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Palliative care in the treatment of women with breast cancer: A scoping study protocol

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Title: Palliative care in the treatment of women with breast cancer: A scoping study protocol

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Keywords: Palliative care; Breast neoplasms; Women; Scoping Review.

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ABSTRACT
Introduction: Currently, breast cancer ranks first among the most common types of cancer in women; hence, there are strong recommendations for the early inclusion of these patients in palliative care programs. Nevertheless, research has showed that poor symptom control over the life span of patients is caused by the disease as well as its treatment. Thus, palliative care, which aims to control the symptoms, is important in the treatment of women with breast cancer. As such, this study aimed to map the available evidences on palliative care in the treatment of women with breast cancer and to discuss the results of the review with the stakeholders.
Methods: A scoping study protocol will be followed by a mixed-methods design which will be conducted in two phases. In the first phase, a scoping review protocol will be adhered to the PRISMA-P statement and Scoping Reviews Manual of the Joanna Briggs Institute (JBI). Nine databases, an electronic repository, register sites, gray literature, and additional sources will be searched and included. In the second phase, consultation will be conducted qualitatively. A focus group interview consisting of six stakeholders will be conducted. The analysis will be performed through inductive and manifest content analysis using the IRaMuTeQ version 0.7 alpha software.

Ethics and dissemination: The scoping review protocol did not require any ethical approval. However, the second phase of the study was approved by the institutional review board. The findings will be disseminated through professional networks, conference presentations, and publications in scientific journals.

Open Science Framework Registration: osf.io/yqubp.

Strengths and limitations of this study

- To the best of our knowledge, this study will be the first scoping review to systematically map the available evidence on palliative care for the treatment of women with breast cancer. A consultation exercise will also be conducted to discuss the results of this review with the stakeholders.
- Scoping reviews with a consultation phase on these topics are scarce. Therefore, this study will provide a novel methodological outline on palliative care with the recent recommendations of the Joanna Briggs Institute.
- In this scoping review, we will adopt a rigorous approach by adhering to the PRISMA-ScR guidelines, and conducting a comprehensive and systematic search strategy, including all study designs, grey literature, and preprints, with no time period or language restrictions.
- The results of this study will provide an up-to-date understanding of palliative care in breast cancer and a future direction for new study designs in this field.
- A possible limitation of this study will be the limited number of articles to be retrieved, even though a broad and systematic search strategy will be performed.

INTRODUCTION

Palliative care (PC) is interesting because of its complexity. However, the concept of PC is not new. Saunders [1], the forerunner of modern hospice philosophy, emphasized in 1978 the importance of PC in the care of patients with serious illnesses. This premise has gained importance today when life expectancy is increasing as scientific advances are made. The increasing incidence of chronic degenerative diseases is leading to a prolongation of the dying process; therefore, the integration of PC into end-of-life care is essential.
Despite its globally recognized relevance, only 14% of people who need PC receive it. It is estimated that 40 million individuals require PC annually. Around 78% live in low- and middle-income countries, where the lack of training and awareness of PC among health professionals is a major barrier [2] and where lack of public and government policies aimed at implementation at different levels of health care is evident.

PC aims to improve the quality of life of patients and their families when faced with life-threatening situations. It is important to improve the well-being, comfort, and dignity of individuals [3]. Therefore, PC is necessary for the therapeutic management of patients with chronic diseases. Despite the negative or passive connotation of the term, PC is active; for example, in patients with advanced cancer, some surgical and radiotherapeutic modalities are essential to achieve symptom control [3-6].

Regarding cancer, global statistics are alarming as it is currently one of the leading causes of death worldwide, with nearly 10 million deaths in 2020 alone [7]. Additionally, the incidence of breast cancer ranks first among the most common types of cancers (2.26 million cases new cases); therefore, research is needed to improve the diagnosis, treatment, and disease control of breast cancer [8-9].

From a biopsychosocial perspective, the diagnosis of breast cancer negatively affects the lives of women, who often experience feelings of anxiety and distress throughout the disease process, including the diagnosis, treatment, and survival phases [10-11]. On the other hand, PC aims to improve the quality of life of these patients and their families by alleviating the symptoms and controlling, thus balancing the progression of the disease with the discomfort caused by medical treatment [12].

Studies by Kokkone et al. [13] and updates by the American Society of Clinical Oncology Clinical Practice Guidelines [14] recommended that patients with advanced cancer, whether inpatients or outpatients, should receive specialized PC services early in the course of their disease and concurrent with their active treatment. However, this recommendation is not always followed, thereby resulting in the referral to PC only in the last weeks of life [15], leading to untreated symptoms and unnecessary aggressive treatments at the end of a patient’s life [16], especially in countries with an unmet need for PC [17-18].

Despite the strong recommendation to include PC starting from diagnosis, recent studies assessing the quality of life of women with breast cancer, including the end stages [10,19-24], showed a high prevalence of cancer symptom clusters, including pain, anxiety, fear, fatigue, insomnia, dyspnea, and sexual dysfunction, which should be the focus of this study to achieve a better quality of life. This leads us to reflect on the current role of PC in the treatment of breast cancer in terms of how PC is delivered to this population and its impact on the lives of these women. Hence, review studies on this topic were conducted in the literature. However, no study with our specific objective has been identified. It was noteworthy that two systematic reviews cited [12, 25] addressed the theme with a
different focus. One [12] aimed to review the published studies (1992–2019) examining the quality of life of women receiving palliative care, while the other [25] assessed the current knowledge on the efficacy and safety of palliative single-agent chemotherapy drugs, including capecitabine, vinorelbine, gemcitabine, and liposomal doxorubicin, which had been commonly used in daily clinical practice [25]. A broad scope review on the subject that integrates the stakeholder consultation exercises has not been addressed in the literature. In addition, this study emphasized the importance of knowing the role of PC in the health care of vulnerable populations in accordance with the Sustainable Development Goal 3 [26], which aimed to ensure healthy lives and promote well-being for all at all ages.

RESEARCH AIM

This study aims to map the available evidences on palliative care in the treatment of women with breast cancer and to discuss the results of the review with the stakeholders.

METHODS

Study Design

This scoping study will have a mixed-methods design divided into two phases. The first phase, the scoping review, will follow the methodological recommendations of the Joanna Briggs Institute (JBI) [27] and will adhere to the PRISMA Extension for Scoping Reviews (PRISMA-ScR) reporting guide [28]. In the second phase, stakeholder consultation will be conducted to analyze and validate the results of the review, which will be aligned with recent JBI recommendations [29] (Figure. 1). The study protocol was registered on the Open Science Framework (OFS) platform under the registration ID osf.io/yqubp.

Phase 1: Scoping review

Literature review question

The population, concept, and context (PCC) strategy for scoping reviews proposed by the Joanna Briggs Institute (JBI) will be used to formulate the research question [27]. In this review, the population will be young adult and older women; the concept will be palliative care; and the context will be breast cancer. The following question is thus formulated: What is the scope of available evidence on palliative care in the treatment of women with breast cancer?

Eligibility

Inclusion criteria
All studies will be included without restriction in terms of methodological design (e.g., experimental, quasi-experimental, prospective, retrospective cohort, case-control, cross-sectional, case series, single-case, descriptive, qualitative, and mixed methods). In addition, no date or language restrictions will be applied in this review. (Figure 2).

Population: Young women will be included according to the age classification proposed by WHO. WHO states that “young age is 25-44, middle age is 44-60, advanced age is 60-75, senile age is 75-90, and long-lived is after 90” [30]. This distinction was made because the highest incidence of breast cancer occurs in women aged ≥ 40 years [31].

Concept: The framework for palliative care described by WHO [2] will be used. It is defined as “an approach that improves the quality of life of patients (adults and children) and their families when they are faced with problems associated with a life-threatening illness. They prevent and relieve suffering through early recognition, assessment, and proper treatment of pain and other problems, whether physical, psychosocial, or spiritual”.

Context: WHO [32] states that “breast cancer arises in the cells of the lining (epithelium) of the ducts (85%) or lobules (15%) of the glandular tissue of the breasts. Initially, a cancerous tumor is confined to the duct or lobule (in situ), where it usually causes no symptoms and has little potential to spread (metastasize). Over time, this in situ cancer (stage 0) can progress and invade the surrounding breast tissue (invasive breast cancer) and then spread to nearby lymph nodes (regional metastases) or other organs in the body (distant metastases)”.

