STREAMLINED **GER**IATRIC AND **ON**COLOGICAL EVALUATION BASED ON IC **TE**CHNOLOGY
FOR HOLISTIC PATIENT-ORIENTED HEALTHCARE MANAGEMENT
FOR OLDER MULTIMORBID PATIENTS

HORIZON 2020 PROGRAMME – TOPIC H2020-SC1-BHC-24-2020
Start date: 01/04/2021 - Duration: 60 months

D3.6: CARE PATHWAYS IN THE 3 TRIAL COUNTRIES

Lead Beneficiary: 8-BOC

Involved Beneficiaries: 1-UBx, 3-DIAK, 7-MyPL, 4-OUS, 5-UCD

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Deliverable Type	Report
Dissemination Level	Public
Due Date	2022-12-31 (M21)
Pages	30
Document version	V5.0
Project Acronym	GERONTE
Project Title	Streamlined **Ger**iatric and **On**cological evaluation based on IC **Te**chnology for holistic patient-oriented healthcare management for older multimorbid patients
Grant Agreement Number	945218
Project Coordinator	Université de Bordeaux Prof. Pierre SOUBEYRAN

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Disclaimer and acknowledgment

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History of Changes

Version	Date	Author	Description of change
V1.0	September	Ardito, Ferrara, Tozzi, Tarricone	Start draft
V2.0	22/12/22	Ardito, Ferrara, Tozzi, Tarricone	Finalization after completing interviews
V3.0	28/12/22	Ferrara, Ardito	Final review after sending the deliverable to all partners
V4.0	07/02/23	Ferrara, Ardito	Review after comments from the EU on first periodic reporting
V5.0	28/09/23	Ferrara, Tozzi, Tarricone	Update after interview with the last clinical site

Table of Content

Executive Summary

This document is aimed at assessing the current care pathways in the three trial countries involved in the GerOnTe project. This report corresponds to the deliverable D3.6, that is part of work-package 3 "Developing the methods for GerOnTe" which supports GERONTE objective 3: Develop socio-economic methods for evaluating the impacts of the implementation of the GERONTE intervention and its sub-objectives. This report, therefore, illustrates the as is care pathways (before the implementation of GERONTE) of older, multimorbid patients with cancer in the 16 trial sites in France, Belgium, and the Netherlands, from diagnosis to follow-up.

Methods and analysis. Semi-structured interviews were conducted in each trial site with key, relevant stakeholders, namely oncologists, geriatricians, APNs/nurses, and data managers. An interview outline was drafted and followed systematically to collect coherent responses across centres. All interviews were recorded and transcribed. Overall, 40interviews were conducted. Evidence of the interviews were processed under several dimensions, including but not limited to organizational context, health care professionals involved, multidisciplinarity, spaces and organization of the activities. The analyses highlighted high variability in the process of care for older, multimorbid patients with cancer as the dominant morbidity across countries and centres.

Ethics and dissemination. These interviews have been conducted as part of the Ancillary study (D4.3 and D4.4) that has been approved by the following institutions: 1) the Ethics Committee in France, the CPP (Committee for the Protection of Persons), under Réf. CPP: 2022-80; 2) the Federal Agency for Medicines and Health Products (FAMHP) in Belgium on 29/11/2022, under reference: CIV-22-06-039827; and the Medical Research Ethics Committees United (MEC-U) in the Netherlands on 11/11/2022, under reference: NL81897.100.22. Consent to record the interviews was requested and obtained verbally. The evidence from Task 3.5 described under this report will be disseminated in any relevant opportunity, including, but not limited to, conferences, webinars, and seminars.

Conclusions. The analysis of the as-is care pathway was instrumental to the later task of conducting an economic evaluation of the GerOnTe model and designing new care pathway for the management of multimorbid patients. The insights emerged from the interviews confirmed an initial hypothesis: high variability in resource use and related costs should be expected from the sites involved in the study. Indeed, the organizational context in which each trial site is embedded affects its operating conditions. Starting from this general statement, the evidence from the interviews highlighted that the delivery of patient care depends on a combination of at least three elements: a) the scope of the services offered by each clinical site within the care pathway; b) the relationships between health care professionals, including access to specialist knowledge; c) the tools available to ensure integration between the different professionals in the different stages of the care pathway. The evidence from the current work represents the first step of a larger assessment of the care pathway in the project that will ultimately be complemented with a later assessment of the evolution of the care pathways once the GerOnTe model will be implemented.

This Deliverable 3.6 was initially submitted at M21 and updated at M30 to complete the preliminary analysis of the care pathway in all clinical sites. D3.6 will be updated at M58 as part of Deliverable D3.7: Update on the care pathways in the 3 trial countries during GerOnTe implementation.

Deliverable work status

Deliverable	Completion status in %	Deviation	Data complete or to be updated
D3.6 Care pathways in the 3 trial countries	90%	See section "Attainment of the objectives and explanation of deviations"	90% complete – Planned updates at M58
Associated Deliverables	D4.3 "First study subject approvals package for FRONE" D4.4 "First study subject approvals package for TWOBE" D5.2 GerOnTe intervention's implementation and challenges D5.3 Economic evaluation of GerOnTe D5.4 Guidelines on the implementation of the GerOnTe model in different countries and healthcare settings D5.6 Policy paper on how to improve the management of older multimorbid patients		
Associated Objectives	03. Develop socio-economic methods for evaluating the impacts of the implementation of the GerOnTe intervention and its sub-objectives O5 Develop recommendations for the replication of GerOnTe best practices in all European health systems and its sub-objectives		

Description of deliverable

This deliverable describes the care pathways currently followed by older cancer patients with multi-morbidities in the trial sites, as described above.

This deliverable is connected to D4.3 "First study subject approvals package for FRONE" and D4.4 "First study subject approvals package for TWOBE". as the analysis of the care pathway is a central part of the Ancillary study of the clinical trial protocol. D3.6 is also connected to D5.2 GerOnTe intervention's implementation and challenges; D5.3 Economic evaluation of GerOnTe; D5.4 Guidelines on the implementation of the GerOnTe model in different countries and healthcare settings, and D5.6 Policy paper on how to improve the management of older multimorbid patients. In fact, proper knowledge of the as-is care pathway before the implementation of GerOnTe is instrumental not only in understanding all the cost categories to be accounted for when conducting the economic evaluation and how the clinical sites are organized but also in identifying the relevant changes in resource use, clinical practice, and processes once the GerOnTe model is implemented in practice. The analysis of the "as-is" represents the baseline for the subsequent analysis and description of the process of implementation of the intervention in the trial sites.

The deliverable is associated to O3 and O5 and more specifically with O3.1 Analyse the current care pathways for older multimorbid patients in the clinical trial's site and align the GerOnTe model with them. By reporting the evidence and insights from the interviews conducted, this deliverable sheds light on the care pathways currently followed by the trial sites with respect to the management of oncologic older patients with multimorbidity.

