers (e.g., communication, administrative, construction) must be checked and, if necessary, removed.

Emotional (psychological), spiritual, physical and work-social support must be an essential part of cancer care. Cancer care providers need to implement a set of procedures to identify and provide for each patient’s needs to help maintain or improve their quality of life. Primarily, these are screening tools to identify early symptoms that require intervention by supporting disciplines (e.g., psycho-oncology screening, nutritional screening, pain screening), healthy lifestyle programmes, work retraining and others. To provide these tools and needs, information materials and clinical practices of other professional societies, advice and services offered by external entities, including patient, church and other non-profit organisations and the Ministry of Labour and Social Affairs will be used. As 95% of cases are attended by relatives and almost 10% of patients have a minor child at the time of diagnosis, the main burden of the disease falls on the family and therefore the CCC/ROGs must also provide support to families.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Develop a concept of regional haematology departments with extended haemato-oncology care in regions where there are no university hospitals, which could provide care for some patients in the regions in collaboration with highly specialised centres. First of all, however, it is absolutely necessary to create personnel reserves there, people who will gradually acquire professional competence in this area.

Propose a model for the continuous evaluation of the relationship and continuity of health services for oncology and haemato-oncology patients for development leading to the highest possible local and temporal availability of healthcare while maintaining its high quality.

Strengthen and create multidisciplinary teams (e.g., nutritionist, rehabilitation worker, intensivist, cardiologist, neurologist and others) with expertise in their field but also experience in caring for haemato-oncology patients.

Develop a system of supportive and palliative care and ensure good continuity of social services after care (*see the SO above*).

Define and anchor the establishment of multidisciplinary teams in the field of cancer care outside the CCC, using experience from the CCC.

Ensuring the operation of the National Cancer Programme portal with the CCC and ROG network structure.

Implementation of eHealth and real-time information sharing (between multidisciplinary teams, between healthcare providers).

Defining and publishing “patient pathways” for individual diagnoses and CCC/ROG and other specialised centres, including methods and contacts for patient appointments.

Definition of a set of screening methods to identify at-risk groups of cancer patients and their family members requiring supportive care intervention.

Definition of basic supportive care provided in CCC/ROGs and its technical and personnel prerequisites.

Establishment of a network of comprehensive supportive care within each CCC/ROG to ensure continuity of supportive care after discharge from hospital.

RESPONSIBILITY

MoH

COOPERATION

MoLSA, providers of health and social services, COS CzMA JEP, other professional societies of the CzMA JEP, CCC/ROGs and other centres of highly specialised oncological care, IHIS, IBA FM MU, patient organisations, health insurance companies, regions and municipalities

LIST OF SUB-OBJECTIVES

3.1.1	Promote effective collaboration between GPs, screening centres, CCCs and HOCs and ROG members and follow-up services, dispensarisation of cancer patients	MoH, relevant health service providers, relevant societies of the CzMA JEP
3.1.2	Strengthen contractual cooperation of hospitals to establish regional and interregional networks of cancer therapy provision	Ministry of Health, regions and other founders, relevant health service providers, health insurance companies
3.1.3	Setting recommended patient pathways through the system, defining and implementing comprehensive standardised procedures to enhance timely access to care	MoH, relevant health service providers, relevant societies of the CzMA JEP,
3.1.4	Support for the development and updating of clinical guidelines in relevant areas	MoH, relevant societies of CzMA JEP, CHRC
3.1.5	Establishment of prevention centres of CCCs	MoH, CCCs, relevant health service providers, relevant societies of the CzMA JEP

INDICATORS

3.1.1	Percentage of CCCs with a concept of a regional oncology group/comprehensive oncology network
3.1.2	Percentage of CCCs with a written agreement on cooperation with other providers within the regional oncology group/comprehensive oncology network
3.1.3	Number of cancer diagnoses with national templates of recommended patient pathways developed by the system following clinical guidelines/EBM recommendations
3.1.3	Proportion of CCCs with an established process for managing and monitoring recommended patient pathways within the relevant regional cancer group/comprehensive cancer network
3.1.4	Number of cancer diagnoses with established national clinical guidelines/EBM recommendations
3.1.5	Percentage of CCCs with an established prevention centre

POSSIBLE SOURCES OF FUNDING

National Recovery Plan (Component 6.2), Operational Programme Employment Plus

SPECIFIC OBJECTIVE 3.2

Ensure the development of personalised medicine

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

The fate of the patient is not only determined by the nature and biological characteristics of the cancer, but also by the overall condition, comorbidities, social background and support, and last but not least, the availability of a highly qualified medical team and facilities, availability of modern targeted care, but also supportive care. Each patient must therefore be provided with care that respects both the characteristics of the disease and the characteristics of the patient.

Cancer treatment is not just the application of anticancer therapy alone. In a broader sense, personalised care can also include care provided on the basis of a patient's specific health condition and life and social situation. The emphasis must be on a comprehensive improvement of the quality of life of cancer patients. In addition to the availability of cancer treatment, this can be fulfilled by improving supportive care during the treatment itself. These activities include mainly the management of adverse effects of treatment, haemotherapy for cancer patients, nutrition for cancer patients, antiemetic or analgesic therapy, as well as psychosocial support. Physical activity is an underestimated part of supportive care in cancer treatment.

In the course of the diagnostic process, treatment and follow-up care, the patient comes into contact with many disciplines. The effective integration of these disciplines is crucial for successful therapy and the preservation of the patient's quality of life. The aim of the oncology programme is therefore also to promote interdisciplinary cooperation at the level of supportive therapy. It is envisaged that special outpatient clinics will be set up at each cancer centre to deal with specific areas of supportive care (e.g. nutrition, psychosocial care, pain management), which will be sized to respond to the needs of the centre's patients and to provide specialist services in their respective areas, including collaboration on the identification of patients at risk (e.g., in the case of nutrition: nutritional screening, consultation, monitoring of malnutrition and nutritional support for cancer patients).

Anticancer treatment is mainly based on the administration of drugs with a low therapeutic index and the management of side effects can only be ensured by a specialist with the appropriate expertise and experience in the treatment. With the advent of new drugs, especially immunotherapy, there is a great diversification of side effects of treatment, which, although individually rare, cover virtually the entire field of internal medicine, dermatology and other disciplines and require the **treating physician of any discipline to collaborate with a wide range of other specialists**. With the development of molecular biology, more and more molecularly targeted therapies are being developed, but these are often effective on a small group of patients. Its effectiveness can be enhanced by precise functional imaging diagnostics, which allows better indication and personalisation of targeted therapy.

In the field of oncology and haemato-oncology, the goal of personalised care will include interventions aimed at providing targeted therapy based on accurate, especially molecular biological, characterisation of the disease, thereby increasing the chances of successful cancer treatment.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

In general, these are all interventions that will improve and accelerate access to testing and consideration of targeted therapies for patients who may benefit from intensive or targeted personalised therapy

Such an approach requires support for the creation of multidisciplinary teams that will accurately characterise the patient's condition and design personalised care, taking into account any additional risk factors, and will be able to provide comprehensive therapeutic and supportive care.

The formulation of specific measures, elaborated in more detail in the follow-up action plans of the NOPL CR 2030, must include the expected substantial changes that are expected in the given area. These are, in particular:

- the flat implementation of new technologies (NGS), which will allow to significantly improve the prediction of the risk of relapse (prognostic factors) of early stages of the disease and to predict the effectiveness of selected treatment (predictive factors);
- the introduction of highly sensitive and specialised methods for monitoring minimal residual disease in haemato-oncology patients;

- molecular identification of differences in previously morphologically almost identical tumours, leading to the reclassification of cancer and exponential growth of new clinical-molecular pathological units;
- the development of diagnostic technology through new validated methods aimed at improving the accuracy of cancer diagnoses and development of Theranostic technologies integrating diagnostics and treatment;
- changes in surgical treatment, which include expanding the spectrum of patients operated on to include those who were primarily inoperable due to the extent of the disease, using neoadjuvant radio or chemotherapy or a combination of both;
- potential also lies in the further super-selection of patients according to the principles of personalised oncology, where surgery can be indicated even in those who would otherwise not achieve surgery according to standard protocols, e.g., selective indication for radical surgery in metastatic pancreatic cancer;
- continued development of minimally invasive techniques in the treatment of cancer and implementation of modern peri-operative care with the aim of shortening hospitalisation and convalescence must also be considered;
- the intended measures must include the mediation of a large number of targeted drugs that can directly affect signalling structures involved in oncogenesis, the use of molecular informatics and applied artificial intelligence;
- measures will include a breakthrough increase in systemic therapy (tumour agnostic) based on the principle of the targeted anti-tumour effect for each drug according to genetically recognised molecular (omic) aberrations, irrespective of the location of the primary tumour. Patients with tumours that have the same genetic changes will receive drugs that target the change, regardless of the type of tumour;
- intervention designs must also take into account the end of the era of untargeted immunotherapy in favour of precision targeted, curative immunotherapy by combining immunopredictors not only for efficacy but also for predicting the risk of adverse effects;
- in radiation oncology, the refinement of technologies to minimise early and late side effects will continue, increasing doses to the target volume (stereotactic radiotherapy, adaptive radiotherapy, non-photon radiotherapy), optimising treatment procedures using open emitters and developing combinations with systemic therapy, especially targeted therapy;
- technological advances in radiation oncology to minimise early and late side effects and targeted dose escalation to the target volume will also be taken into account (stereotactic radiotherapy, adaptive radiotherapy, particle radiotherapy);
- in the field of anticancer pharmacotherapy, the development of technologies in radiotherapy must be taken into account so that radiation therapy is more integrated into various fields of diagnostic imaging using, for example, molecular imaging and Theranostic techniques. An increased percentage of patients undergoing radiation treatment can be expected and, moreover, a more significant combination of radiotherapy with innovative systemic treatment (e.g., immunotherapy);
- support must also be given to the digital sharing and analysis of information between teams and centres (see SO 4.6 below);
- continue to develop the system of supportive and palliative care and ensure the good continuity of social services after the provision of individualised care;
- horizon scanning and the preparation of the conditions for the introduction of new therapies into oncology, as well as the regular updating of treatment recommendations to meet the requirements of lege artis treatment for the needs of a particular patient, must be systematically adopted;
- improving patient information and involvement in treatment decisions is also part of the personalised approach. In order to do this, it is necessary to create support teams consisting of palliators, psychologists, social workers.

