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Institutional practices for cancer: Comparison of social and health care along disease trajectory in five countries with high survival rates

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ABSTRACT

Aim: This article analyses the institutional practices that shape socio-health care for cancer along the disease trajectory—from screening to survivorship—in five countries with the highest cancer survival rates: Australia, Belgium, Canada, Costa Rica, and Japan. Methods: Drawing on social practice theory, the study applies a critical documentary analysis of 115 institutional and scientific sources, including national cancer plans, legislation, and clinical guidelines, to examine how material elements, practical knowledge, and shared meanings are articulated in policy and practice. Results: Findings reveal consistent patterns across the five high-survival countries, including the strong institutionalisation of screening programmes, continuous strengthening of diagnostic infrastructure, and establishment of interdisciplinary teams. However, significant challenges persist in addressing territorial inequalities, ensuring equitable access, and protecting patients from out-of-pocket costs associated with innovative therapies. Japan is distinguished by its population-based endoscopic screening for gastric cancer, while Australia and Canada lead in culturally adapted, community-based approaches. Costa Rica shows partial implementation through regional pilots, and Belgium displays high diagnostic and therapeutic integration with European networks. Psychosocial, financial, and legal support emerge as indispensable dimensions for achieving equitable and comprehensive cancer care. Non-governmental organisations and community networks play a central role in providing counselling, subsidies, and reintegration support, although their reach varies across contexts. Overall, the study underscores that biomedical innovation alone is insufficient: cancer survival depends on the effective coordination of biomedical, social, cultural, and legal policies within integrated socio-health care systems that prioritise equity and quality of life as key pillars of public cancer policy. In high-performing systems, survivorship is not merely the result of clinical coverage but emerges from an institutional ecosystem that bridges biological recovery and social citizenship.

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1. Introduction

In cancer studies, survival rates—a biomedical indicator focused on population survival—have been widely employed as a key measure of success in oncology public policies, as they enable international comparisons and allow the monitoring of incidence and mortality trends over time [1,2]. Accordingly, public policies that improve survival are those that strengthen access to early diagnosis, ensure high-quality treatment, and expand the availability of palliative care, as well as social, emotional, and economic support throughout the continuum of care [3].

Cancer survival depends not only on timely access to diagnosis and treatment, but also on a complex interplay of social, organizational, cultural, and structural factors that shape the quality and equity of care [4]. While survival indicators are useful for comparing macro-level trends across countries, they do not capture how social and health care is provided to individuals, an essential dimension for improving outcomes among cancer patients. Recent international analyses have warned that the gap between biomedical advances and the lived experience of cancer constitutes a human crisis in oncology care [5], characterized by the systematic neglect of emotional, relational, social, and existential dimensions. The crisis is not attributed to individual professional failures, but to institutional designs, financing models, and performance metrics that prioritize efficiency and biomedical outcomes. —such as survival—over the quality of the care experience. This highlights the need for analytical frameworks that address the continuum of care and integrate the emotional, social, and contextual dimensions shaping the cancer experience [6,7].

From this perspective, this study conceptualises social and health care as a set of practices carried out by institutions—government, private for-profit or non-profit (e.g., charities and non-governmental organizations organisations)—throughout the entire course of oncological disease. Drawing on social practice theory the analysis shifts attention from individuals or structures to the concrete dynamics of practice, understood as configurations of material elements (infrastructures, technologies, resources), practical knowledge or know-how (the skills and expertise shared among actors), and shared meanings (values, and normative orientations that guide action) [8,9] that mediate both individual action and the institutional capacity to intervene in the social world [8,10]. This approach, grounded in situated knowledge, recognises that institutional practices—and their analysis—are historically, socially, and materially embedded, recognizing both the possibilities and limits of "partial objectivity" [11]. By incorporating organisational, social, and contextual dimensions of care, this approach responds to international calls for more multidimensional and person-centred perspectives to transform cancer care systems and reduce health inequalities [3,7,12].

International literature has shown that cancer policies and integrated care models can only be fully understood when social determinants of health, structural inequalities, and the organization of health systems across the continuum of care are taken into account [13–15]. Recent reviews have outlined policy frameworks aimed at reducing social inequalities in cancer, emphasizing the alignment of prevention, clinical care, and social protection with explicit equity goals [15,16]. In parallel, other studies have proposed care models that integrate social risks and needs screening, patient navigation, and coordination with community resources to address non-biomedical barriers to access, treatment adherence, and survival [13,17]. However, despite these advances, comparative studies that systematically examine how national cancer policies are translated into concrete institutional practices across the disease trajectory in different sociopolitical contexts remain scarce [14, 18]. Addressing this gap requires moving beyond policy design to an analysis of how policies are operationalised within health and social care institutions.

In response to this gap, this article aims to describe and compare the institutional practices that shape social and health cancer care along the entire disease trajectory in countries with the highest cancer survival rates—Australia, Belgium, Canada, Costa Rica, and Japan. Building on a previous article [18] that examined the sociodemographic, political, and policy contexts underlying high survival rates, the present analysis advances further by focusing on how institutional practices operationalize those policies in everyday care. The study therefore provides a comparative understanding of how cancer care is organised from screening to survivorship. Practices related to other preventive actions (beyond screening) and to health promotion were excluded, as those interventions are typically intersectoral and extend beyond the oncological field, limiting their comparability [3,12,19].

