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Towards Integrated Oncology Care: A Qualitative Study of Providers' Perspectives on Service Quality within the Chilean National Oncology Network

Victoria Lermanda
Pontificia Universidad Católica de Chile
Camilo Oñate
Pontificia Universidad Católica de Chile
Mariol Luan
Pontificia Universidad Católica de Chile
Paula Bedregal
dbedrega@uc.cl
Pontificia Universidad Católica de Chile

Research Article

Keywords: Public Health Systems, Quality of Healthcare, Oncology, Qualitative Research, Governance

Posted Date: June 28th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9707675/v1

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Additional Declarations: No competing interests reported.

Abstract

Background

Cancer is a leading cause of morbidity and mortality in Chile, placing increasing pressure on a public healthcare system characterized by significant territorial inequalities in service provision. Despite the implementation of national oncology policies and guaranteed access mechanisms, important inequalities persist in the availability, coordination, and quality of cancer care services across territories. This study aimed to examine healthcare providers' perceptions regarding the sufficiency and quality of oncology services within the Chilean National Oncology Network.

Methodology:

An exploratory-descriptive qualitative study was conducted using a systemic-constructivist approach. 19 semi-structured interviews were conducted with key providers involved in oncology management and coordination across selected public Health Services representing six macro-regions of Chile. Data was analyzed through thematic analysis, focusing on how organizational, territorial, and sociocultural factors shaped the implementation and functioning of oncology services.

Results

Participants described persistent structural and organizational limitations affecting oncology care delivery, including shortages of specialized human resources, limited access to diagnostic and therapeutic technologies, fragmented information systems, and difficulties coordinating care across levels of the health network. Centralized policy implementation was perceived as insufficiently responsive to diverse territorial realities, particularly in geographically isolated regions. Providers also identified significant gaps in psychosocial support, continuity of care, and culturally responsive strategies for indigenous, rural, and migrant populations. Within this context, healthcare professionals frequently assumed informal coordination and mediating roles to bridge gaps in service integration and sustain continuity of care, while community support networks emerged as important complementary mechanisms for addressing unmet patient needs.

Conclusion

The findings suggest that challenges in the provision of oncology care in Chile are shaped not only by resource limitations but also by fragmentation, limited territorial adaptation, and insufficient integration across healthcare networks. Strengthening oncology care requires improving coordination across levels of care, reinforcing the role of primary healthcare, and advancing toward territorially adaptative, culturally responsive, and patient-centered models of care. The findings further suggest that perceptions of quality

and sufficiency in oncology care are socially and institutionally constructed, underscoring the value of incorporating providers situated knowledge into governance and planning processes to advance more integrated, equitable, and context-sensitive cancer care.

Background

Cancer is one of the leading causes of mortality worldwide. According to the World Health Organization (WHO), approximately 10 million people died from cancer-attributable causes in 2020, representing one in six deaths globally [1]. In Chile, cancer accounts for approximately 25% of all deaths, and it is estimated that nearly one-third of the population will develop this disease during their lifetime [2].

Social and environmental determinants of health are closely linked to inequities in the cancer burden [3]. Intermediate factors, such as limited access to health services and delays in diagnosis and treatment, disproportionately affect vulnerable populations. Although significant advances have been made in early detection and treatment, persistent disparities in access continue to affect not only patients' survival but also their families' quality of life. In this context, the quality and organization of cancer services are critical concerns for both patients and healthcare systems.

Chile has a mixed public-private health system. The National Health Fund provides coverage for approximately 80% of the population, while private social insurance institutions (ISAPREs) finance around 15%; the remaining share is covered by social security schemes for the armed forces, financed by public resources [4, 5]. Service delivery is organized through 29 geographically distributed Health Services, each responsible for coordinating care for a defined population across different levels of complexity, from primary care to specialized hospital services.

Law 19.966 (2004) established the system of “Explicit Health Guarantees” (GES), which defines guarantees of access, timeliness, financial protection, and quality for prioritized health conditions, including several types of cancer and palliative care [5]. For each condition, GES establishes eligibility criteria, maximum waiting times, and care pathways delivered by accredited providers.

In recent years, Chile has also strengthened its regulatory and institutional framework for cancer care. A major milestone was the enactment of Law No. 21,258 (2020), known as the National Cancer Law, which established the basis for the National Cancer Plan, the National Oncology Network, the National Cancer Commission, and the National Cancer Registry, among other initiatives [6]. The National Cancer Plan 2022–2027, aligned with the National Health Strategy 2021–2030, seeks to reduce premature cancer mortality through five strategic lines of action: primary promotion, education and prevention; provision of care services; strengthening of oncology networks; development of information and monitoring systems; and stewardship and regulation [7].

Despite these advances in cancer policy and service prioritization, important challenges persist regarding the accessibility, continuity, coordination, and quality of oncology care across different territorial contexts. Health systems can be analyzed using the WHO framework of six building blocks:

service delivery, health workforce, information systems, access to essential medicines and technologies, financing, and leadership and governance [8]. In the context of cancer care, the performance and interaction of these components are critical for ensuring timely, coordinated, and equitable services. However, understanding how these dimensions operate in practice also requires attention to healthcare providers' experiences and to the territorial and sociocultural conditions that shape policy implementation and service delivery.

Accordingly, this study aims to analyze the perceptions of key actors within the Chilean National Oncology Network regarding the sufficiency and quality of cancer services delivered through the GES system.

Conceptual framework: governance, models of care, and providers' perspectives on quality

The organization of health systems plays a decisive role in shaping access, quality, and equity in cancer care. In Latin America, health systems are frequently characterized by segmentation and fragmentation, contributing to discontinuous care trajectories and reproducing structural inequalities in access to services [9]. In line with recommendations from the Pan American Health Organization (PAHO), the Chilean public healthcare system formally adopts the Integrated Health Service Networks (IHSNs) model, which seeks to strengthen coordination, continuity of care, and territorial articulation across different levels of healthcare provision [10]. However, previous studies have shown that significant gaps may persist between the formal design of integrated networks and their operational implementation, particularly in territorially unequal and resource-constrained settings [11, 12]. Accordingly, fragmentation should be understood not merely as the absence of integrated care models at the policy level, but also as the challenge of translating coordination and continuity of care into practice across such networks.

Within this context, governance has emerged as a central dimension for understanding how health systems respond to complex conditions such as cancer. Governance refers to the capacity of institutions to formulate and implement health policies while ensuring transparency, equity, and participation across actors and levels of care [13]. Contemporary approaches, such as New Public Governance extend this view by foregrounding collaboration between state and non-state actors, recognizing the role of providers, patients, and communities in collective decision-making and policy implementation [14].