RESPONSIBILITY

MoH

COOPERATION

SIDC, health service providers, IHIS, health insurance companies, COS CzMA JEP, CHS CzMA JEP and other professional societies, CCC/ROGs and other highly specialised centres

LIST OF SUB-OBJECTIVES

3.2.1	Promoting a multidisciplinary approach, including ensuring the availability of clinical trials (including academic trials)	MoH, CzMA JEP, relevant health service providers, health insurance companies
3.2.2	Increase the capacity of advanced molecular biological methods to enable personalised targeted therapy	MoH, relevant health service providers, health insurance companies
3.2.3	Increase access to targeted personalised treatments, advanced radiotherapy and advanced surgical techniques, including minimally invasive surgery	MoH, CzMA JEP, relevant health service providers, health insurance companies

INDICATORS

3.2.1	Number of patients (selected diagnoses) undergoing multidisciplinary assessment within the CCC/ROG
3.2.2	Number of CCCs with developed strategies for deployment of advanced molecular biological methods enabling personalised targeted therapy
3.2.3	Number of cancer diagnoses with a clinical guideline/EBM recommendation involving targeted personalised treatment, advanced surgery or radiotherapy
3.2.3	Proportion of patients meeting criteria (selected diagnoses) who are treated in accordance with a recommendation involving targeted personalised treatment, advanced surgery or radiotherapy

POSSIBLE SOURCES OF FUNDING

Resources of health insurance companies, National Recovery Plan (Component 6.2), Integrated Regional Operational Programme 2021–2027, Operational Programme Employment Plus

SPECIFIC OBJECTIVE 3.3

Improve planning and increase access to care

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Oncology is one of the most financially demanding areas of medicine, and the cost of cancer care is constantly rising. It is therefore important to continuously address the quality, accessibility and sustainability of cancer care.

Funding for healthcare, including cancer care, comes from two primary sources, public spending on health, organised as public health insurance, and spending by the patient and his or her family, either directly or through private insurance or supplementary insurance. However, due to the existing broad and solidarity-based health-care system, the financing of oncology in the Czech Republic relies predominantly on public health insurance.

Policy decisions regarding investment in the further development of cancer care must be evidence-based and in line with European and global trends. The basis for budgetary and other financial decisions must be detailed analyses of population development, the development of production by individual segments of care (and therefore the need for health services according to the health status of the population), taking into account the cost structure and its expected development in line with inflation and personnel costs.

An important part of these analyses is also horizon scanning, which quantifies the entry of major new indications and drugs, and the development and updating of treatment recommendations.

Planning must also reflect the aforementioned goals of prevention, early diagnosis/screening. It must also systematically include the needs of follow-up and palliative care.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Continuously evaluate and adjust reimbursement mechanisms to ensure a uniform and transparent standard of healthcare for all patients and to ensure that reimbursement covers the real costs of specialised centres in a timely manner. Flexibly reflect changing legislation in these areas, e.g., the Directive on certified IVDs.

Transparent assessment of direct and indirect costs of cancer.

Regular horizon scanning (at least once a year) to allow an informed estimate of the cost of treatment in the future.

Development of methodology and data sources for the assessment of indirect costs of cancer, especially those financed by social insurance.

Support from organisers and payers of care for the implementation of applied clinical research in the form of academic non-profit clinical trials, which are now considered the standard of care in Europe, both in paediatric oncology and in some rare adolescent and adult cancers.

Ensure adequate remuneration for medical and non-medical healthcare professionals in oncology and related fields, including those providing cancer prevention programmes, home care, and specialists in the field of supportive care (nutrition, rehabilitation, psychology).

Systemic setting of new technologies and drugs input to provide targeted personalised treatment, advanced methods and a multidisciplinary approach with respect to local and temporal availability and the prediction of health and social service needs.

RESPONSIBILITY

MoH

COOPERATION

MoF, IHIS, health insurance companies, regions, health service providers, social service providers, representatives of professional societies, representatives of patient organisations

LIST OF SUB-OBJECTIVES

3.3.1	Develop and implement planning mechanisms in the light of regional care needs	MoH, relevant health service providers and their founders, IHIS, health insurance companies, regions
3.3.2	Rationalisation of cost planning for cancer diagnostics and treatment (optimisation of reimbursement mechanisms)	MoH, relevant health service providers and their founders, IHIS, health insurance companies

INDICATORS

3.3.1	Number of regions with a health plan containing the implementation of the cancer plan with a focus on regional needs
3.3.2	A system designed to rationalise the cost planning of cancer diagnosis and treatment

POSSIBLE SOURCES OF FUNDING

State budget, health insurance companies, Operational Programme Employment Plus, EU4Health

STRATEGIC OBJECTIVE 4

The fight against cancer is conducted to a high standard, in line with advances in science and new technologies

SPECIFIC OBJECTIVE 4.1

Ensure sufficient numbers of quality, qualified and motivated human capital in oncology

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Staffing, not only of non-medical health professionals, but also of physicians not only in oncology but in a wide range of other specialisations, is an essential condition for the fight against cancer from the perspective of health service providers, regardless of whether they are highly specialised care centres or related health services.

From the point of view of highly specialised care centres, staffing is not only a condition for granting such a status (currently the centres are granted the status until 2025), but also one of the barriers that prevents the expansion of this backbone network of oncological health services. In practice, it is clear that university towns, ideally with a medical faculty and a teaching hospital, outperform in the network of highly specialised care because of their links to human capital.

Significant progress in this area is the establishment of specialisation attestation fields in the Czech Republic, i.e., independent clinical oncology, radiation oncology, haemato-oncology and paediatric oncology, as well as additional specialisations in onco-surgery, onco-gynaecology and onco-urology and onco-dermatology. These advanced specialisations serve to train oncology specialists from other specialisations for multidisciplinary teamwork.

For the care of patients with malignancies, it is also crucial to ensure a sufficient number of erudite specialists certified in clinical and radiation oncology and radiotherapy continuing their medical education or doctoral studies. Linking the domestic education system with international and European educational programmes. Prepare an educational programme with multidisciplinary content and a unified concept of continuing education in oncology. Improve the education of nurses in oncology and introduce a specialisation in oncology and haemato-oncology among the specialisations of nurses. Initiate the education of general practitioners in prevention, diagnosis and care of cancer patients in long-term remission and, last but not least, ensure sufficient information for cancer patients and cancer care providers.

High-quality cancer care depends on a highly erudite staff. Healthcare professionals represent a distinct category of employees with regard to the performance of their activities. This is due to the specific organisation of work, which includes on-call duty, night work, etc. Healthcare professionals caring for cancer patients may be exposed to various factors (physical, chemical, ergonomic, psychological, psychosocial, economic-social) that may have a negative impact on their health. The situation is further complicated by the insufficient capacity of medical staff caring for cancer patients. Healthcare professionals therefore need to have comfortable, safe, stable and motivating working conditions to perform their work and further their education. The work of health professionals is also associated with the need to cope with psychologically demanding and stressful situations, often leading to acute or delayed stress reactions. Burnout syndrome represents emotional, mental and physical exhaustion caused by prolonged exposure to stressful situations. This must be prevented by psychosocial support. The health service provider should be encouraged to establish a network of trained psychosocial support providers and to involve them in practice.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Revision and proposal of changes for continuing education of staff at all levels of oncological care corresponding to the needs of patients and technological and scientific progress, as well as for individual supporting specialisations, proposal of coordination and structuring of continuing medical education with its evaluation.

Proposal for a method of managing candidates for the fields providing multidisciplinary care for oncology patients in the framework of studies at medical faculties, to enable interested medical students to gain a practical

understanding of the field and to support student scientific professional activity in oncology. Proposed changes allowing clinical internships of medics also in non-faculty CCCs.

Optimise the postgraduate educational programme in oncology, the accreditation of departments, the system of attestation examination courses. Linking postgraduate training with the European education system (ESMO, ESO, EORTC, ESGO, EADO, UEMS, etc.)

Improve the conditions of PhD studies in oncology (improvement of motivation of students and supervisors, time subsidy for studies, possibility of clinical research, foreign fellowships, connection with international research projects, improvement of the status, conditions and rewards of PhD graduates, availability of the field of Oncology at all medical faculties)

Proposal to improve the quality of nurse education in oncology and haemato-oncology by introducing a field of specialisation education narrowly focused on oncology and haematology in Government Regulation No. 31/2010 Coll. And the overall support of non-medical medical disciplines according to the needs of healthcare in oncology and haemato-oncology.

Proposal to support undergraduate and postgraduate education of radiological physicists in order to develop educational institutions and their motivation to study.