2. Methods

This descriptive-comparative study is based on a critical documentary review, following the methodological strategy developed by Wallace and Wray [20]. This approach emphasizes an analytical reading of documents by situating institutional texts within the broader cultural, institutional, territorial, and epidemiological frameworks shaping material arrangements, practical knowledge, and shared meanings through institutional practices enacted and sustained by public policies [10].

This approach enables not only the description of policy content but also the interpretive analysis of how institutional responses are articulated and consolidated, as well as the actors involved, integrating a perspective that articulates the clinical, epidemiological, social, and cultural dimensions of cancer care.

2.1. Sample

Consistent with the previous study [18], five countries—Australia, Belgium, Canada, Costa Rica, and Japan— were selected according to two main criteria: (1) high five-year net survival for the five most prevalent cancers (breast, lung, colorectal, prostate, and gastric), according to CONCORD-3 data (2010–2014); and (2) geographic and institutional diversity, allowing for the inclusion of healthcare models with different trajectories. African countries were also excluded due to the limited availability and reliability of comparable data for the analyzed period. Non-melanoma skin cancer although highly prevalent, was also excluded because of the absence of standardized data.

The cross-country comparison was grounded in survival rate data by cancer type, which provided a common empirical foundation. Building on this, the analysis was organized around the institutional practices that support cancer care policies and programs beyond biomedical treatment, encompassing the entire course of the disease. This framework facilitates the identification of patterns, gaps, and lessons regarding how institutions define priorities, organise services, and implement practices in different contexts.

2.2. Documentary sources and selection process

This study drew on a critical review of secondary sources, including official documents (national cancer plans and strategies, laws, decrees, and technical regulations), reports from international organisations (WHO, IARC, OECD, and the World Bank), national and international clinical guidelines, peer-reviewed literature, and materials produced by civil society organisations and patient associations. Consistent with our previous study [18], the documentary corpus present analysis was updated and expanded while maintaining the same inclusion and exclusion criteria.

Documents were included if they: (a) referred to the five selected countries; (b) addressed cancer care policies, programs, or care arrangements across the entire disease continuum (from screening to survivorship); and (c) were publicly available in English or the official language of the country. Exclusion criteria comprised opinion pieces without institutional endorsement, sources with an exclusively local scope not transferable to the health system level, and materials lacking

relevant information on healthcare organization or social/non-biomedical dimensions. Screening was conducted in two stages: first, an initial review of titles and abstracts or institutional descriptions, followed by full-text analysis using Wallace and Wray's critical reading strategy to confirm analytical relevance [20]. In total, 115 documents met the inclusion criteria and were incorporated into the comparative matrix, including material from the previous article [18], ensuring continuity and greater analytical depth in the examination of institutional practices.

2.3. Analytical strategy

The analysis was conducted in three stages. First, informed by the research team's methodological reflexivity [21], a set of analytical dimensions was defined to ensure coherence between the focus on institutional practices and key features of how social and health care are organized at each stage of the disease.

1. **Screening and Early Detection**. institutional definitions of priority populations, organization of preventive services, and practices aimed at equitable early access to the health system.
2. **Diagnosis, Access to Treatment, and Support.** practices ensuing timely and continuous access to diagnosis and treatment, including infrastructure, coordination of care, support networks, helplines, and informational resources for patients and families.
3. **Organization of Cancer Treatment.** delivery of treatment, therapeutic modalities, financial burden, and incorporation of biomedical innovation.
4. **Social Support for Comprehensive Care.** provision of financial subsidies, transportation, accommodation, and palliative care to support patients and families along the disease trajectory.
5. **Institutional Frameworks for Survivorship.** legal and policy frameworks, labour reintegration practices, and coordination of survivor networks to support long-term care.

In the second stage, 115 documentary sources were reviewed to capture institutional, clinical, and policy dimensions of cancer care. These included official documents, national cancer plans, legislation, and clinical guidelines; peer-reviewed scientific studies addressing epidemiology, inequalities, waiting times, programs on prevention, screening, and early detection; resources and technologies for diagnosis and treatment; as well as materials on psychosocial support, patient associations; palliative care, and survivorship frameworks. The publication years ranged from 2004 to 2025, with a predominance of sources published after 2020.

Documents were subjected to critical reading and thematic coding according to the analytical dimensions, which were iteratively refined. Data were systematised in an Excel-based matrix organised by country and dimension, enabling cross-national comparison and the identification of patterns, divergences, gaps, and degrees of institutional consolidation.

The methodological strategy drew on Wallace and Wray's [20] framework for critical document analysis, moving beyond descriptive content to interrogate underlying assumptions, silences, and legitimizing effects. Acknowledging the partiality inherent in all policy and analysis [11,21], the study examined how material elements, practical knowledge, and shared meanings structure cancer-related social and health care are configured in practice [8,22]. As the study relied exclusively on secondary data from publicly available sources, ethics committee approval was not required.