Attainment of the objectives and explanation of deviations

The objectives related to this deliverable have been achieved in full and as described in Annexe 1 (Description of the Action Part A) of the Grant Agreement N°945218. Two deviations should be explained.

1. This deliverable, D3.6, was initially due at M18 (September 2022), but its delivery has been postponed by three months, to December 2022 (M21), due to delays in the start of the trials. This deviation is linked to the delay in the identification and recruitments of the clinical sites, the finalization of the clinical trial protocol, and the commencement of the trial, which in turn results from the complexity and variance across the trial site jurisdictions, and in the classification of the trial. For this reason, we could not start interviewing the clinical sites before the administrative aspects of their involvement in the project had been sorted out. As a consequence, we had to postpone the interviews with the principal investigator in each clinical site and the relevant stakeholders that were initially planned for March-April 2022. Once the clinical trial protocols (D4.3 and D4.4) were finalized and submitted to relevant authorities (June 2022), to mitigate the impact of Task 3.5 deviation and avoid further delays we decided to start the interviews with the clinical sites that are also partners of the consortium (UBx, DIAK, KUL) and to plan all the interviews with the other clinical sites between October and December 2022. Consequently, Deliverable 3.6 due at M18 was postponed from M18 to M21.

2. This deliverable, D3.6, is updated at M30 because at M21 we were not able to complete all interviews for two main reasons: firstly, one of the clinical sites (, despite numerous attempts, was not available to reply to our questions before the trial started; secondly, because one of the clinical sites previously identified was substituted by another clinical site (Maasstad Ziekenhuis, Rotterdam).We were, therefore, able complete the interview with the last clinical site at M30, and subsequently resubmitted and updated D3.6 at M30, as indicated in the Technical Report.

Deviation in D3.6 timeline has no impact on other deliverables and tasks.

As already planned in the Grant Agreement an update of this Deliverable is also expected at M58

Justification for delay in deliverable submission

Compared to what initially scheduled in Annexe 1 (Description of the Action Part A) of the Grant Agreement N°945218, the objectives related to this deliverable have been achieved with three months delay, as pre-emptively communicated, in line with delays in the start of the trial. This deviation is linked to the delay in the identification and recruitment of the clinical sites, the finalization of the clinical trial protocol, and the commencement of the trial which in turn results from the complexity and variance across the trial site jurisdictions, and in the classification of the trial. Indeed, because the identification of the clinical site took more time and there were some delays in contracting the clinical sites for the trial, we could not start interviewing them before the administrative aspects of their involvement in the project had been sorted out. As a consequence, the activities related to Task 3.5 and the Deliverable 3.6 due at M18 was postponed from M18 to M21 and then updated at M30.

Data associated

Deliverable 3.6 can be found at https://doi.org/10.5281/zenodo.8398797

1. Introduction

1.1 GERONTE and its objectives

GERONTE is a 5-year research and innovation project (April 2021 to March 2026) funded by the European Union within the framework of the H2020 Research and Innovation programme, in response to the health societal challenge topic SC1-BHC-24-2020 “Healthcare interventions for the management of the elderly multimorbid patient”. The overall aim of GERONTE is to improve quality of life - defined as well-being on three levels: global health status, physical functioning, and social functioning- for older multimorbid patients, while reducing overall costs of care. To this end, GERONTE will co-design, test, and prepare for deployment an innovative cost-effective patient-centred holistic health management system, hereafter referred to as the GERONTE intervention. GERONTE intervention will rely on an ICT based application for real-time collection and integration of standardised clinical and home patient-reported data. GERONTE intervention will be demonstrated in the context of care of multimorbid patients having cancer as a dominant morbidity, and be adaptable to any other combination of morbidities.

The objectives of the GerOnTe project are the following:

O1: INFORMATION gather the stakeholders and data needed for patient-centred and multi-actor complex decision-making process and management

O2: **TOOLS** develop ICT tools for the GERONTE intervention to be implemented

O3: METHODS develop socio-economic methods for evaluating the impacts of the implementation of the GERONTE intervention

O4: **DEMONSTRATION** demonstrate in 16 study sites from three EU countries the feasibility and effectiveness of the GERONTE intervention

O5: **REPLICATION** develop recommendations for the replication of GERONTE best practices in all European health systems

O6: ENGAGEMENT engage all stakeholders by co-designing the GERONTE intervention

1.2 Rationale

The current work corresponds to deliverable D3.6.

D3.6 is the output of Task 3.5 “Analyse and align GerOnTe model with the existing care pathways at the local level”, which is part of work-package 3 which supports GERONTE objective 3 “Developing the methods for evaluating the impacts of the implementation of the GERONTE intervention” and WP5 “Develop recommendations for the replication of GerOnTe best practices in all European health systems and its sub-objectives”. This deliverable has been updated at M30 to complete the analysis of the care pathway before the implementation of GerOnTe, and it will be further updated during GerOnTe implementation at M58 as part of Deliverable D3.7.

Regarding WP3, this task is closely linked to task 3.4 because the QKPIs will be detailed and linked to the various phases of the care pathway. With respect to WP4, this task is highly dependent on the

identification of the clinical sites and the coordination of the clinical trials (task 4.1). Any changes in clinical site identification directly impact the activities conducted in this task, as well as D4.3 and D4.4, as the analysis of the care pathway is an integral part of the ancillary study of the clinical trial. With respect to WP5, this task is highly intertwined with task 5.2 which involves conducting a realistic evaluation to evaluate and document implementation. It is also intertwined with task 5.3, focused on the economic evaluation of the GerOnTe model, and task 5.5, as the new GerOnTe model of care may necessitate changes to existing care pathways.

In a broader context, care pathways serve as evidence-based tool that supports the planning and management of the care process for individual patients with complex, long-term conditions. These pathways define care phases, set goals and milestones, and promote shared decision-making between patients and multidisciplinary care teams within a comprehensive network of care providers. Research indicates that care pathways are associated with reduced in-hospital errors/complications, improved documentation, and positive impacts on clinical outcomes, cost reduction, patient satisfaction, teamwork, and process outcomes. Considering these premises, care pathways have the potential of enhancing cross-setting collaboration and rebalancing care both within hospital and between hospitals (‘Center for Policy on Ageing. The Effectiveness of Care Pathways in Health and Social Care’ 2014). Given these advantages, assessing the as-is care pathway for older, multimorbid cancer patients is a preliminary but essential step. It allows for un understanding of current practices and paves the way for the acceptance and adoption of new processes in the delivery of specific healthcare services.

1.3 Relationship with other deliverables

This document complements the following deliverables and internal documents:

- D3.1. Literature review on the cost-effectiveness of healthcare services for older multimorbid patients, which describes existing methods and models suitable for capturing the main potential of GerOnTe and identifies distinctive features of service and delivery interventions that present challenges for the economic analysis of the GerOnTe model.
- D3.2 Definition of the protocol for economic evaluation of GerOnTe, which outlines how to conduct the economic evaluation of the GerOnTe project and identifies the required resources.
- D3.3 Definition of a dashboard of indicators for the clinical trials, that is intended to finalize and consolidate the initial list of QKPIs identified in the annexe on essential information for clinical studies for the evaluation of RCT FRONE and TWOBE.
- D4.3. First study subject approvals package for FRONE, which includes the final version of the FRONE trial protocol.
- D4.4. First study subject approvals package for TWOBE, which includes the final version of the TWOBE trial protocol.

