

Nursing assessment and monitoring of antineoplastic chemotherapy toxicities: a scoping review protocol

*Evaluación y monitorización de enfermería de las toxicidades de la quimioterapia antineoplásica:
un protocolo de revisión del alcance*

*Avaliação e monitoramento de enfermagem nas toxicidades à quimioterapia antineoplásica:
protocolo de revisão de escopo*

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Abstract

The aim was to map, in the literature, scientific evidence addressing the actions of nurses in the assessment and monitoring of toxicities in cancer patients undergoing antineoplastic chemotherapy. A scoping review protocol was conducted according to the guidelines of the Joanna Briggs Institute (JBI) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). The search will be carried out in databases such as MEDLINE/PubMed, CINAHL, LILACS, Scopus, Embase, Web of Science, and Cochrane. The articles will undergo a screening process by two independent reviewers using Rayyan® software, with conflict resolution by a third reviewer. The extracted data will be organized and presented descriptively, using tables, graphs, and flowcharts, according to JBI guidelines. This review is expected to map how the literature addresses nursing practices in monitoring chemotherapy toxicities, identify knowledge gaps, and support the implementation of strategies to improve the safety and quality of oncological care.

Descriptors: Oncology Nursing; Toxicities; Chemotherapy; Symptom Assessment; Patient Monitoring.

Resumen

El objetivo fue mapear, en la literatura, la evidencia científica que aborda las acciones de enfermería en la evaluación y el seguimiento de las toxicidades en pacientes con cáncer sometidos a quimioterapia antineoplásica. Se realizó un protocolo de revisión exploratoria de acuerdo con las directrices del Instituto Joanna Briggs (JBI) y la Extensión para Revisiones Exploratorias de los Elementos de Informe Preferidos para Revisiones Sistemáticas y Metaanálisis (PRISMA-ScR). La búsqueda se realizará en bases de datos como MEDLINE/PubMed, CINAHL, LILACS, Scopus, Embase, Web of Science y Cochrane. Los artículos serán evaluados por dos revisores independientes utilizando el software Rayyan®, con resolución de discrepancias por parte de un tercer revisor. Los datos extraídos se organizarán y presentarán de forma descriptiva, utilizando tablas, gráficos y diagramas de flujo, de acuerdo con las directrices del JBI. Se espera que esta revisión mapee cómo la literatura aborda las prácticas de enfermería en el seguimiento de las toxicidades de la quimioterapia, identifique las lagunas de conocimiento y respalde la implementación de estrategias para mejorar la seguridad y la calidad de la atención oncológica.

Descriptores: Enfermería Oncológica; Toxicidades; Quimioterapia; Evaluación de Síntomas; Monitorización del Paciente.

Resumo

Objetivou-se mapear, na literatura, evidências científicas que abordem as ações do enfermeiro na avaliação e no monitoramento de toxicidades em pacientes oncológicos submetidos à quimioterapia antineoplásica. Protocolo de revisão de escopo, conduzido de acordo com as diretrizes do Joanna Briggs Institute (JBI) e com a extensão Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). A busca será realizada em bases de dados como MEDLINE/PubMed, CINAHL, LILACS, Scopus, Embase, Web of Science e Cochrane. Os artigos seguirão um processo de triagem por dois revisores independentes, utilizando o software Rayyan®, com resolução de conflitos por um terceiro revisor. Os dados extraídos serão organizados e apresentados de forma descritiva, por meio de tabelas, gráficos e fluxogramas, conforme as diretrizes do JBI. Espera-se que a revisão possibilite mapear como a literatura aborda as práticas de enfermagem no monitoramento de toxicidades quimioterápicas, identificar lacunas de conhecimento e subsidiar a implementação de estratégias para aprimorar a segurança e a qualidade da assistência oncológica.

Descritores: Enfermagem Oncológica; Toxicidades; Quimioterapia; Avaliação de Sintomas; Monitoramento do Paciente.



Introduction

Cancer is a disease that consists of the growth and disorder of mutated cells that proliferate and affect tissues and organs in different parts of the body, forming tumors and potentially triggering a process called metastasis¹. This clinical reality occurs due to exposure to carcinogenic factors such as population aging, genetics, or lifestyle. In Brazil, an estimated 781,000 new cases of cancer are expected each year for the three years 2026-2028, representing a public health problem according to estimates from the National Cancer Institute².