From this perspective, healthcare providers are not merely implementers of public policy, but active institutional agents whose everyday decisions shape how care is actually delivered. Their accounts shed light on how power relations, decision-making, and resource allocation play out within healthcare systems, particularly under conditions of scarcity and organizational fragmentation [15]. Providers routinely navigate tensions between policy guidelines, local realities, and limited institutional capacities, often while making simultaneous clinical and ethical decisions in everyday practice [16]. Examining

these experiences thus offers a privileged vantage point for identifying gaps between policy design and implementation, and for understanding the organizational conditions shaping cancer care delivery.

At the same time, cancer care models have progressively evolved beyond the traditional biomedical paradigm focused primarily on disease treatment toward more comprehensive and person-centered approaches that recognize cancer as a multidimensional experience affecting the physical, emotional, social, and spiritual dimensions of life [17, 18]. Within the literature, three broad approaches are particularly relevant: the Integrated Supportive Care Model, the Bio-psycho-socio-spiritual Model, and the Patient-Centered Model.

The Integrated Supportive Care Model emphasizes coordination among interdisciplinary services, including palliative, psychosocial, nutritional, and supportive care, to reduce fragmentation and improve continuity throughout the care trajectory [19]. Its implementation, however, requires strong institutional coordination, specialized human resources, and robust information systems, conditions that may be difficult to achieve in fragmented or resource-constrained settings.

The Bio-psycho-socio-spiritual Model extends the biopsychosocial perspective by incorporating ethical and spiritual dimensions of care [17]. This approach highlights the importance of addressing suffering comprehensively and recognizing patients' and families' existential needs, particularly in advanced stages of illness [20]. Nevertheless, its implementation remains challenging in healthcare systems strongly oriented towards standardized and productivity-based models of care, where subjective and relational dimensions are often less visible.

Finally, the Patient-Centered Model emphasizes autonomy, participation, and respect for patients' preferences in clinical decision-making [21, 22]. This approach has been associated with improved patient satisfaction, therapeutic adherence, and quality of care. However, its implementation may be constrained in contexts where paternalistic healthcare cultures persist, consultation times are limited, or institutional structures do not adequately support participatory practices [23].

Within these approaches, quality of care constitutes a central dimension for evaluating health system performance. The Institute of Medicine (IOM) defines quality as "the degree to which health services increase the likelihood of desired health outcomes and are consistent with current professional knowledge" [24]. Based on this definition, the IOM proposed six core dimensions of healthcare quality, later adopted by the WHO: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity [25].

Traditionally, healthcare quality has been assessed through models focused on measurable indicators, such as Donabedian's framework of structure, process, and outcomes [26]. While these approaches remain highly influential, qualitative health research has increasingly emphasized the relational and experiential dimensions of care, particularly in oncology settings where providers routinely accompany patients through suffering, uncertainty, and end-of-life processes. In this context, providers' perceptions

of quality are shaped not only by clinical outcomes but also by their ability to deliver ethical, empathetic, and comprehensive care within institutional constraints.

Previous studies have shown that adverse working conditions, including care overload, resource scarcity, bureaucratic pressures, and insufficient institutional support, may give rise to tensions between professional values and organizational realities [20]. These tensions have been associated with moral distress and burnout among oncology professionals [27], reinforcing the relevance of incorporating providers' perspectives, not only as an evaluative tool for assessing service delivery, but also as an analytical lens for understanding how governance arrangements, organizational conditions, and care models are enacted in everyday clinical practice.

Together, these perspectives provide a framework for analyzing oncology care not only as a clinical process, but also as a socially and institutionally mediated experience shaped by governance structures, organizational capacities, and territorial realities. In this study, these frameworks inform the analysis of healthcare providers' perceptions regarding the adequacy and quality of oncology services within the Chilean public health system.

Methodology

Study design

This study adopts an exploratory-descriptive design grounded in a qualitative research approach [28]. It aims to examine the experiences and perspectives of key providers within the National Oncology Network regarding the implementation of cancer care services, with particular attention to their perception of the sufficiency and quality of the services delivered. The analysis is grounded in a systemic-constructivist paradigm [29–31], which holds that perceptions of quality and sufficiency are socially constructed through providers' interactions within the health system, shaped by organizational, territorial, and sociocultural contexts, and that knowledge itself is co-produced through the encounter between researchers, participants, and institutional realities. Reporting follows the Consolidated Criteria for Reporting Qualitative Research (COREQ) [32].

Sample

In the Chilean public healthcare system, Health Services are decentralized administrative entities responsible for coordinating and delivering public healthcare across defined territories, encompassing hospitals and primary care networks, with considerable variation in population size, geographic dispersion, and service complexity. Oncology service provision is organized through a macro-regional network model that integrates facilities across levels of complexity to ensure comprehensive, territorially responsive cancer care [2].

Given the qualitative nature of this study, a purposive sample strategy was applied to capture diverse perspectives across the national oncology network. A maximum variation approach [33] was used to ensure geographical diversity, selecting Health Services across the six macro-regions of Chile (Northern, North Central, Central, South Central, South, and Extreme South), and a total of seven Health Services were included (Antofagasta, Coquimbo, Central Metropolitan, Maule, Biobío, Araucanía Sur, and Magallanes), incorporating more than one service in some macro-regions to capture better variation in population characteristics, geographic conditions, and diverse sociocultural contexts.

Within each Health Service, participants were selected based on predefined criteria to reflect key roles in cancer care management: a professional responsible for cancer coordination, a representative of the local technical council, and a case manager [2]. These roles were selected to capture complementary perspectives on system planning, clinical decision-making, and patient coordination and follow-up throughout the care pathway. The characteristics and functions associated with each role are detailed in Table 1.