Introduction of conceptual lifelong medical education of regional haematologists and transfusion physicians.

Proposal and implementation of a specialisation training programme for general nurses working in haemato-oncology and a concept for training all non-medical health professions involved in haemato-oncology care.

Planning and managing the capacity of physicians and health professionals reflecting the current capacity of the workplace and predicting the needs of patients in the future. Teams that serve both for treatment and to enable other staff to acquire professional competences must not be left out.

Continuously improve working conditions and reduce the turnover of haemato-oncology centre staff to less exposed areas.

Introduce a system of psychological care for employees and a preventive supervision programme for burnout syndrome among employees.

Take into account the increased professional and psychological demands placed on nurses and other staff in cancer and haemato-oncology centres in the financial remuneration of non-medical professionals.

Proposal to ensure safe working conditions for working with cytostatic drugs in workplaces.

Proposal of a method to educate healthcare professionals caring for patients with oncological or haemato-oncological diseases in special skills – nutrition, psycho-oncology, palliative care, ethics, psychosocial skills, multidisciplinary consensus, etc.

Educate general practitioners in oncological issues

Focus on compliance with Occupational Safety and Health (OSH) legislation to prevent risk or damage to health. Measures relate to risk search (prevention) and assessment, technical and technological procedures (e.g., for irradiation technology), training and knowledge verification, provision of protective equipment, etc. Ensure compliance with periodic preventive examinations of healthcare workers.

RESPONSIBILITY

MoH

COOPERATION

MEYS, IHIS, IPME, NCN NMH, CMC, COS CzMA JEP, SROBP CzMA JEP, and other professional societies, CCC/ROGs and other highly specialised centres, patient organisations, medical and nursing faculties, representatives of local government

LIST OF SUB-OBJECTIVES

4.1.1	Ensure high quality vocational education – undergraduate	MoH, MEYS, relevant professional societies of the CzMA JEP, relevant health service providers, medical faculties, secondary and higher medical schools
4.1.2	Ensure high quality and accessibility of vocational training – specialisation and lifelong learning	MoH, MEYS, IPME, NCN NMH, relevant professional societies of the CzMA JEP, relevant health service providers, universities, medical faculties
4.1.3	Increase nurses' competences	MoH, MEYS, IPME, NCN NMH, relevant professional societies of the CzMA JEP, Czech Association of Nurses, UNIFY CR, relevant health service providers
4.1.4	Education of healthcare professionals caring for patients with cancer in special skills – nutrition, psycho-oncology, palliative care, ethics, psychosocial skills, multidisciplinary consensus, clinical pharmacy, etc.	MoH, MEYS, IPME, NCN NMH, Czech Association of Nurses, UNIFY CR, relevant professional societies of the CzMA JEP, relevant health service providers
4.1.5	Improve working conditions, including reconciliation of work and family life, reducing turnover in less exposed sectors	MoH, Czech Association of Nurses, UNIFY CR, relevant professional societies of the CzMA JEP, relevant health service providers

INDICATORS

4.1.1	Proportion of new modern teaching methods introduced for disciplines involved in multidisciplinary care for oncology patients, implementation of simulation teaching, especially in emergency and invasive procedures
4.1.2	Number of curriculum changes embedded in educational programmes following the implementation of simulation-based medical education
4.1.3	Number of graduates from each health discipline planned based on development needs for oncology patients
4.1.4	Records on the progression of postgraduate students through education
4.1.5	Proportion of changes demonstrably facilitating and accelerating completion of specialised parts of the curriculum, permeability across related disciplines
4.1.6	Proportion of PhD students focusing on new methods and new therapies for cancer patients based on biological and immunological properties of tumours
4.1.7	Number of graduates of specialisation training in oncology and haematology for general nurses and paediatric nurses
4.1.8	Number of graduates of non-medical health professions in certified courses focused on supportive care – nutritional, palliative, etc.
4.1.9	Percentage of graduates moving into multidisciplinary cancer care in postgraduate education
4.1.10	Proportion of outflow of non-medical healthcare professionals from oncology to other areas of healthcare
4.1.11	Proportion of outflow of non-medical healthcare professionals from the health sector
4.1.12	Percentage of facilities implementing a special support programme for professionals in particularly difficult environments (psychosocial support for healthcare professionals, periodic preventive check-ups for healthcare professionals, spa rehabilitation for healthcare professionals, crisis intervention for acute stress reactions...)

POSSIBLE SOURCES OF FUNDING

State budget, Operational Programme Jan Amos Komenský, National Recovery Plan – Component 6.2, Operational Programme Employment Plus, EU4Health

SPECIFIC OBJECTIVE 4.2

Improvement of the infrastructure of individual providers of oncological and haemato-oncological care

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

The basis of the current system of oncological care organisation in the Czech Republic is a backbone regional network of clinical cancer centres, the largest of which have been granted the status of Comprehensive Cancer Centres (CCC). This network is complemented by the Highly Specialised Onco-gynaecology Care Centres (OGC), Uro-oncology Centres and Pneumo-oncology Care Centres. These centres currently cover up to 70% of adult patients and virtually 100% of paediatric patients with malignant tumours. Haemato-oncology care in the Czech Republic is concentrated in haemato-oncology centres for children and adults (HOC and CHOC). Onco-dermatology care is, with regard to its scope, which includes about one third of all tumours, as well as its specificity on the one hand and accessibility on the other, located in practically all dermato-venerology practices, which closely cooperate with the specialised onco-dermatology departments at the Comprehensive Cancer Centres.

The centralised care system seeks to optimise and access cancer and haemato-oncology care in its catchment regions and also organises quality and outcome assessments. These goals are achieved by educational and organisational activities of the CCC/HOC and specialised centres in the region, multidisciplinary organisation of care within the CCC/HOC and specialised centres and also by controlling data collection for key registries, especially the National Cancer Registry of the Czech Republic.

Despite the significant centralisation of oncology care, the Czech Republic is characterised by significant regional differences in the availability of CCC care between individual regions; while in Prague only about 10% of patients were treated outside the CCC in the period 2016–2020, in the Karlovy Vary Region it was almost 57%. This huge variation poses a significant challenge to changing the organisation of care in the area.

In order to meet these objectives of the CCC/HOC, the Ministry of Health of the Czech Republic and health insurance companies require close cooperation between providers of acute inpatient cancer care in the catchment regions and their founders. The CCC/HOC organise Regional Oncology Groups (ROG) in their catchment regions, which are a legitimate form of mutual cooperation and networking of oncology departments of inpatient care providers in the regions. This contractually based cooperation guarantees the acceptance, implementation and control of adherence to common clinical protocols by the participating providers and a unified system of cancer care management, including multidisciplinary assessments of clinical cases, access control and quality of care.

Attention must also be focused on related workplaces involved in early detection through screening programmes, including GP surgeries, accredited endoscopy centres, gynaecological outpatient clinics and other health service providers. For example, as of mid-2021, 194 workplaces across the Czech Republic were accredited for the colorectal cancer screening programme.ⁱ

In the field of haematology and transfusion medicine, the Czech Republic registers 368 authorised healthcare providers. It should be added that the entire network includes mainly haematology laboratories and transfusion stations, i.e., workplaces that do not deal specifically with haemato-oncology patients.

The inpatient treatment of haemato-oncology patients is provided in highly specialised haemato-oncology care centres for adults and children. Regional hospitals in a region where there is no centre for highly specialised haemato-oncology care may have contracted haematology beds (separately or, more often, in internal medicine departments) where diagnosis and simpler treatment and palliative treatment are carried out. Smaller hospitals usually have haematology outpatient clinics, which provide only basic diagnoses and referrals to a specialised unit, and may also provide dispensary care for cured patients, simpler treatments and palliative/substitution therapy. The functionality of these facilities and ambulances varies considerably. The reasons for the dysfunction at various levels are due to the lack of qualified staff, but also the costliness of care for haemato-oncology patients.

The current list of centres is published in the Bulletin of the MoH CR. The status of highly specialised care centres is published by the Ministry of Health pursuant to Section 112 of the Health Services Act. The current form of the centres is regulated in Bulletins No 10/2019 and No 11/2019.

ⁱ <https://www.mzcr.cz/seznam-poskytovatelu-doporucenych-k-provadeni-screeningu-nadoru-kolorekta-v-roce-2021>

Provision of haemato-oncological care for paediatric patients

Children and adolescents with haemopoietic malignancies are treated in eight centres of highly specialised haemato-oncological care for children, located in faculty and large regional hospitals. Two workplaces (UH Motol and UH Brno) have a transplantation unit and perform haemopoietic stem cell transplantation (HSCT). In these centres, the diagnosis and treatment of malignant diseases of the haemopoietic system is provided according to uniform, nationally-valid procedures guaranteed by the Working Group for Paediatric Haematology of the Czech Society of Haematology and the Czech Paediatric Society of the Czech Medical Association J. E. Purkyně, and the Paediatric Oncology Unit of the Czech Oncological Society. The centres of highly specialised haemato-oncological care for children that do not have a transplant unit are located in the Olomouc University Hospital, Hradec Králové University Hospital, Pilsen University Hospital, České Budějovice Hospital and Ústí nad Labem Hospital (CHOC).ⁱ Selected specialised diagnostic tests are performed in the reference laboratories of the laboratory centre of the Department of Paediatric Haematology and Oncology at Motol University Hospital.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Build a workplace in Prague providing comprehensive oncological care and coordinating activities within oncology in the Prague and Central Bohemian regions with national overlap. Ensure optimal staffing, equipment and space for oncology workplaces, taking into account the backbone role of the CCC and HOC network as well as the important role of regional oncology workplaces and general practitioners and other specialists.