Cancer treatment is carried out through specific methods and technologies such as surgery, chemotherapy, radiotherapy, immunotherapy, iodine therapy, hormone therapies, bone marrow transplantation, and palliative care, which are applied according to the stage, location, and clinical condition of the affected patients³.

Therefore, the Nursing Process (NP) becomes an indispensable tool during cancer treatment, as it guides the planning and execution of individualized care, ensuring patient safety and quality of care. This is because the nurse, by monitoring adverse effects, contributes not only to symptom control but also to adherence and the prevention of complications that could lead to treatment interruption⁴.

Antineoplastic chemotherapy is one of the main therapeutic resources in the fight against cancer, acting to destroy or inhibit the growth of malignant cells. However, due to its non-selective action, antineoplastic drugs also affect healthy cells, causing various toxicities, which can range from mild manifestations such as nausea, vomiting, and fatigue to severe complications capable of compromising the patient's prognosis and quality of life⁵.

Infusion of antineoplastic chemotherapy can trigger various toxicities, such as myelosuppression, gastrotoxicity, nephrotoxicity, neurotoxicity, and others⁶. The toxicities associated with chemotherapy treatment influence the patient's quality of life. Therefore, it is important that the actions of the oncology nurse in patient care regarding the management of chemotherapy-related toxicities be based on evidence-based interventions and include an assessment of risk factors, monitoring strategies, and non-pharmacological therapies to aid in toxicity control^{7,8}.

The rationale for conducting this review is based on the relevance of nurses' actions in the care of cancer patients undergoing chemotherapy, especially regarding the assessment and monitoring of toxicities resulting from the treatment. This is because chemotherapy, although one of the most effective therapeutic methods in combating cancer, causes a series of adverse effects that directly impact the quality of life of patients.

In this context, the nurse plays an essential role in the early identification of adverse reactions, in the implementation of safe interventions, and in promoting the physical and emotional well-being of the patient, being the main professional responsible for ensuring continuous and humanized care⁸.

It is noteworthy that failures in documenting nursing care can directly impact clinical outcomes, and a lack of records hinders the assessment of chemotherapy toxicity;

inaccurate monitoring compromises evidence-based medical decision-making⁵, can be caused by discrepancies between actual information and patients' medical records, incomplete nursing documentation, incomplete nursing prescriptions, non-adherence to routine procedures, and lack of initials, according to studies^{9,10}, the absence of effective communication among healthcare professionals can compromise patient safety, increasing the likelihood of preventable complications.

Unlike systematic reviews, which are limited to answering a specific question, scoping reviews allow for the exploration of different approaches, methods, and results presented in research, broadening the understanding of the topic and highlighting areas that still require further investigation. Therefore, this study aims to contribute to strengthening the clinical practice of oncology nursing, supporting future research, and promoting the development of strategies that improve the safety, quality, and effectiveness of care provided to patients undergoing chemotherapy¹¹.

The pursuit of knowledge and interest in systematized literature has led to an increase in publications and a constant interest in improving different methods of study and literature systematization. Scoping reviews stand out when it comes to formulating and mapping evidence in healthcare. Thus, choosing this research method broadens and gathers studies, identifying evidence that can contribute to clinical practice, detecting existing gaps in the scientific community, and thus assisting in identifying emerging situations and evaluating ongoing research¹².

In this sense, the following research question was formulated: "What are the nurse's actions in the assessment and monitoring of toxicities in cancer patients undergoing antineoplastic chemotherapy?". Therefore, the objective of the study was to map scientific evidence regarding the nurse's actions in the assessment and monitoring of toxicities in cancer patients undergoing antineoplastic chemotherapy.

Methodology

This study is a scoping review protocol. This type of research aims to map scientific production on the evaluation and monitoring of toxicities associated with antineoplastic chemotherapy treatment. It is possible to "map" diverse studies in a specific area. Unlike literature reviews that focus only on the analysis of articles, scoping reviews are more comprehensive and accept other literature such as manuals, protocols, theses, dissertations, guidelines, and others. This type of study is relevant for mapping the main concepts of a research field; clarifying the definitions of work and/or the conceptual limits of a topic, as well as informing about the need for future research^{13,14}.

