Oncologic patient navigation by nurses: a scoping review

Navegação de pacientes oncológicos por enfermeiros: revisão de escopo

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Conflict of interest: the authors have declared that there is no conflict of interest.

ABSTRACT

Objective: to map the navigation of oncologic patients by nurses in Brazil. **Methods:** this scoping review was conducted using the Medical Literature Analysis and Retrieval System, Scopus, Web of Science, Latin American and Caribbean Health Sciences Literature, and gray literature from the Brazilian Digital Library of Theses and Dissertations. **Results:** a total of 11 studies were selected that addressed the implementation and outcomes of oncology patient navigation programs, the development of supportive navigation technologies, and the prominent role of nursing in this context. **Conclusion:** oncology patient navigation by nurses in Brazil is essential for overcoming barriers to care, improving continuity, and enhancing the patient experience. Strengthening nurse training and incorporating supportive technologies are crucial for expanding this practice. **Contributions to practice:** this study reaffirms the central role of nursing in coordinating oncologic care, highlighting the effectiveness of navigation programs in improving the patient experience. It also emphasizes the importance of integrating supportive technologies and enhancing the training of nurse navigators to optimize oncologic care in Brazil.

Descriptors: Oncology Nursing; Patient Navigation; Nurses; Nursing Care.

RESUMO

Objetivo: mapear a navegação de pacientes oncológicos por enfermeiros no Brasil. **Métodos**: trata-se de uma revisão de escopo realizada nas bases de dados *Medical Literature Analysis and Retrieval System*, Scopus, *Web of Science*, *Latin American and Caribbean Health Sciences Literature* e na literatura cinzenta, pela Biblioteca Digital Brasileira de Teses e Dissertações. **Resultados**: foram selecionados 11 estudos que abordavam a implantação e os resultados de programas de navegação de pacientes oncológicos, bem como o desenvolvimento de tecnologias facilitadoras da Navegação de Pacientes e o protagonismo da enfermagem nesse contexto. **Conclusão**: a navegação de pacientes oncológicos por enfermeiros no Brasil é essencial para superar barreiras no cuidado, melhorando a continuidade e a experiência do paciente. O fortalecimento da formação e a incorporação de tecnologias são fundamentais para expandir essa prática. **Contribuições para a prática**: o estudo reafirma o papel central da enfermagem na coordenação de cuidados oncológicos, destacando a eficácia dos programas de navegação para melhorar a experiência do paciente. Também enfatiza a importância da incorporação de tecnologias facilitadoras e do fortalecimento da formação dos enfermeiros navegadores para otimizar a assistência oncológica no Brasil.

Descritores: Enfermagem Oncológica; Navegação de Pacientes; Enfermeiras e Enfermeiros; Cuidados de Enfermagem.

Introduction

Cancer is a global public health issue projected to cause approximately 10.4 million deaths by 2025[1]. Morbidity and mortality rates associated with cancer have been progressively increasing, exacerbated by sociodemographic factors, late diagnosis, and challenges in accessing treatment[2-3]. In Brazil, it is estimated that 704,000 new cancer cases will be diagnosed each year from 2023 to 2025[4]. Cancer treatment is commonly multimodal and may include various approaches, such as systemic therapy, surgical resection, and radiotherapy, with ongoing efforts to incorporate and enhance new diagnostic and therapeutic technologies[5]. Beyond the physical and emotional stress induced by the diagnosis, treatments, their side effects, and the need for multiple hospitalizations, there are additional challenges faced by cancer patients, their families, and caregivers, including inefficiencies within the healthcare system, delays, lack of care coordination, and insufficient social and emotional support[6].

It is important to note that although formal barriers have been removed through constitutionally guaranteed universal and comprehensive healthcare access, challenges related to accessibility and continuity of care remain, both in primary care and specialized services[7]. In this regard, it is mandated that treatment for any cancer diagnosis in patients under the Brazilian Unified Health System (SUS in Portuguese) should commence within 60 days of diagnosis[8]. However, a decade after the establishment of the "60-Day Law," as it is also known, a significant number of patients are still not receiving treatment within the prescribed timeframe, highlighting the need for solutions to support the full implementation of the law[9-10].

