

Mapping evidence on breast cancer among women in the Democratic Republic of the Congo: a scoping review protocol

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 July 2026 and was last updated on 17 July 2026.

INTRODUCTION

Review question / Objective This scoping review aims to systematically map the available evidence on breast cancer among women in the Democratic Republic of the Congo (DRC), including epidemiological patterns, clinical characteristics, risk factors, molecular profiles, diagnostic pathways, treatment approaches, and health system challenges.

The review question will be structured according to the Population–Concept–Context (PCC) framework:

Population: Women diagnosed with or at risk of breast cancer in the Democratic Republic of the Congo.

Concept: Evidence related to breast cancer epidemiology, clinical presentation, tumour characteristics, molecular and immunohistochemical profiles, screening, diagnosis, treatment, outcomes, awareness, and health system factors.

Context: All healthcare and community settings within the Democratic Republic of the Congo, including hospitals, oncology centres, pathology laboratories, and community-based settings.

The main review question is:

What is known from the existing literature regarding breast cancer among women in the Democratic Republic of the Congo, and what evidence gaps remain across the cancer continuum?

Background Breast cancer is the most frequently diagnosed cancer among women worldwide and represents a major public health challenge, particularly in low- and middle-income countries. In sub-Saharan Africa, breast cancer incidence is increasing, while survival remains poor due to delayed diagnosis, limited screening opportunities, insufficient diagnostic capacity, and restricted access to comprehensive treatment.

The Democratic Republic of the Congo (DRC) faces a growing cancer burden within a fragile health system. However, reliable population-based

data remain scarce due to the absence of a national cancer registry and limited surveillance capacity. Existing evidence is mainly derived from hospital-based studies conducted in major urban centres, particularly Kinshasa and Lubumbashi.

Available studies suggest that breast cancer in the DRC is frequently diagnosed at advanced stages and affects relatively young women. However, important uncertainties remain regarding disease epidemiology, molecular characteristics, risk factors, diagnostic delays, treatment patterns, and outcomes.

A comprehensive mapping of available evidence is therefore needed to characterise the current state of breast cancer knowledge in the DRC, identify research gaps, and inform future priorities for cancer control.

Rationale The evidence base on breast cancer in the DRC remains fragmented, heterogeneous, and largely limited to institutional reports and hospital-based studies. Although several studies have investigated specific aspects of breast cancer, including clinical presentation, histopathology, molecular profiles, awareness, and treatment challenges, no comprehensive synthesis has systematically mapped the available evidence.

A scoping review methodology is appropriate because the objective is to explore the breadth and characteristics of existing literature rather than estimate pooled effects. This approach allows the identification of key concepts, evidence gaps, methodological limitations, and priority areas for future research.

The findings of this review will provide a comprehensive overview of breast cancer research in the DRC and support the development of evidence-informed strategies for prevention, early detection, diagnosis, treatment, and health system strengthening.

METHODS

Strategy of data synthesis A comprehensive search strategy will be developed using controlled vocabulary (e.g., MeSH terms) and free-text terms related to breast cancer and the Democratic Republic of the Congo.

The following databases will be searched:

- PubMed/MEDLINE
- Web of Science
- Wiley Online Library
- African Index Medicus
- African Journals Online (AJOL)
- Google Scholar

Grey literature sources will include institutional repositories, university databases, conference proceedings, and relevant reports from

international organisations such as WHO and IARC.

The search strategy will combine terms related to breast cancer:

("Breast Neoplasms" OR "breast cancer" OR "breast carcinoma" OR "cancer du sein")

AND

("Democratic Republic of the Congo" OR "DRC" OR "Congo Kinshasa" OR "RDC" OR "Zaire" OR "Belgian Congo")

Search strategies will be adapted for each database. Reference lists of included studies will also be screened.

Data will be synthesised descriptively and narratively. Findings will be organised according to major domains of breast cancer control, including epidemiology, clinical characteristics, molecular profiles, screening, diagnosis, treatment, awareness, and health system challenges.

Eligibility criteria Types of participants

Studies involving women with breast cancer or women assessed for breast cancer-related knowledge, awareness, risk factors, or screening practices in the DRC will be included.

