



Crane

European Network
of Comprehensive
Cancer Centres

**Network of Comprehensive Cancer Centres:
Preparatory activities on creation
of National Comprehensive Cancer Centres
and EU Networking (Crane) Joint Action**

FINAL LAYMAN REPORT

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Foreword

Europe's Beating Cancer Plan (EBCP) adopted in 2021 makes an important milestone in European health policy. It is the first document at the level of the European Union that aims at reducing inequalities and disparities in cancer and in quality of cancer care. This is to be achieved through collaborative efforts of all Member States in joining forces to overcome the present shortcomings in prevention, care and survivorship.

Joint Action CraNE (JA CraNE) has been developed based on Flagship 5, which stipulates that an EU Network of Comprehensive Cancer Centres (CCCs) bringing together national CCCs is to be established and that a CCC should be established in every Member State. JA CraNE was faced with an important challenge, which was accepted by 20 Member States and Norway.

JA CraNE has been structured in a way to prepare all the necessary preconditions for the start of the EU Network of CCCs by the deadline set by EBCP. It included 4 core Work Packages (WPs) dealing with the key contextual concepts and their contents as well as the standard joint 4 WPs. Work Package 4 on Sustainability was designed in a particular way that will represent the fil rouge to the next project JA EUNetCCC.

The present Foreword only introduces some of the key topics and activities of JA CraNE and its workpackages, which will then further and in more detail be elaborated through the next sections of this report.

Work Package 5 dealt with the Governance and Organisational structure of the future EUNetCCC. As a first step, a consensual definition of a Comprehensive Cancer Centre (CCC) has been agreed upon. This was followed up by a lengthy discussion on the Governance and on the admission criteria for the EUNetCCC. Eventually, a compromise solution was chosen as it encompasses building on the existing certification mechanisms as used and provided for by OECD and DKH – Deutsche Krebshilfe. The initial membership will thus be secured for all existing certified CCCs as per these two mechanisms until the expiry date of the respective certificates. Membership will provisionally be granted also to all those Member States and their Competent Authorities (CAs) where no CCC has been certified yet. Governance of the EUNetCCC will include four bodies with different responsibilities, where adequate voice for the MS representatives has been secured through the MS Board, which will also participate in the decision-making processes.

Work Package 6 was exploring the links between CCCs and CCCNs, the latter having been developed through different JAs over the last decade. Furthermore, this WP developed Sets of



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Standards for CCCNs as well as a Patient Pathway for Lung Cancer (following up on the activities laid out by JA iPAAC). Two CCCNs for lung cancer have been established and certified internally by the project, namely one in Wroclaw and the other one in Luxembourg. CCCNs may be an important bridging tool in order to connect CCCs to the different national and regional setups, whenever these might be a preferred policy option.

Work Package 7 had as its mission the mapping the features of the existing and potential CCCs in Europe as well as the development of sets of standards for CCCs, which would then serve both for the review of the existing certification schemes as well as for the certification of existing and new CCCs through a mechanism guided by the EUNetCCC. This inclusive and consensual process included all the relevant stakeholders in the EU and provided for a broad space for the mapping of the future landscape of CCCs, considering the various settings as well as several specifics underlined by different MSs. Sets of standards were produced, which will then be implemented in the future JA EUNetCCC.

Work Package 8 was dealing with the mapping of the existing cancer institutional networking setups around CCCs, including their structure, governance, financing and responsibilities. This was an important input for both, WP5 and WP6 in their elaboration of the proposed solutions. Three other important topics have been elaborated in this WP, namely the implementation of the pathways through cancer networks, impact of networking research and finally, models and good practices in survivorship and return to work.

Work Package 4 proposed two key deliverables – one is the Maturity Model, and the other one is Blueprint. The former should serve as a self-assessment tool for new and aspiring CCCs and should be seen as a dynamic document, which will be further developed and elaborated with the development of CCCs within the network. Blueprint should serve as a tool building on the experiences and deliverables of both, JA iPAAC and JA CraNE and provide for the continuity in all those solutions, which will be used to support the EUNetCCC.

