

# NURSING INTERVENTION IN CANCER PATIENTS SUBMITTED TO PARACENTESIS: AN INTEGRATIVE REVIEW PROTOCOL

*Intervenção de enfermagem em doentes oncológicos submetidos a paracentese:  
Protocolo de Revisão Integrativa*

*Intervención de enfermería en pacientes oncológicos sometidos a paracentesis:  
Protocolo de Revisión Integrativa*

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## ABSTRACT

Paracentesis is a minimally invasive procedure commonly used for the diagnosis and treatment of ascites, with liver cirrhosis and malignancy being the most frequent underlying causes. Despite its routine use, particularly in oncology settings, there remains a lack of synthesized evidence regarding the nursing role in the periprocedural care of these patients. This integrative review aims to identify, synthesize, and analyze nursing interventions in adults undergoing paracentesis for ascites management, regardless of disease stage or treatment context. The review will follow an integrative methodology, allowing the inclusion of diverse study designs and both qualitative and quantitative data. Databases including MEDLINE, CINAHL, and ClinicalKey will be searched using a strategy developed by two reviewers and peer-reviewed by a third. Findings are expected to inform evidence-based practice and support the development of autonomous nursing interventions in this clinical setting.

**KEYWORDS:** Paracentesis; Nursing care; Ascites; Drainage; Malignant ascites.

## RESUMO [PT]

A paracentese é um procedimento minimamente invasivo amplamente utilizado para diagnóstico e tratamento da ascite, sendo a cirrose hepática e as neoplasias malignas as causas mais frequentes. Apesar de seu uso rotineiro, especialmente no contexto oncológico, há uma lacuna na literatura sobre o papel da enfermagem nos cuidados periprocedimento. A revisão integrativa a ser realizada segundo o protocolo exposto tem como objetivo identificar, sintetizar e analisar as intervenções de enfermagem em adultos submetidos a paracentese, independentemente do estágio da doença ou natureza do tratamento. A revisão será conduzida com metodologia integrativa, permitindo a inclusão de diferentes desenhos de estudo e dados tanto qualitativos quanto quantitativos. A estratégia de busca será aplicada nas bases de dados MEDLINE, CINAHL e ClinicalKey, desenvolvida por dois revisores e revista por um terceiro. Os resultados esperados visam subsidiar a prática baseada em evidência e fomentar o desenvolvimento de intervenções autônomas do enfermeiro oncologista.

**PALAVRAS-CHAVE:** Paracentese; Cuidados de enfermagem; Ascite; Drenagem; Ascite maligna.

## RESUMO [ES]

La paracentesis es un procedimiento mínimamente invasivo utilizado con frecuencia para el diagnóstico y tratamiento de la ascitis, siendo la cirrosis hepática y las neoplasias malignas las causas subyacentes más comunes. A pesar de su uso rutinario, especialmente en contextos oncológicos, existe una falta de evidencia sintetizada sobre el rol de enfermería en el cuidado perioperatorio de estos pacientes. Esta revisión integradora tiene como objetivo identificar, sintetizar y analizar las intervenciones de enfermería en adultos sometidos a paracentesis para el manejo de ascitis, independientemente del estadio de la enfermedad o del tipo de tratamiento. La revisión seguirá una metodología integradora, permitiendo la inclusión de diversos diseños de estudio y datos tanto cualitativos como cuantitativos. Se realizará una búsqueda en bases de datos como MEDLINE, CINAHL y ClinicalKey, con una estrategia desarrollada por dos revisores y revisada por un tercero. Los hallazgos pretenden informar la práctica basada en evidencia y apoyar el desarrollo de intervenciones autónomas de enfermería en este ámbito clínico.

**PALABRAS CLAVE:** Paracentesis; Cuidados de enfermería; Ascitis; Drenaje; Ascitis maligna.

## Introduction

Paracentesis is a medical procedure involving the insertion of a needle into the peritoneal cavity to access or remove ascitic fluid<sup>1</sup>. The procedure serves distinct clinical purposes depending on the volume of fluid extracted. Diagnostic paracentesis involves removing small fluid samples to identify the etiology of ascites or rule out infections, while therapeutic paracentesis aims to alleviate symptoms by removing more significant volumes of accumulated fluid, with minimal complications<sup>1,2</sup>. Liver cirrhosis remains the leading cause of ascites, but malignant ascites represent 10% of occurrences, frequently with unknown pathophysiology<sup>3,4</sup>. Paracentesis has become a cornerstone in managing this adverse event, independently of the underlying cause<sup>5</sup>. Patient disease progression often leads to rapid reaccumulation of fluid in the abdominal cavity, which requires frequent return visits to the hospital for symptom management<sup>6</sup>. Other techniques have been developed to achieve palliation of symptoms, including tunneled external drainage catheters<sup>7,8</sup>, potentially increasing the burden of care and requiring more complex nursing interventions, including placing the drain completely autonomously and without the presence of a doctor<sup>9,10</sup>. There is an identifiable knowledge gap in the literature regarding this area, especially in the oncology context. Given that the focus of our review findings is on understanding the nurse's role in the periprocedural care of the paracentesis patient, we intend to directly improve clinical practice, as well as contribute to the possible implementation of evidence-

-based autonomous interventions. The purpose of this review is to identify, synthesize and analyze, nursing interventions in patients submitted to minimally invasive malignant ascites drainage, regardless of disease stage or treatment nature. A preliminary search in *JBI Evidence Synthesis*, MEDLINE, and CINAHL did not identify any systematic reviews on this topic.