From the perspective of managing the journey of oncologic patients, the concept of patient navigation emerged in the 1990s. Dr. Harold Freeman, an American physician from the Ralph Lauren Cancer Prevention and Care Center in New York, launched the first navigation program aimed at reducing cancer-related health disparities in the predominantly African-American community of Harlem[11]. Following the success of this experience, the navigation model evolved to be applied across the entire continuum of oncologic care[11-12].

Patient navigation aims to facilitate patient access to healthcare services by minimizing barriers, providing personalized support to patients, survivors, caregivers, and families, ensuring timely healthcare service delivery, promoting clear communication, and fostering a trusting relationship between the navigator and the client[13-14]. Effective navigation models utilize a variety of healthcare professionals, non-health professionals (laypeople), and cancer survivors[15].

In oncology, nurse navigators perform advanced practical functions, offering personalized care and enabling clients to overcome obstacles within the healthcare system[16]. These professionals possess the skills and knowledge necessary to coordinate quality, patient-centered care, utilizing effective communication with the multidisciplinary team, thus becoming a fundamental link between the institution, healthcare providers, caregivers, families, and patients[17].

In Brazil, few healthcare services currently have this methodology in place[18]. This study's assessment of scientific literature on the role of nurse navigators underscores the importance and distinctiveness of this specialty within oncology services and highlights the scarcity of research conducted by Brazilian researchers in this field[19]. Based on this finding, perspectives on developing this model in Brazil's clinical practice have been emerging. Therefore, this study aimed to map the navigation of oncologic patients by nurses in Brazil.

Method

This scoping review was guided by JBI recommendations[20] and aligned with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)[21]. The research protocol was registered on the Open Science Framework (https://osf.io/34rxq/).

The research question was formulated follo-

wing the PCC strategy (Participants, Concept, and Context), where (P) Participants = Oncology patients, (C) Concept = Patient navigation by nurses, and (C) Context = Brazil. Based on this approach, the research question defined was: "What are the topics explored in the scientific literature regarding Oncology Patient Navigation by Nurses in Brazil?"

The study selection was carried out between January and February 2024. The search for scientific literature was conducted in the following databases: Medical Literature Analysis and Retrieval System (ME-

DLINE) via PubMed, Web of Science, Latin American and Caribbean Health Sciences Literature (LILACS) via the Virtual Health Library (VHL), SCOPUS, and the Brazilian Digital Library of Theses and Dissertations (BDTD). References from selected studies were also reviewed to ensure the inclusion of relevant literature.

Controlled descriptors were identified in the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH) to capture articles relevant to the study theme. The search strategy was tailored according to the specifics of each database or platform (Figure 1).