Scoping reviews are useful when the literature is diverse, heterogeneous, complex, and has not yet been extensively reviewed. In this context, the research aims to adopt the method recommended by the Joanna Briggs Institute (JBI), also following the recommendations of the international guide Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist. A



broad search was conducted to identify whether there are already published scoping reviews or protocols on the subject in the following databases: Medical Literature Analysis and Retrieval System Online (MEDLINE), International Prospective Register of Systematic Reviews (PROSPERO), Cochrane (Wiley), and the JBI database.

To aid in the development of the scoping review, a nine-step process was chosen, as recommended by the JBI: defining and aligning the objective and review question; developing and registering the protocol; defining inclusion criteria; planning and executing the search strategy; selecting studies; extracting and mapping data; analyzing and synthesizing results; consulting guidelines and protocols; and finally, writing and disseminating the final report.

Defining the Research Question

The research question was defined using the Participants, Concept, and Context (PCC) strategy, where P (participants): Nurses; C (Concept) - Assessment and monitoring of toxicities in cancer patients; C (Context) - Antineoplastic chemotherapy treatment. Thus, the following question was formulated: "What are the nurse's actions in the assessment and monitoring of toxicities in cancer patients undergoing antineoplastic chemotherapy?".

Development and Registration of the Protocol

The protocol for this scoping review was developed in accordance with the JBI methodological manual and registered on the Open Science Framework (OSF) platform, as per the following link: <https://doi.org/10.17605/OSF.IO/3SXC2>, aiming for transparency, traceability, and reproducibility. The

document followed the PRISMA-ScR recommendations to ensure standardization of the report¹⁵.

Definition of Inclusion Criteria

Original articles, systematic reviews, technical manuals, clinical protocols, guidelines, and other published studies were included without restriction based on language or period. Duplicate materials and studies that did not directly address the topic were excluded.

Planning and Execution of the Search Strategy

For the planning and execution of the search strategy, initially, known key articles will be identified. The titles, abstracts, and keywords of these articles will be analyzed based on the research question, and a preliminary search strategy for MEDLINE/PubMed will be developed. This strategy will be validated based on the retrieval of known key articles and the occurrence of descriptors and keywords in the results.

The MEDLINE/PubMed strategy will be adapted for other databases, respecting the syntax of each platform, without limitations on language, study type, or publication date. This decision was made to ensure the review was as comprehensive as possible.

The bibliographic survey will be conducted in the following databases: Web of Science (WoS), Scopus (Elsevier), Cumulative Index to Nursing and Allied Health (CINAHL); Cochrane Library, via the Coordination for the Improvement of Higher Education Personnel (CAPES) portal, MEDLINE, via the National Library of Medicine (PubMed), Nursing Database (BDENF) and Latin American and Caribbean Literature in Health Sciences (LILACS), via the Virtual Health Library (BVS) and Embase.

Chart 1. Definition of DeCS/MeSH concepts and descriptors. Belém, PA, Brazil, 2025

Concept	Descriptors (DeCS/ MeSH)
Antineoplastics	- Antineoplásicos/ Antineoplastic Agents - Tratamento Farmacológico/ Drug Therapy
Toxicity	- Toxicidade/ Toxicity - Testes de Toxicidade/ Toxicity Tests
Nurses/ Nursing	- Enfermagem/ Nursing - Enfermagem oncológica/ Oncology Nursing

The search strategy will be developed based on the main concepts of the research question to retrieve studies that are at the intersection of the groups of terms. Within each conceptual group, terms are combined using the Boolean operator "OR". The combination of different groups is done using the operator "AND". To broaden the sensitivity of the search, we will use descriptors (such as DeCS, MeSH,

and Emtree), synonyms/related terms (entry terms), as well as free terms, keywords frequently represented by variations in spelling, acronyms, and technical jargon, among others. The following are the descriptors obtained in the preliminary search, which supported the development of the search strategies (Chart 1). Synonyms can be identified directly in the search strategy (Chart 2).