## Research question

This integrative review intends to answer the question “*What are the nursing interventions in minimally invasive malignant ascites drainage?, using PICO methodology*”.

## Design

An integrative review will be conducted, as it is well suited to nursing research<sup>11</sup>. This method includes identification of the problem, literature search, data verification and evaluation resulting in conclusions based on critical analysis and although some of the steps undertaken might be similar to systematic or scoping reviews, integrative reviews have the potential to accommodate diverse data sources, both experimental or not. Furthermore, synthesis may combine both quantitative and qualitative data if there are similarities and involves a flexible analytic approach by allowing the inclusion of empirical data<sup>11</sup>. Integrative reviews are useful when the scope of the topic is complex and uncertain, providing a holistic approach to the matter at hand<sup>12</sup>.

## Setting

Any studies conducted or relative to hospitals that diagnose, refer, treat or provide professional support for adults with ascites will be included in the review.

## Inclusion criteria

The research question was constructed according to PICo strategy, as stated: Population - cancer patient; Phenomenon of Interest: nursing interventions in minimally invasive drainage; Context - malignant ascites. Studies in any language will be included if they describe any process related to minimally invasive management of malignant ascites, as long as they indicate some form of nursing care in the continuum of the procedure, regardless of the timing of the intervention. Limits to study design will not be applied. Eligible studies will include quantitative (experimental and observational designs), qualitative, and mixed-method studies and literature reviews published in databases.

## Exclusion criteria

Studies will be excluded if they are not related to humans or focus on pediatric population (<18 years old). References focusing on other abdominal drains, not classified as “paracentesis” (e.g. surgical drains) will not be considered.

## Search Method

Two reviewers developed the search strategy, which was peer-reviewed by a third expert. The search strategy will aim to locate both published and unpublished studies. As previously stated, an initial limited search was undertaken to identify articles on the topic of the review. The keywords contained in the titles and abstracts of relevant articles and the index terms, such as “malignant ascites”, “ascites”, “ascitic fluid”, “paracentesis”, “ascit\* drain”, “ascitic fluid”, “abdominal drain”, “peritoneal drain”, “nurs\*”, “nursing care”, “cancer patient”, “neoplasm”, “oncology patient\*\*” will be combined to develop a full search strategy adapted to each database using boolean operators, such

as “AND” and “OR”. Initially the search will be limited to title and abstract. Additionally, backward and forward citation searches will be performed on identified sources to locate relevant non-academic materials. We will not restrict our searches by language; however, any relevant sources identified in languages other than English, Spanish, or Portuguese, will be translated into one of those languages using translation tools such as DeepL (DeepL, Cologne, Germany). Sources will be screened according to the predefined inclusion criteria. Specifically, a 2-step screening process, conducted independently by 2 reviewers, will be applied: i) initial screening of titles and abstracts or summaries, and ii) a full-text review for eligible items.

## Study selection

Following the systematic search, all citations identified will be collated and uploaded into Mendeley v2.98-dev3 (Mendeley Ltd., Elsevier, Netherlands) and duplicates will be removed. The Rayyan web-tool (Qatar Computing Research Institute, Doha, Qatar) will be used during the screening phase. The full texts of the citations selected will be assessed in detail against the inclusion criteria by 2 independent reviewers. Any reviewers’ disagreements were resolved through discussion or by a third reviewer. The results of the search and the study inclusion process will be reported in full in the final review and presented in a PRISMA flow diagram<sup>13</sup>.

## Data extraction

The data extracted will include specific details about key findings relevant to the review question. The table was discussed among the authors and will include elements such as year, author and breakdown of the interventions (see Table 1). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included paper. Critical appraisal will not be conducted as this is not required for an integrative review.

**Table 1.** Data extraction tool (draft)

AUTHOR, YEAR	STUDY DESCRIPTION	POPULATION (N, CHARACTERISTICS)	TYPE OF DRAINAGE (TEMPORARY, PERMANENT)	NURSING INTERVENTIONS	OTHERS OF INTEREST
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## Data analysis and presentation

Nursing interventions will be categorized according to the findings. The results will be presented using a descriptive approach and summarized and presented in table formats accompanied by a narrative summary. Given the methodological variability among the potentially included references, the findings of the narrative synthesis will be drawn from the included studies and organized in alignment with the review question. The summary will focus on interventions designed to enhance nurses' capability and autonomy in managing patient care, particularly in relation to the resulting drains, wounds and possible self-management needs.

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Non-applicable

## Approval by the Ethics Committee

Non-applicable

## Conflict of interest

There is no conflict of interest