Table 1
Organizational structure for the management of the Chilean National Public Oncology Network

National Cancer Network Management			
Case manager	**Cancer care coordinator**	**Local Technical Council**	**Macro-regional Oncology Commission**
A healthcare professional designated to provide direct support to individuals diagnosed with cancer and their support network, while managing, monitoring, and coordinating the actions necessary to ensure the implementation of the therapeutic plan.	A professional within the Health Service responsible for articulating and coordinating the local oncology network. Their role is to provide technical support to network management in the implementation of initiatives and actions aimed at strengthening and improving the health service's oncology response, in accordance with the objectives established by national plans and ministerial programs.	Multidisciplinary group established within each Health Service, composed of representatives from different levels of care and key network actors, with decision-making capacity to implement strategies aimed to strengthen coordination within the oncology network through integrated, person (and family)-centered approaches.	Technical coordinating body composed of the Health Services within a defined geographical macro-region

Health Service directors were contacted to facilitate access to eligible participants. A total of 23 participants were invited by email; 4 did not respond, and 19 agreed to participate. The final sample size was considered sufficient to capture recurrent patterns and variations in participants' experiences across different territorial and organizational contexts. Table 2 summarizes participants' main characteristics.

Table 2
Sample Characteristics

Public Health Service	Profession	Role	Institution type
Antofagasta	Midwife	Cancer care coordinator	Administration (Health Service)
	Physician	Local Technical Council	Administration (Health Service)
	Oncologist	Local Technical Council	Clinical Center
	Nurse	Case manager	Administration (Health Service)
Coquimbo	Physician	Cancer care coordinator	Administration (Health Service)
	Nurse	Local Technical Council	Clinical Hospital
Metropolitano Central	Nutritionist	Cancer care coordinator	Administration (Health Service)
	Nurse	Local Technical Council	Clinical Hospital
	Nurse	Case manager	Clinical Hospital
Maule	Nurse	Cancer care coordinator	Administration (Health Service)
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Magallanes	Nurse	Cancer care coordinator	Administration (Health Service)
	Oncologist	Local Technical Council	Clinical Hospital
	Nurse	Case manager	Clinical Hospital

Procedures

Semi-structured interviews were conducted using a guide developed by the research team during the pre-study phase, which ensured consistency across interviews while allowing flexibility to explore emerging themes. The guide focused on participants' perceptions of the sufficiency and quality of cancer care services across the care continuum, with particular attention to human resources, equipment, and infrastructure. Interviews also explored perceived barriers to service provision and participants' recommendations for improvement. The guide was piloted during the first three interviews,

which were retained in the final sample, and subsequently refined to improve clarity and comprehension, and it was further adapted as needed to reflect the specific role and institutional position of each participant. The interview guide is available in the supplementary materials for reader's reference.

Three members of the research team, an anthropologist, a physician, and a nurse, each with master 's-level training and experience in qualitative research, were responsible for contacting each participant and conducting the interviews, which took place between December 2023 and May 2024. The interviewers had no prior relationship with participants. Interviews were conducted via Zoom® and lasted approximately 60–90 minutes. At the beginning of each session, informed consent was obtained, including permission to audio-record the interview. Recordings were transcribed *verbatim* by the interviewer.

Data analysis

Thematic content analysis [34, 35] was conducted using QDA Miner Lite®. An initial coding framework was developed deductively based on the literature and the interview guide and subsequently expanded through inductive coding to capture emergent themes. This approach was informed by existing health systems frameworks, including those proposed by the WHO [8], while remaining grounded in participants' experiences.

Two researchers independently conducted the initial coding and jointly developed a preliminary codebook. This was reviewed and refined with the full research team to establish the final set of themes. The complete dataset was then coded, and the results were reviewed collaboratively to ensure consistency and analytical depth. A summary of themes and subthemes is presented in Table 3.

Table 3
Summary of codification table

Themes	Sub-themes	Concepts
Access to cancer services	Human Resources	Availability of professionals
		Specialist training
		Workforce distribution
	Equipment and Infrastructure	Availability of diagnostic equipment
		Treatment capacity
		Physical infrastructure
	Information Systems	Fragmentation of systems
		Data management
		Patient traceability
	Service accessibility	Geographic barriers
		Patient transportation
		Referral pathways
Governance and system organization	Intersectoral collaboration	Public-private partnerships
		Community organizations
		External support networks
	Health system leadership	Institutional leadership
		Decision-making capacity
		Strategic prioritization
	Organization of care	Integration across levels of care
		Continuity of care
		Care coordination
	Policy implementation	Centralization
		Adaptation to local contexts
		Implementation gaps

Themes	Sub-themes	Concepts
Territorial and sociocultural conditions	Sociocultural factors	Cultural beliefs
		Gender norms
		Health literacy
	Territorial context	Geographic isolation
		Rurality
		Environmental exposure
	Community engagement and participation	Patient participation
		Health education
		Empowerment
Perceived quality and adequacy of care	Timeliness of care	Waiting times
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	Technical quality	Compliance with standards
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		Clinical capacity
	Patient-centeredness	Psychosocial support
		Family involvement
		Humanization of care

To enhance rigor, the study followed Lincoln and Guba's criteria for trustworthiness [36], including credibility, transferability, dependability, and confirmability. Credibility was strengthened by including participants with direct experience in oncology service management across diverse territorial contexts and by using verbatim quotations to support analytical interpretations. Detailed contextual descriptions of the Chilean oncology system and participating Health Services supported Transferability. Dependability and confirmability were enhanced through iterative coding, reflexive analytical discussions among the research team, and continuous comparison between emerging themes and participants' narratives.

Ethical considerations

This study was conducted in accordance with the ethical principles outlined in the UNESCO Universal Declaration on Bioethics and Human Rights (2005) and was approved by the Research Ethics Committee

of the Pontificia Universidad Católica de Chile (ID 230710004). Given its multicenter design, additional approvals were obtained from the local ethics committees of the participating Health Services (Coquimbo, SSMC, Maule, and Araucanía Sur). All participants provided written informed consent prior to their formal participation in the study.

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Results

Based on participants' narratives, four interrelated themes were identified regarding the adequacy and quality of oncology service provision: *access to services, governance and system organization, sociocultural and territorial conditions*, and *perceived quality of care.* These themes reflect distinct but interconnected dimensions of health system performance, illustrating how structural constraints, organizational dynamics, and contextual factors interact to shape providers' experiences across the cancer care continuum. Figure 1 presents a conceptual model synthesizing these relationships.

1. Access to services

Participants consistently identified structural limitations in human resources, infrastructure, and technical capacity as key constraints on access to oncology services. These gaps reduce service availability, delay diagnosis and treatment, and disrupt continuity of care.

A central concern across accounts was the shortage of human resources, including both specialist physicians and non-medical professionals, which limits the availability of clinical appointments and reduces the system's capacity to respond to growing demand. Although training programs have been developed to expand the specialist workforce beyond the Metropolitan Region, participants noted persistent difficulties in recruiting and retaining qualified professionals in other regions.