Develop a strategy for long-term cooperation between the CCC, regional oncology workplaces and general practitioners and other specialists in the field of oncological treatment and dispensarisation of oncological patients.

In terms of infrastructure, it is desirable that all CCCs have the following services (*see SO 2.2.1 above for more details*):

- palliative medicine outpatient clinics/inpatient units;
- consultative team of specialised palliative care for hospitalised patients;
- palliative care inpatient unit/acute care unit.

The proposal to develop regional networks of general and specialised outpatient and inpatient palliative care providers will enable a coordinated and logical *patient flow*. The building of these regional palliative care networks must be done in line with the building of the cancer care provider network.

Quality support for cancer palliative care in regional and provincial healthcare facilities must be provided both in inpatient facilities (hospitals) through palliative care consultant teams and palliative medicine outpatient clinics to support GPs, home care agencies and other general palliative care providers.

Infrastructure support must be in line with the needs for the development of mobile specialised palliative care (“home hospice”) and inpatient hospices.

RESPONSIBILITY

MoH

COOPERATION

regions (especially KVK), COS CzMA JEP, CHS CzMA JEP, SROBP CzMA JEP and other professional societies, healthcare payers, patient organisations, COS CzMA JEP, SROBP CzMA JEP and other professional societies, CCC/ROGs and other specialised centres, health insurance companies

ⁱ See the MoH Bulletin of 15.2.2019.

LIST OF SUB-OBJECTIVES

4.2.1	Support for the development of infrastructure and equipment of CCCs and HOCs (for adult and paediatric patients)	MoH, relevant professional societies of the CzMA, relevant health service providers and their founders, health insurance companies
4.2.2	Support the development of regional care provider infrastructure	MoH, regions, relevant professional societies of the CzMA JEP, relevant health service providers and their founders, health insurance companies
4.2.3	Increase access to cancer care in specific regions	MoH, Motol University Hospital, regions (especially the KVK) relevant professional societies of the CzMA JEP, relevant health service providers and their founders, health insurance companies

INDICATORS

4.2.1	Number of implemented recovery projects
4.2.1	Number of reconstructions or extensions or technological innovations of the infrastructure of highly specialised centres in the field of oncology
4.2.1	Number and location of innovative instrument technology
4.2.2	Number of specialised centres established in regions without a CCC
4.2.2	Number of specialised centres with a national scope
4.2.3	Number of upgrades, reconstructions or expansions or technological innovations of the infrastructure of members of regional oncology groups
4.2.3	Percentage increase in the capacity of members of regional oncology groups
4.2.3	Proportion of patients treated outside the CCC in individual regions

POSSIBLE SOURCES OF FUNDING

Integrated Regional Operational Programme 2021–2027, National Recovery Plan - Component 6.2

SPECIFIC OBJECTIVE 4.3

Monitor the quality of care at individual cancer care providers

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Treatment standards are the foundation of quality cancer care provided according to the principles of evidence-based medicine. These recommendations are developed independently and by consensus, based on updates from the various disciplines involved in the treatment of individual cancers. It expresses treatment algorithms, the sequence of treatment methods as well as current pharmacotherapy options, including the current status of reimbursement by payers.

Treatment by oncology specialists can be guided by the standards of international professional organisations and national treatment standards, which are based on European and international recommendations and are updated at a maximum interval of 6 months. They are guaranteed by the Czech Oncological Society and other professional societies of the CzMA JEP, which are dedicated to the diagnosis and treatment of a given tumour.

In addition to internal hospital information systems, NCR data are crucial for evaluating quality indicators. The methodology of data collection, independent verification by comparison with available reference data sources within the National Health Information System and statistical evaluation of the prescribed indicators is regularly updated by the IHIS, which publishes an annual summary report.

Another independent and important indicator of quality is data on patient satisfaction obtained through accredited programmes supported by patient organisations, as well as the number of complaints to the Czech Medical Chamber, the number of complaints to the Ethics Committee or the Hospital Ombudsman, including their content and severity.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Within the framework of a long-term cooperation strategy between CCC, regional oncological workplaces and general practitioners and other specialists in the field of oncological treatment and the dispensarisation care of oncological patients, propose a set of indicators enabling the collection and monitoring of the quality of care provided.

Propose a model allowing continuous and flexible response to changes in treatment procedures and evaluate the list of procedures to be reserved for central care, continuously innovate and expand the existing Diagnostic and Treatment Recommendations of the Czech Society of Oncology and the Society of Haematology of the CzMA JEP with regard to monitoring the quality of care at individual cancer care providers.

Ensure the monitoring and evaluation of the quality of service provision by multidisciplinary teams (e.g., nutritionist, rehabilitation worker, intensivist, cardiologist, neurologist and others) with expertise in their field but also experience in caring for haemato-oncology patients.

Ensure the long-term and high-quality collection of data needed to assess the quality of cancer care, update and regularly validate sets of quality indicators of cancer care. Propose changes in care delivery based on validation.

Ensure the evaluation of quality indicators of preventive programmes by linking existing registers and databases (NCR, healthcare payer data, registers of preventive interventions)

Define indicators applicable for patient assessment of the functionality, complexity and success of the services provided in key areas of cancer care (information, communication and education, accessibility and continuity of care, co-determination, emotional, spiritual, physical and work-social support) and a methodology for their monitoring.

Develop recommendations for the monitoring of Patient Reported Outcome Measures (PROMs) in cancer patients.

RESPONSIBILITY

MoH

COOPERATION

IHIS, COS CzMA JEP and other professional societies, CCC/ROGs and other specialised centres, patient organisations, health insurance companies, health service providers, social service providers

LIST OF SUB-OBJECTIVES

4.3.1	Update and regularly validate cancer care indicator sets	MoH, IHIS, relevant professional societies of the CzMA JEP, providers of health and social services and their founders
4.3.2	Introduce standardised evaluation by patient organisations	MoH, IHIS, relevant professional societies of the CzMA JEP, providers of health and social services and their founders, patient organisations

INDICATORS

4.3.1	Establishment of departmental reference statistics for all areas of the National Cancer Plan, in particular for the system for assessing access to and quality of care
4.3.1	Improvements in key population indicators (population coverage of treatment in specialised centres, early detection of disease) and clinical indicators (5-year relative survival)
4.3.2	Establishment of patient councils at all centres of highly specialised care in oncology and implementation of regular annual patient reviews

POSSIBLE SOURCES OF FUNDING

State budget, Operational Programme Employment Plus

SPECIFIC OBJECTIVE 4.4

Ensure access to innovative practices and maintain high quality in cancer care

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Given the fundamental developments in the field of oncology, the following determinants are expected to intensify and should be taken into account in the future development of oncology. All of these influences will allow for a higher level of individualised treatment for the patient, a higher quality of life, more effective treatment, but they also bring a challenge for the funding of the entire treatment system, as well as a challenge for changes in the education of physicians and health professionals, and last but not least for changes in the reimbursement of procedures, medicines and technologies.

The specific and expected outlook of the expected progress is given above in Objective 3.2 Ensure the development of personalised medicine, the subject of this objective is mainly to design interventions that will accelerate the implementation of new innovative procedures, extend the mechanism for health technology assessment (HTA) to non-medical innovations and technologies, and strengthen the implementation of DRGs.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Continuously and flexibly respond to changes in treatment procedures and evaluate the list of procedures to be reserved for central care, continuously innovate and expand the existing Diagnostic and Treatment Recommendations of the Czech Society of Oncology and the Society of Haematology of the CzMA JEP.

Work on the concept of regional haematology departments with extended haemato-oncology care that could provide care for some patients in the regions in collaboration with highly specialised centres in regions where there are no university hospitals. First of all, however, it is absolutely necessary to create personnel reserves there, people who will gradually acquire professional competence in this area.

Treatment with targeted drugs, often aimed at small groups of patients, is rational only in the context of comprehensive cancer centres; on the contrary, it is inappropriate to split this system into small centres. The goal for the next few years is to further strengthen the centralisation of care, especially where targeted treatment can be provided.

Take into account the increased professional and psychological demands placed on nurses and other staff in cancer and haemato-oncology centres in the financial remuneration of non-medical professionals.

Strengthen and create multidisciplinary teams (e.g., nutritionist, rehabilitation worker, intensivist, cardiologist, neurologist and others) with expertise in their field but also experience in caring for haemato-oncology patients.

Ensure the availability of oncology drugs and treatments proven to be effective according to evidence-based medicine, including for rare cancers.