Exclusion criteria

Studies in which participants with breast cancer concomitant with other pathologies or those who receiving concurrent PC for other pathologies will be excluded.

Search strategy

The search will be conducted systematically in eight databases: MEDLINE (via PubMed), Embase (Excerpta Medica dataBASE), LILACS (Latin American and Caribbean Health Sciences Literature), Cochrane Library, Web of Science, Scopus, Epistemonikos, CINAHL/Cumulative Index to Nursing and Allied Health Literature (via EBSCO), JBI Evidence Synthesis, and the electronic repository SciELO (Scientific Electronic Library Online). The final search equations will be reviewed with a librarian. There will be no date nor language restrictions, and an individual strategy will be designed for each database.

Due to the flexibility of including gray literature in scoping reviews [27] and the importance of understanding the role of PC in breast cancer, gray literature will also be included [33]. Secondary searches will be conducted in a variety of other sources, including the British Library, Google Scholar, Preprints for Health Sciences [medRXiv], Open Gray, Institutional Repository for
Information Sharing (IRIS), ProQuest Global Dissertations, Theses, registers sites (ClinicalTrials.gov), clinical practice guidelines, protocols, and information on the websites of recognized scientific societies dealing with breast cancer and PC.

In addition, the final reference list of the included primary studies will be manually analyzed to identify relevant studies that can be added. The search strategy will be performed independently by two researchers according to the recommendations of the JBI guidelines [27]. First, the presence of an index of subject-specific titles (with MeSH terms, Emtree, DeCS, and CINAHL headings) and their synonyms (keywords) will be identified in each database. The search terms will then be combined with the Boolean operators "AND" and "OR" [34-35]. The search strategy, which combines the controlled descriptors and keywords used in each database, is shown in Supplementary File 1.

Selection of the sources of evidence

The Rayyan Systems Inc. (RAYYAN) software [36] will be used to manage the evidence sources. First, all articles from the general search will be deposited in the RAYYAN software. Duplicate studies will then be removed, and the percentage of agreement in the selection between the two reviewers will be evaluated. A sample of 25 articles will be drawn for analysis, and the review will not begin until a percentage of agreement of >70% will be reached according to the JBI recommendations [27].

After this stage, articles will be analyzed by two independent reviewers for title and abstract to identify potentially eligible articles, and any uncertainty regarding the inclusion of a study will be clarified by another reviewer. Subsequently, the same reviewers will independently review the manuscripts that passed the initial screening, and a third reviewer will resolve any conflicting decisions to obtain a final list of studies to be included. The flow of the search and review process will be illustrated using the PRISMA 2020 flowchart. [37]

Data extraction

For data extraction, a form designed by a member of the research team will be used. This form will be adapted from the data extraction template proposed by JBI and will be based on previously published extraction forms [34,38-39]. To verify that the form will extract all relevant study results, a pilot test [27,40,41] will be conducted. In this pilot test, there will be two reviewers extracting the proposed data from two previously included articles. Finally, it will be evaluated and accepted by a third reviewer.

The information to be extracted will include a) study identification and objectives, b) study population and baseline characteristics, c) study design, d) sample size, e) results, f) main findings, g) clinical and epidemiological significance, h) conclusions, i) implications, and j) limitations [34,38,39].

Data analysis and presentation
A narrative synthesis of the evidence will be conducted, and the main quantitative data from the included studies will be tabulated. The results will be grouped and presented in tables, graphical models, and text categories depending on the information found for the final themes. In addition, similarity analysis will be performed using the IRaMuTeQ version 0.7 alpha 2 software (Interface de R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires) to infer the structure of the text construction (results) with themes of relevant meaning by matching words [42].

**Phase 2: Consultation exercise**

The consultation exercise will be the sixth additional step proposed by Arksey, O'Malley [43], and Levac [44] in scoping studies. Although this phase was not included in the 2015 [45] and 2020 [27] JBI methodological guidance, a recent JBI publication presented a methodological guidance for setting up and conducting consultation exercises [29] based on the use of the Authors and Consumers Together Impacting on eVidencE (ACTIVE) framework used in systematic reviews to define stakeholder engagement [46]. In this research, the consultation exercise will be used longitudinally during the two phases of the scoping study; therefore, the recommendations proposed by the JBI will be adapted. A description of the ACTIVE framework is presented in Figure 3.

<Figure 3>

**ACTIVE Framework**

**Stakeholders**

Stakeholders are defined as individuals who use the knowledge of the research but are not directly involved in the research in their primary capacity [46]. In other words, stakeholders are individuals whose characteristics or attributes may provide relevant information in the discussion of the results of the review. The study will use the term "specialists" to refer to the professionals who will lead the entire study and the term "stakeholders" to refer to those who will participate in the second phase of the study (consultation). This is in accordance with the criteria defined in ACTIVE [46].

The specialists will include a breast cancer specialist, a PC specialist, and a scope review specialist. The stakeholders will be composed of a heterogeneous structural sample of six individuals who will meet the following characteristics: two patients diagnosed with metastatic breast cancer and receiving PC in any modality, a representative of a breast cancer non-governmental organization, a nurse practitioner involved in breast cancer care, a physician who specializes in PC, and a professor/doctor involved in research on these topics. A heterogeneous sample will be used because each interviewee can contribute a wealth of information from their knowledge and experience in breast cancer palliative care. They complement each other's discourse and are also direct beneficiaries of the scoping study findings.
Recruitment

First, a group of specialists will be invited to participate in the study through closed recruitment. Subsequently, interested parties will be selected through closed recruitment, considering a purposive sample [47]. Closed recruitment will involve inviting only specific individuals to participate in the study [46].

Mode of participation

The mode of participation refers to the general manner in which specialists and stakeholders are involved in a study [46]. The group of specialists will participate continuously throughout the study in a noninteractive manner. All their considerations will be made individually and separately. On the other hand, stakeholders will participate only once and will interact through focus group discussions.

Stages of participation

The group of specialists will participate in all stages of the study, from the conception of the question, development of the protocol, and writing of the final report. However, interested parties will participate only in the discussion phase of the scoping review findings.

Level of participation

The ACTIVE framework describes five levels of participation: leading, controlling, influencing, participating, and receiving [46]. Thus, the specialists' level of participation will be at the levels of controlling, influencing, and contributing, whereas those of the stakeholders will be controlling and receiving.

Methodical structure of the consultation exercise

The stakeholder consultation will follow a qualitative research design [48].

Data collection technique and instruments

A focus group interview technique will be used for data collection [49]. The number of focus group sessions will be determined based on the criterion of data saturation or until the point when no more new and relevant data will be obtained from the discourses [50,51]. The duration of the session(s) will be 1-2 hours [52,53] to limit participant fatigue and prevent unpleasant conditions from interfering with the goals of the discussion [54]. The place where meetings will be held must be easily accessible, free of noise, and acoustically isolated without too many disturbances, so that participants can listen and discuss [55]. The focus group will be moderated by the study director using a questionnaire based on the results of the scoping review. The focus group will then be reviewed by a group of specialists. The sessions will be recorded using two mobile devices.

Data analysis

The data obtained from the focus group will be analyzed qualitatively according to the inductive and manifest content analysis approach proposed by Elo and Kyngäs [56], which will
consist of three phases: preparation, organization, and report. The audio recordings will be transcribed into a word processor, and the meaning of the whole will be determined by reading and rereading the transcripts [57]. The open coding process and the creation of categories will then be conducted, grouping the codes under higher-level headings and formulating a general description of the research topic by creating categories and subcategories as a summary. This phase will be supported by the constant comparison method [58]. Finally, the analysis process and results will be presented using categories, conceptual model, and line of reasoning.

Scientific rigor

The consultation will meet the criteria of scientific rigor for qualitative research proposed by Lincoln & Guba [59]: credibility, transferability, reliability, and confirmability. To ensure transparency and rigor at this stage, the methodological appraisal of the stakeholder consultation will be ensured by responding to the items in the Authors and Consumers Together Impacting on the eVidencE (ACTIVE) framework [46]. Thus, the presentation of the final report will be in line with the GRIPP2 short report checklist, which will report patient and public participation in research [60].