1.4 Ethical Approval

The interviews have been conducted as part of the Ancillary study that has been approved by 1) the Ethics Committee in France, the CPP (Committee for the Protection of Persons), under Réf. CPP: 2022-80; 2) the Federal Agency for Medicines and Health Products (FAMHP) in Belgium on 29/11/2022, under reference: CIV-22-06-039827; and the Medical Research Ethics Committees United (MEC-U) in the Netherlands on 11/11/2022, under reference: NL81897.100.22. Consent to record the interviews was requested and obtained verbally to each interviewee.

2. Methodology

2.1 Care pathway analysis

2.1.1 Theoretical background

Care pathways, also known as clinical pathways, critical pathways, care paths, integrated care pathways, case management plans, clinical care pathways or care maps, are used to systematically plan and follow up a focused patient or client care programme ('European Pathway Association', n.d.).

According to Richter and colleagues, patient pathways are "[…] an evidence-based tool that supports the planning and management of the care process of individual patients within a group of similar patients with complex, long-term conditions. The care pathway details the phases of care, guiding the whole journey a patient takes by defining goals and milestones, and supports mutual decision-making by the patient and his/her multidisciplinary care team collaborating in a comprehensive network of care providers" (Richter, Hickmann, and Schlieter 2021).

While the term "patient pathway" is often used regarding optimising processes and aligning information and communication flows, a common terminological basis is not provided. Furthermore, several related terms can be found in the literature, including for example care pathway, clinical pathway, patient journey, treatment pathway, and care map ('The IPAAC Patient Pathway Guide' 2021).

Another common definition is that of integrated care pathways (ICPs). ICPs cover the entire care journey in a network of care providers for a specific patient type and across the continuum of care. ICPs aim to state and align functional, biological, and patient-related goals of care, focusing on patient group and individual patient planning and management for complex long-term conditions, describing and sequencing key components of care to guide care provision across inpatient and outpatient settings. They are developed, implemented, and used by a multidisciplinary team, including professional and informal caregivers and patients themselves. ICPs are evidence-based and also draw from expert experiences. They are typically used for patient navigation, information, documentation, monitoring and evaluation purposes. Throughout the deliverable, we adopt this definition of care pathway.

Irrespective of the definition, care pathway analysis is a step in what is referred to as clinical process redesign. Clinical process redesign applies process redesign and change management principles to healthcare. The method focuses on the patient journey as the primary improvement locus, employing process mapping to identify value-adding steps and eliminate non-value-adding ones to enhance flow and reduce delays in accessing emergency and elective care. Clinicians, managers, patients, and caregivers collaborate in this process, leading to improvements in healthcare delivery (Ben-Tovim et al. 2008). In this perspective, the redesign of care pathways as primary processes aims to improve care quality.

According to Busse and colleagues (2019), at least six dimensions are related to improving healthcare quality, namely:

1. **Efficacy** is the capacity of a given intervention (e.g., drug, medical devise or service) to improve health outcomes for a given group of patients.

2. **Efficiency**, is concerned with the relation between resource inputs (costs, including labour, capital, or equipment) and either intermediate outputs (e.g., numbers of patients treated, waiting time, etc.) or final health outcomes (e.g., lives saved, life years gained, quality adjusted life years (QALYs)). Allocative efficiency examines whether the correct mix of health services is funded or provided, so that at a given level of total expenditure, health outcomes are maximized, while technical efficiency examines how to maximize the outputs given an existing level of inputs.

3. **Continuity of care**, namely ensuring continuity of physician-patient relationship (e.g., visit to the usual physician), or care through guideline-based clinical pathways.

4. **Information sharing**, namely sharing data and information among doctors, nurses, pharmacists and other health care providers involved in the care process to appropriately access and share patient information (through paper and electronic means) and to improve the speed, quality, and safety of patient care.

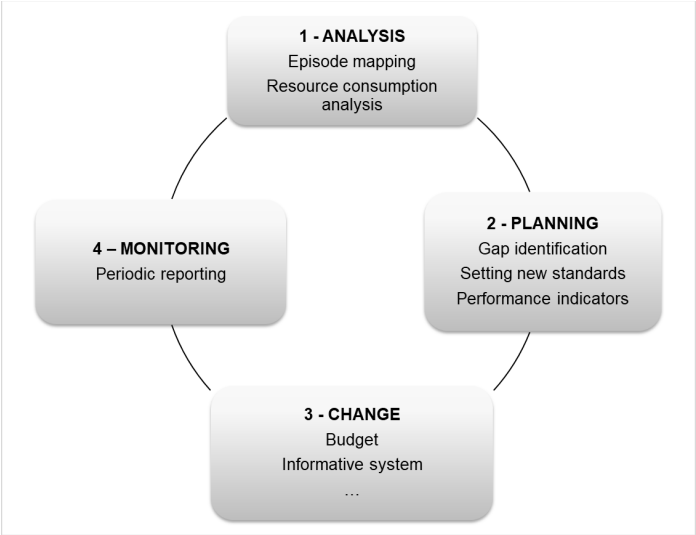
5. **Patient centeredness**, that is providing care that respects individual patient preferences, needs and values, with patient values guiding clinical decisions.

6. **Equity**, namely eliminating or reducing barriers to social and economic resources that affect an individual's health, such as expanding access to health care and championing policies and interventions that reduce harms and access barriers.

Various tools can be used to improve patient journeys, including clinical standards, organizational models based on professional consensus, demand management and stratification of clinical need, and information sharing and data management.

Given these theoretical premises, the analysis of the care pathway extends throughout the entire process of care, from initial identification to diagnosis, treatment, follow-up, and palliative care. It is structured around 4 phases as shown in Figure 1.

Figure 1. Consecutive phases of care pathway analysis



- In the first phase (Analyses), both quantitative and qualitative analyses of the care pathway are performed. Quantitative analysis involves understanding the volume of patients treated, which can be done with a direct method (i.e., asking departments and units how many patients have been treated), or with an indirect method (i.e., using claim data / administrative data). Qualitative assessments, often referred to as the "5W" questions (Who, what, when, why, where), investigate the professionals involved, the activities performed, the average time needed to conduct specific activities, the overall aims, and the settings involved.
- The second phase (Planning) is dedicated to identifying gaps and/or quality issues in the current delivery of care. Typical questions to address include: What aspects or tasks need improvement? How long does it take to complete specific activities? What is the average time to diagnosis, and is it acceptable? Are there any post-operative patterns that need require improvement? What about follow-up?
  During the Planning phase, a set of health indicators is also identified. These indicators are designed to summarize information about priority topics related to population health or health system performance. With this regard, key consideration include: Which indicators can be used to monitor the care pathway? What is relevant for patient care? Which indicators can be easily used to monitor the care provided?
- The third phase is related to Change management. Common questions addressed are: What can we do to improve the patient pathway? How can inappropriateness be reduced? What measures can enhance efficiency?
- The fourth phase, Monitoring, involves measuring key performance indicators (KPIs) by capturing specific data and converting it into useful metrics that can be measured and reported through easily digestible charts and dashboards. The output of this phase informs the analysis phase, as it is an iterative process that aims to constantly improve the quality of care.