Limitations in technological capacity further constrain service availability. Restricted access to diagnostic procedures, such as PET/CT, MRI, or biopsies, creates bottlenecks in the care pathway. Although cancer patients are prioritized, these resources are shared with other high-demand conditions, generating ethical and logistical tensions in their allocation. Health Services frequently resort to outsourcing to the private sector to address these gaps; however, this strategy is constrained by the shortage of specialized professionals, particularly cytopathologists, and by insufficient diagnostic capacity. As a result, delays in diagnosis and treatment remain widespread.

Geographical dispersion intensifies these constraints. The transfer of biological samples from remote or isolated areas frequently introduces additional delays, while the absence of certain treatments, such as radiotherapy, requires referrals to distant centers. Transportation and related logistics, therefore, emerge as significant barriers, particularly for patients requiring sustained access to specialized services unavailable locally, reflecting how geographic dispersion compounds structural limitations and deepens territorial inequalities in cancer care access.

"In the north, for example, the closest you have is Iquique, and it is 500 km. away. And if you go to the same region, Calama is more than 200 km away, so you must have centers of low or medium complexity in areas where the journey is shorter... How are you going to travel 200 km? A patient who comes to be treated here has chemotherapy and goes on a bus or a van, whatever, and goes vomiting all the way, you know what I mean? So that is not quality of care. It's not quality. There is a terrible inequity in certain processes, and that has to do with territoriality" (SSANT01).

Participants also emphasized the insufficiency of hospital infrastructure to meet current demand. In several Health Services, facilities lacked adequate space and capacity, evident in the shortage of operating rooms for procedures such as biopsies and the limited availability of consultation rooms. Across accounts, a recurring theme was the interdependence between infrastructure and human resources: as participants noted, the availability of advanced equipment does not guarantee service provision without the trained personnel to operate it. This mismatch between technological investment and workforce capacity was described as contributing to underutilization of resources and reduced system efficiency.

"I have a new radiotherapist trained, and she has to come to return, but I don't have radiotherapy, so what am I going to do with her here if you don't have a place to do radiotherapy? Or, for example, I don't know about it, they bought an angiography, a very cool one, like that, top line, and I have the specialist, because the specialist decided to come and live here. He has a few hours, but we don´t have an anesthesiologist. Something so basic. I don't have an anesthesiologist to support him in the procedures. So, angiography is paused." (SSAS01)

Although national guidelines promote a comprehensive approach to cancer care, including psychosocial support for patients and families, participants reported limited capacity to implement these components due to insufficient dedicated resources, particularly in psychosocial care. In contrast, services related to pain management, end-of-life care, and rehabilitation were reported as more consistently integrated into practice, largely due to targeted regulatory frameworks and dedicated funding streams. Taken together, these accounts reflect a persistent gap between the conceptualization of comprehensive care and its practical implementation within resource-constrained conditions.

"*Something more robust is needed in everything that is mental health for the cancer patient, from the accompaniment when they have the diagnosis, the accompaniment in the same committee that tells them what they have, how they are going to be treated, that they should have a room there, a psychologist, when the patient leaves to be able to give them brief psychological attention (…), no. Nothing. No. You're talking to me as if we were in another country.*" (SSANT01).

Finally, participants identified significant challenges related to information systems. A central issue was the fragmentation of digital platforms, with each Health Service operating its own system rather than a unified national platform. This fragmentation limited access to clinical information, compromised continuity of patient traceability, and increases the risk of disruptions in the care pathway. In addition,

reliance on manual record-keeping, such as Excel® spreadsheets, created operational inefficiencies, diverting time away from clinical tasks toward administrative work.

"The computer system is our great Achilles' heel, because they are all different, each health service has a different system even though today MINSAL created a platform for monitoring the cancer patient, which we were a pilot, it still does not meet all the functionality we would like, we still carry our manual records through an Excel spreadsheet, so finally that the computer systems do not converse produces a node in management." (SSBB02).

2. Governance and system organization

Participants acknowledge important advances in the prioritization of cancer within the national health agenda, particularly regarding regulatory frameworks and programmatic development. However, they consistently emphasized tensions between centrally defined policies and their implementation at the local level. Despite the creation of new roles, such as case managers, participants described a persistent gap between policy guidelines and the operational capacity to implement them effectively. Political commitment was not always accompanied by sustained investment in local capacities, resulting in structural limitations that affected both timeliness and quality of care.

A central concern across accounts related to the highly centralized nature of oncology policy design, which participants felt inadequately addressed the territorial, cultural, and organizational diversity of Health Services. This lack of contextual adaptation complicates implementation, as Health Services were required to operationalize standardized guidelines under structural unequal conditions.

Participants described institutional fragmentation as a further constraint on governance, particularly in terms of weakening coordination across levels of care and disrupting continuity along the patient pathway. Participants particularly emphasized the need to strengthen the role of Primary Health Care (PHC) not only in prevention and early detection, but also in the ongoing monitoring and management of cancer patients, especially in geographically dispersed or underserved areas.

"I think that part of the problem is that public policies from the primary level are not well strengthened in what is cancer and management, although it is true, the discourse from the WHO, PAHO, the ministry, etc., is always PHC, but there is an incoherence that I find that is serious between discourse and action." (SSANT01).

At the organizational level, participants described governance challenges as manifested through constraints in resource allocation and service management. They reported persistent delays in procedures and extended waiting times, linked to shortages of specialized personnel and competition between the public and private sectors. In this context, decision-making frequently involves prioritizing among patients and allocation services under conditions of scarcity, giving rise to tensions between centrally mandated guarantees, such as GES, and the realities of local service provision.

"Sometimes I'm alone, and you don't have the support of another who supports you in these strategies or who perhaps has more technical knowledge or expertise." (SSAS01)

Participants also described fragmentation as operating within healthcare teams and institutions themselves, where difficulties in communication and coordination hindered collective decision-making. They emphasized that the lack of regular interdisciplinary interaction limited the development of shared clinical criteria and undermines the coordination of care across professionals and settings. Taking together, these accounts suggest that governance operates not only through formal policies but also through the everyday interactions and relational dynamics among professionals.

"I don't know what it will be like in other services, but it happens to me that here it is very difficult for me to bring people together so that we can talk about cancer." (SSCOQ01)

Participants described coordination challenges as extending beyond individual facilities, particularly in managing patient referrals across the network. When local services are unable to provide specific treatments, patients had to be referred to other centers, requiring complex inter-hospital coordination frequently constrained by administrative limitations and the absence of shared information systems. Participants noted that lack of unified coordination protocols made these referral processes particularly burdensome, both for providers and for navigating the network.