Patient and public involvement

The scoping review protocol (first phase) will not include patient participation. However, the second phase of this scoping study will involve consultation with stakeholders, which will be approved by the IRB, as mentioned above.

IMPLICATIONS

The results of this study will provide an up-to-date understanding of PC in breast cancer and will be useful in identifying existing knowledge gaps and shaping future research in this area. Indirectly, our findings may also help PC professionals reflect on the role of PC in the treatment of women with breast cancer and encourage the search for the best evidence to inform the delivery of their care. It is important to emphasize that stakeholder consultation is a strength of this study, as it provides a more realistic view of the phenomenon and allows it to be contrasted with existing evidence.

ETHICS AND DISSEMINATION

Since consultation exercises in scoping studies require the participation of interested parties, the protocol was approved by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC under number 5.549.380/CAAE 60662522.4.0000.5050. In this study, all ethical and legal aspects concerning participation of human subjects were respected. The findings of the scoping review will be disseminated through professional networks, conference presentations, and publications in scientific journals.

Data availability statement
Data are available upon reasonable request.

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Contributorship statement:

Conceptualization: RJVY, LLCJ, AFCF
Methodology: LCLJ and RJVY
Resources: ACF
Acquisition/interpretation of data for the work: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC and EFC
Supervision: LCLJ
Writing – original draft: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC and EFC
Writing – review & editing, and approving the final version: LCLJ and RJVY
Guarantors: LCLJ and RJVY
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Data availability statement: Data are available upon reasonable request.
Ethics approval: Approval was obtained by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC under number 5.549.380/CAAE 60662522.4.0000.5050

REFERENCES


42. Souza MAR de, Wall ML, Thuler AC de MC, Lowen IMV, Peres AM. O uso do software IRAMUTEQ na análise de dados em pesquisas qualitativas. Rev esc enferm USP [Internet]. 2018 Oct 4 [cited 2022 Aug 8];52. Available from: http://www.scielo.br/j/reeusp/a/pPCgsCCgX7t7mZWfp6QfCcC/?lang=pt


Figure legends

**Figure 1.** Flowchart of the scoping review methodology. Adapted from: Arksey H, O’Malley L (2005).

**Figure 2.** Inclusion criteria aligned with the acronym PCC

**Figure 3.** Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A, et al. (2022).
Figure 1. Flowchart of the scoping review methodology. Adapted from: Arksey H, O’Malley L (2005).

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**Figure 2. Inclusion criteria aligned with the acronym PCC**

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Figure 3. Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A, et al. (2022).

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For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
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**C- CONCEPT:**
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C- CONTEXT:
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#4: #1 AND #2 AND #3

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## PRISMA-P 2015 Checklist

This checklist has been adapted for use with protocol submissions to *Systematic Reviews* from Table 3 in Moher D et al: Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 2015 4:1

### Table of Checklist Items

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<td>State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis)</td>
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<td>Data collection process</td>
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<td>Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators</td>
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<td>List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale</td>
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<td>Risk of bias in individual studies</td>
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<td>Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis</td>
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<td>If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., I², Kendall’s tau)</td>
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<td>If quantitative synthesis is not appropriate, describe the type of summary planned</td>
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<td>Describe how the strength of the body of evidence will be assessed (e.g., GRADE)</td>
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Palliative care in the treatment of women with breast cancer: a protocol for a mixed-methods study

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| Complete List of Authors: | Velasco Yanez, Romel; Federal University of Ceara, Department of Nursing  
Carvalho Fernandes, Ana; Federal University of Ceara, Department of Nursing  
Miranda Mattos, Samuel; State University of Ceara  
Moreira, Thereza; State University of Ceara, ENFERMAGEM  
Moura Barbosa Castro, Régia; Federal University of Ceara, Department of Nursing  
Corpes, Erilaine de Freitas; Universidade Federal do Ceará, Nursing Department  
LOPES-JÚNIOR, LUÍS CARLOS; Universidade Federal do Espírito Santo, Nursing Department |
| Primary Subject Heading: | Oncology |
| Secondary Subject Heading: | Nursing |
| Keywords: | PALLIATIVE CARE, Adult palliative care < PALLIATIVE CARE, ONCOLOGY, Breast tumours < ONCOLOGY |
Title: Palliative care in the treatment of women with breast cancer: a protocol for a mixed-methods study

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Keywords: Palliative care; Breast neoplasms; Women; Scoping Review.

Word Count: 3221 words.

ABSTRACT
Introduction: Currently, breast cancer ranks first among the most common types of cancer in women; hence, there are strong recommendations for the early inclusion of these patients in palliative care programs. Nevertheless, research has showed that poor symptom control over the life span of patients is associated by the disease as well as its treatment. Thus, palliative care, which aims to control the symptoms, is important in the treatment and care of women with breast cancer. As such,
this study aimed to map and synthesize the available evidence on palliative care in the treatment of women with breast cancer and to discuss the results of the review with the stakeholders.

**Methods:** A mixed-methods design scoping study protocol is presented in this article which will be conducted in two phases. In the first phase, a scoping review protocol will adhere to the PRISMA-P statement and Scoping Reviews Manual of the Joanna Briggs Institute (JBI). Nine databases, an electronic repository, register sites, gray literature, and additional sources will be searched and inclusion/exclusion criteria applied to create a database of selected studies. In the second phase, consultation will be conducted qualitatively, using a focus group discussion, consisting of six stakeholders. The analysis will be performed through inductive and manifest content analysis using the IRaMuTeQ version 0.7 alpha software.

**Ethics and dissemination:** The scoping review protocol did not require ethical approval. However, the second phase of the study has been approved by the institutional review board of Maternidade Escola Assis Chateaubriand/MEAC/UFC. The findings will be disseminated through professional networks, conference presentations, and publications in scientific journals.

**Open Science Framework Registration:** osf.io/yqubp

**Strengths and limitations of this study**

- To the best of our knowledge, this study will be the first scoping review to systematically map as well as synthesize the available evidence on palliative care for the treatment and care of women with breast cancer. A consultation exercise will also be conducted to discuss the results of this review with the stakeholders.
- Scoping reviews with a consultation phase on these topics are scarce. Therefore, this study will provide a comprehensive methodological outline on palliative care with the recent recommendations of the Joanna Briggs Institute.
- In this scoping review, we will adopt a rigorous approach by adhering to the PRISMA-ScR guidelines and conducting a systematic search strategy, including all study designs, grey literature, and preprints, with no time period or language restrictions.
- The results of this study will provide an up-to-date understanding of palliative care in breast cancer and a future direction for new study designs in this field.
- A possible limitation of this study will be the limited number of articles to be retrieved, even though a broad and systematic search strategy will be performed.

**INTRODUCTION**

Palliative care (PC) is complex because of the diverse aspects of medical, psychological, spiritual and cultural care which it encompasses. However, the concept of PC is not new. Saunders
[1], the forerunner of modern hospice philosophy, emphasized in 1978 the importance of PC in the care of patients with serious illnesses. This premise has gained importance over time when life expectancy is increasing due to scientific advances. The increasing incidence of chronic degenerative diseases and associated treatments is leading to a prolongation of the dying process making, the integration of PC and end-of-life care essential.

Despite its globally recognized relevance, only 14% of people who need PC receive it. It is estimated that 40 million individuals worldwide require PC annually. Around 78% live in low- and middle-income countries [2], where the lack of training and awareness of PC among health professionals is a major barrier and where lack of public and government policies aimed at implementation at different levels of health care is evident [3].

PC aims to improve the quality of life of patients and their families when faced with life-threatening situations, it is important to improve the well-being, comfort of individuals [4], therefore, PC is necessary for the therapeutic management of patients with chronic diseases [5-7].

With regard to cancer, world statistics are alarming, placing cancer today as one of the main causes of death worldwide with about 10 million deaths in 2020 [8]. In addition, in 2020, considering the most incident cancers, breast cancer (2.26 million cases) was ranked occupying the first position in the incidence [8]. Although it is one of the most treatable cancers when discovered early, treatment modalities with curative purposes can trigger undesirable side effects that compromise the quality of life of patients, which is why PC becomes necessary [2,9].

From a biopsychosocial perspective, the diagnosis of breast cancer negatively affects the lives of women, who often experience feelings of anxiety and distress throughout the disease process, including the diagnosis, treatment, and survival phases [10-11]. Given this, PC aims to improve the quality of life of these patients and their families by alleviating the symptoms and controlling, thus balancing the progression of the disease with the discomfort caused by medical treatment [12].