We believe that we have comprehensively addressed the most important aspects and challenges of the setting up of the EUNetCCC, which will be a collaborating network of 31 countries. Obviously, the ‘proof lies in the pudding’ as they and the future work on all the elements presented here will have to focus on the challenges, barriers and successes of the proposed solutions. All of these will be elaborated and regularly discussed by the bodies of the future EUNetCCC, which will contribute to two of the most important goals of EBCP – to the reduction of the inequalities and disparities in cancer care and cancer control in Europe and in raising the bar for quality of cancer care across the EU.

Executive Summary

The “Network of Comprehensive Cancer Centres: Preparatory activities on creation of National Comprehensive Cancer Centres and EU Networking” Joint Action - CraNE JA (<https://crane4health.eu/>) was a project that derived from the European Beating Cancer Plan, a commitment of the European Commission for equal access to affordable preventive and curable high-quality cancer care across Europe. It was jointly financed by the participating Member States and the European Health and Digital Executive Agency (HaDEA).

According to the Europe’s Beating Cancer Plan (Flagship No5), by 2025 the European Commission will establish an EU Network linking recognized National Comprehensive Cancer Centres (CCCs) in every Member State, in order to ensure that cancer patients across Europe will receive quality-assured diagnosis, care, as well as the latest innovative treatments and that 90% of eligible patients will have access to Comprehensive Cancer Centres by 2030. As Comprehensive Cancer Centres can be characterized Oncology Hospitals or Hospital Units which provide high-quality cancer care for the whole spectrum of curative treatments (those scientifically established and recommended) and diagnosis, training and education of health care professionals as well as extended research. In the light of these goals, CraNE project joined 46 Organizations from 25 European Countries with the main aim to create this EU network of CCCs by facilitating the integration of the already existing CCCs and supporting the MSs that still need to develop and certify such Centres.

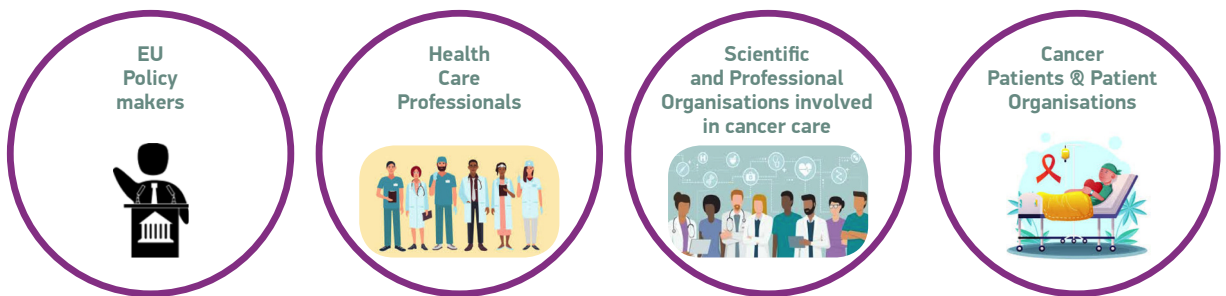
All the work of the JA was directed towards the achievement of the following objectives:

- establishment of a common understanding about the framework of criteria, governance and quality standards of the potential CCCs
- creation of a common direction among MSs for the development of the CCCs, including both standalone Centres as well as Centres which are part of hospitals or universities,
- identification of the current cancer patient pathways (in certain cancers in local and regional level) and assessment and analysis of their improvement through the process of networking,
- elimination of the disparities regarding cancer care across EU by creating an EU Network of National CCCs,
- link the development of Comprehensive Cancer Care Networks (CCCNs) with established Comprehensive Cancer Centres (CCCs) in EU Member States,
- sustainability of the outputs of the JA in cancer care structures in all MSs.

The CraNE JA is the continuation of the European Commission’s efforts to achieve high standards in cancer care in all the European MSs through cancer control JAs. After the previous CanCon JA, which aimed to the quality improvement of cancer care in MSs and the iPAAC JA, which created the Roadmap on Implementation and Sustainability of Cancer Control Actions, CraNE JA moves towards to the next step of the realization of the establishment of Comprehensive Cancer Centres in EU MSs, by preparing all the necessary preconditions (administrative, professional, high-quality performance) in order to create an EU Network which will ensure equal access to cancer care for all European citizens.