The focus of the current work is on the first two phases, namely Analysis and identification of gaps.

2.1.2 Semi-structured interviews

Specifically, in the present work, the as-is care pathways of older, multi-morbid patients with cancer as dominant morbidity were investigated using the methodology of semi-structured interviews.

Semi-structured interviews are a qualitative research design that blends closed- and open-ended questions, often supplemented with follow-up "why" or "how" questions (Adams 2015).

For the purposes of this analysis, we contacted four types of stakeholders at each trial site: i) medical oncologist; ii) geriatrician; iii) nurse or advanced practice nurse (APN); iv) data expert. Medical oncologists or the geriatricians often served as the Principal Investigators (PI). Nurses/APNs typically accompany patients throughout the entire care pathway, serving as coordinators across professionals. Data experts were typically someone from the administrative department with knowledge of different data sources within the hospital (e.g., EMR, administrative databases), data integration, and the availability of health-related data. These stakeholder groups were selected based on the work conducted under WP1 and reported in D1.1.

The interviews were conducted remotely using commonly established teleconferencing tools (i.e., Microsoft Teams). Each interview was recorded after obtaining verbal agreement from the interviewees. The recordings were securely stored and later transcribed by the research team. A scheduling software (i.e., Calendly) was also used to facilitate the set-up phase. Specifically, the BOC

team reached out via e-mail to the PI of each centre using a standardized message containing a short overview of the interview's purpose and instructions for the next steps. Interviews were conducted between June2022 and September 2023.

Each interview had an approximate duration of 1 hour. The interview outline was carefully prepared in advance and shared with the interviewees. The interview outline is provided in the Appendix and followed what was approved as part of the Ancillary study of the trial.

2.2 Data analysis

This work investigated different dimensions. First, an overview of the stakeholders interviewed in each trial site is provided (Section 3.1). An organizational assessment follows, and detailed analyses are provided with a twofold perspective: from the clinical site as a whole to the oncology department (Section 3.2). Integration and coordination of care are then analysed by describing the relationships of the healthcare professionals involved in the care pathway of older, multimorbid patients with cancer as dominant morbidity (Section 3.3). Specifically, the coordination of care within the MDT (Section 3.3.1), with the general practitioner (Section 3.3.2), with other specialties within the hospital (Section 3.3.3), and with other professionals in other hospitals (Section 3.3.4) are outlined. Lastly, Section 3.4 illustrates the forms of specialization in the delivery of cancer care, with a focus on the care setting, the planning of the doctors' activities (i.e., management of the agenda), and the availability of dedicated professionals. All these dimensions are presented in the "Results" section of this report.

3. Results

3.1 Overview of the stakeholders interviewed

The interviews were successfully conducted in all the trial sites that agreed to participate in the project. It was possible to reach at least one relevant stakeholder per centre, typically the Principal Investigator (PI) for the centre. The role of the PI was typically held by either a medical oncologist or a geriatrician. Overall, 40 interviews were conducted40, specifically: 12 with geriatricians, 11 with oncologists, 10 with data experts, and 7 with APNs/nurses. A summary view of the stakeholders interviewed in each trial site is reported in Table 1.

Table 1. Summary of the stakeholders interviewed in each clinical site

Clinical site	Location	PI	Oncologist	Geriatrician	APN/Nurse	Data manager
FRONE						
Institute Bergonié	Bordeaux	Yes	Yes	Yes	Yes	Yes
CH de la Côte Basque	Bayonne	Yes	Yes	Yes	NA	Yes
CH Saint Malo	Saint Malo	Yes	Yes	Yes	Yes	Yes
CHU Nice	Nice	Yes		Yes*		
Centre Antoine Lacassagne (CAL)	Nice	Yes		Yes*		
Centre Azuréen de Cancérologie (CAC)	Mougins	Yes		Yes*		
CHD Vendée	La Roche-sur-Yon	Yes	Yes	Yes	Yes	Yes
Hôpital Tenon APHP	Paris	Yes	Yes		Yes	
TWOBE		Yes				
UZ Leuven	Leuven	Yes	Yes	Yes	Yes	Yes
UZ Brussel	Brussel	Yes	Yes	Yes	NA	Yes
AZ Groeninge	Kortrijk	Yes	Yes	Yes	Yes	Yes
AZ Sint Jan	Brugge	Yes	Yes	Yes		Yes
Diakonessenhuis	Utrecht	Yes	Yes	Yes	Yes	Yes
Leiden University Medical Centre	Leiden	Yes		Yes		
Catharina Ziekenhuis	Eindhoven	Yes		Yes	NA	Yes
Maasstad Ziekenhuis	Rotterdam	Yes		Yes		

Note: Empty cells indicate that the interview was not needed because the necessary information had already been collected elsewhere, or due to the lack of contact with a given professional. Cell with NA indicate that a given professional had not been appointed for the GerOnTe activities at the time of the interview, and/or was not available in a given centre.

* The Geriatrician interviewed was the same across the three centres.

3.2 Organizational assessment

The clinical sites involved in the GerOnTe trial vary significantly across several dimensions. Therefore, an organizational analysis of the clinical sites was conducted initially.

For each clinical site, the following dimensions were analysed:

- *Legal status*: This refers to the legal nature of the hospitals being studies (e.g., public vs. private).
- *Type of hospital*: Hospitals can be distinguished based on different levels of specialization in the healthcare services offered, such as hospitals can have a broader (i.e., general hospitals) or narrower focus (i.e., cancer centres).
- *Teaching hospitals*: some of the hospitals were also university hospitals (i.e., teaching hospitals).
- *Scope of services*: concerning cancer care, hospitals may either be able to provide any cancer-related treatment internally (e.g., surgery, radiotherapy) or rely on established referral processes and/or care networks for specific sub-sets of treatments and/or cancer types (e.g., lack of clinical expertise for surgical treatments for hepatocellular carcinomas).

