

Perspectives

Finding the sweet spot between standardisation and tailoring, using the implementation science principles in oncogeriatrics

Jorge Browne^a, Verónica Araya^b, Natalie Pinto^b, Estefany Quintana^b, Ignacio Salazar^{c,d},
Bruno Nervi^{d,e}, Benjamin Walbaum^{c,d,*}

^a Geriatrics Section, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

^b School of Nursing, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

^c Hospital Dr. Sótero del Río, Santiago, Chile

^d Department of Hematology and Oncology, Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile

^e Center for Cancer Prevention and Control (CECAN), Chile

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1. Introduction

Despite a large body of evidence supporting the role of comprehensive assessments for older adults in cancer care, their widespread implementation in clinical practice remains challenging. This is particularly relevant for low- and middle-income countries (LMICs), which currently account for nearly 50% of global cancer diagnoses and are projected to experience a sharp increase in cases over the coming decades [1,2]. Data from within these settings remains scarce. The recent global survey “Leave No One Behind” which included national representatives from four Asian and two South American countries, reported a slow pace of implementation and identified multiple barriers to scaling up access to oncogeriatric assessment [3].

Several randomized controlled clinical trials have demonstrated the importance of screening for age-related risk factors associated with an increased risk of toxicity from systemic cancer therapies. These studies have shown an impact in reducing grade 3 toxicity and hospitalizations due to treatment-related complications, in identifying geriatric syndromes, and in improving the overall experience and quality of life of older adults [4,5]. For this reason, numerous international clinical guidelines recommend the implementation of a comprehensive geriatric assessment. The American Society of Clinical Oncology (ASCO) has published a series of clinical guidelines that review the evidence and propose a user-friendly, standardized Practical Geriatric Assessment

(PGA) [6]. This is particularly relevant since many reported barriers to implementation include limited knowledge of the available tools and their effectiveness, which adds to time constraints among clinical teams. Notably, the 2025 ASCO guidelines acknowledge that resource-limited settings require a tailored approach to ensure feasibility and thus stratify recommendations according to three levels of resource availability: basic, limited, and enhanced, progressing from the implementation of a brief geriatric screening tool to a more structured geriatric assessment, and finally to a comprehensive assessment enabling integrated management [7].

While human and financial resources undoubtedly play a central role in the implementation of oncogeriatric models, they are not the only determinants of success. Local- and micro-level factors, such as workflow organization, professional attitudes, and information systems, can act as powerful facilitators or barriers and must therefore be explicitly considered during the design and implementation process [8] (Supplementary Table 1). These dimensions are often underrecognized yet critical for a sustainable integration of geriatric principles into cancer care.

This perspective reflects the experience of implementing a nurse-led oncogeriatric program in a public hospital in Santiago, Chile, a resource-limited setting where the balance between standardisation and adapting to the local context became central for its success. Our experience suggests and clearly exemplifies how systematically integrating micro-level

* Corresponding author at: Department of Medical Oncology, Pontificia Universidad Católica de Chile, Santiago, Lira 40, Santiago 2354200, Chile.

E-mail address: bwalbau@uc.cl (B. Walbaum).

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determinants into program designs, while maintaining a clear and standardized definition of what constitutes a geriatric oncology assessment, may be key to achieving sustainable and scalable models of care.

1.1. Resources and needs

The oncogeriatric program at Hospital Sótero del Río was developed through three iterative phases: study, design, and early evaluation, inspired by principles of implementation science [9]. Although no formal framework was applied, each phase sought to progressively identify barriers, design feasible solutions, and test early implementation strategies within a public, resource-limited health system.

The oncology center at Hospital Sótero del Río is the main referral facility for patients with cancer from three public hospitals in south-eastern Santiago, an area that includes some of the most socioeconomically vulnerable territories in Chile. Together, these institutions serve over 1.7 million inhabitants that represent near 10% of the Chilean total population. Despite this scale, resources for geriatric oncology were extremely limited. The available outpatient geriatric workforce available for oncologic patients was only 0.25 FTE (Full-Time Equivalent) that represent near 11 h per week, allowing coverage of roughly 18% of older adults receiving systemic therapy, many of them assessed only after treatment initiation.

As an early input for program design, a mixed-methods study conducted by an independent research team included a quantitative analysis of service data to more accurately estimate care demand and workflow capacity [10]. The qualitative component, comprising semi-structured interviews with patients, family caregivers, and the multidisciplinary oncology team, further revealed several critical challenges. The period between tumour board discussion and treatment initiation emerged as the point of lowest patient-physician contact. Moreover, treating oncologists expressed uncertainty when making treatment decisions for older adults, with, as expected, age-related biases commonly reported across the care continuum. Nurses, in contrast, were consistently identified as trusted and capable coordinators who could play a central role in improving continuity of care. With this data, this phase produced 38 recommendations to strengthen cancer care for older adults (Supplementary Table 2). Although not all were specific to oncogeriatrics, they provided essential guidance for system redesign and informed the subsequent model development.