Objective/ Problem	P	C	C
Extraction	Cancer patient	Patient Navigation by Nurses	Brazil
Conversion	Cancer patient	Patient, navigation	Brazil
Combination	Neoplasm; Bone Neoplasms; Intestinal Neoplasms; Uterine Neoplasms; Vaginal Neoplasms; Stomach Neoplasms; Lung Neoplasms; Prostatic Neoplasms; Esophageal Neoplasms; Pharyngeal Neoplasms; Skin Neoplasms; Laryngeal Neoplasms; Urologic Neoplasms; Gastrointestinal Neoplasms; Digestive System Neoplasms; Uterine Cervical Neoplasms; Head and Neck Neoplasms; Colorectal Neoplasms; Hematologic Neoplasms; Breast Neoplasms; Oncology;	Navigation, Patient; Navigations, Patient; Patient Navigations; Patient Navigators; Navigator, Patient; Navigators, Patient; Patient Navigator; Oncology Nursing	Brazil
Construction	("Neoplasm" OR "Oncology" OR "Bone Neoplasms" OR "Intestinal Neoplasms" OR "Uterine Neoplasms" OR "Vaginal Neoplasms" OR "Stomach Neoplasms" OR "Lung Neoplasms" OR "Prostatic Neoplasms" OR "Esophageal Neoplasms" OR "Pharyngeal Neoplasms" OR "Skin Neoplasms" OR "Laryngeal Neoplasms" OR "Urologic Neoplasms" OR "Gastrointestinal Neoplasms" OR "Digestive System Neoplasms" OR "Uterine Cervical Neoplasms" OR "Head and Neck Neoplasms" OR "Colorectal Neoplasms" OR "Hematologic Neoplasms" OR "Breast Neoplasms")	("Navigation, Patient" OR "Navigations, Patient" OR "Patient Navigations" OR "Patient Navigators" OR "Navigator, Patient" OR "Navigators, Patient" OR "Patient Navigator" OR "Oncology Nursing")	Brazil
Use	("Neoplasm" OR "Oncology" OR "Bone Neoplasms" OR "Intestinal Neoplasms" OR "Uterine Neoplasms" OR "Vaginal Neoplasms" OR "Stomach Neoplasms" OR "Lung Neoplasms" OR "Prostatic Neoplasms" OR "Esophageal Neoplasms" OR "Pharyngeal Neoplasms" OR "Skin Neoplasms" OR "Laryngeal Neoplasms" OR "Urologic Neoplasms" OR "Gastrointestinal Neoplasms" OR "Digestive System Neoplasms" OR "Uterine Cervical Neoplasms" OR "Head and Neck Neoplasms" OR "Colorectal Neoplasms" OR "Hematologic Neoplasms" OR "Breast Neoplasms") AND ("Navigation, Patient" OR "Navigations, Patient" OR "Patient Navigations" OR "Patient Navigators" OR "Navigator, Patient" OR "Navigators, Patient" OR "Patient Navigator" OR "Oncology Nursing") AND ("Brazil").		

Figure 1 – Participant, Concept, and Context strategy applied to the study. Fortaleza, CE, Brazil, 2024

Primary quantitative and qualitative studies, as well as guidelines, theses, dissertations, and monographs resulting from research conducted in Brazil involving oncology patients followed by nurse navigators, were included. The focus was on implementation experiences, outcomes of navigation programs, and the development of technologies and supportive strategies. No time restrictions were applied. Literature reviews, editorials, and studies on patient navigation

performed by healthcare professionals other than nurses were excluded.

After database and gray literature searches, all studies (titles and abstracts) were independently analyzed by two reviewers. In cases of disagreement on inclusion, a third reviewer was consulted to make a final decision. Selected studies were then read in full and mapped. Data mapping and extraction were conducted using a tool created by the authors, containing

variables such as database, publication year, methodological design, characteristics of the study population, interventions conducted, main outcomes, and results. This tool aimed to compile and facilitate data analysis, as well as to allow a quantitative assessment of the scope, characteristics, and distribution of included studies. To ensure paired reading and facilitate independent study screening, the online platform Rayyan QCRI was used alongside Google Sheets® for data organization and systematization.

During data extraction and organization, each study was coded to simplify the presentation of results. Studies from scientific articles were identified with the letter "E" followed by a number (e.g., E1, E2), and studies from gray literature, such as theses and dissertations, were designated with the letter "C" (e.g., C1, C2), ensuring a concise and organized identification.

The level of evidence of the studies was categorized following the methodology proposed by JBI, which organizes evidence into a five-level hierarchy: Level 1 includes experimental studies, including systematic reviews of randomized controlled trials; Level 2 includes quasi-experimental studies, such as prospective controlled quasi-experimental studies and retrospective studies with control groups; Level 3 in cludes cohort and case-control studies; Level 4 includes systematic reviews of descriptive studies, cross-sectional studies, case series, and case studies; and Level 5 includes expert opinions and investigation databases[20].

Results were compiled to provide an overview of the material, thematically organized. The characterization of identified studies, their methodological design, and results were presented in figures.

Since this is a secondary study conducted using database research, it was exempt from review by the Research Ethics Committee.