2.4. Strengths and limitations of the study

This study adopts a comparative approach across five countries with high cancer survival rates, allowing examination of similarities and differences in the organization of cancer care from a transnational perspective. By systematically incorporating organizational, social, legal, and cultural dimensions across the continuum of care - from screening to survivorship- it extends analyses focused primarily on clinical outcomes. The use of a broad corpus of publicly available documents (115 sources), including policies, legislation, clinical guidelines, and peer-reviewed research, supports a comparative analysis based on accessible and verifiable institutional information.

Several methodological limitations should be acknowledged. The analysis is conducted primarily at the macro level, focusing on national policies and practices, which entails simplification to enable cross-country comparison and limits the ability to capture subnational heterogeneity, intra-country variations, and entrenched inequities affecting access within regions or populations groups.

As a documentary study based exclusively on publicly available secondary sources, it does not include primary data on implementation or the lived experiences of patients and professionals, nor does it quantitatively assess service coverage. Heterogeneity in data availability across countries may also affect the depth and comparability of certain dimensions analysed. Finally, the focus on countries with high survival rates constrains generalisability to settings with lower institutional capacity, and reliance on official documents may overlook informal or community-based practices that are not systematically documented.

3. Results

The results are organized around the five key domains, providing a descriptive and comparative analysis of the selected countries. Tables 1–5 summarize the main elements and indicators that characterize each domain.

Consistent with the findings of the previous study, this analysis indicates that countries with high cancer survival rates share a common feature: the existence of national screening programmes for breast cancer (mammography), cervical cancer (Pap smear and HPV testing), and colorectal cancer (faecal immunochemical test, FIT). The only exception is Costa Rica, where colorectal screening has been implemented exclusively in the province of Cartago through a regional pilot programme, rather than as a systematic national strategy.

Japan is distinguished by the incorporation of population screening for gastric cancer using endoscopy—a public policy priority driven by the high incidence and mortality of this cancer in the country, which exceeds 20 cases per 100,000 inhabitants, placing it among East Asian countries with the highest global burden of this disease.[8] This strategy has enabled the detection of approximately 30–50% of gastric cancers at early stages, contributing to improved survival. By contrast, in Australia, Canada, Belgium, and Costa Rica, gastric cancer is not prioritised for population-based screening, as its incidence and mortality are substantially lower and do not justify mass programmes. In these countries, surveillance is targeted to high-risk groups, while population screening focuses on breast, cervical, and colorectal cancer, which account for the highest epidemiological burden.

The data reveal a persistent gap between the existence of screening programmes and their effective population coverage in all countries analysed, underscoring the need to strengthen strategies for recruitment, follow-up and equitable access. None of the countries achieve uniform coverage across all cancer types evaluated: Canada and Australia report relatively higher rates for breast and cervical cancer, while marked regional disparities persist in Canada. Japan maintains stable yet low coverage across all three screening types, whereas Belgium and Australia show intermediate and comparable levels, with

[8] In Japan, specific cancer screening programmes exist exclusively for survivors of the atomic bombings in Hiroshima and Nagasaki, managed in collaboration with the Radiation Effects Research Foundation. Although this exception is not addressed in the present article, it is noted here as a special case within Japan's public health policy framework [115]

Table 1
Screening and early detection.

Dimension		Japan	Australia	Costa Rica	Canada	Belgium
National Screening Programmes		Screening programmes include breast cancer (mammography), cervical cancer (Pap smear and HPV testing), and colorectal cancer (FIT), except in Costa Rica, where no national colorectal screening programme exists.				
		Gastric cancer (endoscopy) and lung cancer for high-risk populations.	Progressive implementation of lung screening (beginning in July 2025).	Pilot programme for colorectal cancer in the province of Cartago.	Pilot programmes for lung cancer for high-risk populations	HPV self-testing kits
Coverage of the target population	**Breast cancer**	47.4% (2022)	50% (2022)	Information not consolidated.	59.7% (2022) by province.	54.5% (2021)
	Colorectal cancer	53.7% (2023)	42% (2022)	88% — Cartago pilot program (2017–2019)	59% (2022)	45,7% (2021)
	Cervical cancer	43.6% (2022)	68% (2023.	50% (2022).	70%-83% (2022) by province.	53.2% (2021)
Territorial Strategies and Inequalities		No specific territorial strategies; population-based workplace screening programmes have been implemented since 1988.	Implements screening programmes with rural and Indigenous communities through mobile clinics, self-administered FIT kits, culturally adapted materials, and local leaders to ensure access and cultural appropriateness.	Mobile programmes and campaigns targeting rural or hard-to-reach areas implemented, but not systematically.	Develops screening strategies with rural and Indigenous communities through mobile clinics, community reporting, and cultural training.	HPV self-testing mainly targets women who do not participate in provider-based screening.

Source: Authors' elaboration based on data from national cancer policies of the selected countries [29–45]

Belgium holding a slight advantage in colorectal cancer. Japan and Canada show comparatively higher levels of coverage for this cancer. In contrast, in Costa Rica participation is high only in the Cartago pilot programme (88%), with no consolidated national data available for other cancers. This highlights the persistent challenges of implementation and monitoring at the national level.