Study carried out by Kokkone, et al. [13] and the updated from the Clinical Practice Guidelines of the American Society of Clinical Oncology [14] recommend that hospitalized or outpatient cancer patients receive specific PC from the beginning of the course of advanced disease (i.e., stage IV). However, other more recent studies address the importance of including early PC at the same time as the diagnosis of the disease along with the curative treatment [15-16]. Furthermore, the literature shows that these recommendations are not always met, leading to referrals to PC services in the last weeks of life [16], untreated symptoms, patient distress and unnecessary aggressive treatments at the end of life [17], especially in those countries where there is an unmet need for PC [18,19].

Despite the strong recommendation to begin PC from diagnosis, recent studies assessing the quality of life of women with breast cancer, including end stage disease [10,20-25], showed a high prevalence of cancer symptom clusters, including pain, anxiety, fear, fatigue, insomnia, dyspnea, and sexual dysfunction, which should be the focus of this study to achieve a better quality of life. This
leads us to reflect on the current role of PC in the treatment of breast cancer in terms of how PC is delivered to women with breast cancer and its impact on the lives of these women.

Although review studies on this topic have been conducted in the literature [12,26], however, no study with the specific objective to has been identified. Both systematic reviews [12, 26] addressed the theme although from different perspective, specifically with regards to the scope of evidence and the conduct of the consultation exercise. One study [12] reviewed published studies (1992–2019) which examined the quality of life of women receiving palliative care, while the other [26] assessed current knowledge on the efficacy and safety of palliative single-agent chemotherapy drugs, including capecitabine, vinorelbine, gemcitabine, and liposomal doxorubicin, which are commonly used in daily clinical practice [26].

Hence, a broad scoping review on the subject that integrates the stakeholder consultation exercises has not been addressed in the literature. In addition, this study emphasized the importance of understanding the role of PC in the health care of vulnerable populations in accordance with Sustainable Development Goal 3 [27], which aims to ensure healthy lives and promote well-being for all at all ages.

**RESEARCH AIM**

This study aims to map and synthesize the available evidence on palliative care in the treatment of women with breast cancer and to discuss the results of the review with the stakeholders.

**METHODS**

**Study Design**

This scoping study will have a mixed-methods design divided into two phases. The first phase, the selection of articles and synthesis of findings, will follow the Joanna Briggs Institute (JBI) methodological recommendations [28] and will adhere to the PRISMA Extension for Scoping Reviews (PRISMA-ScR) reporting guide [29]. In the second phase, a stakeholder consultation will be conducted to discuss and validate the results of the review, which will be aligned with recent JBI recommendations [30] (Figure. 1). The study protocol was registered on the Open Science Framework (OFS) platform under the registration ID osf.io/yqubp.

<Figure1>

**Phase 1: Scoping review**

**Literature review question**

The population, concept, and context (PCC) strategy for scoping reviews proposed by the Joanna Briggs Institute (JBI) will be used to formulate the research question [28]. In this review, the population will be young through to older women; the concept will be ‘palliative care’; and the
context will be ‘breast cancer’. The following question was formulated: What is known about the impact of palliative care in the treatment of women with breast cancer?

Eligibility

Inclusion criteria

All studies will be included without restriction in terms of methodological design (e.g., experimental, quasi-experimental, prospective, retrospective cohort, case-control, cross-sectional, case series, single-case, descriptive, qualitative, and mixed methods). In addition, no date or language restrictions will be applied in this review. (Figure 2).

Population: Young women will be included according to the age classification proposed by WHO [31]. The WHO states that “young age is 25-44, middle age is 44-60, advanced age is 60-75, senile age is 75-90, and long-lived is after 90”. This distinction was made because the highest incidence of breast cancer occurs in women aged ≥ 40 years [32].

Concept: Studies on breast cancer that present interventions, treatments/therapies, reflections or comments aligned with the PC reference described by the WHO [3] will be included. It is defined as “an approach that improves the quality of life of patients (adults and children) and their families when they are faced with problems associated with a life-threatening illness. They prevent and relieve suffering through early recognition, assessment, and proper treatment of pain and other problems, whether physical, psychosocial, or spiritual”.

Context: In order to cover studies that bring the recommendations to include PC from the advanced stage [13,14] as well as from the diagnosis of the disease [15,16], all studies that dealt with breast cancer were included, without restriction of the type of cancer or stage, as defined by the WHO [33] states that “breast cancer arises in the cells of the lining (epithelium) of the ducts (85%) or lobules (15%) of the glandular tissue of the breasts. Initially, a cancerous tumor is confined to the duct or lobule (in situ), where it usually causes no symptoms and has little potential to spread (metastasize). Over time, this in situ cancer (stage 0) can progress and invade the surrounding breast tissue (invasive breast cancer) and then spread to nearby lymph nodes (regional metastases) or other organs in the body (distant metastases)”.

Exclusion criteria

Studies in which participants with breast cancer concomitant with other pathologies or those who receiving concurrent PC for other pathologies will be excluded. Also, studies with survivors in remission because they are no longer receiving treatment will also be excluded.

Search strategy
The search will be conducted systematically in eight databases: MEDLINE (via PubMed), Embase (Excerpta Medica database), LILACS (Latin American and Caribbean Health Sciences Literature), Cochrane Library, Web of Science, Scopus, Epistemonikos, CINAHL/Cumulative Index to Nursing and Allied Health Literature (via EBSCO), JBI Evidence Synthesis, and the electronic repository SciELO (Scientific Electronic Library Online). The final search will be reviewed with a librarian. There will be no date nor language restrictions, and an individual strategy will be designed for each database.

Due to the flexibility of including gray literature in scoping reviews [28] and the importance of understanding the role of PC in breast cancer, gray literature will also be included [34,35]. Secondary searches will be conducted in a variety of other sources, including the British Library, Google Scholar, Preprints for Health Sciences [medRxiv], Open Gray, Institutional Repository for Information Sharing (IRIS), ProQuest Global Dissertations, Theses, registers sites (ClinicalTrials.gov), clinical practice guidelines, protocols, and information on the websites of recognized scientific societies dealing with breast cancer and PC.

In addition, the final reference list of the included primary studies will be manually analyzed to identify relevant studies that can be added. The search strategy will be performed independently by two researchers according to the recommendations of the JBI guidelines [27]. First, the presence of an index of subject-specific titles (with MeSH terms, Emtree, DeCS, and CINAHL headings) and their synonyms (keywords) will be identified in each database. The search terms will then be combined with the Boolean operators "AND" and "OR" [36-37]. The search strategy, which combines the controlled descriptors and keywords used in each database, is shown in Supplementary File 1.

Selection of the sources of evidence

The Rayyan Systems Inc. (RAYYAN) software [38] will be used to manage the evidence sources. First, all articles from the general search will be deposited in the RAYYAN software. Duplicate studies will then be removed, and the percentage of agreement in the selection between the two reviewers will be evaluated. A sample of 25 articles will be drawn for analysis, and the review will not begin until a percentage of agreement of >70% will be reached according to the JBI recommendations [28].

After this stage, articles will be analyzed by two independent reviewers for title and abstract to identify potentially eligible articles, and any uncertainty regarding the inclusion of a study will be clarified by another reviewer. Once the title and abstract screening has been completed, full articles will be retrieved and screened via a full reading, and a third reviewer will resolve any conflicting decisions to obtain a final list of studies to be included. The flow of the search and review process will be illustrated using the PRISMA 2020 flowchart. [39]

Data extraction
For data extraction, a data extraction chart designed by a member of the research team will be used. This chart will be adapted from the data extraction template proposed by JBI and will be based on previously published extraction forms [36,40-41]. To verify that the chart will enable extraction of all relevant study data, a pilot test [28,42,43] will be conducted. In this pilot test, two reviewers will separately extract relevant data from two of the included articles and finally, it will be evaluated and accepted by a third reviewer.

The information to be extracted will include a) study identification and objectives, b) study population and baseline characteristics, c) study design, d) sample size, e) results, f) main findings, g) clinical and epidemiological significance, h) conclusions, i) implications, and j) limitations [36,40-41].