Results

The search yielded 457 studies. Seventeen duplicate studies were excluded, and 32 publications were pre-selected. Of these, 21 did not meet the research question.

Following identification, selection, eligibility assessment, systematization, and full-text reading, the final sample consisted of 11 publications. The identification, screening, and inclusion strategy for the studies is illustrated in the flowchart presented in Figure 2, following the PRISMA-ScR model.
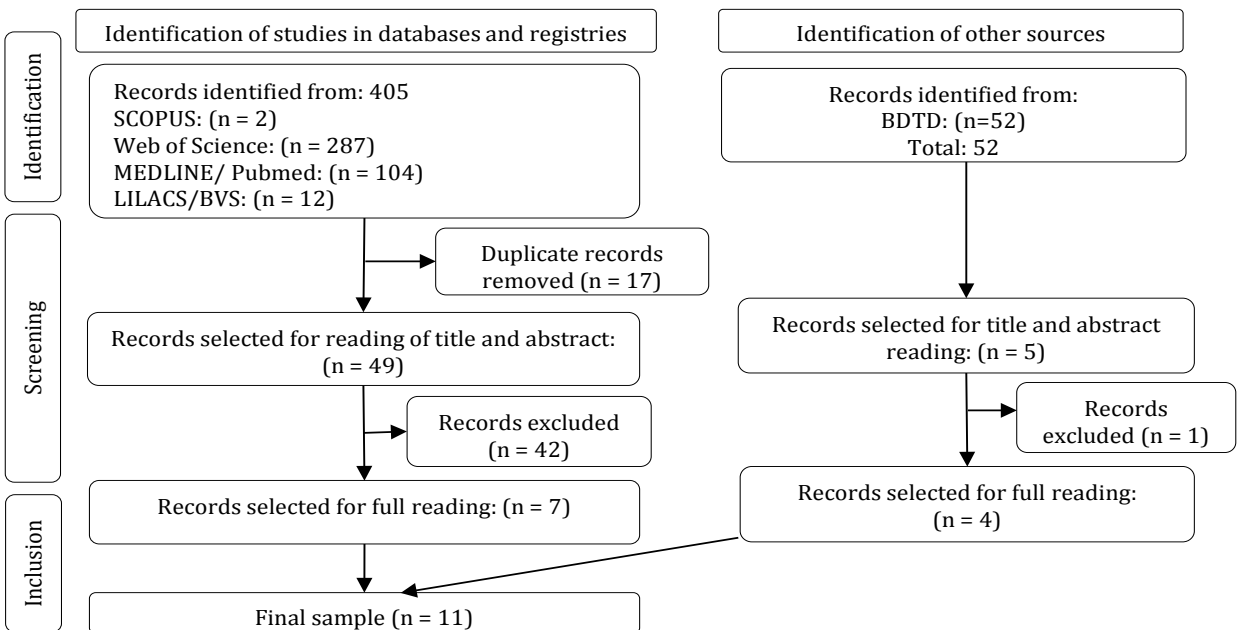
Figure 2 – Flowchart of the article selection process. Fortaleza, CE, Brazil, 2024

Regarding the publication year, 2023 stood out with four (36%) publications, followed by 2020 with three (27%) and 2022 with two (18%) publications. The years 2021 and 2019 each had one (9%) publication.

In terms of language, nine (81%) of the 11 studies were available in Portuguese. As for availability, two (18%) were indexed in MEDLINE, five (45%) in LILACS, and four (36%) in BDTD. Among studies from gray literature (5; 45%), only one (9%) was a guidance manual, while the rest were master's dissertations (4; 36%).

The methodological design of the sample included two (18%) convergent care research studies, two (18%) experience reports, two (18%) qualitative studies, one (9%) non-randomized clinical trial, one (9%) cohort study, one (9%) methodological study, one (9%) cross-sectional study, and one (9%) recommendation manual. Regarding the educational background of the authors, all studies in the sample included nurses in their authorship and development.