RESPONSIBILITY

MoH

COOPERATION

IHIS, health insurance companies, SIDC, health service providers, CzMA JEP

LIST OF SUB-OBJECTIVES

4.4.1	Accelerate the implementation of innovative procedures (including the category of inventions) in diagnosis and treatment	MoH, relevant health service providers and their founders, health insurance companies, SIDC, relevant professional societies of the CzMA JEP
4.4.2	Extending the cost-effectiveness assessment of new technologies (HTA) to include non-drug innovations and technologies	MoH, health insurance companies, SIDC, relevant professional societies of the CzMA JEP
4.4.3	Strengthening the implementation of the DRG system, the exact valuation of the cost of cancer therapy and targeted mechanisms for reimbursement of care (payment according to cost – reimbursement tariffs)	MoH, IHIS, relevant health service providers and their founders, health insurance companies, SIDC, relevant professional societies of the CzMA JEP

INDICATORS

4.4.1	Significant reduction in time to implementation of innovative procedures and new drug indications in clinical practice
4.4.1	Full-scale implementation of predictive models and horizon scanning standards to prepare the financial resources, infrastructure and processes required for the rapid implementation of innovations in clinical practice
4.4.2	Development and implementation of a concept and national methodology for standardisation of HTA in the field of medical devices; number of HTA analyses performed and defended
4.4.3	Achieve full reporting of CZ-DRG markers with 100% coverage of the acute inpatient care segment by 2025
4.4.3	Proportion of oncologically-relevant DRG bases reimbursed according to exact costs under the CZ-DRG system in the form of reimbursement tariffs

POSSIBLE SOURCES OF FUNDING

State budget, resources of health insurance companies, Operational Programme Employment Plus

SPECIFIC OBJECTIVE 4.5

Promote research and international cooperation in the field of oncology

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

Effectively fighting cancer is a global challenge that cannot be tackled in isolation without international cooperation. Its scope is not only in the field of education and research, but also in the exchange of know-how, the joint development and sharing of recommended practices and quality standards, and ensuring equal access to facilities, medicines and markets in general, both within the EU and worldwide. The basic framework for the implementation of international cooperation will be activities leading to the implementation of Europe's Beating Cancer Plan, cooperation within European research infrastructures (e.g., The European Cancer Research Infrastructure (e.g., BBMRI-ERIC, ECRIN, EATRIS, ELIXIR) and European cancer reference networks (e.g. EURACAN, PaedCan, EuroBloodNet, Genturis) and European and global non-profit organisations bringing together professional organisations and cancer institutes (e.g., OECI, EORTC). Last but not least, international cooperation with associations of companies producing technologies and products for the diagnosis, treatment and management of cancer will be supported.

Progress in the understanding and treatment of cancer is dependent on high quality research programmes. Clinical oncology research deals with the prevention, diagnosis and treatment of cancer and its complications, including long-term consequences. The aim of basic and applied oncological research is to understand the mechanisms of tumour formation and spread and to find ways to prevent them through new treatments and early diagnosis. A high level of basic and applied research is also a condition for the timely and high-quality translation and application of new knowledge into routine clinical practice in order to reduce the incidence, and improve the early detection of cancer and therapeutic outcomes in oncology. The ambition of the implementation of the NOPL CR 2030 is to increase the number of patients treated in clinical trials, to develop basic and applied clinical research and, last but not least, to maintain and create data support for epidemiological and clinical research in oncology.

Within the CCC network, the Comprehensive Oncology Centre of the University Hospital Motol and the Comprehensive Cancer Centre of the Masaryk Memorial Cancer Institute in Brno work in cooperation with the University Hospital Brno and the University Hospital U Svaté Anny as National Cancer Centres (NCC). NCCs are conceived as coordinating scientific and research entities and their establishment extends the possibilities of international cooperation in the CCC network. The NCCs act in a coordinating role in the field, especially as national focal points for international cooperation, and do not replace the scope and competence of professional societies or the network of comprehensive cancer centres.

When formulating support for research and international cooperation in the field of oncology, it is necessary to bear in mind that involvement in international clinical trials, including academic ones, and in European reference networks and research infrastructures brings innovations and guarantees a top level of diagnostics and treatment, thus increasing the quality of oncological care in the Czech Republic. This approach is crucial in the field of paediatric oncology and rare tumours.

At the same time, the demanding administrative requirements for the centres' participation in international academic clinical trials and other scientific programmes, as well as their involvement in reference and research networks, which require trained and linguistically equipped project staff, data managers and, in the case of Phase I and II studies, study nurses, must also be considered. These staffing needs, if they are to be sufficiently and qualitatively fulfilled, cannot be covered by the hospital from its own resources; even sponsor donations are not sufficient. It is desirable to provide such committed centres with funds for the salaries of these professionals, without which the sustainability of these programmes cannot be ensured.

Funding of cancer research: the main sources of funding for cancer research are from the public sector: philanthropic (subsidised charities through annual fundraisers), from the state budget through public authorities and their organisations (e.g., grant agencies).

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Find resources for academic research and academic clinical trials in segments where there is no interest from pharmaceutical companies (usually rare diseases/conditions/complications) in order to improve the diagnostic and therapeutic process in these areas as well.

Conduct epidemiological and socio-behavioural research in primary cancer prevention (e.g., interventions on lifestyle, energy intake, food quality, physical activity, stress factors and quality of life).

Provide preclinical and clinical research on chemopreventive agents and biomarkers suitable for early cancer detection, including clinical evaluations of medical devices for self-testing (POCT).

Conduct implementation research on new tools for the early detection of cancer

To create up-to-date and clear databases of clinical trials in oncology by cooperation between the COS, CHC, relevant professional societies and the SIDC

Increase the involvement of patient organisations in education about the possibilities and types of clinical trials

Prioritise modern methods of molecular genetics and genomics for the study of genetic predisposition to cancer and as a predictor of the therapeutic effect of new treatments in oncology

Strengthen horizontal and vertical communication between basic research centres and hospitals by supporting thematic workshops, conferences and coordination centres

Provide support for academic studies, including improving patient awareness of opportunities for involvement.

Support the creation and maintenance of drug registries focused on new cancer treatments and rare cancer diagnoses

Develop a system for transparent and regulated access to epidemiological data and linking these data to therapeutic data for scientific use in high-quality cohort studies.

Propose the strengthening and refinement of existing and introduction of new, highly sensitive, specific, non-invasive or minimally invasive screening tests that can be used for the early detection of cancer in the general population or in at-risk groups

Support research in the field of patient quality of life, effective communication with patients.

RESPONSIBILITY

MoH

COOPERATION

MEYS, CHRC, CCC, NCC, ERN, screening and preventive centres, educational and research institutions, patient organisations and the non-profit sector, CHRC, educational and research institutions, screening and preventive centres, educational and research institutions, patient organisations and the non-profit sector, investors, IHIS CR/NSC, professional societies of the CzMA JEP

LIST OF SUB-OBJECTIVES

4.5.1	Excellence in research and development, including academic research and academic clinical trials to improve the diagnostic and therapeutic process in oncology	MoH, CHRC, relevant health service providers, relevant professional societies of the CzMA JEP, academic and other educational and research institutions, NCC, ERN sites
4.5.2	Define rare cancers and access to international clinical and basic research in collaboration with the EU	MoH, CHRC, relevant health service providers, relevant professional societies of the CzMA JEP, academic and other educational and research institutions
4.5.3	International cooperation and harmonisation of research and care within the EU and WHO	MoH, CHRC, relevant professional societies of the CzMA JEP, academic and other educational and research institutions, NCC, ERN sites

INDICATORS

- 4.5.1** Total number of patients enrolled in prospective interventional clinical trials in the index year as a percentage of patients newly treated at the cancer centre/institution
- 4.5.2** Number of patients diagnosed with cancer included in prospective phase 1, 2 and 3 clinical trials containing one or more interventions for diagnosis, treatment, monitoring or rehabilitationⁱ

POSSIBLE SOURCES OF FUNDING

National resources for research – CHRC, GACR, National Recovery Plan (Component 5.1), Operational Programme Jan Amos Komenský, HORIZON, EU4Health

ⁱ Interventional means that the study includes one or more defined actions aimed at improving diagnosis, care or outcome. Studies can be single-arm or multi-arm. Patients enrolled in clinical quality studies or registration studies are excluded from the percentage for designation. Participants in biomarker-driven observational cohort studies are NOT included in the numbers comprising the percentage for designation.

SPECIFIC OBJECTIVE 4.6

Reaping the benefits of digitisation

REASON FOR INCLUSION AND CONTENT OF THE SPECIFIC OBJECTIVE

The main goal of the NOPL CR 2030 is to improve all aspects of cancer patient care, including equal access to care for all patients, expert and rapid evidence-based treatment, improved survival and quality of life, full-scale monitoring and planning of interventions, and reduction of overall costs. Achieving and maintaining high quality cancer care requires **regular, standardised evaluations followed by the development and implementation of recommendations**.

The basis for this goal is binding **methodologies for the collection and evaluation of data** that serve as indicators of the availability and quality of cancer care:

- volume of care – annual numbers of newly diagnosed patients and total annual numbers of treated patients, distinguishing the phase of anticancer treatment (primary treatment, relapses – progression, terminal phase of treatment) staffing of care: calculated numbers of full-time physicians by educational category and their age;
- calculated numbers of full-time non-medical healthcare professionals by educational category and their age, basic diagnostic characteristics of newly diagnosed diseases, in particular clinical stage and morphological typology;
- the time from the date of diagnosis of the cancer to the date of initiation of anticancer treatment;
- numbers of patients by individual diagnoses (ICD) and by clinical stages of the disease consulted by the multidisciplinary team;
- the numbers of patients treated with highly innovative or centre-based anticancer therapy and the basic characteristics of these patients (age, sex, condition) and of this therapy (preparations, duration, completion, results);
- annual numbers of patients by individual diagnoses (ICD): radical surgery, radiotherapy treatment, treatment with specific preparations of central therapy;
- annual number of re-operations in cancer patients (surgery for the same reason – related to the tumour – within 30 days of the original surgery);
- overall in-hospital mortality (30-day and 90-day mortality in operated patients);
- 1-, 3- and 5-year absolute and relative survival (10 and 15-year survival for selected diagnoses) of treated patients according to diagnosis, stage and other accepted prognostic parameters, if applicable;
- the number of patients who received psychological support related to their cancer or its treatment;
- number of cancer patients by diagnosis (ICD) who received end-of-life care and died at the centre.