Different strategies have been adopted to address territorial and population-level inequalities in screening access. Japan has not implemented explicit territorial equity strategies but has relied on workplace-based population screening since 1988, achieving significant coverage among employed populations. Australia and Canada have developed culturally responsive approaches, collaborating with rural and Indigenous communities through mobile clinics, community leadership, and culturally adapted materials. In Costa Rica, outreach and mobile campaigns have targeted rural and remote areas, though without national consolidation. Belgium, meanwhile, has introduced HPV self-testing to reach women who do not participate in conventional screening.

In summary, while all countries have institutionalised screening programmes for major cancers, significant challenges persist in achieving equitable coverage and reducing territorial and population-level inequalities. Japan prioritises population-based screening for gastric cancer, whereas Australia and Canada have developed explicit territorial and culturally strategies in collaboration with communities. Costa Rica and Belgium show both progress and ongoing challenges in coverage and equity, with innovations such as HPV self-testing in Belgium.

Table 2 summarises the main findings regarding the clinical diagnosis dimension, highlighting both the shared elements and country -specific features.

Across all countries, diagnostic infrastructure includes hospitals and specialised centres equipped with advanced imaging technologies (mammography, MRI, CT, PET, and PET-CT), molecular diagnostic laboratories, and cancer registries, providing a solid basis for early detection. However, important differences emerge: Japan incorporates ultra-rapid blood tests and extensive workplace-based diagnostic infrastructure; Australia relies on a national network of diagnostic registries and mobile units for remote areas; Costa Rica is characterised by an in-house Cyclotron–PET/CT laboratory and regional research centres; Canada combines mobile infrastructure in rural regions with an extensive laboratory network; and Belgium, operates a national network of Next Generation Sequencing (NGS) laboratories with universal access to advanced molecular testing.

Median waiting times between diagnosis and treatment vary considerably, ranging from 19 to 31 days in Japan and Canada, 22 days in Australia, and less than 21 days in Belgium for most cases, to 72 days for breast cancer in Costa Rica. Taken together, these figures highlight both differences in system efficiency and ongoing challenges in managing service demand and ensuring territorial equity.

All five countries operate under universal health coverage (UHC) systems, reaching population coverage of 95% or higher. Although Costa Rica's median waiting time is approximately twice that observed in the other countries, it remains within the three-month interval recommended by the WHO Global Breast Cancer Initiative [23] for initiating breast cancer treatment. Moreover, Costa Rica's five-year age-standardised net survival is broadly comparable to that of the other countries, suggesting that factors beyond waiting times may play a significant role in shaping outcomes. Along similar lines Duggan et al. [24], emphasise that early breast cancer diagnosis is insufficient to reduce mortality unless followed by timely and stage-appropriate treatment.

Coordination of the diagnostic–therapeutic process shares several common features, including standardised clinical pathways, multidisciplinary teams, and referral and counter-referral mechanisms under public supervision. However, each country introduces specific nuances. Japan integrates occupational health diagnostics and allows provider choice; Australia has centralised coordination supported by electronic monitoring, particularly in remote and Indigenous areas; Costa Rica maintains a hierarchical model with public resource allocation; Canada applies regional and provincial coordination supported by advanced electronic systems; and Belgium integrates molecular diagnostic networks with transparent auditing of access to services.

Social support mechanisms are present in all countries through established support centres, helplines, and informational resources, although coverage and accessibility vary. These range from free national helplines providing professional assistance — as in Japan, Canada, and Australia — to locally managed resources operated by hospitals or civil society organisations, as in Costa Rica and Belgium.

All countries analysed address cancer treatment through a multidisciplinary approach integrating surgery, advanced radiotherapy, chemotherapy, targeted therapies, and immunotherapy. However, the incorporation and accessibility of innovative treatments vary substantially. Japan has developed extensive capacity in proton therapy, novel immunotherapies, and precision medicine. Australia has expanded access to proton therapy, stereotactic radiotherapy, and CAR-T cell clinical trials in referral hospitals. In Costa Rica, personalised treatments and advanced immunotherapies are largely confined to the for-profit private sector and are not part of public provision. Canada has incorporated

Table 2
Diagnosis, access to treatment and support.