Figure 2. Overview of the organizational characteristics of the clinical sites

Clinical site	Legal status	Type of hospital	Teaching hospital	Oncologic services	Other services
FRONE					
Institute Bergonié	Private Not for - profit hospital	Cancer centre	Yes	All major cancer treatment within the site	Other services for comorbidities provided outside the clinical site. A geriatrician visits 2/week; otherwise, unstructured interactions
CH de la Côte Basque	Public	General hospital	No	All major cancer treatments provided within the site	Available within the site more than 60 departments representing 40 specialties (pneumologist, gastroenterologist, geriatricians)
CH Saint Malo	Public	General hospital	No	Some cancer treatments (e.g., radiotherapy) and surgeries (e.g., thoracic) outside the hospital within the care network	Generic services for comorbidity management within the hospital
CHU Nice	Public	General hospital	Yes	All cancer treatments – network with other hospitals	All specialties within the different hospital sites
Centre Antoine Lacassagne (CAL)	Private not for profit	Cancer centre	Yes	Major cancer treatment and surgeries	Network with CHU Nice and south of France hospital group
Centre Azuréen de Cancérologie (CAC) – du Mugin	Private not for profit	Cancer centre	No	Chemotherapy, radiotherapy, well-being	Network with CHU Nice
CHD Vendée – La Roche sur Yon	Public	General hospital	No	Major cancer treatment	Generic services for comorbidity management within the hospital
Hôpital Tenon APHP – Paris	Public	General hospital	Yes	Any cancer service (they are a Group Hospitalier)	In the Group Hospitalier, some hospitals are specialized in geriatric care, others in acute cancer events or long-term care

Clinical site	Legal status	Type of hospital	Teaching hospital	Oncologic services	Other services
TWOBE					
UZ Leuven	Private Not for profit	University hospital	Yes	Major cancer treatments	Generic services for comorbidity management within the hospital
UZ Brussel	Private Not for profit	University hospital	Yes	All cancer treatments except for surgery for oesophageal cancer	Generic services for comorbidity management within the hospital (e.g., geriatricians)
AZ Groeninge - Kortrijk	Private Non for profit	General hospital	No	All cancer treatments except for pancreatic cancer	Generic services for comorbidity management within the hospital (e.g., cardiologists)
AZ Sint Jan - Brugge	Private Not for profit	General hospital	No	Major cancer treatments	Organ-specific specialists by cancer type and generic services for comorbidity management
Diakonessenhuis	Public	General hospital	Yes	Every cancer services	Every form of care from childhood to old age, except multiple trauma
Leiden University Medical Centre	Public	University hospital	Yes	All cancer services except for the small ones	Generic services for comorbidity management
Catharina Ziekenhuis - Eindhoven	Public	University hospital	Yes	Major cancer services	Generic services for comorbidity management
Maasstad Ziekenhuis	Public	University hospital	Yes	All cancer services	Generic services for comorbidity management within the hospital

In general, the interviews illustrate how, regardless of the organizational conditions, the centres successfully cover every phase of the care pathway (e.g., from diagnosis, to treatment, to follow-up), either by directly providing health services or by referring patients to other hospitals. Centres that internally offer health services throughout the entire care pathway can, at least in principle, address the full range of needs for older, multimorbid people with cancer. In contrast, centres that do not provide the "full package" of services have developed professional and organizational relationships with other centres to promptly redirect patients with specific needs to other access points in the supply chain.

The organizational context in which each trial site is embedded affects its operating conditions. Building upon this general observation, the evidence from the interviews highlighted that the delivery of patient care depends on a combination of at least four elements: a) the scope of the services offered by each clinical site within the care pathway; b) the relationships between health care professionals, including access to specialist knowledge; c) the tools available to ensure integration among different professionals at different stages of the care pathway.

a) **The organizational context influences the scope of services offered by the clinical site within the care pathway**. The organizational context orients the relationship between the oncologic department and other units/wards/departments within the hospital, leading to more or less structured processes for patient referral to other nodes in the supply network. Different models can be identified based on the type of centre (e.g., cancer centre vs. general hospital) and the resulting autonomy in delivering health care services.
On one hand, a range of professionals involved in multidisciplinary patient management (e.g., rehabilitation therapists, physiatrists or pulmonologists) may be engaged, thereby expanding the array of services offered. As such, the overall set of health care services offered to older, oncologic patients with multimorbidity may vary in scope, depending on the activities conducted "in-house" and on the collaborations and network with professionals from other departments and/or centres. Such collaborations may allow for the delivery of not only specialized oncologic services, but also multi-specialty consultations, depending on the evolving needs of patient at different stages of the pathway.
On the other hand, some centres may house crucial expertise for diagnosing and treating oncologic patients. In such cases, professionals involved in different stages of the pathway collaborate through multidisciplinary models (including MDT meetings – better specified later) or by sequentially organizing the patient's accesses to ad hoc specialist consultations. This model is typical of specialized cancer centres. These centres therefore directly provide highly specialized oncologic services, while other ancillary or complementary services are provided by specific disease-oriented professionals operating in other centres (e.g., the corresponding Bordeaux University Hospital Centre (CHU) for the Institute Bergonié).

b) **The organizational context influences the relationships among health care professionals.** Providing comprehensive care of older oncologic patients with multi-morbidities necessitates the organized interdependence of various professional profiles. Typically, the professional figures most frequently involved in the as-is care pathways, in addition to oncologists, include organ specialists (e.g., pulmonologist for lung cancer or gastroenterologist for colorectal cancer), physiotherapist/therapist, psycho-oncologists, physiatrist, nutritionist, ago-therapists, and anaesthesiologist.

c) **The organizational context affects the tools available to ensure integration among different professionals at various stages of the care pathway.** There are several tools that can be deployed to support integration efforts among different stakeholders:
   - *Physical-logistical integration*: This involves sharing equipment, spaces, assets, resources and technology.
   - *Professional and clinical integration*: This entails the development of common protocols and care pathway;
   - *Functional integration*: This relates to the use of common electronic medical records and information exchange.

   The predominant form of integration described in the interviews was physical-logistical integration, which occurs when equipment, space, resources and technology are shared. Physical-logistical integration can be facilitated by physical proximity and the sharing of common spaces (e.g., between oncology and geriatric departments).
   Furthermore, professional and clinical integration is achieved through the progressive sharing of protocols or guidelines, which define the content of services, the sequence of services, and mutual roles. Only a few structured forms of professional and clinical integration were observed, as the majority of the described collaborations appeared unstructured or not codified. Professional and clinical integration is realized through the sharing of intra-operating

unit protocols, the definition of shared pathways (similar to the one to be implemented with GerOnTe), and the establishment of professional networks.
Lastly, functional integration pertains to the availability of information and the sharing of information systems, medical records, and data. The degree of information exchange among departments, hospitals, and professionals varied significantly across the clinical sites interviewed, with significant country differences noted.

The referral of cancer patients can occur through various channels or access points. In general, elderly cancer patients with multi-morbidities can access the hospital through the following means:

- **General practitioner (GP)**: GPs can either directly contact oncologists/surgeons themselves, or recommend that the patient do so.
- **Other specialists within the hospital**: older patients with comorbidities often receive care from various specialties, and if any abnormalities are detected, other specialists (e.g., surgeons) may contact the oncologist.
- **Emergency room (ER)**: patients may visit the ER spontaneously if they experience symptoms
- **Screening programs**: For instance, women with breast cancer may come in after undergoing mammography as part of a national screening program.

The duration of first visits varies, and patients may arrive with scans or laboratory tests already completed. Additional complexity can arise from waiting times for certain scans or imaging tests within hospitals, which might lead patients to opt for these exams elsewhere.