1.2. Designing the program

Building on these findings, a pragmatic, nurse-led oncogeriatric model was designed to achieve equitable access within existing resource limitations. The target population included adults aged ≥ 70 years whose multidisciplinary tumour board had recommended systemic therapy with curative or palliative intent.

All eligible patients received a nursing-led oncogeriatric evaluation within seven working days of tumour board presentation. This process included two components: screening using the G8 tool [11] and a structured geriatric assessment addressing functional, nutritional, cognitive, and social domains [12,13]. Fig. 1.

When the G8 score was ≤ 14 , patients were referred for a full Comprehensive Geriatric Assessment (CGA) by a geriatrician, conducted in person within 14 days. Importantly, when specific vulnerabilities were identified during the nursing assessment, nurses activated pre-defined referral pathways without waiting for geriatric confirmation. For instance, patients with poor physical performance were referred directly to physical therapy, those with malnutrition to nutrition services, and those lacking social support to a social worker.

Because the modelling phase revealed no available resources for longitudinal follow-up, the program prioritized pre-treatment evaluation as the key opportunity to detect and address modifiable vulnerabilities. This nurse-led structure allowed early action, rapid triage, and integration of geriatric principles into oncology workflows while maintaining feasibility within resource constraints.

By concentrating efforts in the waiting period, between tumour board discussion and treatment initiation, the model aimed to deliver geriatric-informed care to all older adults before starting systemic therapy, balancing standardisation of assessment while adapting to local context (Table 1).

1.3. Early implementation

All these steps enabled the formal presentation of the proposal to the hospital's administration, followed by the implementation process. This required redefining clinical workflows to clarify how the program would be embedded within the continuum of care for older adults with cancer, as well as identifying essentials, such as physical space and basic supplies, both challenging tasks in large public institutions.

Ultimately, the program was launched with three nursing

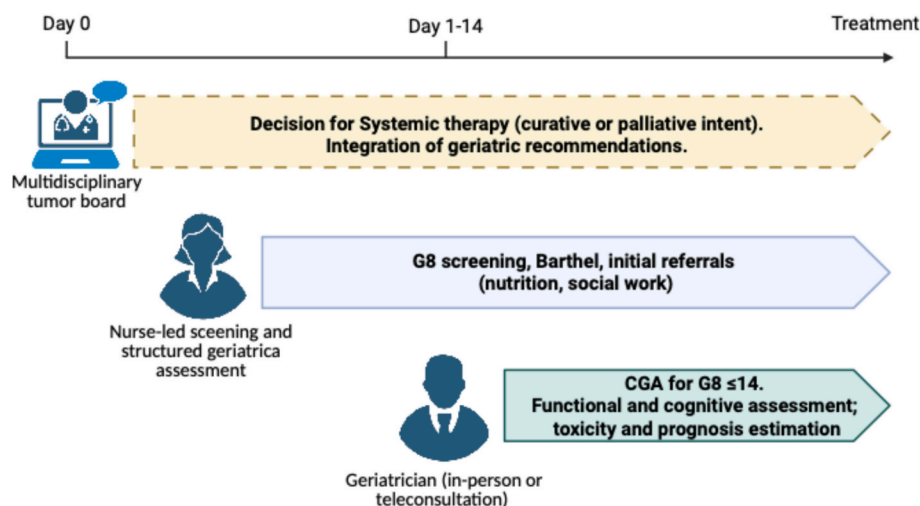


Fig. 1. Chronogram of the oncogeriatric evaluation and care pathway.

The figure summarizes the sequential workflow implemented at Hospital Dr. Sótero del Río for adults aged ≥ 70 years undergoing systemic therapy. The process spans from tumour board decision to treatment initiation and integrates multidisciplinary and geriatric evaluations. G8: Geriatric 8 screening tool. Initial frailty screening performed by the oncogeriatric nurse. CGA: Comprehensive Geriatric Assessment – Multidimensional evaluation performed by the geriatrician (in-person or teleconsultation) for patients with $G8 \leq 14$.

Table 1
Core design elements and roles in the oncogeriatric program.