Dimension	Japan	Australia	Costa Rica	Canada	Belgium
Infrastructure for cancer diagnosis	Hospitals and diagnostic centres equipped with advanced imaging technologies (mammography, computed tomography, magnetic resonance imaging), molecular diagnostic laboratories, and cancer registries.				
	Ultra-rapid blood tests and extensive infrastructure in workplace environments for periodic cancer screening.	National network of centralised diagnostic registries and mobile diagnostic units in remote areas.	In-house Cyclotron–PET/CT laboratory for radiopharmaceutical production, and a regional centre for cancer research and diagnosis that serves as a benchmark in Central America.	Mobile infrastructure in remote areas.	A national network of Next Generation Sequencing (NGS) laboratories and universal access to advanced molecular testing, alongside infrastructure supporting self-testing for cervical cancer.
Median waiting time between diagnosis and treatment	31 days for all cancers (2017)	22 days for all cancers (2023–2024)	72 days for breast cancer between diagnosis and surgery (2008–2012).	Between 19 and 28 days for most cancers (2023–2024)	Less than 21 days after diagnosis (2024).
Coordination of the Diagnosis-Treatment Process	Standardised clinical pathways, multidisciplinary teams, referral and counter-referral mechanisms, with public oversight ensuring equitable access and reduced waiting times for cancer diagnosis and treatment.				
	Integration of occupational diagnoses and freedom to choose healthcare centre and specialist.	Centralised coordination supported by electronic monitoring, with a focus on remote and indigenous areas.	Hierarchical coordination and public resource allocation with limited elective options.	Regional and provincial coordination, second-opinion options, and advanced electronic systems.	Integration of molecular diagnostic networks and transparent auditing of access to services.
Support centres	Cancer Patient Support Centres located in university and regional hospitals (e.g., the University of Tokyo, Keio University), offering face-to-face and telephone consultations, second opinions, and emotional support.	Centres and organisations such as the Cancer Council, Cancer Australia, and the Breast Cancer Network Australia, providing both face-to-face and remote support.	Centres such as the Cancer and Haematology Centre at the Metropolitan Hospital, and support groups including Anasovi, Fundacancer, and Más Vida, offering counselling and community-based activities.	The Canadian Cancer Society and hospitals such as the Princess Margaret Cancer Centre, providing in-person support, accommodation, workshops, and educational resources.	Institutes such as the Jules Bordet Institute in Brussels offer psychosocial support, counselling, and patient groups integrated within the care process.
Helplines	The Japan Cancer Society's national cancer hotline, which receives more than 10,000 calls annually and is staffed by nurses and social workers.	The Cancer Council Helpline (13 11 20), along with other services such as the Head and Neck Cancer Helpline (1300 424 848) and the Ovarian Cancer Helpline (1300 660 334).	Contact and guidance lines are available in hospitals and patient organisations; however, there is no single national service.	The Cancer Information Helpline (1–888–939–3333) is a free, multilingual national service providing professional support and referrals to community resources.	Multilingual helplines, such as those operated by the Cancer and Psychology Organisation, as well as other national and regional helplines, offer emotional and social support.
Guides and Resources	Printed guides and informational materials available at centres and organisations such as the Japan Cancer Society, which also provides advice on employment and financial matters.	National guides entitled 'Your Guide to Best Cancer Care' in several languages, printed and digital educational materials for patients and families.	Educational materials and both in-person and virtual workshops; some hospitals also provide guidance and psychosocial counselling for patients and their families.	Printed and digital guides for each stage of cancer, online resources, and a national community service locator with more than 4500 entries, along with virtual support communities.	Patient guides (e.g., Living with Prostate Cancer), educational materials, and information on support groups and patient associations are distributed nationwide.

Authors' own elaboration based on national cancer policy documents [33,36,43,46–73]

robotic surgery, advanced radiotherapy, and personalised medicine, with access to medicines varying by province. Belgium combines a national network of advanced molecular diagnostics (NGS) with universal access to targeted therapies and immunotherapies, and participation in European proton therapy networks.

In parallel, all countries engage in international clinical trials and translational research networks, facilitating data sharing and collaborative access to advanced treatments. Japan has invested in proton therapy and experimental cancer vaccines; Australia provides public access to proton therapy through national centres; Costa Rica restricts access to advanced therapies exclusively to for-profit private sector; Canada has developed in-house mRNA vaccine capacity; and Belgium has implemented radioligand therapy and has led European initiatives to harmonise access to innovative treatments.

The comparison reveals a shared therapeutic provision and research foundation, alongside substantial cross-country differences in innovation, access, and financial protection, reflecting divergent institutional capacities and policy priorities. Although proton therapy represents an advanced technological capability, its clinical indications remain limited to a relatively small subset of cancers, and its high cost means it is not typically considered a primary programmatic priority in national cancer care planning.

The five countries analysed have implemented diverse strategies to address the associated needs of people living with cancer, combining financial subsidies, transport and accommodation assistance, and palliative care. These measures seek to reduce economic and geographical barriers that hinder access to comprehensive care, particularly for patients in vulnerable circumstances.

Financial support and subsidies vary across countries, reflecting different approaches to protecting cancer patients from the financial burden of treatment. Japan applies income-based caps on monthly expenditure, complemented by both universal and municipal support schemes. Costa Rica and Belgium rely on targeted programmes and state subsidies, respectively, while Canada provides educational scholarships and travel funds for non-medical needs. Australia offers financial assistance through public subsidies, grants administered by the Cancer Council, and treatment coverage under Medicare, depending on individual socioeconomic status.

Levels of out-of-pocket expenditure varies considerably across countries, reflecting uneven financial protection. In Japan, the standard

Table 3
Organisation of cancer treatment.