Data analysis and presentation

A narrative synthesis of the evidence will be conducted, and the main quantitative data from the included studies will be tabulated. The results will be grouped and presented in tables, graphical models, and text categories depending on the information found for the final themes. In addition, similarity analysis will be performed using the IRaMuTeQ version 0.7 alpha 2 software (Interface de R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires) to infer the structure of the text construction (results) with themes of relevant meaning by matching words [44].

Phase 2: Consultation exercise

The consultation exercise will be the sixth additional step proposed by Arksey, O'Malley [45], and Levac [46] in scoping studies. Although this phase was not included in the 2015 [47] and 2020 [28] JBI methodological guidance, a recent JBI publication presented a methodological guidance for setting up and conducting consultation exercises [30] based on the use of the ACTIVE framework (Authors and Consumers Together Impacting on eVidencE) used in systematic reviews to define stakeholder engagement [48]. In this research, the consultation exercise will be used longitudinally during the two phases of the scoping study; therefore, the recommendations proposed by the JBI will be adapted in relation to the expertise of stakeholder group. A description of the ACTIVE framework is presented in Figure 3.

<Figure 3>

ACTIVE Framework

Stakeholders

Stakeholders are defined as individuals who use the knowledge of the research but are not directly involved in the research in their primary capacity [48]. In other words, stakeholders are individuals whose characteristics or attributes may provide relevant information in the discussion of
the results of the review. The study will use the term "specialists" to refer to the professionals who will lead the entire study and the term "stakeholders" to refer to those who will participate in the second phase of the study (consultation) this is in accordance with the criteria defined in ACTIVE [48].

It should be noted that The ACTIVE framework does not offer a specific recommendation on the number of stakeholders needed for the consultation, but mentions the importance of including at least three categories (in this consultation: patients, professionals and researchers). In addition, the reference of the number of stakeholders for this study was chosen based on study with a similar methodological design [49]. Thus, the specialists will include a breast cancer specialist, a PC specialist, and a scope review expert. The stakeholders will be composed of a heterogeneous structural sample of six individuals who will meet the following characteristics: two patients diagnosed with metastatic breast cancer and receiving PC in any modality, a representative of a breast cancer non-governmental organization, a nurse practitioner involved in breast cancer care, a physician who specializes in PC, and a professor/doctor involved in research on these topics.

A heterogeneous sample will be used because each stakeholder can contribute a wealth of information from their knowledge and experience in breast cancer palliative care. They can complement each other's discourse and are also direct beneficiaries of the scoping study findings.

Recruitment
A group of specialists and stakeholders will be invited to participate in the study through closed recruitment, considering a purposive sample [50]. Closed recruitment involve inviting only specific individuals to participate in the study based on research interests [48].

Mode and stages of participation
The mode of participation refers to the general manner in which specialists and stakeholders are involved in a study [48]. The group of specialists will participate continuously throughout the study in a noninteractive manner, from the conception of the question, development of the protocol, and writing of the final report. On the other hand, stakeholders will participate only once and will interact through focus group discussions in the discussion phase of the scoping review findings.

Level of participation
The ACTIVE framework describes five levels of participation: leading, controlling, influencing, participating, and receiving [48]. Thus, the specialists' level of participation will be at the levels of controlling, influencing, and contributing, whereas those of the stakeholders will be controlling and receiving.

Methodical structure of the consultation exercise
The stakeholder consultation will follow a qualitative research design [51] as follows:

Data collection technique and instruments
Focus group discussions will be used for consultation [52]. The number of focus group sessions will be determined based on the criterion of data saturation or until the point when no more
new and relevant data will be obtained from the discourses [53,54]. The duration of the session(s) will be 1-2 hours [55,56] to limit participant fatigue from interfering with the goals of the discussion [57]. The focus groups will be held in accessible venues, free of noise, and acoustically isolated without too many disturbances, so that participants can listen and discuss freely [58]. Each focus group will be moderated by the principal investigator, guided by a list of questions, which will be obtained from the findings of the scoping review and reviewed by a group of experts. The session will be recorded with two mobile devices.

Data analysis

Information obtained from the focus groups will be analyzed qualitatively according to the inductive and manifest content analysis approach proposed by Elo and Kyngäs [59]. This consists of three phases: preparation, organization, and report. In terms of preparation, the audio recordings will be transcribed into a word processor, and familiarisation will be achieved by reading and rereading the transcripts [60]. Open coding and the creation of categories will then be conducted. This involves identification of meaningful text, followed by grouping the codes under higher-level headings. Then, these will be formulated into a general description of the research topic by creating summarizing categories and subcategories. This phase will be supported by the constant comparison method [61] whereby. Finally, the analysis process and results will be presented using categories, conceptual model, and the lines of reasoning used to develop the final analysis.

Scientific rigor

The consultation will meet the criteria of scientific rigor for qualitative research proposed by Lincoln & Guba [62]: credibility, transferability, reliability, and confirmability. To ensure transparency and rigor at the consultation stage, the methodological appraisal of the stakeholder consultation will be ensured by responding to the items in the ACTIVE framework [48]. Thus, the presentation of the final report will be in line with the GRIPP2 short report checklist, which will report patient and public participation in research [63].

Patient and public involvement

The scoping review protocol (first phase) will not include patient participation. However, the second phase of this scoping study will involve consultation with stakeholders, which was approved by the IRB, as mentioned above.

ETHICS AND DISSEMINATION

Since consultation exercises in scoping studies require the participation of interested parties, the protocol was approved by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC under number 5.549.380/CAAE 60662522.4.0000.5050. In this study, all ethical and legal aspects concerning participation of human subjects were respected. The findings of
the scoping review will be disseminated through professional networks, conference presentations, and publications in scientific journals.

DISCUSSION

The results of this study will provide an up-to-date understanding of PC in breast cancer and will be useful in identifying existing knowledge gaps and shaping future research in this area. Indirectly, our findings may also help PC professionals reflect on the role of PC in the treatment of women with breast cancer and encourage the search for the best evidence to inform delivery of care. It is important to emphasize that stakeholder consultation is a strength of this study, as it provides a more realistic view of the phenomenon and allows it to be contrasted with existing evidence. Some of the possible limitations of the present study include: i) the failure to retrieve any relevant study through the search strategy; ii) the lack of access to all paid articles in case of exceeding the researchers' own budget.

Data availability statement

Data are available upon reasonable request.

Acknowledgments

We would like to thank the Coordination for the Improvement of Higher Education Personnel (CAPES, Brazil).

Contributors statement:

Conceptualization: RJVY, LLCJ, AFCF
Methodology: LCLJ and RJVY
Resources: ACF
Acquisition/interpretation of data for the work: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC and EFC
Supervision: LCLJ
Writing – original draft: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC and EFC
Writing – review & editing, and approving the final version: LCLJ and RJVY
Guarantors: LCLJ and RJVY
Competing interests: None declared.
Funding: No funding.
Data availability statement: Data are available upon reasonable request.
**Ethics approval:** Approval was obtained by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC under number 5.549.380/CAAE 60662522.4.0000.5050

**REFERENCES**


36. Lopes-Júnior LC, Siqueira PC, Maciel ELN. School reopening and risks accelerating the COVID-19 pandemic: A systematic review and meta-analysis protocol. PLOS ONE [Internet]. 2021


44. Souza MAR de, Wall ML, Thuler AC de MC, Lowen IMV, Peres AM. O uso do software IRAMUTEQ na análise de dados em pesquisas qualitativas. Rev esc enferm USP [Internet]. 2018 Oct 4 [cited 2022 Aug 8];52. Available from: http://www.scielo.br/j/reuesp/a/pPCgsCCgX7t7mZWfp6QfCeC/?lang=pt


Figure legends

**Figure 1.** Flowchart of the scoping review methodology. Adapted from: Arksey H, O’Malley L (2005).

**Figure 2.** Inclusion criteria aligned with the acronym PCC

**Figure 3.** Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A, et al. (2022).
Figure 1. Flowchart of the scoping review methodology. Adapted from: Arksey H, O’Malley L (2005).

336x250mm (144 x 144 DPI)
Figure 2. Inclusion criteria aligned with the acronym PCC

Population: Who makes up and what are the characteristics of the population to be examined?
- Women > 25 years

Context: What is the central aspect to be examined?
- Any type of breast cancer
- Any stage of cancer

Context: What are the specific details or factors that relate directly to the population?
- PC definition by WHO

Population: Young, adult and older women

Breast cancer

Palliative care

306x206mm (144 x 144 DPI)
Figure 3. Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A, et al. (2022).