Chart 2. Estratégia de busca por base de dados. Belém, PA, Brasil, 2025

Database	Strategies	Results of the preliminary search
MEDLINE/ PubMed	((("Antineoplastic Agents"[Mesh] OR "Drug Therapy"[Mesh]) OR ("Antitumor Agent"[Title/Abstract] OR "Antineoplastic Agent"[Title/Abstract] OR "Anticancer Agent"[Title/Abstract] OR "Anticancer Agents"[Title/Abstract] OR "Antineoplastic Drug"[Title/Abstract] OR "Antineoplastic"[Title/Abstract] OR "Antitumor Drug"[Title/Abstract] OR "Cancer Chemotherapy Agent"[Title/Abstract] OR "Antineoplastics"[Title/Abstract] OR "Antineoplastic Drugs"[Title/Abstract] OR "Antitumor Agents"[Title/Abstract] OR "Antitumor Drugs"[Title/Abstract] OR "Cancer Chemotherapy Agents"[Title/Abstract] OR "Cancer Chemotherapy Drugs"[Title/Abstract] OR "Chemotherapeutic	194



	Anticancer Agents"[Title/Abstract] OR "Chemotherapeutic Anticancer Drug"[Title/Abstract] OR "Cancer Chemotherapy Drug"[Title/Abstract] OR "Chemotherapy"[Title/Abstract] OR "Chemotherapies"[Title/Abstract] OR "Pharmacotherapy"[Title/Abstract] OR "Pharmacotherapies"[Title/Abstract] OR "Drug Therapies"[Title/Abstract])) AND (("Toxicity Tests"[Mesh] OR "Toxicity"[Title/Abstract] OR "Drug Toxicity"[Title/Abstract] OR "Drug Toxicities"[Title/Abstract] OR "Toxicity Test"[Title/Abstract] OR "Treatment Toxicity"[Title/Abstract] OR "Chemotherapy Toxicity"[Title/Abstract] OR "Toxicity Management"[Title/Abstract] OR "Toxicity Assessment"[Title/Abstract])) AND (((("Nursing"[Mesh]) OR "Oncology Nursing"[Mesh]) OR ("Oncologic Nursing"[Title] OR "Oncological Nursing"[Title] OR "Cancer Nursing"[Title] OR Nurs*[Title]))	
Embase	('antineoplastic agent'/exp OR 'drug therapy'/exp OR 'antitumor agent':ti,ab,kw OR 'antineoplastic agent':ti,ab,kw OR 'anticancer agent':ti,ab,kw OR 'anticancer agents':ti,ab,kw OR 'antineoplastic drug':ti,ab,kw OR 'antineoplastic':ti,ab,kw OR 'antitumor drug':ti,ab,kw OR 'cancer chemotherapy agent':ti,ab,kw OR 'antineoplastics':ti,ab,kw OR 'antineoplastic drugs':ti,ab,kw OR 'antitumor agents':ti,ab,kw OR 'antitumor drugs':ti,ab,kw OR 'cancer chemotherapy agents':ti,ab,kw OR 'cancer chemotherapy drugs':ti,ab,kw OR 'chemotherapeutic anticancer agents':ti,ab,kw OR 'chemotherapeutic anticancer drug':ti,ab,kw OR 'cancer chemotherapy drug':ti,ab,kw OR 'chemotherapy':ti,ab,kw OR 'chemotherapies':ti,ab,kw OR 'pharmacotherapy':ti,ab,kw OR 'pharmacotherapies':ti,ab,kw OR 'drug therapies':ti,ab,kw) AND ('toxicity testing'/exp OR 'toxicity':ti,ab,kw OR 'drug toxicity':ti,ab,kw OR 'drug toxicities':ti,ab,kw OR 'toxicity test':ti,ab,kw OR 'treatment toxicity':ti,ab,kw OR 'chemotherapy toxicity':ti,ab,kw OR 'toxicity management':ti,ab,kw OR 'toxicity assessment':ti,ab,kw) AND ('nursing'/exp OR 'oncology nursing'/exp OR 'oncologic nursing':ti OR 'oncological nursing':ti OR 'cancer nursing':ti OR 'nurs*':ti)	26