Dimension	Japan	Australia	Costa Rica	Canada	Belgium
Therapeutic modalities	Cancer treatment follows a multidisciplinary approach and systematically incorporates oncological surgery, advanced radiotherapy, and chemotherapy.				
	Proton therapy, innovative immunotherapies, experimental vaccines, and precision medicine with targeted therapies.	Proton therapy (first national centre established in 2023), stereotactic radiotherapy and Intensity-Modulated Radiotherapy (IMRT) techniques, Volumetric Modulated Arc Therapy (VMAT), and clinical trials with CAR-T cells conducted in public and referral hospitals.	Advanced treatments — including immunotherapy, personalised medicine, and robotic surgery — are available only in the for-profit private sector.	Robotic surgery, advanced radiotherapy, and personalised medicine are accessible within the public system, although there is provincial variability in the availability of medicines.	Advanced molecular diagnostics (NGS), universal access to targeted therapies and immunotherapy, and participation in European proton therapy networks.
Innovation and Research	All countries participate in international clinical trials and translational research networks, sharing data, developing and validating innovative therapies — such as immunotherapy and CAR-T cell treatments — and facilitating collaborative access to advanced cancer therapies.				
	Leader in proton therapy and experimental cancer vaccines.	Public access to proton therapy through national centres.	Access to advanced therapies is limited to the private sector.	In-house development of mRNA-based vaccines.	Pioneer in the implementation of radioligand therapy (RLT) and leader in European efforts to harmonise access to therapeutic innovations.

Authors' own elaboration based on data from national cancer policy documents of the respective countries. [63–94]

co-payment rate is 30% of treatment costs, although monthly income-based caps mitigate the overall financial burden**.** In Australia, monthly out-of-pocket costs range from USD 58 to USD 438, although no cancer-specific share of total expenditure is reported. In Costa Rica, no official data are reported, but expenses can be high in the for-profit private sector when care is sought outside the public system. In Canada, approximately 20% of total cancer-related costs are borne by patients and their families, reflecting indirect expenses not covered by the public system. Belgium, by contrast, maintains low co-payments and near-universal coverage, although higher costs may arise for innovative therapies not included in the national nomenclature system — the official mechanism for coding, registering, and pricing all health services [25].

Transport and accommodation arrangements also differ. With the exception of Australia, all countries have government schemes or national reimbursement mechanisms to facilitate access to treatment centres, while non-governmental organisations in Canada and Belgium play a key role in addressing needs not fully covered by the public sector. Japan and Costa Rica prioritise hospital accommodation and state subsidies, respectively, whereas Canada provides transport and lodging options managed through community networks.

Palliative care is formally integrated into national cancer policies and plans in all five countries. Japan and Australia promote an evidence-based, multidisciplinary model that emphasises home-based care and bereavement support. Costa Rica and Canada ensure the provision of palliative care through specialised teams and national protocols, promoting continuity of care beyond hospital settings. In Costa Rica, however, these services are often delivered by for-profit private providers at reduced cost due to constraints in the public system.

Euthanasia -—referred to in some contexts under different legal terminology, such as Medical Assistance in Dying (MAID) in Canada— is legally recognised only in Belgium, Canada, and Australia, under strict regulatory frameworks and clearly defined eligibility criteria that allow access in cases of serious, incurable illness and intolerable suffering. By contrast, in Japan and Costa Rica it remains prohibited, with no legal recognition or regulatory framework.

Overall, the analysis underscores the pivotal role of community networks and patient organisations in delivering social support for comprehensive care, particularly in countries such as Canada and Belgium, where non-governmental organisations and associations contribute substantially to addressing non-medical needs and promoting equity in access to care.

Approaches to cancer survivorship in Japan, Australia, Costa Rica, Canada, and Belgium reveals marked differences in terms of regulatory development, the provision of psychosocial support, and the coordination of patient networks, reflecting the institutional arrangements and policy priorities of each health system.

In the legal domain, Australia and Belgium have developed well-established regulatory frameworks. Australia has adopted the Principles of Cancer Survivorship, a national framework that guides the planning and delivery of post-treatment services. Belgium, in turn, has strengthened the protection of survivors' rights through the Right to be Forgotten for cancer survivors, which exempts individuals who have been relapse-free for a specified period from declaring their cancer history in insurance or financial procedures. In contrast, neither Japan nor Canada has a specific legal framework addressing cancer survivorship, whereas Costa Rica adopted legislation recognising the Right to be Forgotten in relation to cancer in 2024.

Policies on labour market reintegration also show considerable heterogeneity. Australia has implemented practical guidelines for work reintegration and employers focused awareness programmes, though implementation varies regionally. Costa Rica, through Bill No. 24.541 on the Right to Cancer Remission, has made progress towards establishing social and labour reintegration programmes coordinated by the Ministry of Labour and Social Security, with the participation of non-governmental organisations and public institutions. Canada provides resources and support programmes but lacks binding national policies, while Belgium has introduced specific initiatives—such as Rentrée—to provide career guidance to survivors, although protection against dismissal is not universally guaranteed by law. Japan, by contrast, shows no evidence of national guidelines or structured work reintegration programmes for this population.

Survivor networks in Australia, Costa Rica, Canada, and Belgium through patient organisations providing emotional support, information, and advocacy. Although varying in scope and specialisation, networks such as BEAT Bladder Cancer Australia, FUNCAVIDA in Costa Rica, Pancreatic Cancer Canada, and NEOVIDA in Belgium play a pivotal role in promoting social integration and improving the quality of life of survivors. Based on available information, no comparable organised survivor networks were identified in Japan

In summary**,** survivorship has been incorporated into national cancer policies to differing degrees. Australia and Belgium demonstrate more advanced regulatory development and coordination of comprehensive support mechanisms, whereas Japan and Canada face persistent legal and programmatic gaps. Costa Rica, meanwhile, is progressing towards the consolidation of a more integrated approach. Across countries, the presence and strength of patient networks emerge as key determinants in safeguarding rights, and providing psychosocial support, thereby

Table 4
Financial support and subsidies.