403x261mm (144 x 144 DPI)
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#4: #1 AND #2 AND #3

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C- CONCEPT: | #2 TITLE-ABS-KEY (“Palliative care” OR “Palliative treatment” OR “Palliative therapy” OR “Palliative Medicine” “Supportive care”))
#4: #1 AND #2 AND #3

| Epistemkos | P- POPULATION: | #1 (title:(("Women" OR "Woman" OR "Female" OR "Females")) OR abstract:("Women" OR "Woman" OR "Female" OR "Females"))) OR abstract:((title:(("Women" OR "Woman" OR "Female" OR "Females")) OR abstract:("Women" OR "Woman" OR "Female" OR "Females")))
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For peer review only - http://bmjopen.bmj.com/site/about/guidelines.xhtml
#2 ((Cuidados Paliativos [DeCS] OR Palliative Care [DeCS] OR Cuidados Paliativos [DeCS] OR Soins paliatifs [DeCS] OR Medicina Paliativa [DeCS] OR Palliative Medicine [DeCS] OR Medicina Paliativa [DeCS] OR Médecine palliative [DeCS]))

C- CONTEXT:
#3 (Neoplasias da Mama [DeCS] OR Breast Neoplasms [DeCS] OR Neoplasias de la Mama [DeCS] OR Tumeurs du sein[DeCS])

#4: #1 AND #2 AND #3

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# PRISMA-P 2015 Checklist

This checklist has been adapted for use with protocol submissions to *Systematic Reviews* from Table 3 in Moher D et al: Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews* 2015 4:1

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<td>Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author</td>
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<td>Contributions</td>
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<td>Describe contributions of protocol authors and identify the guarantor of the review</td>
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<td>If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments</td>
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<td>Support</td>
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<td>Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)</td>
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<td>Eligibility criteria</td>
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<td>Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for excluding studies</td>
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<td>Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis</td>
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Palliative care in the treatment of women with breast cancer: a scoping review protocol

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| Complete List of Authors: | Velasco Yanez, Romel; Federal University of Ceara, Department of Nursing  
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| <b>Primary Subject Heading</b>: | Oncology |
| Secondary Subject Heading: | Nursing |
| Keywords: | PALLIATIVE CARE, Adult palliative care < PALLIATIVE CARE, ONCOLOGY, Breast tumours < ONCOLOGY |
Title: Palliative care in the treatment of women with breast cancer: a scoping review protocol

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Keywords: Palliative care; Breast neoplasms; Women; Scoping Review.

Word Count: 2992 words.

ABSTRACT
Introduction: Currently, breast cancer ranks first among female malignancies; hence, there are strong recommendations for the early inclusion of these patients in palliative care. Palliative care aims to alleviate symptoms improving the quality of life of dying patients, an essential component of breast cancer care. This study aimed to map and synthesize the available evidence on palliative care for women with breast cancer and to discuss the review results with stakeholders.
Methods: A scoping review protocol is presented in this article, consisting of two phases. In the first phase, a scoping review study will be conducted adhering to the PRISMA-ScR guidelines and guided by the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis. Nine databases, an electronic...
repository, a trial register website, grey literature, and additional sources will be searched. A focus
group discussion with six stakeholders will occur in the second phase. The analysis will be performed
through inductive and manifest content analysis using the IRaMuTeQ version 0.7 alpha software.

**Ethics and dissemination:** The scoping review protocol did not require ethical approval. However,
the study's second phase has been approved by the institutional review board of Maternidade Escola
Assis Chateaubriand/MEAC/UFC. The findings will be disseminated through professional networks,
conference presentations, and publications.

**Open Science Framework Registration:** osf.io/yqubp

### Strengths and limitations of this study

- To the best of our knowledge, this study will be the first scoping review to systematically map and
  synthesize the available evidence on palliative care for women with breast cancer. A consultation step
  will also be conducted to discuss the review results with stakeholders.
- Scoping reviews with a consultation phase are scarce. This study will provide a comprehensive
  methodological outline of palliative care with the recent recommendations of the Joanna Briggs
  Institute.
- In this scoping review, we will adopt a rigorous approach by adhering to the PRISMA-ScR guidelines
  and conducting a systematic search strategy covering all study designs, grey literature, and preprints,
  with no period or language restrictions.
- The study's results will provide an up-to-date understanding of palliative care for women with breast
  cancer and a future direction for new study designs in the field.
- A possible limitation of the study is the chance of including a limited number of articles, even though
  a broad and systematic search strategy will be employed.

### INTRODUCTION

Palliative care (PC) is complex because it encompasses medical, psychological, spiritual, and
cultural dimensions. However, the concept of palliative care is not new. Saunders [1], the forerunner
of modern hospice philosophy, emphasized in 1978 the importance of PC for patients with serious
illnesses. This premise has gained importance over time when life expectancy increases due to
scientific advances. The increasing incidence of chronic degenerative diseases and associated
treatments have resulted in a prolonged dying process, reinforcing the importance of integrating PC
and end-of-life care.

Despite the importance of PC, only 14% of patients who need palliative care receive it. It is
estimated that 40 million individuals worldwide require PC annually. Around 78% live in low- and
middle-income countries [2], which lack training, professional awareness, public and government policies aimed at PC at different healthcare levels [3].

PC aims to improve the quality of life, well-being, and comfort of patients with life-threatening illnesses and their families [4], which is especially important for patients with chronic diseases [5-7]. Global cancer statistics are increasingly alarming, and there were about 20 million new cases of cancer and 10 million deaths in 2022 [8]. In addition, the International Agency for Research on Cancer (IARC) estimates that, by 2040, the incidence of breast cancer will increase by more than one-third to more than 3 million new cases per year, and breast cancer mortality will increase by more than one-half, to more than 1 million deaths per year [9]. Although breast cancer is one of the most treatable cancers when discovered early, treatment modalities with curative purposes can trigger undesirable side effects that compromise the quality of life, reinforcing the importance of PC [2,10].

From a biopsychosocial perspective, breast cancer diagnosis negatively affects women, who often experience anxiety and distress during the diagnosis, treatment, and survival phases [11-12]. PC aims to improve the quality of life of these patients and their families by alleviating the symptoms and controlling them, balancing the progression of the disease with the discomfort caused by medical treatments [13].

A study carried out by Kokkone et al. [14] and the Clinical Practice Guidelines of the American Society of Clinical Oncology [15] recommend that hospitalized or outpatient patients with advanced cancer receive specific PC from the beginning of the treatment. However, recent studies address the importance of including early PC at the same time as the diagnosis and the curative treatment [16-17]. Furthermore, the literature shows that these recommendations are not always met, leading to referrals to PC services only in the last weeks of life [17], untreated symptoms, patient distress, and unnecessary aggressive treatments at the end of life [18], especially in countries where there is an unmet need for PC [19,20].

Despite the strong recommendation to begin PC from diagnosis, a high prevalence of symptom clusters (pain, anxiety, fear, fatigue, insomnia, dyspnea, and sexual dysfunction) has been reported in recent studies assessing the quality of life of women with breast cancer [11,21-26], leading us to reflect on the current role and how PC has been delivered. Although review studies on the topic have been conducted [13,27], no study has been identified with an objective similar to ours. Both systematic reviews [13, 27] addressed the theme differently regarding the scope of available evidence and the consultation exercise. One study [13] reviewed published studies (1992–2019) that examined the quality of life of women receiving palliative care, while the other [27] addressed current knowledge on the efficacy and safety of palliative single-agent chemotherapy drugs, including capecitabine, vinorelbine, gemcitabine, and liposomal doxorubicin, which are commonly used in daily clinical practice [27].

Hence, the literature has not addressed a broad scoping review that integrates stakeholder consultation exercises. In addition, this study emphasizes the importance of understanding the role of
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PC in the health care of vulnerable populations per Sustainable Development Goal 3 [28], which aims to ensure healthy lives and promote well-being for all ages.

RESEARCH AIM
This study aims to answer two objectives linked to each phase of the study:
1. To map and synthesize the available evidence on palliative care for women with breast cancer.
2. To discuss the main results emerging from the scoping review with stakeholders through a consultation exercise.