"We as a region, in the face of the patient who effectively cannot be treated here at the local level, obviously our obligation is to ensure access in a reference center that can be defined as a network and in case they cannot, we as a service through the entire network or meso management that we have at the level of health services we begin to evaluate where they can receive them, that is, if our reference center that we have destined.“ (SSMAG01)

Participants also identified institutional leadership as a decisive factor in shaping local governance and care organization. They noted that when leadership actively prioritizes cancer care, it fostered coordination, resource mobilization, and a shared organizational vision. Conversely, its absence left professionals with fewer institutional support for implementing strategies and managing structural limitations.

" I can go to the establishments, I can try to convince you of everything you want. But when the director says something, it's different for him to say it than for me to say it. So I started as a general recommendation, it's like really, if you're going to wear the shirt for cancer, which is one of the most prevalent diseases that you're going to find me now, and that probably all of us at some point are going to have a family member with cancer or ourselves. He has to look a little further" (SSAS01)

Finally, participants described governance as extending beyond the formal health system through collaboration with external actors. Intersectoral partnerships with community organizations, local governments, and private entities were described as essential for addressing gaps in service coverage, particularly in transportation, accommodation, and social support. However, these initiatives frequently

depended on individual efforts rather than formal institutional structures, limiting their long-term sustainability.

"I think that there are challenges and predictions at the same time... We aim to work jointly with the intersector and to develop projects or social insertion projects. That perhaps they will come out of these tables that we are working on together with the SEREMI, the universities, the civil societies, because well, another issue that we may not mention and for us is fundamental, is the fact that we do not have shelters." (SSCOQ02)

Across these accounts, community engagement appeared not only as a response to system limitations but also as an incipient form of local participation in the organization of care. Taken together, these accounts point toward a relational understanding of governance, in which effective cancer care depends on coordination across institutional levels and collaboration among diverse actors within and beyond the health system.

3. Sociocultural and territorial conditions

Participants emphasized that access to oncology care was shaped not only by the health system's organizational capacity but also by sociocultural and territorial conditions that influenced how individuals perceive, seek, and engage with healthcare services. Across accounts, providers described tensions between institutional models of care and the diverse cultural, social, and territorial realities of the populations served.

One recurring theme concerned the persistence of paternalistic approaches within healthcare, in which the system assumes a central role in directing and managing patients' care trajectories. Participants noted that this model may limit opportunities to strengthen patient autonomy and active participation in health decision-making, particularly regarding preventive practices and timely consultation. Some providers associated delays in screening and early diagnosis with broader cultural patterns related to risk perception, health literacy, and engagement with preventive care.

"I believe that the main difficulties are generated because, unfortunately, we continue to have a lot in the public system, I think, a very paternalistic model of care. So patients are not very empowered." (SSBB02)

Participants emphasized the importance of developing communication and health education strategies that promote more active engagement with preventive care, beyond merely expanding access to health information. In this context, risk communication was identified as a valuable tool for strengthening participation in screening and early detection initiatives.

Gender-related barriers were also identified as significant influences on access to services. Participants described how social norms associated with masculinity may discourage some men from seeking preventive examinations, such as prostate cancer screening. At the same time, community beliefs and moral perceptions surrounding sexuality could affect acceptance of HPV vaccination. In addition,

structural constraints, such as limited time availability among workers who cannot afford to miss working hours, were identified as barriers to accessing preventive and diagnostic services.

Cultural diversity was consistently identified as a critical consideration in the implementation of health programs. Participants described challenges in adopting oncology strategies to the realities of Indigenous, rural, and migrant populations, whose experiences, belief systems, and social conditions may differ substantially from dominant institutional models of care. In some cases, distrust toward healthcare institutions, or the perception that medical interventions conflict with local cultural values may limit engagement with services. Migrant populations, meanwhile, frequently faced difficulties navigating administrative procedures and encountered logistical barriers to accessing care.

"I think that the main difficulty is like the geographical disintegration we have, because there are very isolated sectors. For example, this Alto Biobío issue is already an issue. When you want to go to do activities there, you must basically consider the worldview of the Pewenche people and also ensure that, through an intercultural facilitator, you can agree that the communities and the head of these communities accept that an external person is going to tell them about cancer, for example." (SSBB02).

Participants thus emphasized the importance of incorporating intercultural facilitators and culturally sensitive strategies, recognizing that effective engagement requires not only logistical access but also cultural legitimacy and community trust.

Territorial conditions were described as playing a central role in shaping experiences of cancer and access to care. Participants highlighted how Chile's geographical diversity, together with local socio-environmental conditions, influenced both exposure to health risk and the organization of healthcare services across macro-regions.

"Mining, exposure to heavy metals in this region. Historically, people who are born in Antofagasta, myself included, are condemned to die of cancer, and it is a sad reality." (SSANT04).

Accounts such as this one convey how territorial contexts were experienced not only as logistical challenges but also as conditions of environmental vulnerability and unequal health risks, dimensions that shaped providers' understanding of their populations' cancer burden.

4. Perceptions of sufficiency and quality of the services

Participants described a tension between the formal guarantees provided by the health system and the practical limitations that affect the delivery of timely and comprehensive oncology care. Although providers generally recognized that a minimum technical standard of care is ensured through national accreditation processes and specialized clinical protocols, many questioned whether these standards alone were sufficient to guarantee quality in practice.

For participants, quality of care extended beyond the technical performance of procedures or compliance with institutional standards. Instead, quality was understood as closely linked to timeliness,

continuity of care, accessibility, and the provision of humane, patient-centered support throughout the cancer trajectory. In this regard, participants emphasized that delays in diagnosis, treatment, referrals, and follow-up substantially undermine the perceived quality of services, even when clinical interventions themselves are technically adequate.

"If you ask me, currently, we do not have the provision of quality services. We don't have any, because for me, quality is also the opportunity in care. Deep down, if I'm going to give something of quality, it's not just like delivering it like the exam, let's say, with the best technology or something like that, but that this provision of that service is also in the right and timely manner. So deep down, let it be with quality as well." (SSAS01)

This account captures how participants framed quality not as technical threshold but as and experiential and relational conditions, inseparable from the timeliness and continuity of care received.