3.3 Forms of integration and coordination of care

Integration of care amongst different specialties and settings of care, as well as the way coordination of care was pursued, were also assessed. Specifically, it was evaluated if the healthcare professionals involved in the care pathway of older, multimorbid cancer patients interacted with other professionals and, when they did, how the coordination was achieved. For instance, relationships between professionals could be structured according to protocols, or vice versa could be left to spontaneous, individual initiatives. Similarly, coordination of care could be achieved through integrated IT systems, or vice versa by reaching to other professionals via phone, depending on the personal network of contacts. Hereafter the most common types of relationship are discussed.

3.3.1 Multi-Disciplinary Team (MDT)

Multi-disciplinary teams (MDTs) were a key step of the care process in every clinical site interviewed. However, what is meant by a multidisciplinary approach may vary depending on the specific cancer type being discussed and on the organizational models in place. A preliminary distinction to be made is between multidisciplinary assessments in the presence of the patient (i.e., multidisciplinary evaluation) and multidisciplinary discussion between specialists without the patient. While the former was not common across the centres analysed, the latter was said to be conducted systematically and at least weekly. The multidisciplinary discussion within the Multidisciplinary team (MDT) results in a report showing the activities performed and the treatment/follow-up plan to be followed.

Typically, MDTs are organized either by cancer type (e.g., breast; lung; prostate; etc.), or by cancer clusters (e.g., gynaecological and breast cancer; head and neck, and cerebral cancer; etc.). MDTs typically meet on a weekly basis, although frequency may vary depending on volumes of activity of each specific cancer type. The oncologic team leads the meeting, although the inputs from different professionals are accounted for. In this regard, opinions from different specialties are collected either before the MDT meets, or by inviting different specialties to attend the MDT meeting itself.

MDTs are organized at the hospital level and are managed most likely by the oncologic department. In addition to representatives from the oncologic team, other professionals might attend, including geriatricians, GPs, or other professionals like nurses. However, attending MDT did not appear to be very common across all centres. GP were said to be invited to participate often, but that in practice they never attend. Following the Covid-19 pandemic, some centres continue to give the possibility to join the MDT meeting remotely (i.e., using common teleconference tools), allowing flexibility and efficient time management.

Lastly, in addition to hospital-level MDTs, observed in every hospital and every country, national-level MDTs are also held in the Netherlands. This second-layer-MDT is particularly relevant for complex cases that is appropriate to discuss at a higher level.

3.3.2 General practitioners (GPs)

General practitioners (GPs) were unanimously said to have a key role in the process of care of older, multimorbid patients with cancer as dominant morbidity, regardless of the country and of the trial site. As a matter of fact, GPs represent a relevant contact point for chronic patients, that does not change over time and who has a clear overview on the disease staging and evolution.

The interviews highlighted that, currently, GPs communicate with healthcare professionals within the hospitals mainly through IT, digital channels, such as phone calls, emails or dedicated “letters”, namely official encrypted communications sent via the hospital platforms. The latter are particularly common in the Netherlands. Apart from these forms of offline interactions, there does not seem to be a structured process to involve GPs in the treatment choices of the target patients being studied. Some centres said they sometimes invite GPs to attend the MDT, especially in the case of frail patients, although this hardly ever happens in practice. After the Covid-19 pandemic, alternative ways of attending MDTs were established (e.g., through video-conferencing tools) and made available also after the emergency. However, coordinating the schedule of different professionals seems to be difficult, especially considering the high number of MDTs meetings that are organized weekly and that prevent GPs to be able to attend each of them while running the regular clinic work.

Interestingly, some centres like the Catharina Ziekenhuis hospital in Eindoven stated that they engage with the GPs especially when the MDT agrees not to proceed with treatment. In such cases where the decision is not to treat, a letter is sent to the GPs, and the explanation for the course of action is reported. Other centres, like AZ Groeninge in Kortrijk, said that they typically do not have many exchanges with the GPs, unless the patients ask for a more stable interaction that would happen over the phone or via email anyways. Finally, the Leiden University Medical Center in Leiden emphasized the need to improve communication with GPs as a critical aspect of enhancing the quality of cancer care.

Overall, most of the professionals interviewed, especially medical oncologist and geriatricians recognize the importance to engage GPs more regularly in the process of care, although, at the current

stage, not-real-time communication seems not only preferable, but also the only viable type of communication.

3.3.3 Other healthcare professionals within the hospital

Communicating with other specialties within the hospital is fundamental for older patients with cancer and multimorbidities. Such professionals clearly vary based on the combination of morbidities, as well as on the staging of the diseases. Health care professionals can range from pneumologists, to cardiovascular doctors, from orthopaedic surgeons, to palliativists, to name a few. While the need to exchange information with this larger set of professionals is recognized and warranted, what emerges from the interviews is that such interactions are not always backed by strict, codified practices, but tend to follow the initiative of individual physicians. Interacting with other specialties is therefore more spontaneous and somewhat easier in general hospitals, where other specialties are typically present. Cancer centres, on the contrary, might have to define operating guidelines in order to guarantee exchanges of opinions with other non-oncologist doctors, and to let them examine cancer patients in need. For instance, Institute Bergonié arranges visits from a geriatrician affiliated to the partner University Hospital in Bordeaux twice per week.

Oncologists can reach out to other health care professionals differently. First, physical proximity clearly helps, and many people interviewed stated that it is convenient to sit close to doctors from other departments. Proximity also encourages informal interactions, therefore facilitating the request of a consult for specific cases. Other times, consults from other professionals are requested through a more structured process. For instance, in the Hospital Tenon in Paris the Secretary of the Oncologic Department asks for a consult to physicians from other Departments, typically via informal emails.

Oncologists typically discuss cases of cancer patients with HCP from other specializations before the MDT meets. This way, they are already informed about possible concerns raised by other doctors and are able to discuss them jointly. In rare occasions, especially for particularly frail patients or for patients suffering from severe adverse events or compilations due to multiple treatment plans, other professionals are invited to join the MDT meeting.

Furthermore, the geriatric assessment and/or the comprehensive geriatric assessment (CGA), that is an important step in the trajectory of care of older oncologic patients, can be performed by different healthcare professionals, be it the APN/nurse, the geriatrician, or other specialized roles. For instance, in Kortrijk the geriatric assessment is performed by the psycho-oncologist, who ask patients if they have independence for walking, run dementia tests, etc.

Older, multimorbid patients with cancer are also eligible to receive ancillary, yet fundamental care services from a plethora of other health care professionals that include but are not limited to dieticians, physiotherapists, psychologist, psycho-oncologists, pharmacists, ago-therapists, etc. As anticipated earlier in the report, the type of centre (e.g., a cancer centre vs. a general hospital) impacts how such services are organized and delivered to patients. For instance, Centre Azuréen de Cancérologie (CAC) is a private, cancer centre that, in addition to being specialized in standard oncologic services, such as radiotherapy and chemotherapy, is also engaged in fostering the well-being of their patients.