This comprehensive view on cancer care –as expressed in this JA– focusing on the entire cancer disease pathway from prevention to survivorship, is not only making cancer a shared scientific and operational priority, but also a whole-of-society effort.

Target Groups



Structure

1. **Coordination** - National Institute of Public Health, **Slovenia**
 2. **Dissemination** - 1st Regional Healthcare Authority of Attica, **Greece**
 3. **Evaluation of the results** - Oncology Institute Ion Chiricuta, **Romania**
 4. **Sustainability** - Sciensano, **Belgium** & National Institute of Public Health, **Poland**
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| <p>5. Composition, Governance and Functioning of EU Network of Comprehensive Cancer Centres
Alliance Against Cancer, Italy</p> | <p>6. High-quality Cancer Care in Comprehensive Cancer Care Networks
German Cancer Society, Germany</p> | <p>7. Framework and Criteria for the Comprehensive Cancer Centres' implementation
French National Cancer Institute, France & Oslo University Hospital, Norway</p> | <p>8. Equitable access to high-quality cancer care and research
Catalan Institute of Oncology, Spain</p> |
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Outputs

Composition, Governance and Functioning of EU Network of Comprehensive Cancer Centres

<https://crane4health.eu/wp5>

To establish the EU Network of Comprehensive Cancer Centres (CCCs), our work focused on three key goals:

1. Defining the essential elements of an inclusive EU Network of CCCs that promotes collaboration and accelerates the adoption of high-quality cancer care and research across all Member States.
2. Developing governance mechanisms that ensure the effective operation and long-term sustainability of the Network.
3. Proposing functions and networking activities aimed at continuously improving cancer care and research throughout the EU.

First, we identified existing and certified Comprehensive Cancer Centres in the EU, which included 47 CCCs certified by OEIC and DKH. In addition, we worked to find solutions that could enable all countries, including those without CCCs, to participate in the Network. This approach ensures that every Member State has the opportunity to access the benefits of the Network.

Second, to ensure the smooth operation of the Network, we developed a governance model that defines key roles, responsibilities and decision-making processes. Through collaboration with project partners, we explored three governance models: Clinical and Research Centered, Policy Centered, and the Mixed Approach. The Mixed Approach, which balances decision-making power between Network members and Member States, was chosen as the most inclusive and effective for fostering collaboration while representing diverse perspectives.

Finally, the success of the EU Network of CCCs depends on strengthening collaboration both within the Network and with other EU initiatives and stakeholders. We developed collaborative activities for members, identified synergies with other EU cancer initiatives and outlined specific ways the Network could engage with them. Additionally, we identified key stakeholders, assessed their potential roles and interests and created strategies for engaging them in the Network's growth and evolution.

High-quality Cancer Care in Comprehensive Cancer Care Networks

<https://crane4health.eu/wp6>

One of the primary objectives of the JA, corresponding to the European Beating Cancer Plan, was to give the opportunity to all cancer patients, regardless of the stage of their disease, to have equal access to a high-quality care that covers all the steps of the oncology pathway, from early detection and diagnosis to treatment and care, survivorship and palliative care. To this direction, the previous CanCon and iPAAC JAs developed the theoretical framework (CanCon) and implemented the model of Comprehensive Cancer Care Networks (CCCNs) for colorectal and pancreatic cancer (iPAAC). A CCCN consists of multiple units, which belong to different institutions dealing with the whole spectrum of oncology, namely prevention, diagnosis, treatment, follow-up, rehabilitation, as well as supportive and palliative care. These units interact and consist of multidisciplinary teams, which have the responsibility of the continuum of care of cancer patients with a particular type of tumor.

With CraNE JA we updated the definition of the CCCNs and we aimed at further developing the access and availability of comprehensive high-quality care in CCCNs to all Member States (MSs) and aligning the high standards in cancer care for all quality assured institutions, defining at the same time the interfaces between CCCs and CCCNs (research and care).

Using the tools developed in iPAAC JA, we expanded the tumor-specific approach to lung cancer by developing set of standards and quality indicators for lung cancer CCCNs and updating the European Framework for the certification of CCCNs.