METHODS
Study design
This scoping review protocol includes a stakeholder consultation exercise and will be divided into two phases. The first phase, the selection of articles and synthesis of findings, will follow the Joanna Briggs Institute (JBI) methodological recommendations [29] and adhere to the PRISMA Extension for Scoping Reviews (PRISMA-ScR) [Supplemental material 1] reporting guidelines [30]. In the second phase, a stakeholder consultation will be conducted to discuss and validate the results of the review, following recent JBI recommendations [31] (Figure. 1). The study protocol was registered to the Open Science Framework (osf.io/yqubp).

Phase 1: Scoping review
Literature review question
The population, concept, and context (PCC) strategy proposed by the Jonna Briggs Institute (JBI) will be used to formulate the research question [29]. In this review, the population will be "young to older women", the concept will be "palliative care", and the context will be "breast cancer". The following question was formulated: What is known about the impact of palliative care in the treatment of women with breast cancer?

Eligibility
Inclusion criteria
All studies designs will be included (e.g., experimental, quasi-experimental, prospective, retrospective cohort, case-control, cross-sectional, case series, single-case, descriptive, qualitative, and mixed methods), date, or language restrictions (Figure 2).

<Figure 1>

<Figure 2>
**Population:** Studies conducted with young women will be included, considering the age classification of the WHO [32]: young, 25-44 years, middle age, 44-60 years, advanced age, 60-75 years, senile age, 75-90 years, and long-lived, 90 years and over. This distinction was made because the highest incidence of breast cancer occurs in women aged ≥ 40 years [33,34].

**Concept:** Studies on breast cancer that present interventions, treatments/therapies, reflections, or comments aligned with the WHO's [3] definition of PC will be included: “an approach that improves the quality of life of patients (adults and children) and their families when facing problems associated with life-threatening illness. It prevents and relieves suffering through the early identification, correct assessment and treatment of pain and other problems, whether physical, psychosocial or spiritual”.

**Context:** As this review aims to synthesize studies with PC recommendations for women with advanced-stage breast cancer [14,15] and diagnosis [16,17], we will include all studies that address breast cancer with no cancer stage restriction (0-4).

**Exclusion criteria**

Studies with women with breast cancer concomitant with other pathologies or those with patients in PC secondary to other pathologies will be excluded. Studies with survivors in remission will also be excluded as these patients no longer receive treatment.

**Search strategy**

The search will be conducted systematically in eight databases: MEDLINE (via PubMed), Embase (Excerpta Medica Database), LILACS (Latin American and Caribbean Health Sciences Literature), Cochrane Library, Web of Science, Scopus, Epistemonikos, CINAHL/Cumulative Index to Nursing and Allied Health Literature (via EBSCO), JBI Evidence Synthesis, and the electronic repository SciELO (Scientific Electronic Library Online). The final search will be reviewed by a librarian. There will be no date or language restrictions, and an individual strategy will be designed for each database.

The grey literature will be searched due to the flexibility of including grey literature in scoping reviews and the importance of understanding the role of PC in breast cancer treatment [35, 36]. Secondary searches will be conducted in a variety of other sources, including the British Library, Google Scholar, Preprints for Health Sciences [medRXiv], Open Gray, Institutional Repository for Information Sharing (IRIS), ProQuest Global Dissertations & Theses, and ClinicalTrials.gov trial register website, in addition to clinical practice guidelines, protocols, and information available on the websites of recognized scientific societies.

The final reference list of the included primary studies will be manually analyzed to identify relevant studies. The search strategy will be performed independently by two researchers according to the recommendations of the JBI guidelines [29]. First, the presence of an index of subject-specific titles (with MeSH terms, Emtree, DeCS, and CINAHL headings) and their synonyms (keywords) will
be identified in each database. The search terms will then be combined with the Boolean operators "AND" and "OR" [37-38]. The search strategy combines controlled descriptors with specific keywords in each database, as shown in Supplemental material 2.

Selection of the sources of evidence

The Rayyan Systems Inc. software [39] will be used during the title and abstract analysis. First, all articles from the general search will be deposited in the software. Duplicate studies will then be removed, and the percentage of agreement between the two blinded reviewers will be obtained. A sample of 25 articles will be drawn for analysis, and the review will not begin until a percentage of agreement of >70% is reached, according to the JBI recommendations [29].

In the next stage, titles and abstracts of potentially relevant studies will be reviewed to determine whether they meet the criteria for inclusion. A third reviewer will clarify any uncertainty regarding the inclusion of studies. Once the title and abstract screening has been completed, full articles will be retrieved and screened through a full-text reading, and a third reviewer will resolve any conflicting decisions to obtain a final list of studies. The search and review processes will be illustrated using the PRISMA-ScR flowchart. [40]

Data extraction

The data extraction will be done using a chart designed by one of the research team members. The chart will be adapted from the data extraction template proposed by the JBI and based on previously published tools [37,41-42]. A pilot test will determine whether the chart enables the extraction of all relevant study data [29,43-44]. In this pilot test, two reviewers will separately extract relevant data from two of the included studies, and finally, a third reviewer will make a final decision.

The information to be extracted includes the following: a) study identification and objectives, b) study population and baseline characteristics, c) study design, d) sample size, e) results, f) main findings, g) clinical and epidemiological significance, h) conclusions, i) implications, and j) limitations [37,41-42].

Data analysis and presentation

A narrative synthesis of the evidence will be conducted, and the primary quantitative data from the studies will be tabulated. The results will be grouped and presented in tables, graphical models, and text categories depending on the information found in the review. In addition, similarity analysis will be performed using IRaMuTeQ software version 0.7 alpha 2, leading to textual categories and themes of relevant meaning identified through word association [45].

Phase 2: Consultation exercise
The consultation exercise is the sixth additional step for scoping reviews proposed by Arksey, O'Malley [46], and Levac [47]. Although this phase was not included in the JBI Manuals released in 2015 [48] and 2020 [29], a recent JBI publication provides methodological guidance for consultation exercises [31] based on the ACTIVE (Authors and Consumers Together Impacting on eVidencE) framework used in systematic reviews to define stakeholder engagement [49]. In our study, the consultation exercise will be conducted longitudinally during the two phases of the scoping review. Therefore, the JBI recommendations will be adapted to the expertise of the stakeholder group. A description of the ACTIVE framework is presented in Figure 3.

![Figure 3](ACTIVE Framework)

**ACTIVE Framework**

**Stakeholders**

Stakeholders are persons who use the research knowledge but are not directly involved in the research [49]. In other words, stakeholders are individuals whose characteristics or attributes may provide relevant information to discuss the review results. We will use the term "specialists" to refer to the professionals who will lead the study and "stakeholders" to refer to those who will participate in the second phase of the study (the consultation), following the ACTIVE framework [49].

It should be noted that The ACTIVE framework does not offer a specific recommendation on the number of stakeholders needed for the consultation but mentions the importance of including at least three categories (in our study, the following categories will be included: patients, health professionals, and researchers). The number of stakeholders for this study was chosen based on a previous study [50]. The sample of specialists will include a breast cancer specialist, a palliative care specialist, and a scoping review expert. The sample of stakeholders will be heterogeneous, comprising six individuals who will meet the following characteristics: two patients diagnosed with metastatic breast cancer and receiving PC in any modality, a representative of a breast cancer non-governmental organization, a nurse practitioner involved in breast cancer care, a physician specialized in palliative care, and a Ph.D. professor involved in research on these topics. The heterogeneous sample will be used because each stakeholder can contribute with their knowledge and experience, complementing each other's discourse and being directly benefitted from the scoping review findings.

**Recruitment**

A group of specialists and stakeholders will be invited to participate in the study through closed recruitment, considering a purposive sample [51]. Closed recruitment involves inviting only specific individuals to participate in the study based on research interests [49].

**Mode and stages of participation**

The mode of participation refers to how specialists and stakeholders are involved in a study [49]. The group of specialists will participate continuously throughout the study noninteractively,
from the conception of the protocol to the final report. Stakeholders will participate only once and interact through focus group discussions in the discussion phase of the scoping review.

Level of participation

The ACTIVE framework comprises five levels of participation: leading, controlling, influencing, participating, and receiving [49]. The specialists' level of participation will be at the levels of controlling, influencing, and contributing, whereas those of the stakeholders will be at the levels of controlling and receiving.