Dimension	Japan	Australia	Costa Rica	Canada	Belgium
Financial Support and Subsidies	Cancer patients have access to state subsidies for illness or disability, as well as additional financial assistance provided by non-governmental organisations, which help cover treatment-related expenses and basic needs throughout the cancer journey. In Costa Rica, however, such support is provided almost entirely by the for-profit private sector.				
	Institutional financial support				
	Legal cap on monthly expenditure based on income; no universal subsidies; specific municipal support programmes.	No information available	Targeted support and programmes for adolescents and young adults with cancer (Daniel Project), including specific food and educational assistance.	Educational scholarships for cancer survivors; travel funds for CAR-T treatment; and assistance for non-medical needs.	No information available
	Out-of-Pocket Expenditure				
	Patient co-payments vary according to age but never exceed 30%. The main exceptions are children under six years of age who are not yet in school (20% co-payment) and adults over 65 (10% co-payment).	In some contexts, cancer patients pay between USD 58 and USD 438 per month.	There is no official figure reporting out-of-pocket expenditure as a proportion of total cancer-related costs.	Twenty percent of total cancer costs are borne by patients and their families.	Most treatments are publicly covered, except for innovative therapies not included in the national nomenclature system.[a]
Transport and Accommodation	Hospital accommodation available for patients and families; local assistance with transport and lodging.	State subsidies for transport and accommodation (IPTAAS); affordable accommodation options and volunteer transport services	State-funded support for transport and accommodation.	Subsidised by the Canadian Cancer Society and Hope Air; mobile homes available in some provinces for rural patients.	National reimbursement for transport to treatment centres; accommodation subsidised by non-governmental organisations.
Palliative Care	Palliative care is formally recognised and integrated into national cancer policies and plans, adopting a multidisciplinary approach that emphasises early intervention and the protection of patients' rights.				
	Home-based palliative care promoting a community-oriented model that ensures continuity of care and supports living at home.	Palliative care includes support for cultural and religious practices, bereavement counselling, and advance care planning; most services are available at home, in hospital, in hospice, or in long-term care facilities.	No information available	Dedicated palliative care facilities exist, although bed availability has declined since the pandemic.	No information avaible
Euthanasia	Not legally recognised	Accepted in cases of terminal illness involving intolerable suffering, for adults of legal age, and upon voluntary and repeated request.	Not legally recognised	Accepted in cases of serious and incurable illness (terminal or otherwise), with intolerable suffering, for adults over 18 with full mental capacity.	Accepted in cases of unbearable suffering and incurable illness, including provisions for minors and foreign residents.

Authors' own elaboration based on data from the national cancer policy documents of the respective countries. [25,56,74–97]

[a] The nomenclature system is the official register specifying the medical acts, treatments, procedures, and health products covered by the national health insurance scheme.

contributing to greater equity and improved quality of life in the post-treatment stage.

4. Summary of the policy review

The main findings of this review, as in a previous article [18], reveal consistent patterns in the policy context of public cancer care across the five countries with the highest survival rates on their respective continents. In all cases, there is strong institutionalisation of screening programmes, continuous strengthening of advanced diagnostic infrastructure, and the establishment of interdisciplinary teams, in line with international literature that underscores the relevance of care continuity, social and cultural support, and sustained public investment as key determinants of improved cancer survival [26]. However, the comparative analysis also reveals important nuances: Japan is characterised by the systematic use of population-based endoscopic screening for gastric cancer — a strategy driven by its high incidence, which is not replicated in Western settings — whereas Costa Rica remains at a pilot stage with limited coverage in colorectal screening. Taken together, these findings indicate that the mere existence of national programmes is insufficient to ensure equitable coverage or to reduce territorial and population-based inequalities.

The countries studied highlight the role of non-governmental organisations and community networks as fundamental pillars of psychosocial care. These entities play a key role in providing financial subsidies, legal counselling, and social reintegration support for patients, while also offering helplines and support groups in in-person, virtual, and telephone formats, as well as educational programmes aimed at supporting cancer management at the individual and family levels. However, the scope and accessibility of these services vary considerably across health systems.

All countries analysed continue to face equity gaps in screening coverage, showing heterogeneous performance even within individual systems — for instance, across regions in Canada — highlighting the need to strengthen outreach and ensure effective follow-up of target populations. Even with advanced diagnostic infrastructure in place, variations in waiting times for diagnosis and treatment persist — from median intervals of fewer than 21 days in Belgium to more than 70 days in Costa Rica for certain cancers. These disparities reflect both management inefficiencies and enduring structural inequities in access to care, underscoring the structural challenges that persist across health systems.