Recognizing the training gap for the healthcare professionals of the CCCNs, we gathered feedback from different pilot sites and task members, resulting in identifying the training needs and developing a training manual for setting up CCCNs.

In the continuum of the quality improvement process and highlighting the role of the patient-centered care, we used systematic review and we surveyed on patient centeredness in CCCN that resulted in the Lung Cancer patient pathway template for CCCNs, with detailed steps in every stage of the cancer care.

Two pilot sites participated in the set-up of CCCNs for Lung Cancer from Poland and Luxembourg, implementing all developed materials from Work Package 6 (WP6) of CraNE JA in real-life setting. Both sites after being peer reviewed by external auditors, it was concluded that the two pilot sites have very successfully set up a CCCN and implemented all requirements.

Framework and Criteria for the Comprehensive Cancer Centres' implementation

<https://crane4health.eu/wp7>

One of the initiatives of CraNE JA was to create a framework to establish the European Network of Comprehensive Cancer Centres, considering the diversity of Member States' health-care systems, in order to ensure that these cancer centres will prove sustainable. This would promote a common European approach to excellence in cancer care and set the principles of continuous quality improvement in healthcare systems and solidarity among Member States.

The concept of the EU Network focuses in “comprehensiveness”, encompassing the whole route of cancer journey, the continuum of research/care, including multiple tumor types and operating under a structured governance model.

The primary goal of CraNE JA was to establish the criteria and standards for a cancer center to become a CCC. In other words, we worked on setting the framework for the development and implementation of CCCs, which will form the basis of the creation of the EU Network of CCCs. The set of criteria and standards for CCCs fulfills the concept of comprehensiveness and covers all aspects.

The certification of a potential CCC is a dynamic process with follow up for continuous improvement, tailored to each centre, and is designed to ensure that CCCs achieve and maintain the highest standards of cancer care.

Equitable access to high-quality cancer care and research

<https://crane4health.eu/wp8>

Throughout Europe, Comprehensive Cancer Centres (where these have been developed), do not operate as one body isolated from other cancer services of the health system and sometimes CCCs themselves result from an aggregation of different institutions. Regarding its regional or national integration there is a variety of institutions that act as satellites to the CCCs, providing a wide range of cancer services with the aim to improve the quality of care. The linkages between them and the CCCs are sometimes formal and create models of networking, which we studied during CraNE JA. It seems that there is a diversity of approaches, but it is very often in EU health systems that these networks build around CCCs. In addition, we found that in many cases the CCCs play the role of the

broker among all participating institutions (beyond the role of health authorities), while at the same time they remain the key health care carrier for cancer patients.

In the framework of the networking between cancer hospitals/units as described above and the complexity of the exchange of services, it has been implemented a tool called Integrated Care Pathway (ICP) for a specific type of cancer, in this case lung cancer. This tool served as a vehicle to support the management of the care process for lung cancer patients, giving details and structured guidance in each phase of their care, throughout their cancer journey. Our findings indicate that the role of ICPs is essential in facilitating the referral process for patients within the multidisciplinary team and in strategizing the cooperation between all the participating organizations, including patients. In the ICP, we also included the integration of the participation of the most innovative approach in oncology, the precision oncology, which means that doctors choose cancer treatments based on the DNA signature of the patient's tumor. In this way, research gets into clinical practice, improving the quality of care.

One of the aspects of the organization of cancer care in real world is the assessment of the Return to Work (RTW) rate of cancer survivors, as data show that about a third of the 4.4 million people diagnosed with cancer in Europe per year are of working age (23-64 years old).

Although there is a lack of standardized definition of the RTW -which was a barrier in the evaluation of the results of our literature search- we analyzed the data of cancer survivors from 17 European countries, which showed that it should be taken into consideration the relation between all relevant patient/individual predictors (socioeconomic, therapy duration, beliefs, e.tc.) and the timepoints of every stage of their cancer journey. A better understanding of these predictors in relevance to the different timepoints can lead to an earlier intervention for return-to-work support. In this direction, it is essential for healthcare professionals to be updated about the legislation regarding the RTW in their country and provide a holistic counseling to their patients and for Member States to strengthen the role of social service counseling. These results can be used to born supportive measures for cancer survivors and identify those that are not returning to work due to their cancer history.