Based on the researched themes, four main focus areas were identified: (1) implementation of patient navigation programs in Brazil, (2) patient navigation outcomes in oncology care, (3) development of supportive technologies for patient navigation, and (4) the prominent role of nursing in patient navigation. Figure 3 presents metadata related to the studies included in this review, along with their main findings and conclusions.

Code Year	Type of study, LE*	Focus areas	Results	Conclusion
†E1[22] 2019	Cross-sectional study 4	1, 2 and 4	There was a reduction in the time between diagnosis and treatment, from 24 to 18 days (2014-2017), with 97% of the 153 participants reporting satisfaction or high satisfaction with the nurse navigator's care.	The nursing navigation program reduced the time between diagnosis and treatment, and the high level of patient satisfaction suggests potential for its continuation and expansion to other services within the institution.
E2[23] 2020	Convergent care research 4	1	Head and neck cancer patients were selected using the Navigation Needs Assessment Scale, developed to determine their eligibility and required support. Parte inferior do formulário	A Navigation Program adapted to the Brazilian context was developed, with navigator roles and responsibilities established.
E3[24] 2020	Experience report 4	4	Several measures were adopted to support pandemic response efforts and provide a safe environment for both professionals and patients.	The role of the nurse navigator was crucial in ensuring safe access to services for breast cancer patients during social distancing, preventing lapses in their care.
‡C1[25] 2020	Non-randomized clinical trial 2	1 and 2	Patient Navigation reduced the time from biopsy to the start of radiotherapy from 108 to 74 days, increasing the proportion of patients who began treatment within 60 days from 20.5% to 38.5%.	Given the potential of Patient Navigation in vulnerable oncology contexts in Brazil and its positive outcomes, it is recommended to evaluate the expansion of this strategy, considering its effectiveness and economic feasibility.
C2[26] 2021	Guide/ Manual of recommendations 4	1 and 4	The guide presents an overview of healthcare in Brazil and the experience of breast cancer patients, discussing patient navigation and including case studies and recommendations for implementing a program adapted to the national context.	It is essential to promote the guide to prevent women from getting lost in the healthcare system and to ensure early breast cancer diagnoses. Patient navigation, supported by cost-effectiveness analyses, should be encouraged for inclusion in public policies and national implementation.Parte inferior do formulário
E4[27] 2022	Experience report 4	3 and 4	There was a decline in diagnostic visits and an increase in SARS-CoV-2 exposure. To maintain safe services, a drive-through service was implemented for medication administration, an innovative solution given the challenges of telemonitoring and access to testing.	Oncology navigation during pandemic periods requires scientific expertise, technical competence, and innovation to create strategies that ensure the quality and effectiveness of nursing care.

(the Figure 3 continue in the next page...)

C3[28] 2022	Cohort study 3	2	The navigation group experienced fewer admissions and hospitalizations, a higher rate of cisplatin cycle completion, and better treatment adherence, with fewer absences for chemotherapy, radiotherapy, and consultations. No participant experienced grade IV toxicities.	The navigation program demonstrated superior outcomes in healthcare compared to the control group, showing a lower incidence of severe toxicities, reduced missed appointments, shorter hospitalization time, and fewer emergency service visits.
E5[29] 2023	Qualitative approach study 4	2 and 4	Five categories emerged from the statements: smoothness in care, team integration, connection with patients and families, oncology nurse navigators' competencies, and appreciation of team training.	Experiences of nurses in oncology units revealed that reinforcing navigation principles improves care and minimizes barriers, facilitating the therapeutic journey for cancer patients.
E6[30] 2023	Convergent care research 4	1 and 2	An analysis of patient profiles and service flow identified barriers through professional interviews. The program was structured, a pilot was conducted with two nurses, the nurse navigator's profile was defined, and training programs were proposed.	The Planned Care Pathway and Navigation Program were developed, centering attention on the patient by assessing their needs, removing barriers, and guiding them at every stage of the healthcare system.
C4[31] 2023	Methodological study 4	1 and 3	The project was carried out in three phases: conception, development of the technological artifact, and appearance and content validation testing, with all evaluated items achieving an agreement index above 80%	The construct was validated by experts as a relevant tool for oncology patient navigation, and it is expected to assist nurse navigators in improving patient care.
C5[32] 2023	Descriptive, exploratory study 4	3 and 4	The study categorized participation into two areas: Nurse Navigator Activities and Nurses' Perceptions of Patient Navigation, highlighting the importance of this professional in the comprehensive support of cancer patients at all treatment stages.	The connection and bond established from the initial contact between the nurse navigator and the patient emphasize the importance of this professional in the healthcare Community.