In addition to how such services are sourced (i.e., “make or buy”), such services might be more or less available to patients according to how rules are differently established across centres and countries. Some centres make services like the psycho-oncology consultation available to every cancer patient

being cured in their centre, whereas other centres only make these services available to patients that meet certain criteria (e.g., high frailty levels) due to lack of resources.

3.3.4 Other healthcare professionals in different hospitals

Interactions with other healthcare professionals in different hospitals can happen, although they are rather unstructured and do not follow formalized protocols. The level of interaction with these professionals may vary depending on whether established partnerships are in place, as well as on the type of specialization (i.e., cancer centre vs. general hospitals).

Compared to general hospitals who are able to provide a larger set of services, cancer centres typically interact with other hospitals when they prescribe exams or recommend treatment plans that cannot be performed internally. For instance, Institute Bergonié in Bordeaux can only conduct certain surgeries (i.e., for breast and colon-rectal cancer), therefore refers to the partner Univerisity Hospital in Bordeaux for other surgical treatments, as well as for dedicated cancer-specific exams or scans that might be needed.

Network of hospitals also facilitate the interactions between centres, not only in terms of performing different treatments in different locations, but also in terms of discussing patients in joint MDTs. For instance, the onco-geriatric multidisciplinary board held in the Hôpital Tenon in Paris meets once every two weeks, and extremely complex situations are discussed not only from within the hospital, but also from other hospitals who belong to the network of University Hospitals.

3.4 Forms of specialization

3.4.1 Dedicated spaces

The forms of specialization of spaces refer to the identification of specific places where 360° care is delivered for a specific target of patients. The theoretical background behind the analysis of spaces assumes that physical spaces are relevant not only in connecting different professionals, but also favouring the usability of health care services in the patient perspective. When it comes to multimorbid, older patients with cancer as dominant disease, the most pivotal places are those related to the oncologic department. This involve both the oncologic ward, where patients might be hospitalized, and the ambulatory spaces for outpatient consultation or services (e.g., chemotherapy). Clearly, there might be differences based on the type of centre (cancer centres vs. general hospitals).

An interesting remark can be presented by Hospital Tenon in Paris, that presented the geriatric-oncology unit as a “virtual”. It means that it formally does not have dedicated spaces, nor bed, but that it receives financial help from the hospital to develop projects for older, oncologic patients. While the people working for this unit are all from the oncology Department, they receive a specific training for geriatric patients. In this sense, therefore, virtual unit has to be intended as a functional unit.

Overall, while available spaces vary from centre to centre, it seems that the spaces dedicated to the Oncologic Department are more often used in the care of older patients with cancer, while other departments do not necessarily have dedicated spaces to perform specific tests or assessments, like the Comprehensive Geriatric Assessment (CGA). With this regard, centres like Diakonessenhuis hospital said that normal outpatient clinic spaces are used as spaces to perform geriatric care, but that this space is not exclusively allocated to the geriatric team.

3.4.2 Dedicated professionals

The forms of specialization of professionals refer to the identification of professionals with a specialized background and with a preferential (although relative, and not exclusive) attitude towards a specific cancer area, who devote a more or less important part of their working time to its management.

The analysis of the evidence from the interviews conducted highlights that in any centre there are "relative" forms of specialization of the professionals. First, medical oncologists tend to be specialized by type of cancer or by clusters. As such, they most of the cases they follow relate to patients within their preferred area of specialization. For instance, in the hospital in Brussels medical oncologists are specialized in 1 or maximum 2 types of cancer, to be able to guarantee high-level care for patients with diverse and highly specialized needs. Clearly, the dimension of the hospital and the underlying volumes of activities are dimensions that may impact the way professionals organize their work. In smaller centres, with fewer professionals who therefore have to take care of patients with a wider range of complexities and cancer types. The same specialization might be observed also in the nursing team.

As for geriatricians, there might be different cases. In some hospitals, geriatricians are not specialized by cancer types, and follow any cancer patients regardless of their specific conditions; in other hospitals, especially when high volumes are encountered, some forms of specialization can be observed. For instance, in the Catharina Ziekenhuis hospital in Eindoven, the geriatricians in the Geriatric Department are specialized by clinical expertise, and there might be professionals who follow mostly older patients with cancer. As a matter of fact, there is a preference towards specialization that however is not exclusive, therefore it is referred to as “partial dedication” or “major attention” to a certain area. Regardless, they tend to guarantee continuity with patients, when possible, and often have a corresponding physician to be substituted with, in case of temporal leave. Especially when follow-up appointments are not scheduled nor necessary, geriatricians tend to see the same patient who returns to the hospital, although this is left to individual preferences and is not structured ex ante.

3.4.3 Dedicated agenda

Forms of specialization of agendas pertain to the specialized organization of supply, the presence of dedicated slots to make sure that a specialist with a certain orientation meets his or her target audience. Dedicated agendas make it possible to align the dedicated specialist with the agenda of outpatient or day hospital activity. In some centres, specific days were identified for certain services (e.g., outpatient visits) to concentrate certain phases of the pathway at specific times and also encourage the co-presence of multiple professionals.

For instance, the centre in Brussel disposes of a dedicated agenda to schedule the consultations, specifically an online file complemented by a paper-booklet where both treatment and patients’ needs are noted, so that the Secretary staff can book appointments accordingly, typically in dedicated moments in the work week (e.g., 3 mornings and 2 afternoons on fixed days).

4. Conclusion

This report aimed at mapping the as-is care pathways typically followed by multimorbid, older cancer patients, within the trial sites involved in the GerOnTe project. The goal of this report was to document the high complexity of the project deriving from the contextual and organizational differences across different centres and different countries. While cost of health care services was not a focus of the interviews that were conducted and is therefore out of the scope of the current report, it is foreseen huge differences in cost will be observed throughout the trial follow-up depending on the underlying organizational, procedural, and structural characteristics of the centres where GerOnTe will be implemented.

This report was intended to be the first step of a larger, continuous assessment that will be conducted throughout the entire trial duration, that aims at mapping the care pathway to-be and that therefore will take place at a later stage, once the GerOnTe intervention will be implemented. As such, the analyses of the care pathway will be updated in the following months, in order to assess how the care pathways will adapt (if any) to the new GerOnTe model.

This deliverable was initially due at M18 (September 2022), but its delivery has been postponed of three months, to December 2022 (M21), due to delays in the start of the trial. This deviation is linked to the delay in the identification and recruitments of the clinical sites, the finalization of the clinical trial protocol, and the commencement of the trial which in turn results from the complexity and variance across the trial site jurisdictions, and in the classification of the trial. For this reason, we could not start interviewing the clinical sites before the administrative aspects of their involvement in the project had been sorted out. As a consequence, we had to postpone the interviews with the principal investigator in each clinical site and the relevant stakeholders that were initially planned for March-April 2022. Once the clinical trial protocols (D4.3 and D4.4) were finalized and submitted to relevant authorities (June 2022), to mitigate the impact of Task 3.5 deviation and avoid further delays we decided to start the interviews with the clinical sites that are also partners of the consortium (UBx, DIAK, KUL) and to plan all the interviews with the other clinical sites between October and December 2022. Consequently, Deliverable 3.6 due at M18 was postponed from M18 to M21.