The aim is that the National Health Information System (NHIS) will play a key role in monitoring the population burden of cancer, and the prioritisation and evaluation of health policies related to the NOPL CR 2030. The basis should be the standard long-term National Cancer Registry. The essence of the oncology information system must be its integration with other registries within the NHIS, especially the National Register of Covered Health Services. Another key factor for sustainability and further development is to be the eHealth system, the development of which will be related to the new legislation adopted in 2021. The aim is to establish a National Cancer Information System within the framework of the NOPL CR 2030, which will play a key role in the evaluation and monitoring of the NOPL CR 2030, but will also be a key tool for the evaluation of health technologies and the assessment of results in the fight against cancer.

CONTENT OF THE DRAFT SPECIFIC OBJECTIVE

Propose a system of continuous and flexible response to changes in treatment procedures and evaluate the list of procedures to be reserved for central care; continuously innovate and expand the existing Diagnostic and Treatment Recommendations of the professional societies of the CzMA JEP.

Build and support data infrastructure, provide funding sources for existing databases of the Society of Haematology, innovate oncology and haemato-oncology patient data collection and analysis in cooperation with, for example, IHIS.

Provide financial and material technical support for methodological guidance, standardisation, monitoring, data collection of the REGEX exposure register within the activities of public health protection authorities and set up a system of regular interconnection with the NCR.

Ensure sustainable provider collaboration on the National Cancer Registry

Ensure the development of the National Health Information System in the area of the evaluation and monitoring of cancer control policies.

Implement eHealth healthcare supporting in all respects the NOPL CR 2030.

RESPONSIBILITY

MoH

COOPERATION

IHIS, PHPA, professional societies of the CzMA JEP, health insurance companies, health service providers, educational institutions

LIST OF SUB-OBJECTIVES

4.6.1	Involvement of cancer care in the implementation of eHealth and telemedicine	MoH, IHIS, relevant professional societies of the CzMA JEP, relevant health service providers and their founders, academic institutions and other educational and research organisations
4.6.2	Support for the development of a parametric database, in particular the National Cancer Registry and related NHIS data sources	MoH, relevant professional societies of the CzMA JEP, relevant health service providers
4.6.3	Creation, development and use of electronic documentation for better interoperability and multidisciplinary collaboration	MoH, IHIS, relevant professional societies of the CzMA JEP, relevant health service providers and their founders
4.6.4	Creation of an information system for the inter-ministerial integration of economic data for the prediction and validation of a transparent reimbursement system in the field of oncology and for the implementation of innovations	MoH, IHIS, relevant professional societies of the CzMA JEP, relevant health service providers and their founders
4.6.5	Ensure the broad sharing of secondary data with legal entities that have a legitimate interest in accessing data based on legitimate objectives arising from their position in the system or from legal or other regulationsⁱ	MoH, IHIS, relevant professional societies of the CzMA JEP, relevant providers of health services and social services and their founders

INDICATORS

4.6.1	Creation of an electronic version of cancer patient documentation and its release as a national standard
4.6.2	Full transition of the National Cancer Registry to electronic reporting of records from hospital information systems by 2025
4.6.3	Develop and publish communication and content standards for electronic documentation for major cancer diagnoses
4.6.4	Full implementation of an information system integrating available central data sources on staff capacity, salaries and wages, economics and provider operation
4.6.5	Methodology and rules for sharing secondary data; number of open datasets published in the National Open Data Catalogue (10 by 2030)

POSSIBLE SOURCES OF FUNDING

National Recovery Plan (Components 1.1 and 1.2), Integrated Regional Operational Programme 2021–2027

ⁱ E.g., patient organisations, marketing authorisation holders, scientists, etc.

3

IMPLEMENTATION OF NOPL CR 2030

3.A Framework for implementation

As mentioned in the introductory part of the NOPL CR 2030, implementation will take place **on the basis of detailed and interrelated Action Plans covering the entire period until 2030**, taking into account the need for the prioritisation and sequencing of steps. The division of the implementation into time-bound implementation documents (Action Plans) will provide the necessary level of detail for the processing of projects and will also enable a continuous response to current changes, trends and innovations within the implementation of the NOPL CR 2030.

Each subsequent Action Plan will incorporate the results of ongoing experience from the implementation of the previous Action Plan during its formulation.

The first Action Plan for 2022–2024 will be submitted to the management of the MoH for approval within three months of the approval of the NOPL CR 2030 by the Government of the Czech Republic. Action Plans for the next period will always be prepared in advance prior to the start of the validity of the subsequent Action Plan and submitted to the management of the MoH for approval after discussion with relevant stakeholders and an internal ministerial comment procedure (for more details, see the chapter “Monitoring and Evaluation of the Implementation of the Objectives of the NOPL CR 2030”).

Each Action Plan will specify in more detail the sub-objectives broken down into individual activities, always indicating the responsibility or co-responsibility for implementation, cooperating entities, a timetable for implementation, the estimated financial intensity of implementation and the preferred source of funding. The action plan shall also always include: a change and risk management system and a communication plan.

The sub-objectives that will be elaborated into individual activities in the Action Plans will be based on the draft sub-objectives set out in the NOPL CR 2030. However, in response to current developments, other sub-objectives may also be added that are not mentioned in the NOPL CR 2030, but which can be seen as necessary and desirable for the fulfilment of specific and subsequently strategic objectives. However, the targeting of specific and strategic objectives must always be respected in such an addition.

In general, the implementation of the NOPL CR 2030 can be divided into two parts:

1. The preparation of a first detailed Action Plan is a prerequisite.
2. The implementation itself – execution of activities and development of projects based on Action Plans and their implementation.

3.B Institutional security for implementation of the NOPL CR 2030

In order to ensure the implementation of the objectives of the NOPL CR 2030, it is necessary to define a clear implementation structure, including the responsibilities of individual actors.

The Minister of Health is the **Contracting Authority** of the NOPL CR 2030 and is also responsible for its implementation. He/she appoints the implementation Administrator, who is the Deputy Minister for the Healthcare Section. On the basis of a proposal from the **Administrator**, the Minister appoints the **National Council for the Implementation of the NOPL CR 2030 (NCI NOPL CR 2030)**.

The Administrator relies on the **expert opinions of the NCI NOPL CR 2030** in decision-making and also appoints and manages the **Coordinator of the NOPL CR 2030**, who is included in the Healthcare Department in terms of the organisational regulations of the Ministry of Health and whose responsibility is to coordinate the preparation of individual Action Plans and their evaluation, coordination of individual activities within the implementation of the NOPL CR 2030 and supervision of the implementation of projects falling under individual Action Plans.

The **NCI NOPL CR 2030** is an **expert advisory body** composed of representatives of stakeholders to ensure the professional guarantee of the implementation of the NOPL CR 2030. The composition is balanced to

represent the views of all stakeholders. Their responsibility is to advise on their area in the form of a professional guarantee or to participate directly in key activities of the implementation of the NOPL CR 2030 as requested by the **NOPL CR 2030 Coordinator**. It is a permanent body that meets as needed, but at least once every two months, to address ongoing implementation requirements on an operational basis. The **Administrator** is the Chair. Through the Administrator, the **NCINOPL CR 2030** escalates an issue for which it needs the cooperation of other sections of the MoH or the government, i.e., one for which it does not have the necessary competence, to the Management Meeting and to the Contracting Authority.

The implementation of the set objectives will be carried out in the form of projects where appropriate, where project management will be used regardless of the sources of funding, i.e., not only for EU-funded projects.

The implementation of the NOPL CR 2030 will take place at the same time as other activities aimed at meeting the objectives of the *Strategic Framework for Health 2030*, and thus their procedures must be coordinated. In particular, the ongoing steps in the area of the primary care reform (*Implementation Plan 1.1*), personnel stabilisation of the Czech healthcare system (*Implementation Plan 2.2*) and digitalisation of healthcare (*Implementation Plan 2.3*), but given the need to focus on prevention, *Implementation Plan 1.2 Disease prevention, health promotion and protection and increasing health literacy*, as well as systemic changes in the entire ministry, will have a major impact on cancer care.

Since the main source of funds for the implementation of the objectives of the NOPL CR 2030 will be Component 6.2 of the National Plan for Strengthening Cancer Prevention and Care of the National Recovery Plan, it is necessary to coordinate the implementation of the NOPL CR 2030 and the implementation of the National Recovery Plan. This is ensured, among other things, by the fact that the Deputy Minister for Healthcare is both the Administrator of the NOPL CR 2030 and also the person responsible for the expert inputs of Component 6.2.

Individual Action Plans can refine the implementation structure of the NOPL CR 2030 based on the current situation and experience from the implementation of previous plans.