LE: Level of evidence; E: scientific article; C: gray literature

Figure 3 – Characterization of selected studies by database, methodological design, level of evidence, and year of publication. Fortaleza, CE, Brazil, 2024

Discussion

Patient navigation is a strategy designed to deliver patient-centered care, aiming to address patients' needs and priorities. This process involves the collaboration of healthcare professionals and other individuals to help cancer patients overcome obstacles in accessing healthcare services and receiving timely treatment[33]. The primary goal is to ensure that patients receive quality care at every stage, from diagnosis to treatment, integrating fragmented healthcare systems and making their healthcare journey less burdensome[11].

Regarding the first thematic category—implementation of patient navigation programs in Brazil—these programs emerged to formalize the navigation process and address the specific needs of patients served by a particular healthcare facility. In Brazil, efforts to implement patient navigation in oncology began in the last decade[26]. This aligns with the findings of this review, in which all included studies were developed and published within the last decade, particularly in the past five years[23-32].

Since then, public and private institutions have adapted the American model to the reality of SUS and the supplementary healthcare system, implementing the strategy within the Brazilian context[22-23,27-28,30-31]. One of the studies included in this review was a best practice guide for navigating breast cancer patients, created to establish a foundation for implementing this strategy in Brazil, with an emphasis on breast cancer patients[26].

There are various models or scopes of navigation, each tailored to the unique setting of each service. Oncology Patient Navigation Programs typically focus on specific organ diagnoses (such as breast, prostate, and stomach cancer) or regions/body systems (such as head and neck cancers, urological, and gynecological cancers). Generalist programs may also exist, with a team supporting patients with suspected or diagnosed cancer. Differences also exist regarding the length of follow-up, initiation, and discharge from navigation services. Most programs included in this study were dedicated to supporting patients with breast cancer[24,26,30] and head and neck cancers[23,28].

Additionally, one of the studies in this review developed and validated a support technology, the Navigation Needs Assessment Scale. This tool assesses the actual need for entry into a navigation program, recommends the necessary support, and outlines the basic responsibilities of navigators and the profile of oncology nurse navigators[23].

The second thematic category, focused on the outcomes of patient navigation in oncology care, highlighted the development of a navigation program and a specialized care pathway for breast cancer in a private health plan provider. This program was designed with a multidisciplinary approach, where the nurse acts as the care coordinator, ensuring comprehensive patient follow-up throughout the oncology journey. This approach includes patients from the screening phase, promoting continuous and integrated care, optimizing health outcomes, and enhancing adherence to treatment. This nurse-led coordination contributes to personalized care and ensures patients receive appropriate support and guidance at each stage, from diagnosis through post-treatment follow-up[30].

In this context, and consistent with this study's findings, there is a greater number of studies conducted within the supplementary healthcare sector[22,24,30-31], which historically values and encourages strategies aimed at financial returns and cost reductions.

Despite advances in navigation programs in Brazil, the COVID-19 pandemic posed new challenges, especially regarding continuity of care[24,27]. Social distancing measures and mobility restrictions exacerbated barriers to healthcare access, impacting early diagnosis and appropriate treatment[24,27,34]. In response, nurse navigators played a crucial role, ensuring continuity of care through innovative methods such as telemonitoring and drive-through services. The pandemic underscored the need for rapid adaptation, and patient navigation emerged as an essential tool to mitigate healthcare system difficulties. Thus, the strategies employed by nurse navigators ensured that cancer patients continued to receive proper care[24,27].