Participants also highlighted tensions between the growing complexity of oncology care and the health system's capacity to respond effectively. Although GES guarantees were positively valued as mechanisms for protecting access and patients' rights, some interviewees noted that service packages and coverage criteria were not always updated at the pace of technological and therapeutic advances in oncology. At the same time, demographic growth and increasing demand for specialized services have not been accompanied by proportional expansion of infrastructure, human resources, or service decentralization, contributing to congestion in major referral centers and reduced accessibility for patients from peripheral territories.

Participants further described persistent gaps between supply and demand across multiple specialties, affecting not only access to treatment but also continuity of care throughout long-term follow-up processes. These limitations reinforced participants’ perceptions of the system’s difficulty in providing comprehensive, sustained care trajectories for cancer patients, particularly amid increasing demand and resource constraints.

Humanization of care also emerged as an important dimension of quality. Participants emphasized that provider attitudes, communication styles, and emotional support played a central role in shaping patients’ experiences, and that these relational dimensions of care were often perceived as inseparable from its technical quality.

Discussion

The findings of this study reveal that the provision of oncology services in Chile is shaped by persistent structural, organizational, and territorial inequalities that affect the accessibility, continuity, and quality of care. Participants described a health system characterized by shortages of human and technological resources, fragmented coordination between levels of care, and difficulties in adapting national oncology policies to diverse local contexts. At the same time, the study documents adaptive strategies, ethical commitment, and collaborative practices developed by healthcare teams to sustain service delivery

under constrained conditions. Taken together, these findings suggest that oncology care in Chile is constrained not only by resource scarcity but also by systemic fragmentation and insufficient territorial adaptation, conditions that lead healthcare providers to develop informal coordination, adaptive practices, and relational work to sustain continuity and quality of care.

One of the principal tensions identified concerns the centralized logic underlying the organization and implementation of oncology policies. Although national initiatives such as the National Cancer Plan and the GES system have strengthened the prioritization of cancer within the public agenda, participants reported important gaps between policy design and local implementation capacities. In practice, centralized policy designs may unintentionally reproduce territorial inequities when implementation requirements are not aligned with local infrastructural and workforce capacities. These tensions were particularly evident in geographically isolated regions, where shortages of specialists, diagnostic technologies, and infrastructure limited the ability of services to comply with national standards and waiting-time guarantees. These findings thus suggest that the effectiveness of national oncology strategies depends not only on regulatory frameworks but also on the territorial distribution of resources and the capacity of local services to adapt policies to their specific demographic, epidemiological, and sociocultural conditions.

From the perspective of IHSNs, the study reveals important limitations in the vertical and horizontal integration of oncology care. Difficulties in coordination between primary, secondary, and tertiary levels of care, fragmentation of information systems, and barriers to inter-hospital communication undermine continuity of care and effective patient follow-up. These findings are consistent with PAHO’s position that fragmented health systems tend to generate barriers to access, inefficiencies in service delivery, and lower quality of care [14]. Similarly, previous studies on collaborative governance in integrated networks have identified challenges related to coordination, strategic alignment, and institutional trust [37, 38]. In the present study, these governance tensions were reflected in delays in referrals and treatment, duplication of administrative processes, and difficulties in maintaining continuity of patient follow-up across the care pathway; these findings suggest that fragmentation should be understood not merely as an administrative inefficiency, but as a structural condition shaping patients' opportunities for timely, coordinated, and continuous care.

Within this context, PHC emerges as a strategic yet insufficiently integrated component of oncology care. Although participants recognized the role of PHC in prevention, early detection, and patient follow-up, important difficulties remain in coordinating care trajectories across different levels of the health system [12]. The limited integration of PHC within oncology networks reflects broader organizational difficulties; opportunities for longitudinal follow-up, patient navigation, and territorial coordination remain underdeveloped, particularly for populations living far from specialized centers. Strengthening PHC as an articulating component within oncology networks may therefore contribute not only to improving access and continuity of care, but also to reducing fragmentation across the healthcare system [39].

Human resource shortages emerged as one of the most critical barriers affecting oncology service delivery. Participants described insufficient availability of specialists, high staff turnover, and difficulties retaining trained professionals outside major urban centers. These limitations affect the timeliness of diagnosis and treatment, weaken continuity of care, and place additional pressure on already overloaded teams. In primary healthcare settings, instability of clinical teams further restricts the development of long-term therapeutic relationships and local response capacities. These dynamics reveal that workforce shortages are not only quantitative problems, but also expressions of territorial concentration and unequal distribution of specialized capacities across the healthcare system. Together, these findings underscore the need for regional workforce planning strategies that promote equitable distribution of human resources, support retention of specialized professionals, and expand training opportunities tailored to territorial needs.

The study also highlights tensions between contemporary models of cancer care and the organizational realities of the healthcare system. Although the current approach to oncology emphasizes integrated, patient-centered, and psychosocial care, participants described significant limitations in implementing these principles in practice. Deficits in mental health support, discontinuities in follow-up, and insufficient coordination between services frequently resulted in a prioritization of urgent biomedical treatment over comprehensive supportive care. Similarly, persistent paternalistic practices and limited opportunities for patient participation constrained the implementation of more participatory and person-centered approaches. These findings thus reveal a persistent disjunction between normative models of comprehensive cancer care and the operational realities of resource-constrained health systems. Achievement of the transition toward person-centered, interdisciplinary care requires not only clinical and ethical commitment but also the organizational conditions (continuity, coordination, and sustained supportive services) that make such care structurally possible [18].

In addition to structural barriers, the study highlights the importance of sociocultural and territorial factors in shaping access to care. Geographic isolation, rurality, intercultural dynamics, and socioeconomic constraints emerged as significant determinants of healthcare-seeking trajectories and service engagement. In culturally diverse territories, providers described difficulties implementing health strategies that adequately considered local worldviews, linguistic differences, and community beliefs regarding disease and prevention. These findings suggest that oncology policies often operate through standardized models of care that fail to account for the cultural and territorial heterogeneity of local populations. In practice, this may limit healthcare services' capacity to establish culturally meaningful forms of communication and trust with diverse communities, particularly with indigenous, rural, and migrant populations. These findings reinforce the importance of culturally responsive models of care that integrate intercultural approaches, community participation, and locally situated knowledge into oncology services [40]. Previous studies have similarly shown that cultural beliefs and social conditions significantly influence healthcare-seeking behaviors, treatment adherence, and trust in health institutions [40–43], highlighting the importance of addressing both structural and cultural dimensions of inequity.