Cochrane	((MeSH descriptor: [Antineoplastic Agents] explode all trees OR MeSH descriptor: [Drug Therapy] explode all trees OR "Antitumor Agent":ti,ab,kw OR "Antineoplastic Agent":ti,ab,kw OR "Anticancer Agent":ti,ab,kw OR "Anticancer Agents":ti,ab,kw OR "Antineoplastic Drug":ti,ab,kw OR "Antineoplastic":ti,ab,kw OR "Antitumor Drug":ti,ab,kw OR "Cancer Chemotherapy Agent":ti,ab,kw OR "Antineoplastics":ti,ab,kw OR "Antineoplastic Drugs":ti,ab,kw OR "Antitumor Agents":ti,ab,kw OR "Antitumor Drugs":ti,ab,kw OR "Cancer Chemotherapy Agents":ti,ab,kw OR "Cancer Chemotherapy Drugs":ti,ab,kw OR "Chemotherapeutic Anticancer Agents":ti,ab,kw OR "Chemotherapeutic Anticancer Drug":ti,ab,kw OR "Cancer Chemotherapy Drug":ti,ab,kw OR "Chemotherapy":ti,ab,kw OR "Chemotherapies":ti,ab,kw OR "Pharmacotherapy":ti,ab,kw OR "Pharmacotherapies":ti,ab,kw OR "Drug Therapies":ti,ab,kw)) AND (MeSH descriptor: [Toxicity Tests] explode all trees OR "Toxicity":ti,ab,kw OR "Drug Toxicity":ti,ab,kw OR "Drug Toxicities":ti,ab,kw OR "Toxicity Test":ti,ab,kw OR "Treatment Toxicity":ti,ab,kw OR "Chemotherapy Toxicity":ti,ab,kw OR "Toxicity Management":ti,ab,kw OR "Toxicity Assessment":ti,ab,kw) AND (MeSH descriptor: [Nursing] explode all trees OR MeSH descriptor: [Oncology Nursing] explode all trees OR "Oncologic Nursing":ti,ab,kw OR "Oncological Nursing":ti,ab,kw OR "Cancer Nursing":ti,ab,kw OR Nurs*:ti,ab,kw))	6
Scopus	(TITLE-ABS-KEY (("Antineoplastic Agents" OR "Drug Therapy" OR "Antitumor Agent" OR "Antineoplastic Agent" OR "Anticancer Agent" OR "Anticancer Agents" OR "Antineoplastic Drug" OR "Antineoplastic" OR "Antitumor Drug" OR "Cancer Chemotherapy Agent" OR "Antineoplastics" OR "Antineoplastic Drugs" OR "Antitumor Agents" OR "Antitumor Drugs" OR "Cancer Chemotherapy Agents" OR "Cancer Chemotherapy Drugs" OR "Chemotherapeutic Anticancer Agents" OR "Chemotherapeutic Anticancer Drug" OR "Cancer Chemotherapy Drug" OR "Chemotherapy" OR "Chemotherapies" OR "Pharmacotherapy" OR "Pharmacotherapies" OR "Drug Therapies")) AND TITLE-ABS-KEY (("Toxicity Tests" OR "Toxicity" OR "Drug Toxicity" OR "Drug Toxicities" OR "Toxicity Test" OR "Treatment Toxicity" OR "Chemotherapy Toxicity" OR "Toxicity Management" OR "Toxicity Assessment")) AND TITLE (("Nursing" OR "Oncology Nursing" OR "Oncologic Nursing" OR "Oncological Nursing" OR "Cancer Nursing" OR Nurs*)))	197
WOS	("Antineoplastic Agents" OR "Drug Therapy" OR "Antitumor Agent" OR "Antineoplastic Agent" OR "Anticancer Agent" OR "Anticancer Agents" OR "Antineoplastic Drug" OR "Antineoplastic" OR "Antitumor Drug" OR "Cancer Chemotherapy Agent" OR "Antineoplastics" OR "Antineoplastic Drugs" OR "Antitumor Agents" OR "Antitumor Drugs" OR "Cancer Chemotherapy Agents" OR "Cancer Chemotherapy Drugs" OR "Chemotherapeutic Anticancer Agents" OR "Chemotherapeutic Anticancer Drug" OR "Cancer Chemotherapy Drug" OR "Chemotherapy" OR "Chemotherapies" OR "Pharmacotherapy" OR "Pharmacotherapies" OR "Drug Therapies") (Topic) and ("Toxicity Tests" OR "Toxicity" OR "Drug Toxicity" OR "Drug Toxicities" OR "Toxicity Test" OR "Treatment Toxicity" OR "Chemotherapy Toxicity" OR "Toxicity Management" OR "Toxicity Assessment") (Topic) and ("Nursing" OR "Oncology Nursing" OR "Oncologic Nursing" OR	81