Component	Summary
Core principles	1. To achieve impact, 100% of older adults eligible for systemic therapy must receive oncogeriatric evaluation. 2. Oncogeriatric programs can focus on evaluation only or evaluation + follow-up; both medical- and nurse-led approaches are supported by evidence, and the model should match local demand and resources. 3. The program must be interdisciplinary, involving nutrition, kinesiology, speech therapy, psychology, and social work. 4. Oncogeriatric care addresses many, but not all, patient needs (e.g., transport, ageism require broader institutional action). 5. The waiting-list period between tumour board and treatment start is a critical opportunity for geriatric screening and early intervention.
Target population	Adults aged ≥70 years with an oncologic committee decision to initiate systemic therapy (chemotherapy, radiotherapy, or immunotherapy), either curative or palliative. Excludes patients in follow-up only, exclusive palliative care, or surgical-only management.
Main objective	To deliver a pre-treatment comprehensive evaluation that informs oncologic decision-making. Follow-up of geriatric syndromes is secondary and only performed if it does not limit access for new patients.
Model leadership	Nurse-led program, with nurses trained in abbreviated comprehensive geriatric assessment, case management, and coordination of referrals to allied professionals or geriatricians.
Structure of care	Two-tiered process: 1. Initial nursing assessment within 7 working days of tumour board, including G8 screening and structured geriatric evaluation. 2. Comprehensive Geriatric Assessment (CGA) by a geriatrician (in-person or teleconsultation) within 14 days for high-risk cases (G8 ≤ 14).
Workflow focus	Implementation during the waiting-list period; emphasis on timely triage, standard documentation, and integration of geriatric recommendations into oncology decision-making.
Roles and key interventions	Waiting-list manager: identifies eligible patients, tracks timelines, updates status, and ensures communication with families. Oncogeriatric nurse: performs screening + structured geriatric evaluation; records results; activates predefined pathways (e.g., referral to kinesiology for SPPB <10, to nutrition for MNA < 8, to social work for weak support networks); coordinates care while the patient remains on the waiting list. Geriatrician: performs full CGA for high-risk patients; estimates prognosis and toxicity risk (Lee, Schomberg, CARG); provides recommendations on dosing, prehabilitation, and follow-up; addresses geriatric syndromes via network referrals. Head of Hemato-Oncology / Chief Nurse: ensures program functioning, facilitates interdisciplinary collaboration, and leads educational actions to counter ageism and promote healthy aging culture.

SPPB: Short Physical Performance Battery; MNA Mini Nutritional Assessment; CGA: Comprehensive Geriatric Assessment; CARG: Cancer and Aging Research Group Tool.

consultation slots, providing 12 new patient appointments per week, representing a 192% increase in patient care capacity compared to baseline. Within one year, 305 patients were evaluated, with weekly multidisciplinary meetings established to discuss progress and review complex cases. Among them, 54.8% presented some degree of dependency (Barthel Index <95 points), and 46.1% showed some level of frailty (Clinical Frailty Scale ≥4).

During implementation, early outcomes and gaps were identified, highlighting both the feasibility of the model and the challenges to be addressed in the second phase of the program. An initial analysis showed that approximately 22% of evaluated patients completed their care under an exclusive nurse-led plan. This allowed physicians to prioritize

consultations for those requiring more complex evaluation. Additionally, having a standardized care protocol improved access and timeliness of evaluation while enabling nurses to perform targeted interventions during the first visit, an essential feature given the time-sensitive nature of cancer diagnosis.

However, there were still important challenges identified. First, there was limited awareness of the program and roles from the treating clinicians. As this model was pioneering within the oncology unit, dissemination among clinical teams was scarce. This explains why many professionals were unfamiliar with the content and scope of information provided. Awareness and collaboration improved gradually over time.

Second, despite an agreed referral flow, the processes of scheduling and patient notifications were inconsistent. As a result, nurses often had to assume additional administrative tasks beyond their clinical duties, leading to time constraints.

2. Conclusion

This ongoing project demonstrated that, despite significant resource constraints and administrative challenges, a stepwise and purposefully designed program, grounded in patient-centered principles, can produce meaningful improvements in care, even when such progress initially appears unattainable and difficult to measure. Moreover, this experience offers several transferable principles for implementing oncogeriatric programs in other resource-limited settings. First, it reaffirms the universality of access as an ethical imperative. Second, by understanding local workflows, it highlights the strategic use of pre-treatment waiting periods to conduct assessments and early interventions. Third, it underscores the pivotal role of advanced practice nurses as coordinators and clinical leaders within multidisciplinary teams. Finally, it operationalizes interdisciplinary care as a prerequisite for a truly patient-centered approach.

Beyond local results, these principles align with international literature, showing that a pragmatic and nurse-led approach, grounded in local workflow-integrated models, can improve access, efficiency, and most importantly, patient outcomes even without extensive geriatric infrastructure. Sustainability depends not only on financial or human resources but also on fostering institutional alignment, clarifying roles, and embedding geriatric thinking into everyday oncology practice.

This program remains a work in progress, yet, after only a year, it already provides transferable lessons on how to adapt global oncogeriatric standards to local realities. We call upon the geriatric oncology community to shift focus from demonstrating efficacy to understanding and advancing implementation strategies, ensuring that evidence-based care reaches all older adults, regardless of where they live.

Author contribution

JB was the principal author and contributed to all stages of the study. BW contributed to conceptualization and study design, manuscript drafting, and critical revision of the manuscript. VA, NP, EQ, and IS contributed to the design and implementation of the interventions and to manuscript drafting. BN contributed to data interpretation and critical revision of the manuscript.

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Declaration of competing interest

BW has received lecture fees from AstraZeneca and advisory/consulting fees from Novartis. The remaining authors declare no competing interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jgo.2026.102849>.

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