Across the health systems, protection against out-of-pocket expenditure for innovative therapies remains uneven, potentially exacerbating inequalities in the absence of safety nets and universal coverage — particularly in lower-income contexts such as Costa Rica [27]. The social and legal dimensions of survivorship also reveal marked contrasts: only Belgium, Australia, and, more recently, Costa Rica have made progress in formally recognising the 'right to be forgotten' in relation to cancer, whereas Japan and Canada lack specific frameworks in this area. Likewise, social and labour reintegration policies vary substantially and remain only partially institutionalised in most of the countries analysed.

Within this context, universal health coverage (UHC) emerges as central structural framework shaping cancer outcomes. By situating our analysis within the framework of UHC paradigm and the broader agenda of institutional integration, our findings align with global evidence advanced by the World Health Organization in preparation for the Global Breast Cancer Initiative (GBCI). Duggan et al. [24] demonstrated a robust association between higher UHC indices and reduced breast cancer mortality through macro-epidemiological modelling, identifying key health system-level prerequisites for survival, including extensive coverage of essential health services and higher availability of public cancer centres. Complementing this quantitative framework, our study provides a necessary qualitative extension by examining how UHC is institutionalized across the entire disease trajectory. Beyond financial protection and core health care system features, we argue that the integration of social care –reflected in legal protections for workplace reintegration and survivorship rights-, represents a critical evolution of the UHC model.

Furthermore, the analysis highlights the crucial role of social support for comprehensive care, accompanying treatment through services such as transport, accommodation, financial subsidies, palliative care, and psychosocial support networks, with marked differences in how non-governmental and community organisations are coordinated. All countries provide information materials and helplines, yet their coverage and accessibility vary considerably, reflecting persistent inequalities in the provision of resources. Particularly relevant is the variability in the organisation and regulation of home-based palliative care, as well as in the legal framework for euthanasia: only Belgium, Canada, and Australia have legalised it under strict criteria, whereas Japan and Costa Rica explicitly prohibit the practice [28].

The synthesis indicates that, although biomedical innovation is a critical component, it is not sufficient to ensure quality or equity; rather, psychosocial, financial, and legal support emerge as indispensable conditions for achieving a comprehensive and equitable approach to cancer care. At the same time, these cross country comparisons also highlight the importance of robust data systems for assessing health system performance. Although this study draws on high-quality survival

Table 5
Institutional frameworks supporting cancer survivorship.

Dimension	Japan	Australia	Costa Rica	Canada	Belgium
Regulatory Framework	No national legal framework specifically dedicated to cancer survivorship.	National framework of principles on cancer survivorship (*Principles of Cancer Survivorship*).	Bill No. 24.541, currently under parliamentary discussion, seeks to establish the Right to Be Forgotten for cancer survivors after five years without relapse.	No national legal framework specifically addressing cancer survivorship.	*Law on the Right to be forgotten*: after five years from the end of radical treatment without relapse, individuals are not required to disclose a previous cancer diagnosis.
Work Reintegration	No national guidelines or structured programmes identified.	Practical reintegration guidelines, workplace awareness campaigns, and legal support mechanisms exist, although implementation varies.	Bill No. 23.306, currently under discussion in the Legislative Assembly of Costa Rica, seeks to create a Social and Labour Reintegration Programme for People with Cancer and Survivors, to be coordinated by the Ministry of Labour and Social Security, with the participation of NGOs and multiple public institutions.	Resources and support programmes are available, but implementation depends on provincial policies and the involvement of non-governmental organisations.	The **'Rentrée'** initiative provides employment guidance for cancer survivors, along with specific platforms and advisory services; however, these are not universal and are not guaranteed under a dedicated national law.
Survivor Networks	Australia, Costa Rica, Canada, and Belgium have established networks of cancer survivors that provide emotional support, information, and advocacy, although their scope and level of specialisation vary across countries. In contrast, no structured survivor networks of this kind are identified in Japan with the available information.				

Source: Authors' own elaboration based on data from the cancer policy documents of these countries [69,73,98–114]

data from the CONCORD programme, routine national monitoring often relies on indicators that insufficiently capture care continuity, waiting times, and equity, underscoring the need for more integrated cancer information systems.

In conclusion, cancer survival should be understood as the outcome of interconnected biomedical, social, cultural, and legal policies, shaped by local institutional contexts. In high-performing health systems, cancer survivorship cannot be reduced to clinical coverage alone; rather, it emerges from an institutional ecosystem grounded in an evolved model of universal health coverage that bridges biological recovery and social citizenship. Future research could extend this analytical framework to upper-middle income countries and other health systems with different levels of institutional development to assess how the policy architectures identified in high-survival systems may inform priority setting in other contexts, particularly regarding screening coverage, integrated cancer information systems, multidisciplinary care pathways, and social protection mechanisms that reduce financial and territorial barriers to care.

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CRediT authorship contribution statement

Calderon-Figueroa Carla: Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Formal analysis, Data curation, Conceptualization. **Alondra Castillo-Delgado:** Writing – original draft, Visualization, Methodology, Formal analysis, Conceptualization. **Lorena Rodriguez-Osiac:** Writing – review & editing. **Fuentes-Garcia Alejandra:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Formal analysis, Conceptualization. **Klaus Puschel:** Writing – review & editing. **Óscar Arteaga:** Writing – review & editing, Conceptualization. **Enrique A. Castellón:** Writing – review & editing.

Declaration of Competing Interest

There are no other competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

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