	"Oncological Nursing" OR "Cancer Nursing" OR Nurs*) (Title) and Review Article or Article (Document Types)	
CINAHL	((MH "Antineoplastic Agents" OR MH "Drug Therapy" OR "Antitumor Agent":TI,AB OR "Antineoplastic Agent":TI,AB OR "Anticancer Agent":TI,AB OR "Anticancer Agents":TI,AB OR "Antineoplastic Drug":TI,AB OR "Antineoplastic":TI,AB OR "Antitumor Drug":TI,AB OR "Cancer Chemotherapy Agent":TI,AB OR "Antineoplastics":TI,AB OR "Antineoplastic Drugs":TI,AB OR "Antitumor Agents":TI,AB OR "Antitumor Drugs":TI,AB OR "Cancer Chemotherapy Agents":TI,AB OR "Cancer Chemotherapy Drugs":TI,AB OR "Chemotherapeutic Anticancer Agents":TI,AB OR "Chemotherapeutic Anticancer Drug":TI,AB OR "Cancer Chemotherapy Drug":TI,AB OR "Chemotherapy":TI,AB OR "Chemotherapies":TI,AB OR "Pharmacotherapy":TI,AB OR "Pharmacotherapies":TI,AB OR "Drug Therapies":TI,AB)) AND (MH "Toxicity Tests" OR "Toxicity":TI,AB OR "Drug Toxicity":TI,AB OR "Drug Toxicities":TI,AB OR "Toxicity Test":TI,AB OR "Treatment Toxicity":TI,AB OR "Chemotherapy Toxicity":TI,AB OR "Toxicity Management":TI,AB OR "Toxicity Assessment":TI,AB) AND (MH "Nursing" OR MH "Oncology Nursing" OR "Oncologic Nursing":TI,AB OR "Oncological Nursing":TI,AB OR "Cancer Nursing":TI,AB OR Nurs*:TI,AB))	50
LILACS	(TW: "Antineoplastic Agents" OR "Drug Therapy" OR "Antitumor Agent" OR "Antineoplastic Agent" OR "Anticancer Agent" OR "Anticancer Agents" OR "Antineoplastic Drug" OR "Antineoplastic" OR "Antitumor Drug" OR "Cancer Chemotherapy Agent" OR "Antineoplastics" OR "Antineoplastic Drugs" OR "Antitumor Agents" OR "Antitumor Drugs" OR "Cancer Chemotherapy Agents" OR "Cancer Chemotherapy Drugs" OR "Chemotherapeutic Anticancer Agents" OR "Chemotherapeutic Anticancer Drug" OR "Cancer Chemotherapy Drug" OR "Chemotherapy" OR "Chemotherapies" OR "Pharmacotherapy" OR "Pharmacotherapies" OR "Drug Therapies" OR "Agentes Antineoplásicos" OR "Terapia Medicamentosa" OR "Agente Antitumoral" OR "Agente Antineoplásico" OR "Agente Anticâncer" OR "Agentes Anticâncer" OR "Medicamento Antineoplásico" OR "Quimioterapia do Câncer" OR "Agentes Quimioterápicos Anticâncer" OR "Farmacoterapia" OR "Terapias Medicamentosas" OR "Terapia Farmacológica" OR "Fármacos Antineoplásicos" OR "Tratamiento Farmacológico" OR "Terapia con Medicamentos" OR "Agente Antineoplásico" OR "Agente Antitumoral" OR "Agentes Anticancerígenos" OR "Quimioterapia" OR "Quimioterapias" OR "Terapias Farmacológicas") AND (TW: "Toxicity Tests" OR "Toxicity" OR "Drug Toxicity" OR "Drug Toxicities" OR "Toxicity Test" OR "Treatment Toxicity" OR "Chemotherapy Toxicity" OR "Toxicity Management" OR "Toxicity Assessment" OR "Testes de Toxicidade" OR "Toxicidade" OR "Toxicidade de Medicamentos" OR "Toxicidade Medicamentosa" OR "Teste de Toxicidade" OR "Toxicidade do Tratamento" OR "Toxicidade da Quimioterapia" OR "Gestão da Toxicidade" OR "Avaliação da Toxicidade" OR "Pruebas de Toxicidad" OR "Toxicidad" OR "Toxicidad de los Medicamentos" OR "Toxicidad Farmacológica" OR "Ensayo de Toxicidad" OR "Toxicidad del Tratamiento" OR "Toxicidad de la Quimioterapia" OR "Gestión de la Toxicidad" OR "Evaluación de la Toxicidad") AND (TW: "Nursing" OR "Oncology Nursing" OR "Oncologic Nursing" OR "Oncological Nursing" OR "Cancer Nursing" OR Nurs* OR "Enfermagem" OR "Enfermagem Oncológica" OR "Enfermagem em Oncologia" OR Enfer* OR "Enfermería" OR "Enfermería Oncológica" OR "Enfermería en Oncología" OR Enferm*))	85