Another relevant finding concerns the central role played by healthcare professionals in sustaining the functioning of oncology services under conditions of scarcity. Participants frequently described situations in which institutional limitations required them to prioritize patients, adapt procedures, or develop informal coordination strategies to maintain continuity of care. These experiences reveals how providers' perspectives constitute an important source of situated knowledge regarding the operational functioning of health systems. At the same time, these accounts reveal the emotional and ethical burden associated with delivering oncology care under resource-constrained conditions. Previous studies have associated these tensions with moral distress and burnout among healthcare professionals [18, 26], particularly in contexts where organizational pressure limits the ability to provide the type of care professionals consider ethically appropriate. In this sense, providers function not only as clinical actors but also as operational mediators between centralized policy frameworks and territorially situated realities, actively compensating for organizational fragmentation through informal practices and relational coordination. Recognizing these informal practices as a structural feature of fragmented systems rather than individual workarounds has important implications for how governance and workforce policy are designed.

Institutional leadership and intersectoral collaboration also emerged as important factors in shaping services' capacity to respond to local needs. Participants emphasized that supportive leadership could facilitate coordination, mobilize resources, and strengthen the prioritization of oncology care within healthcare organizations. At the same time, alliances with municipalities, universities, civil society organizations, and private actors helped address gaps in transportation, accommodation, and psychosocial support for patients referred outside their local territories. However, participants noted that many of these initiatives depended on individual efforts rather than institutionalized coordination mechanisms. These collaborative arrangements reveal how oncology care frequently depends on relational and informal governance mechanisms operating beyond formal institutional structures. In this sense, continuity and comprehensiveness of care are frequently sustained through interpersonal networks, local leadership, and intersectoral cooperation, arrangements that while effective in short term, remain structurally fragile without institutionalization and formal recognition.

The findings of this study can also be interpreted through the IOM framework for healthcare quality [25]. From the perspective of safety and effectiveness, shortages of human resources, fragmented information systems, and limited access to specialized technologies contribute to delays in diagnosis and discontinuities in treatment, factors consistently associated with poorer cancer outcomes [44]. Timeliness emerged as one of the most critical dimensions of quality as prolonged waiting times and difficulties in referral pathways directly affect opportunities for early intervention and continuity of care [45, 46]. Similarly, limitations in psychosocial support and culturally appropriate services constrain the patient-centeredness of care, while territorial and socioeconomic inequalities challenge the equity of oncology service provision [47]. Finally, inefficiencies stemming from fragmented coordination and mismatches between infrastructure and available personnel reflect broader organizational difficulties that compromise overall system performance. The findings suggest that providers conceptualize quality not only in technical terms, but also as an organizational and relational capacity to sustain timely,

continuous, and ethically responsive care under structurally constrained conditions. Collectively, these dimensions demonstrate how deficiencies in organizational integration simultaneously compromise multiple domains of healthcare quality.

Taken together, these findings suggest that improving oncology care in Chile requires moving beyond a predominantly centralized, capacity-oriented approach toward models that prioritize organizational integration, territorial adaptability, and continuity of care across healthcare networks. In this regard, fragmentation within oncology services, weak coordination between levels of care, and limited interoperability of information systems emerge not merely as operational difficulties but as structural conditions that shape the quality, timeliness, and equity of cancer care. Strengthening the articulating role of PHC and advancing toward integrated, culturally responsive models of care may therefore contribute to more equitable, continuous, patient-centered oncology services.

Collectively, the findings of this study suggests that the principal challenge facing oncology care in Chile is not limited to expanding service capacity but rather strengthening the organizational coherence and territorial responsiveness of oncology networks. Within this context, healthcare providers emerge as relational coordinators whose informal practices and adaptative strategies constitute not merely individual responses to scarcity, but a structural feature of how fragmented oncology networks are sustained in everyday clinical settings.

Limitations of the study

This study included a purposive sample of providers involved in oncology management and coordination within selected public Health Services. Consequently, the perspectives of frontline clinicians, patients and caregivers —whose experiences of care delivery and access may differ substantially from those of coordinators and managers— are not captured in this study. In addition, qualitative design does not seek statistical generalizability, but rather an in-depth understanding of organizational and contextual dynamics within oncology care provision. Consistent with the systemic-constructivist approach adopted in this study, the findings should be interpreted as situated perspectives shaped by participants' institutional roles and territorial contexts, rather than as objective measurements of health system performance. Although the research team brought diverse disciplinary perspectives, including anthropology, medicine and nursing, to the design and conduct of the study, the analytical process was inevitably shaped by researchers' own professional and institutional positions. Reflexive strategies, including peer debriefing and ongoing discussion of interpretative decisions within the team, were employed to enhance the credibility and transparency of the analysis. Future research could expand the scope of inquiry by incorporating the perspectives of frontline clinicians, patients and caregivers, and by exploring experiences across a wider range of territories, healthcare levels, and cancer types to build a more comprehensive understanding of the quality and adequacy of oncology services in Chile.

Conclusion

This study demonstrates that oncology care in Chile is shaped by a complex interplay of structural constraints, territorial inequalities, organizational fragmentation, and sociocultural conditions. Shortages of human and technological resources, limited coordination across levels of care, and centralized decision-making continue to affect the timeliness, continuity, and equity of cancer services, particularly in geographically isolated and underserved regions. At the same time, gaps in psychosocial support and culturally responsive strategies reflect persistent tensions between contemporary person-centered models of cancer care and the operational realities of resource-constrained health system.

Despite these limitations, the findings also demonstrate the central role of healthcare providers in maintaining the operational continuity of oncology services under constrained conditions. Through adaptive coordination practices, intersectoral collaboration, and locally situated problem-solving, providers frequently bridge gaps in service integration, a finding that underscores the need to formally recognize and structurally support these roles within health system governance. These findings underscore the importance of systematically incorporating providers situated knowledge into health planning and governance processes, particularly when designing policies intended to operate across territorially diverse contexts.

The findings suggest that perceptions of quality and sufficiency in oncology care are not solely determined by technical capacity or service availability but are socially and institutionally constructed through the interaction between governance structures, territorial inequalities, organizational fragmentation, and sociocultural conditions. Advancing toward more equitable and integrated oncology care in Chile requires not only investment in infrastructure, human resources, and interoperable information systems, but also governance models that strengthen coordination and territorial responsiveness across healthcare networks. Although the Chilean public health system is formally organized according to the principles of IHSNs, the findings suggest that important challenges persist in operationalizing these networks under conditions of territorial inequality, organizational fragmentation, and uneven resource distribution. Reinforcing the articulating role of primary healthcare, promoting culturally responsive approaches, and formalizing collaboration with community and civil society actors may contribute to more continuous, integrated, and patient-centered oncology care. Ultimately, improving oncology care depends not only on expanding service capacity but also on strengthening the organizational coherence and relational integration of the health system as a whole.