Methodical structure of the consultation exercise

The stakeholder consultation will follow a qualitative research design as follows [52]:

Data collection technique and instruments

The consultation exercise will occur through focus group discussions [53]. The number of focus group sessions will be determined based on the criterion of data saturation, the point when no more new and relevant data is obtained [54,55]. The sessions will last 1-2 hours [56,57] to minimize participant fatigue that can interfere with the discussion goals [58]. The focus groups will be held in accessible, free-of-noise, and acoustically isolated rooms without no disturbances so that participants can listen and discuss freely [59]. Each focus group will be moderated by the principal investigator using a list of questions obtained from the scoping review and reviewed by a group of experts. The session will be recorded with two mobile devices owned by the researcher, which will be hidden from the group's view to prevent them from feeling intimidated, but with prior consent from the participants.

Data analysis

Information obtained from the focus groups will be analyzed qualitatively using Elo and Kyngäs' [60] inductive and manifest content analysis approach, divided into three phases: preparation, organization, and report. The audio recordings will be transcribed into a word processor, and familiarization will be achieved by reading and rereading the transcripts [61] in the preparation step. Open coding and categorization will then be conducted to identify meaningful text and code them under high-level headings. Then, a general description of the research topic will be generated by creating summarized categories and subcategories. This phase will be supported by the constant comparison method [62]. Finally, the analysis process and results will be presented using categories, conceptual models, and lines of reasoning used to develop the final analysis.

Scientific rigor

The consultation will meet the criteria of scientific rigor for qualitative research proposed by Lincoln & Guba [63]: credibility, transferability, reliability, and confirmability.

Credibility: refers to the accurate and truthful description of the experience lived by a participant [64]; in this study, this criterion will be achieved through the immersion of the researcher in the context of the phenomenon, knowing the PC service and interacting with people similar to the focus group, in order to minimize the distortions that could infiltrate the data.
Transferability: Consists of transferring research results to other contexts using an intentional sampling method. We will provide a wide range of information through detailed and accurate descriptions of stakeholders, their speeches, and their contributions [64].

Reliability: This criterion refers to the stability of the data. In qualitative research, due to its complexity, the stability of the data is not guaranteed, nor is the exact replicability possible due to the great diversity of situations analyzed [65]. In our study, reliability will be achieved by triangulating the results with other researchers. Researchers with a doctorate degree and experience in qualitative research will be requested to review some transcribed documents and identify new codes or categories. The suggestions will be triangulated with the principal investigator and the tutor [64].

Confirmability: In this criterion, the research results must guarantee the veracity of the descriptions made by the participants. In our study, this criterion will be met through content analysis [60], i.e., only the speeches will be analyzed without considering the non-verbal expressions of the subjects, as they will not provide information to respond to the consultation objectives.

The methodological appraisal of the stakeholder consultation will be ensured by responding to the items in the ACTIVE framework [49] to ensure transparency and rigor. The final report's presentation will align with the GRIPP2 checklist for reporting patient and public involvement in health and social care research [66].

Patient and public involvement

The first phase of this research will not include patients. However, in the second phase, stakeholders (patients and professionals) will be consulted through a focus group, and the most relevant results emerging from the scoping review will be discussed. It should be noted that this participation will be direct and occur only once during the entire consultation period.

ETHICS AND DISSEMINATION

Since the consultation step requires the participation of interested parties, the protocol was approved by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC (protocol number: 5.549.380; ethical approval: 60662522.4.0000.5050). All ethical and legal aspects concerning the participation of human subjects will be respected in this study. The findings of the scoping review will be disseminated through professional networks, conference presentations, and publications in scientific journals.

Data availability statement

Data are available upon reasonable request.

Acknowledgments
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Contributors statement:

Conceptualization: RJVY, LLCJ, AFCF
Methodology: LCLJ and RJVY
Resources: ACF
Acquisition/interpretation of data for the work: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC, and EFC
Supervision: LCLJ
Writing – original draft: RJVY, LCLJ, AFCF, SMM, TMMM, RCMBC, and EFC
Writing – review & editing, and approving the final version: LCLJ and RJVY
Guarantors: LCLJ and RJVY
Competing interests: None declared.
Funding: No funding.
Data availability statement: Data are available upon reasonable request.
Ethics approval: Approval was obtained by the Institutional Review Board (IRB) of Maternidade Escola Assis Chateaubriand/MEAC/UFC under number 5.549.380/CAAE 60662522.4.0000.5050

REFERENCES


22. Villar RR, Fernández SP, Garea CC, Pillado MTS, Barreiro VB, Martin CG. Quality of life and anxiety in women with breast cancer before and after treatment. Rev Lat Am Enfermagem


2021 Mar 29 [cited 2022 May 3];372:n71. Available from: https://www.bmj.com/content/372/bmj.n71


45. Souza MAR de, Wall ML, Thuler AC de MC, Lowen IMV, Peres AM. O uso do software IRAMUTEQ na análise de dados em pesquisas qualitativas. Rev esc enferm USP [Internet]. 2018 Oct 4 [cited 2022 Aug 8];52. Available from: http://www.scielo.br/j/reuesp/a/pPCgsCCgX7t7mZWfp6QfCcC/?lang=pt


**Figure legends**

**Figure 1.** Flowchart of the scoping review methodology. Adapted from: Arksey H, O'Malley L (2005).

**Figure 2.** Inclusion criteria aligned with the acronym PCC

**Figure 3.** Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A et al. (2022).
Figure 1. Flowchart of the scoping review methodology. Adapted from: Arksey H, O’Malley L (2005).

336x250mm (144 x 144 DPI)
Figure 2. Inclusion criteria aligned with the acronym PCC

Population: Who makes up and what are the characteristics of the population to be examined?

- PC definition by WHO

P
Young, adult and older women
- Women > 25 years

Context: What is the central aspect to be examined?

C
Palliative care

- Any type of breast cancer
- Any stage of cancer

Context: What are the specific details or factors that relate directly to the population?

C
Breast cancer

306x206mm (144 x 144 DPI)
Figure 3. Development of the stakeholder consultation exercise through the ACTIVE framework. Adapted from: Pollock A, et al. (2022).

403x261mm (144 x 144 DPI)

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<td>Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.</td>
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<td>Objectives</td>
<td>Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.</td>
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<td>Data charting process‡</td>
<td>Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.</td>
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<td>If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).</td>
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<td>RESULTS</td>
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<td>Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.</td>
<td>NA</td>
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<td>15</td>
<td>For each source of evidence, present characteristics for which data were charted and provide the citations.</td>
<td>NA</td>
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<td>16</td>
<td>If done, present data on critical appraisal of included sources of evidence (see item 12).</td>
<td>NA</td>
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<td>17</td>
<td>For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.</td>
<td>NA</td>
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<tr>
<td></td>
<td>18</td>
<td>Summarize and/or present the charting results as they relate to the review questions and objectives.</td>
<td>NA</td>
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<tr>
<td>DISCUSSION</td>
<td>19</td>
<td>Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.</td>
<td>NA</td>
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<td>20</td>
<td>Discuss the limitations of the scoping review process.</td>
<td>2</td>
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<tr>
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<td>21</td>
<td>Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.</td>
<td>NA</td>
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<td>FUNDING</td>
<td>22</td>
<td>Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.</td>
<td>10</td>
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</table>

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where sources of evidence (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.
† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with information sources (see first footnote).
‡ The frameworks by Arksey and O’Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.
§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of “risk of bias” (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

### Supplemental material 2. Preliminary search strategy.

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<td>#5: #3 AND #4</td>
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#4: #1 AND #2 AND #3

Scopus

P- POPULATION:
#1 TITLE-ABS-KEY ("Women" OR "Woman")

C- CONCEPT:
#2 TITLE-ABS-KEY ("Palliative care" OR "Palliative treatment" OR "Palliative therapy" OR "Palliative Medicine" OR "Supportive care")

C- CONTEXT:
#3 TITLE-ABS-KEY ("Breast neoplasm" OR "Breast tumor" OR "Breast cancer" OR "Mammary cancer" OR "Human mammary carcinoma" OR "Breast carcinoma" OR "Breast malignant neoplasm" OR "Advanced breast cancer" OR "Triple Negative Breast Neoplasm" OR "Triple Negative Breast Cancer")

#4: #1 AND #2 AND #3

Epistemonikos

P- POPULATION:
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C- CONCEPT:
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