In the third thematic category, focused on developing supportive technologies for patient navigation, the incorporation of new technologies that facilitate patient follow-up was highlighted, including a prototype web platform that enabled professionals to better manage patient information[31].

Another study developed a communication and knowledge dissemination tool between nurse navigators and patients, which was positively perceived by the target audience. This technology was well-received by patients and was described as a facilitator for communication with healthcare professionals and as a valuable source of information about their illness and treatment. The technological intervention positively impacted communication optimization between patients and nurse navigators and provided updated and reliable information on oncology follow-up[35].

Patient navigation can be performed by any healthcare professional or even by laypersons who have received training. However, professional navigation is considered superior, particularly regarding service quality and support provided to patients throughout their healthcare journey. In contrast, layperson-led navigation often involves sharing personal experiences[32].

Nursing Council establishes specific criteria for nurses to serve as oncology patient navigators. Among these requirements is a mandatory navigation training course with a minimum of 120 hours, at least

50% of which must be dedicated to practical activities. This training reflects the recognition of navigation as an Advanced Nursing Practice, strengthening the quality and excellence of care in Brazil[36].

The implementation of this practice in major oncology centers across the country is a key strategy for reducing disparities in healthcare access and quality among different regions. Advanced Nursing Practice in Navigation promotes continuous and specialized follow-up, contributing to healthcare equity and addressing social and regional needs more comprehensively. Thus, nurse-led navigation emerges as an effective tool to overcome barriers in oncology care, expanding the reach and impact of healthcare interventions[36].

In this light, the fourth and final thematic category—nursing leadership—demonstrates that nurse-led navigation is a proven strategy for improving oncology care standards and significantly reducing the time between diagnosis and the beginning of treatment. It provides coordination throughout the treatment journey, empowering patients, fostering their confidence, and facilitating adherence to therapeutic planning[22,26,29,32].

From this perspective, clinical outcomes for nurse-led navigation showed that patients supported by these professionals experienced reduced distress, anxiety, and depression; better symptom control; increased physical conditioning; improved quality and continuity of care; enhanced quality of life; and a shorter time to treatment initiation. These findings are consistent with studies included in this review and may suggest the effectiveness of adapting this strategy to the Brazilian context[22,24-25,28,30].

Study limitations

This review presents certain limitations that should be considered. Patient navigation remains closely tied to high-complexity services, diverging somewhat from the original goal of providing patient follow-up from the pre-diagnosis stage within prima-

ry care settings. Additionally, national scientific output is heavily associated with leading experts in this area, highlighting the need for new hubs or centers of excellence in patient navigation.

Moreover, further studies are essential to evaluate the long-term outcomes and impact of established navigation programs on cancer patient care in both the private sector and SUS.

Contributions to practice

By reinforcing knowledge about the role of nurses in cancer patient care, particularly in the creation and coordination of Patient Navigation Programs, this study reaffirms nursing leadership in integrating oncology care. Such coordination reduces service fragmentation and enhances the overall patient experience, especially in a diverse and expansive country like Brazil.

Additionally, this review highlights the importance of facilitating technologies in supporting oncology patients. The adoption and integration of technological platforms, such as communication tools and information management systems, are essential to optimizing the practice of nurse navigators. These technologies not only improve care management efficiency but also strengthen communication and coordination throughout the patient journey, adapting to the specific characteristics of the Brazilian healthcare system.

Conclusion

This study underscores the importance of patient navigation in overcoming barriers to healthcare access and continuity, reducing service fragmentation, and enhancing the patient experience. Additionally, the integration of facilitating technologies proved crucial for optimizing nurse navigators' practices, improving communication and care management throughout the oncology patient journey.

Authors' contributions

Concept and design, or analysis and interpretation of data; Manuscript drafting or critical review of significant intellectual content; Final approval of the version to be published; Agreement to be accountable for all aspects of the manuscript related to accuracy or integrity, ensuring any issues are properly investigated and resolved: Pires JM, Rodrigues AB, Alencar MMSC, Castro RCMB.

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