Abbreviations

GES - Explicit Health Guarantees

IHSNs - Integrated Health Service Networks

IOM - Institute of Medicine

ISAPREs - Private Social Insurance Institutions

PAHO – Panamerican Health Organization

PHC - Primary Health Care

WHO - World Health Organization

Declarations

Ethics approval and consent to participate

This research was carried out considering the ethical aspects established in the Universal Declaration on Bioethics and Human Rights of UNESCO (2005) and has the approval of the Research Ethics Committee of the Pontificia Universidad Católica de Chile, ID 230710004. Additionally, given its multicenter nature, the study was approved by the local ethics committees of the Health Services Coquimbo, SSMC, Maule, and Araucanía Sur. All participants in this study provided written informed consent prior to their formal participation in the study.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and analyzed during the current study are not publicly available due to privacy and confidentiality considerations regarding the participants. Still, they are available from the corresponding author upon reasonable request.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding

This work was supported by the Center for Cancer Prevention (CECAN) through the National Agency for Research and Development (ANID) [FONDAP 152220002].

Author's Contributions

V.L. was responsible for conceptualization, methodology, data curation, formal analysis, and writing — original draft. **C.O.** was responsible for data curation, formal analysis, and writing — original draft. **M.L.** was responsible for conceptualization, data curation, and writing the original draft. **P.B.** was responsible for conceptualization, funding acquisition, supervision, writing, review, and editing.

Acknowledgements

The authors would like to thank the participating Health Services for their valuable contributions to this study: Antofagasta Health Service, Coquimbo Health Service, Central Metropolitan Health Service, Maule Health Service, Biobío Health Service, Araucanía Sur Health Service, and Magallanes Health Service. We also gratefully acknowledge the National Agency for Research and Development (ANID) for providing financial support for the conduct of this study [FONDAP 152220002].

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Figures

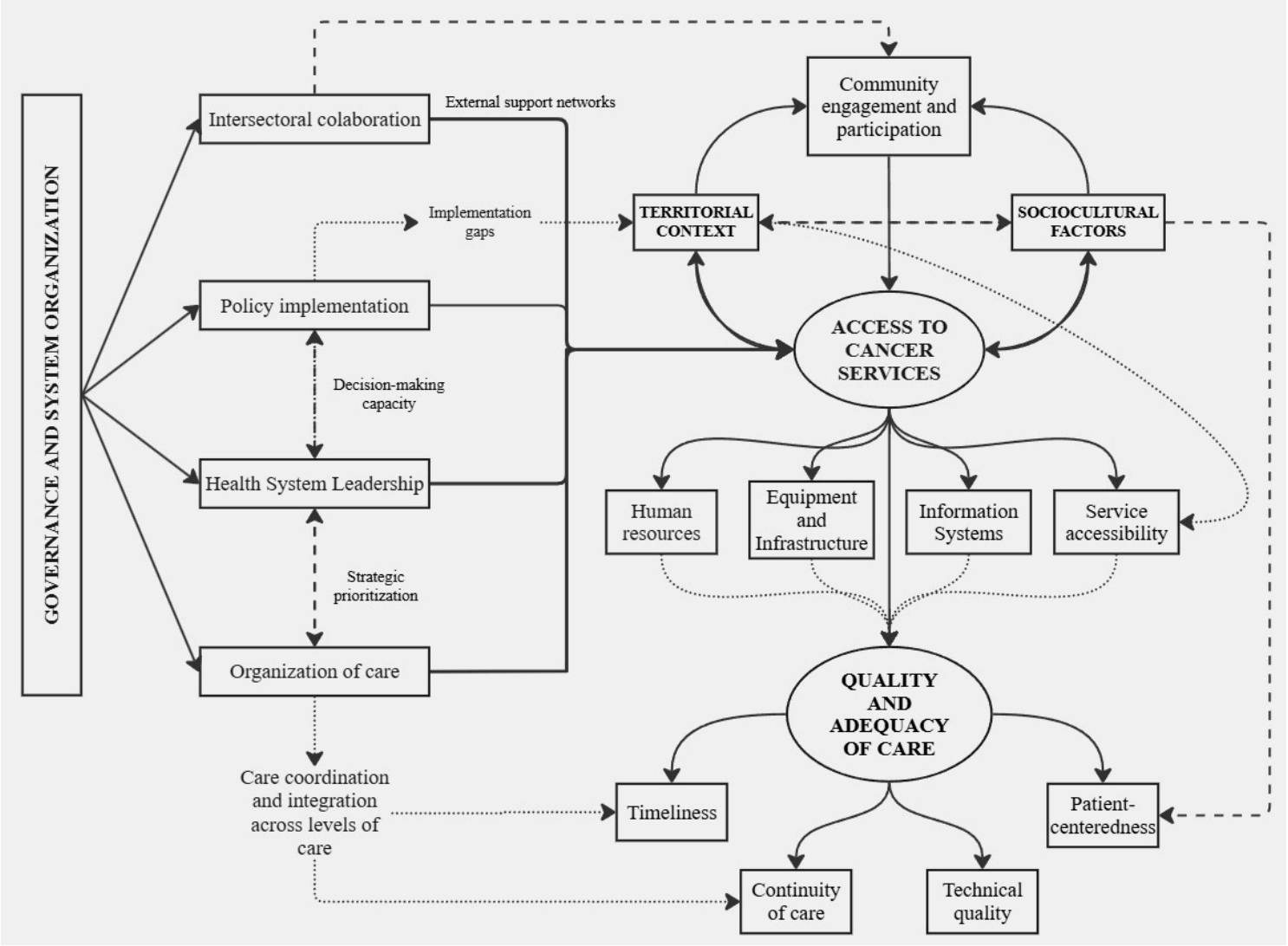


Figure 1

Conceptual model of factors influencing the provision of oncology healthcare. *The four analytical dimensions identified in this study are deeply interconnected. Governance and organization arrangements shape access to cancer services, while territorial and sociocultural conditions influence how care pathways are experienced and navigated across different contexts. Together, these factors configure providers' perceptions of the sufficiency and quality of oncology care within the public healthcare network. (Own Elaboration)*

Supplementary Files

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