2. This deliverable, D3.6, is updated at M30 because at M21 we were not able to complete all Interviews for two main reasons: firstly, one of the clinical sites, despite numerous attempts was not available to reply to our questions before the trial started; secondly, because one of the clinical sites previously identified was substituted by another clinical site (Maasstad Ziekenhuis, Rotterdam). We were, therefore, able complete the interview with the last clinical site at M30, and subsequently, resubmitted and updated D3.6 at M30, as indicated in the Technical Report. Deviation in D3.6 timeline has no impact on other deliverables and tasks.

As already planned in the Grant Agreement an update of this Deliverable is also expected at M58.

5. List of abbreviations

APN: Advanced Practice Nurse

CGA: Comprehensive Geriatric Assessment

EMR: Electronic Medical Record

FU: Follow-up

GP: General Practitioner

HCP: Healthcare Professional

MDT: Multidisciplinary Team

PI: Principal Investigator

QKPIs: Quality Key Performance Indicators

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7. Appendix 1

Interview outline

Introduction: The aim of the interviews is to describe the organizational model of the site participating in the project and in particular the delivery and service model. We're especially interested in people who have cancer, but also have some other health issues. These might be single conditions like diabetes or COPD, or more complex conditions like frailty, or both.

- Can you describe your typical patient? (age/comorbidities/residency)
    - Do you think certain groups are disadvantaged and how?
- Can you describe how older people with cancer and other complex health needs are cared for right now – is there a formal care pathway, or how is it done? Are there written and standardized procedures?
- Can you describe the care pathway for cancer patients (lung/colorectal/breast)?
    - Who is involved? What do they do? When? Where? Why?
    - **Diagnosis**
    - How do they access the service (first visit/first consultation)? Is there a patient access point?
    - Who send them (GP/ED/other consultation)?
    - In which setting do you usually see them? (e.g., ambulatory care/hospital stay)
    - Is there anyone who is in charge of their welcome? APN? Case manager?
    - What do you do to diagnose them? (e.g., explain the main steps and procedures)?
    - **Treatment**
    - Who is involved? What do they do? (surgical/medical)
    - In which settings (visit/ambulatory care/ Day hospital/ hospital stay)? If hospitalization, what is the length of stay)?
    - Who does what?
    - **Follow up**
    - Who is involved?
    - How patient is contacted?
    - Do they already have follow-up appointments? For how long?

- **Integration / coordination**
    - Do you interact with:
        a. GPs?
        b. Other specialties/professionals (for cancer)? Why? What specialties are most frequently consulted?
        c. Other facilities/hospitals? Why? For what activities?
        d. Other clinicians involved in the treatment (comorbidities)? Phone call/do you have a common Electronic medical record? ICT? Email?
        e. With patients and families?
    - How do you interact with other professionals and nodes of the network (e.g., GP, other professionals, facilities, and other units)?
    - How do you typically access and share information about your patients?
    - What would improve this communication process?

- **Do you have a multidisciplinary meeting?**
  - Who is involved?
  - How often do you meet?
  - How is it structured? How do these meetings work?
  - Is the patient involved?
  - For which patients? (i.e., all patients/only specific patients?)
  - When? (e.g., before diagnosis, after treatment, follow-up)?

- **Form of specialization**
  - Dedicated professionals (same professional/reference contact?)
  - Dedicated spaces (same space?)
  - Dedicated agenda (timeslot to specific patients)

- What is the role of the nurse?

- What difficulties do you currently face in the management of older multimorbid patients?
  a. What makes care work well? What makes care doesn't work well?

8. Appendix 2

Interviews conducted to complete this deliverable

Date	Role	Clinical site	Location	Country
10-06-2022	PI, Oncologist, Geriatrician, APN, Data expert	Institute Bergonié	Bordeaux	France
04-07-2022	Data expert	UZ Leuven	Leuven	Belgium
04-07-2022	PI, Geriatrician	Diakonessenhuis	Utrecht	The Netherlands
04-07-2022	Data expert	Diakonessenhuis	Utrecht	The Netherlands
04-07-2022	Geriatrician	UZ Leuven	Leuven	Belgium
05-07-2022	Oncologist	Diakonessenhuis	Utrecht	The Netherlands
05-07-2022	PI, oncologist, nurse	UZ Leuven	Leuven	Belgium
05-07-2022	APN	Diakonessenhuis	Utrecht	The Netherlands
12-10-2022	PI, oncologist	CH de la Côte Basque	Bayonne	France
12-10-2022	Data expert	CH de la Côte Basque	Bayonne	France
17-10-200	PI, Oncologist	UZ Brussel	Brussels	Belgium
19-10-2022	Geriatrician	CH de la Côte Basque	Bayonne	France
25-10-2022	Data expert, APN	AZ Groeninge	Kortrijk	Belgium
25-10-2022	PI, geriatrician	Catharina Ziekenhuis	Eindhoven	The Netherlands
27-10-2022	PI, oncologist	AZ Groeninge	Kortrijk	Belgium
28-10-2022	Geriatrician	AZ Groeninge	Kortrijk	Belgium
28-10-2022	PI, Oncologist	AZ Sint Jan	Bruges	Belgium
28-10-2022	Data expert	UZ Brussel	Brussels	Belgium
02-11-2022	Data expert	Catharina Ziekenhuis	Eindhoven	The Netherlands
04-11-2022	Geriatrician	AZ Sint Jan	Bruges	Belgium
08-11-2022	Geriatrician	UZ Brussel	Brussels	Belgium
14-11-2022	PI, oncologist	Hôpital Tenon APHP	Paris	France
24-11-2022	PI, oncologist, nurse, data expert, head of clinical research unit, study coordinator	CHD Vendée	La Roche-sur-Yon	France
25-11-2022	PI, Geriatrician	CHU Nice Centre Antoine Lacassagne (CAL) Centre Azuréen de Cancérologie (CAC)	Nice, Mougin	France
25-11-2022	Data expert	CH Saint Malo	Saint Malo	France
25-11-2022	Nurse, research assistant	CH Saint Malo	Saint Malo	France
28-11-2022	Data expert	AZ Sint Jan	Bruges	Belgium
28-11-2022	PI, oncologist	CH Saint Malo	Saint Malo	France
28-11-2022	Geriatrician	CH Saint Malo	Saint Malo	France

29-11-2022	Nurse	Hôpital Tenon APHP	Paris	France
14-12-2022	PI, geriatrician	Leiden University Medical Centre	Leiden	The Netherlands
23-03-2023	PI, geriatrician	Maasstad Ziekenhuis	Rotterdam	The Netherlands

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 945218. The sole responsibility for the content of this project lies with the authors. It does not necessarily reflect the opinion of the European Union. The European Commission is not responsible for any use that may be made of the information contained therein.