IMPLEMENTATION STRUCTURE OF THE NOPL CR 2030

IMPLEMENTATION UNIT

CONTRACTING AUTHORITY – MINISTER OF HEALTH

- Responsible for the policy brief to develop and implement the strategy document
- Appoints the person responsible for the preparation and implementation of the NOPL CR 2030
- Approves the NOPL CR 2030 and submits it to the Government of the Czech Republic for approval
- Approves individual Action Plans and their evaluation
- Is responsible for the implementation of the NOPL CR 2030
- Has maximum decision-making powers, veto power
- Is continuously (regularly) informed about the implementation, approves any changes in the direction of the NOPL CR 2030

ADMINISTRATOR – DEPUTY MINISTER FOR HEALTHCARE (DMH)

- Responsible for the preparation, coordination and continuous evaluation of the implementation of the NOPL CR 2030, including the preparation of Action Plans and their evaluation
- Responsible to the contracting authority for the practical implementation of the NOPL CR 2030
- Ensures cooperation and communication across the MoH through management meetings
- Escalates risks to the implementation of the NOPL CR 2030 through a management meeting
- Is the communication channel between the MoH (management meeting including PM), NCI NOPL CR 2030, Programme Manager and all stakeholders
- For decision-making it relies on the expert opinions of the NCI NOPL CR 2030
- Appoints and manages the NOPL CR 2030 Coordinator
- Is the person responsible for the technical inputs to Component 6.2 of the National Recovery Plan and is responsible for its substantive focus

IMPLEMENTATION STRUCTURE OF THE NOPL CR 2030

IMPLEMENTATION UNIT

NATIONAL COUNCIL FOR THE IMPLEMENTATION OF THE NOPL CR 2030 (NCI NOPL CR 2030) the Chair:

- DMH (Deputy Minister for the Healthcare Section of the Ministry of Health)
- members are representatives of:
- the relevant departments of the Ministry of Health
 - IHIS
 - MoLSA, MEYS, MoF
 - regions,
 - healthcare service providers
 - NCC (directors of the MMCI and the IHBT)
 - health insurance companies
 - medical faculties
 - professional societies
 - NIPH, NCN NMH, IPME
 - CHRC
 - social service providers
 - patients and informal carers
 - NGOs

- Advisory body of the Administrator, makes recommendations for decision-making according to the needs of the Administrator
- Discusses draft Action Plans and evaluations of Action Plans, including Implementation Risk Registers
- Propose adjustments to the Action Plans
- Is regularly and continuously informed about the progress of implementation, significant changes in projects and other details
- Stakeholder representatives mediate information flows in both directions (to and from the NCI NOPL)
- Stakeholder representatives facilitate stakeholder collaboration, open up opportunities for cooperation and discussion, moderate discussions and seek to find common consensus solutions
- They lobby in favour of the implementation of the NOPL CR 2030 within their competences, not only internally, but also externally – ambassadors of the NOPL CR 2030 in their areas
- They assess the influence (impact) of the NOPL CR 2030 on the environment they represent
- They issue opinions, suggest additions, compensatory measures, etc.

COORDINATOR OF NOPL CR 2030

- Ensures the preparation of Action Plans and evaluation of Action Plans in accordance with the chapter **Monitoring and evaluation of the fulfilment of the objectives of the NOPL CR 2030**
- Is a member (or nominates members) of relevant working groups of the Ministry of Health to implement the objectives of the Strategic Framework for Health 2030 relevant for the implementation of the NOPL CR 2030
- Is a member of the relevant Expert Platforms of Component 6.2 of the National Recovery Plan
- Monitors the progress of the projects listed in the Action Plans or participates in their implementation
- Ensures the interconnection of individual projects and the sharing of information between projects
- Ensures the transfer of information on the implementation of projects to the NCI NOPL CR 2030
- Executively manages the NOPL CR 2030 programme

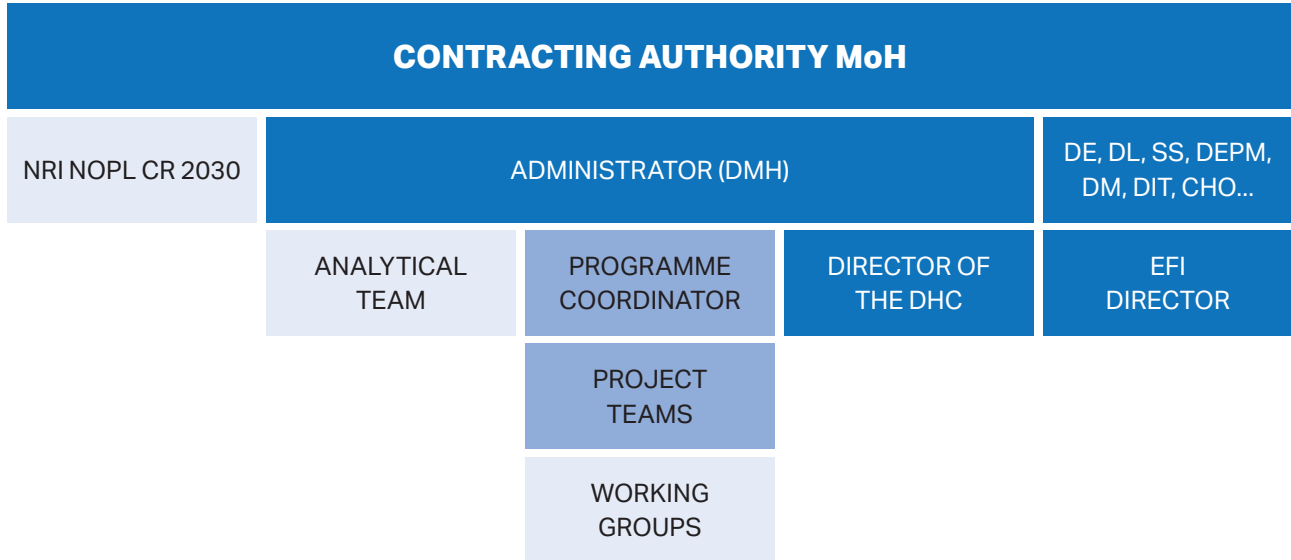
WORKING GROUPS

- Established on an ad hoc basis to address specific professional issues
- Stakeholder representation according to the issue addressed
- They provide high level expert support for the NCI NOPL CR 2030 and the NOPL CR 2030 Coordinator

ANALYTICAL TEAM (IHIS)

- Provides the Coordinator, the NCI NOPL CR 2030, the Administrator and the Contracting Authority with feedback on changes based on the data and evaluation of indicator performance
- Participates in monitoring and proposing adjustments to activities and objectives according to the impact of implementation in practice
- Preparation and approval of documents for the purposes of strategic planning and development of cancer prevention and treatment care, including predictions for negotiation procedures, HTA analyses and programme documents

Figure 2: Diagram of possible institutional arrangements for implementationⁱ



Source: own preparation

The figure above shows the temporary units, both executive and advisory, in relation to the organisational structure of the MoH. Light purple shows the temporary platforms for meetings and source documents, dark purple shows the temporary units for the executive part, and blue shows the units of the Ministry of Health according to the current Organisational Regulations. The dotted ellipse shows the MoH Management Meeting.

3.C Monitoring and evaluation of the achievement of objectives NOPL CR 2030

Evaluation of the fulfilment of the objectives of the NOPL CR 2030 will be carried out in accordance with the cyclical process of strategic managementⁱⁱ on the basis of evaluation of the fulfilment of individual Action Plans.

An evaluation of the implementation of the Action Plan will always be submitted to the MoH management meeting for approval in April of the following year. In the event that a follow-up Action Plan is developed in a given year, it is prepared for approval in October of that year. The final ex-post impact evaluation of the entire NOP CR 2030 will take place after its validity expires and after the evaluation of the implementation of the last of the Action Plans. It will therefore be prepared in the second half of 2031 and will be based, inter alia, on all the evaluations of the Action Plans.

ⁱ The number of projects and working groups will be specified in the Action Plan.

ⁱⁱ Strategy – activities – monitoring – evaluation – correction – strategy – activities – monitoring – evaluation – correction...

Table 2: Schedule for monitoring and evaluating the achievement of the objectives

Action Plan / Evaluation	Annual assessment		Overall assessment of the implementation of the Action Plan		Preparation of a follow-up Action Plan	
	Preparation	Submission for approval to the management of the MoH	Preparation	Submission for approval to the management of the MoH	Preparation	Submission for approval to the management of the MoH
Action Plan for 2022–2024	January 2023 – March 2023	April 2023	-	-	-	-
	January 2024 – March 2024	April 2024	-	-	May 2024 – September 2024	October 2024
	-	-	January 2025 – May 2025	June 2025	-	-
Action Plan for 2025–2027	January 2026 – March 2026	April 2026	-	-	-	-
	January 2027 – March 2027	April 2027	-	-	May 2027 – September 2027	October 2027
	-	-	January 2028 – May 2028	June 2028	-	-
Action Plan for 2028–2030	January 2029 – March 2029	April 2029	-	-	-	-
	January 2030 – March 2030	April 2030	-	-	-	-
	-	-	January 2031 – May 2031	June 2031	-	-
Final impact evaluations	Preparation: July 2031 – November 2031			Submission to the MoH management for approval: December 2031		

Source: own preparation

For the purpose of monitoring and evaluating the implementation of the Action Plans and the NOPL CR 2030, **the indicator system** (see the individual objective cards above) **will be evaluated**, monitoring the fulfilment of individual specific objectives as well as the overall vision of the NOPL CR 2030. The indicators primarily monitor whether the strategy is being implemented in the intended direction and whether the intended changes are taking place in the environment. For the level of monitoring the fulfilment of the strategic objectives, the so-called basic indicators were set with the initial and target values listed in the following table. In many cases, the results of implementation will only become apparent over time and should therefore not be viewed dogmatically.