Sustainability

<https://crane4health.eu/wp4-sustainability/>

Epigrammatically, CraNE JA introduces the criteria and standards for Cancer Centres to be certified as CCCs, their joining process for the EU network of CCCs through structured governance models, the link with CCCNs and the accessibility and inclusion of real-life settings organizing cancer care. Considering the heterogeneity among organizations of cancer care in Europe and the need to discuss all the above aspects in order to meet the needs of each member state, we organized governmental boards, where representatives of EU Member States had the chance to discuss and report their concerns and needs.

In the framework of the endorsement of the sustainability of the outputs of the project, we created two important tools: The Maturity Model and the Blueprint. The Maturity Model was developed with the ambition to offer a self-assessment tool for centres and member states. With this tool we investigated the current situation of the centres regarding the standards required and set by the project (WP5,6,7,8) and identify their characteristics that can lead them to a successful transformation to members of an EU CCC network. The Blueprint serves to illustrate in a structured and cohesive way the results and the final recommendations of the core WPs. Both tools bridge CraNE JA with the upcoming EUnetCCC JA and with the aim to successfully establish an EU Network of CCCs in MS.

Partners Competent authorities

- Slovenia** (coordinator) National Institute of Public Health of the Republic of Slovenia (NIJZ)
- Austria** Austrian National Public Health Institute (GÖG)
- Belgium** Sciensano
- Bulgaria** University Specialized Hospital for Active Treatment in Oncology (USHATO)
- Croatia** Croatian Institute of Public Health (CIPH)
- Cyprus** Ministry of Health of the Republic of Cyprus (MOH)
- Czech Republic** Motol University Hospital (MUH)
- Estonia** Ministry of Social Affairs Republic of Estonia (MSAE)
- France** French National Cancer Institute (INCa)
- Germany** Federal Ministry of Health (BMG)
- Greece** 1st Regional Health Authority of Attica (1ST YPE)
- Hungary** National Institute of Oncology (OOI)
- Ireland** Department of Health (DOH)
- Italy** Alliance Against Cancer (ACC)
- Latvia** Riga East University Hospital (REUH)
- Lithuania** Ministry of Health of the Republic of Lithuania (SAM LT)
- Luxembourg** National Cancer Institute (INC)
- Malta** Ministry for Health – Government of Malta (MFH)
- Norway** Oslo University Hospital (OUS) - OECl (subcontractor)
- Poland** National Institute of Public Health (NIZP-PZH-PIB)
- Portugal** Ministry of Health of the Portuguese Republic (MS)
- Romania** Oncology Institute Ion Chiricuta (IOCN)
- Slovakia** National Cancer Institute (NOU)-National Oncology Institute (NOI)
- Spain** Catalan Institute of Oncology (ICO)
- Sweden** National Board of Health and Welfare (NBHW)

Partners Affiliated entities

- Belgium** Antwerp University Hospital (UZA)
- Estonia** University of Tartu (UT)
- France** UNICANCER
- France** Hospital Federation of France (FHF)
- France** National Institute of Health and Medical Research (INSERM)
- Germany** German Cancer Research Center (DKFZ)
- Germany** German Cancer Society (DKG)
- Germany** German Cancer Aid (DKH)
- Germany** TU Dresden (TUD)
- Greece** Agios Savvas General Anticancer Hospital of Athens (AGIOS SAVVAS)
- Greece** Laiko General Hospital of Athens (LGHA)
- Greece** Agia Sofia Children's Hospital (AGIA SOFIA)
- Greece** Andreas Syggros Hospital for Skin and Venereal Diseases (ANDREAS SYGGROS)
- Italy** Ministry of Health (MoH)
- Italy** Luigi Maria Monti Foundation (IDI-IRCCS)
- Lithuania** Hospital of Lithuanian University of Health Sciences Kauno Klinikos (LSMULKK)
- Lithuania** Vilnius University Hospital Santaros Klinikos (VULSK)
- Lithuania** National Cancer Institute (NCI)
- Luxembourg** Luxembourg Institute of Health (LIH)
- Slovenia** Institute of Oncology Ljubljana (OIL)
- Spain** Valdecilla Biomedical Research Institute (IDIVAL)



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