Concept

Studies addressing one or more of the following domains will be eligible:

- Breast cancer epidemiology
- Incidence, prevalence, mortality, or burden
- Clinical presentation and tumour characteristics
- Histological classification and grading
- Molecular and immunohistochemical profiles
- Risk factors and awareness
- Screening and early detection
- Diagnostic pathways
- Treatment approaches
- Healthcare access and system barriers
- Patient outcomes

Context

Studies conducted in any healthcare or community setting in the Democratic Republic of the Congo will be considered.

Eligible evidence sources will include observational studies, case series, case reports, implementation studies, reviews, and relevant grey literature.

Studies published from January 1970 onwards in English or French will be included.

Letters, editorials, commentaries, and studies without extractable DRC-specific breast cancer data will be excluded.

Source of evidence screening and selection All retrieved records will be imported into Covidence for duplicate removal and study management.

Two reviewers will independently screen titles and abstracts according to predefined eligibility criteria.

Potentially relevant studies will undergo full-text assessment by the same reviewers.

Disagreements between reviewers will be resolved through discussion. If consensus cannot be reached, a third reviewer will adjudicate.

The selection process will be documented using a PRISMA flow diagram, including reasons for exclusion at the full-text stage.

Data management Data management will be performed using Covidence and a standardised data extraction form developed specifically for this review.

The extraction form will be pilot-tested before full implementation. Extracted data will include study characteristics, population characteristics, geographical location, study design, sample size, breast cancer characteristics, diagnostic methods, molecular findings, treatment approaches, and reported barriers or gaps.

Data will be securely stored and accessible only to members of the review team.

Reporting results / Analysis of the evidence

Results will be reported according to the PRISMA-ScR guidelines.

Characteristics of included studies will be summarised using descriptive statistics, including frequencies, proportions, ranges, and narrative descriptions.

Evidence will be synthesised according to predefined domains:

- Epidemiology and disease burden
- Clinical and pathological characteristics
- Molecular profiles
- Awareness and prevention
- Diagnosis and treatment
- Health system challenges

No formal risk-of-bias assessment will be performed because the objective is evidence mapping rather than quantitative effect estimation.

Presentation of the results The results will be presented using:

- A PRISMA flow diagram describing study selection.
- Tables summarising characteristics of included studies.
- Evidence maps showing geographical distribution, study designs, and research domains.
- Narrative summaries describing major findings and evidence gaps.

Additional tables will summarise breast cancer epidemiology, clinical characteristics, molecular profiles, screening approaches, treatment pathways, and health system constraints.

Language restriction English and French.

Country(ies) involved Democratic Republic of the Congo.

Other relevant information This scoping review will follow the Joanna Briggs Institute (JBI) methodology for scoping reviews and will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR).

Keywords Breast cancer; Democratic Republic of Congo; oncology; epidemiology; molecular profile; screening; treatment; scoping review.

Dissemination plans The findings of this scoping review will be submitted for publication in a peer-reviewed scientific journal. Results will also be disseminated through academic conferences, oncology and public health networks, and relevant stakeholders involved in cancer control in the Democratic Republic of the Congo.

The review will provide evidence to support future research priorities, cancer surveillance strengthening, and development of context-specific breast cancer prevention and management strategies.

Contributions of each author

Author 1 - Stanislas Maseb'a-Mwang Sulu - Conceived the study, developed the scoping review protocol, coordinated the overall review process, and screened titles and abstracts.

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Author 2 - Arnold Maseb Sul Sulu - Contributed to the design of the review methodology, participated in the literature search and study selection, assisted in data charting and verification, and acted as the third reviewer to resolve screening disagreements. Contributed to protocol development, literature search strategy, and methodological refinement.

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Author 3 - Bienvenu Lebwaze Massamba - Contributed to the design of the review methodology, participated in the literature search and study selection, assisted in data charting and verification, and critically revised the manuscript for important intellectual content.

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Author 4 - Kaymarlin Govender - Provided methodological oversight, guided the application of the scoping review framework, contributed to the interpretation of the synthesised evidence, and critically revised the manuscript for important intellectual content.

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Author 5 - Olivier Mukuku - Developed the scoping review protocol, coordinated the overall review

process, screened titles and abstracts, performed the data extraction and synthesis, contributed to the interpretation of findings and supervision, drafted the initial version of the manuscript, and participated in subsequent revisions.
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