Selection of Studies

The study selection process will be guided by the adoption of inclusion and exclusion criteria, as presented. Inclusion criteria: Original articles, systematic reviews, technical manuals, clinical protocols, and other studies published in any language, without time restrictions, will be included. Exclusion criteria: Duplicate studies will be excluded.

After the search is conducted, the data will be transferred to the Rayyan platform for reading titles and abstracts and subsequently selecting the studies to be read in full. It is important to note that Rayyan is a free platform where researchers can perform the selection collaboratively and with double-blind analysis, and also allows for the presence of a third researcher to review articles where there was no consensus regarding inclusion, thus reducing research bias.

Data Mapping

The selected studies will be read in their entirety and exhaustively and subjected to critical analysis regarding their methodological quality and the content addressed. A spreadsheet will be created in Microsoft Excel 2019 to group the data to be extracted from the studies: Authors, references, year of publication, country, objectives, type of study, type of neoplasm, age, context, toxicities in cancer patients, profile of nurses, and nursing interventions. This data will be grouped into a data collection instrument created by the authors themselves, as shown in the chart.

Comparison, Summary, and Reporting of Results

The data obtained in the critical analysis will be interpreted considering the conceptual foundations and compared among themselves, identifying convergences, divergences, and the diversity of existing content and the most prevalent toxicities among cancer patients undergoing



antineoplastic chemotherapy. The report of the results will be presented through a selection flowchart of the study, a

chart characterizing the included studies, and a discussion of the most relevant findings.

Chart 3. Data extraction from literature. Belém, PA, Brazil, 2025

Authors	Reference	Year	Country/Origin	Objective	Type of study	Type of neoplasm	Age	Context/ scenario	Toxicities in cancer patients	Profile of nurses	Nursing interventions

Consult the Guidelines and Protocols

To complement and validate the findings of the scoping review, an additional consultation will be conducted with clinical guidelines, institutional hospital protocols, and documents from recognized scientific societies in the oncology field. The objective is to compare the results obtained in the review with official recommendations and practices adopted in oncological care, ensuring consistency and relevance of the findings. Documents such as recommendations from national and international scientific societies, such as the Brazilian Society of Clinical Oncology, will be analyzed. The analysis will consist of comparing the toxicities identified in the review with those recommended in the guidelines and protocols, verifying convergences, divergences, and gaps in the literature and clinical practice. This approach allows for the validation of the results obtained without the need for direct consultation with specialists, maintaining the objectivity and traceability of the process.

Drafting and Disseminating the Final Report

The results will be reported using a flowchart for study selection, tables characterizing the included studies, and a discussion of the most relevant findings, following the PRISMA-ScR standards, aiming at scientific dissemination and practical applicability.

Ethical Aspects

Since this is a scoping review study, it was determined that approval by the Ethics and Research Committee (CEP) is not required, as it does not involve human subjects, in accordance with the guidelines of CNS Resolution No. 466/2012. However, the data presented will follow the scientific method, with referenced sources and rigor in the treatment of the data that will be presented as a result of this study.

Expected Results

Given the above, this study aims to map the available scientific evidence regarding nursing actions focused on the assessment and monitoring of toxicities in cancer patients undergoing antineoplastic chemotherapy. It is expected to identify the main care practices adopted by nurses, as well as the tools, instruments, and protocols used to document these practices, observing their application in practice for the early detection of toxicities and the management of this event.

Furthermore, it aims to expand knowledge about strategies that contribute to patient safety and quality of care, as well as to identify shortcomings in practice that may promote future research and the improvement of clinical practice in oncology.

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