Table 3: Key indicators for monitoring the fulfilment of strategic objectives

Strategic Objective	Indicator	Detailed definition and unit	Initial value	Target state (2030)	Monitored at strategy document level
SO 1 The effectiveness of all phases of prevention is increased and cancer is prevented	Proportion of girls aged 13 years vaccinated against the human papillomavirus (HPV)	%	63.9% (2019)	90%	Europe's Beating Cancer Plan
	Coverage of the target population by colorectal cancer screening	%	29.5% (2019)	60%	National Recovery Plan
	Mammography screening 58.7% (2019); cervical screening 57.1% (2019); blanket lung cancer screening (from 2022)	%	58.7% (2019); 57.1% (2019); 0% (starting from 2022)	65%	
	Percentage of patients meeting criteria (selected diagnoses) who are followed up in accordance with the relevant recommendation (according to the physician performing dispensarisation) ⁱ	%	N/A	N/A	
SO 2 Patient-centred care leads to the highest possible quality of life during the illness, after curing and in the terminal phase	Number of beds in long-term and follow-up care	Number of beds in long-term care per 1000 inhabitants	2.7 (2017)	3.3	Health 2030
	Number of mobile specialised palliative care providers	Number	N/A	42	-
	Proportion of CCCs with a functioning patient council	%	N/A	100%	-

ⁱ The indicator in the implementation plan will be further elaborated in the area of tertiary prevention into a set of a number of sub-indicators in line with the trend, e.g. proportion of cases of additional primary cancers detected at stage 3; focus on the most common cancer, etc., with regard to the type of workplace, i.e. HOC, CCC, outpatient specialist, general practitioner, etc. In summary, it is not possible to relevantly define at this level of generality.

Strategic Objective	Indicator	Detailed definition and unit	Initial value	Target state (2030)	Monitored at strategy document level
SO The coordination of the entire cancer system is modern, efficient, and meets the needs of care providers and patients	Proportion of cancer diagnoses with national templates of recommended patient pathways developed by the system following clinical guidelines/EBM recommendations	%	0%	80%	-
	Proportion of patients who were treated for the first time for a malignant tumour in a CCC in a given year and had a multidisciplinary team consultation reported	%	55.7% (2020)	80%	-
	Number of regions with a health plan containing the implementation of the cancer plan with a focus on regional needs	Number	0	14	-
SO 4 The fight against cancer is conducted to a high standard, in line with advances in science and new technologies	Number of graduates of specialisation training in oncology and haematology for general nurses and paediatric nurses	Number	0	40	-
	Proportion of patients from the Karlovy Vary Region treated for solid MT only outside the CCC	%	56.7% (aggregated over the period 2016–2020) ⁱ	30%	-
	Reduce the incidence of late-stage cancers of the breast, colon, rectum, cervix	%	See Annexe 1, slides 59, 60, 61, 62, 63, 64	5%	-
	National Cancer Registry fully linked to the electronic reporting of records from hospital information systems	Number	0	1	-
	Malignant tumour mortality ⁱⁱ	Deaths per 100 000 inhabitants	258 (2017)	240	Health 2030

ⁱ The current % share in the Czech Republic is 31.7%.

ⁱⁱ Calculated for all cancer diagnoses, the numerical setting corresponds to trends from the National Cancer Registry data.

3.D Preconditions for successful implementation of the NOPL CR 2030

This chapter includes a list of the most important assumptions for the implementation of the NOPL CR 2030. These are listed below and represent the circumstances that should be maintained or created in order for the NOPL CR 2030 to be successfully implemented as a whole.

1. Political will to implement the NOPL CR 2030
2. Pushing through the necessary legislative changes in the legislative process
3. Ensuring sufficient financial and personnel coverage of the NOPL CR 2030
4. Generation of quality outputs influencing the achievement of the objectives of the NOPL PČR 2030
5. Willingness of individual stakeholders to change
6. General interests are superior to the interests of individual ministries and interest groups
7. Intensive communication to ensure support and high acceptance of change

3.E Risk Management

The implementation of the NOPL CR 2030 also includes a risk management process. Within each Action Plan, a **Risk Register** is prepared to provide an overview of all significant risks associated with the implementation of the NOPL CR 2030. The risk register is differentiated according to the risk significance as the product of the probability of occurrence and the impact of the risk.ⁱ For each risk, a description of the implementation of measures to reduce its significance is also provided.

Implementation takes place in a constantly changing environment, so the Risk Register needs to be continuously updated at **least once a year as part of the annual or overall evaluation of the Action Plans**. It always includes an evaluation of the implementation of corrective measures taken during the year.

The Risk Register is discussed as part of the Annual or Overall Action Plan Evaluation by the NCI NOPL. This is subsequently approved by the management of the Ministry of Health.

During implementation, proposed corrective actions are implemented by the risk owners. Risk management is a continuous process, therefore, if during the year a critical risk (i.e., a risk with a level of significance in the range of 15–25) is identified by an entity involved in the implementation, this entity is obliged to inform the NOPL 2030 Coordinator and the NCI NOPL about it..

3.F Cooperation and communication

The **Communication Plan** is also key for the implementation of the proposed NOPL CR 2030. The Communication Plan **sets the method of communication about the implementation of the strategic document, i.e., about the implementation of the set of objectives through the achievement of specific outputs and results in relation to the target groups of communication. In the case of the NOPL CR 2030, these are other ministries, regions, health insurance companies, educational institutions and especially the professional and**

ⁱ Both the impact and the likelihood of risks were rated on a five-point scale, with 1 representing a low impact or very low likelihood and 5 representing a high impact or very high likelihood. The observed values were averaged. The product of the average probability value and the average impact value is used to derive the significance of the risk, which can range from 1 to 25. According to the result of the assessment, the risks were divided into three groups according to their significance:

- very significant risk (15–25);
- medium risk (7–14.99);
- low risk (1–6.99).

general public. Communication in relation to target groups should be truthful, as effective as possible and use modern means of communication.

The implementation of the Communication Plan is the responsibility of the NOPL CR 2030 Coordinator in cooperation with the Press Department of the Ministry of Health. The NCI is also informed of any significant communication activities carried out.

The communication plan is regularly updated (once a year as part of the annual or overall evaluation of the respective Action Plan), the update is submitted for discussion to the NCI and subsequently for approval by the MoH management.

The following Communication Plan is set out as a framework:

INFORMING TARGET GROUPS ABOUT THE APPROVAL OF THE NOPL 2030 AND ITS IMPLEMENTATION ACTION PLAN FOR 2022–2023

CONTENTS	<ul style="list-style-type: none"> • reasons for the creation of the NOPL CR 2030 and the Action Plan 2022–2024 • vision and objectives of the NOPL CR 2030 • key sub-objectives • expected outputs, results and benefits
SCHEDULE	<ul style="list-style-type: none"> • after the government approval of the NOPL CR 2030 and the Action Plan 2022–2024 by the management of the MoH
FORM	<ul style="list-style-type: none"> • articles in professional journals • information on the website of the Ministry of Health, or other relevant websites • presentation of the NOPL CR 2030 at relevant working platforms, relevant Councils of the Government, etc.

INFORMING TARGET GROUPS ABOUT THE PREPARATION AND APPROVAL OF ACTION PLANS FOR THE NEXT PERIOD

CONTENTS	<ul style="list-style-type: none"> • reasons for the creation of the Action Plan • key measures and activities implemented on the basis of the previous Action Plan • expected outputs and results
SCHEDULE	<ul style="list-style-type: none"> • before the Action Plan comes into force
FORM	<ul style="list-style-type: none"> • articles in professional journals • information on the website of the Ministry of Health, or other relevant websites • presentation of the Action Plans at relevant working platforms, conferences, relevant Councils of Government, etc.

INFORMING TARGET GROUPS ABOUT KEY OUTPUTS AND RESULTS OF THE IMPLEMENTATION OF THE NOPL CR 2030 AND INDIVIDUAL ACTION PLANS

CONTENTS	<ul style="list-style-type: none"> • achieved outputs or results of the NOPL CR 2030 • annual and overall evaluation of individual Action Plans
SCHEDULE	<ul style="list-style-type: none"> • continuously during the entire period of validity of the NOPL CR 2030
FORM	<ul style="list-style-type: none"> • articles in professional journals • information on the website of the Ministry of Health or other relevant websites and through newsletters • presentation of the outputs and results of the NOPL CR 2030 at relevant working platforms, conferences and other platforms • presentation on social media (Twitter, Facebook)

3.G Estimated financial requirements – possible sources of funding

In order to implement the NOPL CR 2030 in the form of individual Action Plans, it is crucial to ensure adequate personnel and financial resources.

The financial complexity of the implementation of the NOPL 2030, including all strategic objectives in the above scope, was estimated at approx. 18 billion. **A more detailed specification of the financial requirements for implementation will be part of the individual follow-up Action Plans and the funds for their implementation will be reflected in the budgets of the chapters concerned.**

National resources will contribute to the financing of individual activities as well as funds from European instruments, where the National Recovery Plan should be the dominant source. This is Component 5.1 Excellence in research and development in priority areas of public interest in the health sector, under the Ministry of Education, Youth and Sports. Component 6.2 of the National Plan for Strengthening Cancer Prevention and Care under the Ministry of Health is entirely focused on the implementation of the objectives of the NOPL CR 2030. In terms of funds, it offers about CZK 10.3 billion. Other investment funds are offered by the Integrated Regional Operational Programme 2021–2027 (Specific Objective 4.3) managed by the Ministry of Regional Development. Systemic projects of a non-investment nature which can, however, substantially drive changes in the relevant areas, can be financed from the Operational Programme Employment Plus (Specific Objective 2.3), whose Managing Authority is the Ministry of Labour and Social Affairs.

List of Annexes

ANNEXE 1 – Analytical section of the NOPL CR 2030

ANNEXE 2 – Linkages between the objectives of the NOPL CR 2030 and relevant strategic documents