

INPLASY

A scoping review protocol of the clinical care pathways, outcomes, and health financing for bladder cancer in Nigeria

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ADMINISTRATIVE INFORMATION**Support** - Move Against Cancer Africa.**Review Stage at time of this submission** - Preliminary searches.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202680056**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 August 2026 and was last updated on 13 August 2026.**INTRODUCTION**

Review question / Objective What evidence exists on the clinical care pathways, treatment outcomes, and health financing mechanisms for bladder cancer in Nigeria, and how do these compare with regional and international standards of care?

Objectives

1. To map the clinical care pathway for bladder cancer patients from presentation and diagnosis through treatment and follow-up in Nigeria.
2. To synthesize existing evidence on treatment adherence, outcomes, and follow-up protocols for bladder cancer within Nigerian healthcare settings.
3. To identify and describe the health financing mechanisms and insurance coverage available for bladder cancer management in Nigeria.
4. To explore the financial and non-financial barriers that hinder access to quality bladder cancer care across the country.

Background Bladder cancer is the tenth most frequently diagnosed cancer globally, accounting for an estimated 573,000 new cases and 213,000

deaths in 2020 (Sung et al., 2021). Despite advances in diagnosis and management in high-income countries, where survival rates have improved significantly over recent decades, the burden of bladder cancer remains unevenly distributed across regions. The disease is predominantly associated with industrialization, with major risk factors including tobacco use, occupational exposure to carcinogens, and environmental toxins (Antoni et al., 2017). Globally, men are affected nearly three times more frequently than women (Burger et al., 2013).

In Africa, the epidemiology of bladder cancer differs from that of high-income regions due to the continued influence of infectious etiologies, particularly schistosomiasis. Squamous cell carcinoma (SCC), strongly associated with chronic schistosomal infection, remains disproportionately common in several African countries, contrasting with the predominance of urothelial (transitional cell) carcinoma (TCC) seen in industrialized nations (Bowa et al., 2020). This regional variation highlights the dual burden of infectious and environmental determinants shaping the African cancer landscape.

In Nigeria, bladder cancer represents one of the most significant urological malignancies but remains under-researched and underdiagnosed. Available data suggest a high proportion of late-stage presentations, limited histopathological classification, and poor treatment outcomes (Okeke et al., 2017; Waziri et al., 2016). These poor outcomes are often linked to systemic weaknesses such as inadequate diagnostic infrastructure, weak cancer registry systems, a shortage of trained personnel, and restricted access to advanced treatment modalities, including intravesical immunotherapy and radical cystectomy (Ogunbiyi & Shittu, 1999). Financial barriers further compound these challenges, as most patients rely on out-of-pocket payments due to minimal insurance coverage for oncology care. Consequently, delays in diagnosis, fragmented clinical pathways, and treatment discontinuation are common, reflecting deep-seated structural inequities in Nigeria's health system.

Compared with global and regional contexts, Nigeria's bladder cancer response remains hampered by the absence of standardized clinical guidelines, limited access to molecular diagnostics, and inadequate integration of oncology services into existing health systems.

While countries like Egypt have implemented schistosomiasis control programs and structured cancer registries that support early detection and improved outcomes (El-Baz et al., 2020; Ibrahim et al., 2014; El-Bolkainy et al., 2017), Nigeria lags behind in establishing such coordinated frameworks (Jedy-Agba et al., 2012; Adebamowo et al., 2018). This disparity highlights the urgent need for evidence-based insights to strengthen national strategies for prevention, diagnosis, and comprehensive management.

Rationale Bladder cancer care in Nigeria reflects a complex interplay of systemic, institutional, and socioeconomic challenges that hinder effective disease management. The country's oncology response is constrained by a shortage of specialized personnel, fragmented referral systems, inadequate registry infrastructure, and limited diagnostic and treatment capacity (Jedy-Agba et al., 2022). Furthermore, most tertiary hospitals lack sufficient access to cystoscopy, pathology services, and advanced treatment options such as intravesical Bacillus Calmette-Guérin (BCG) therapy, chemotherapy, and radical cystectomy (Okeke et al., 2017; Ogunbiyi & Shittu, 1999). These challenges are compounded by the absence of national clinical management guidelines and limited inclusion of cancer care within the National Health Insurance Scheme,

leading to high out-of-pocket expenditure and treatment abandonment (Adebamowo et al., 2018). Given Nigeria's unique epidemiological profile, where both infection-related (schistosomiasis-associated) and industrial risk factors coexist, systemic weaknesses in surveillance, diagnosis, and treatment exacerbate inequities when compared with regional and global contexts. While high-income countries have implemented evidence-based treatment algorithms and multidisciplinary care pathways, and African counterparts like Egypt and South Africa maintain structured cancer control programs, Nigeria's fragmented system results in delayed presentation, incomplete treatment, and suboptimal outcomes.

Therefore, this scoping review will examine the entire continuum of bladder cancer care in Nigeria, from presentation and diagnosis to treatment, follow-up, and financing, by systematically mapping literature published between 2010 and 2025. It will identify key gaps within the clinical and financial care pathways, assess disparities between Nigerian data, regional and international benchmarks and will inform evidence-based recommendations aimed at strengthening oncology infrastructure, guiding national policy, and reducing patient mortality and financial hardship. Data will be analyzed using both quantitative and qualitative synthesis approaches. Quantitative data extracted from eligible studies will be summarized using descriptive statistics such as frequencies, percentages, and proportions to illustrate trends in diagnostic delays, treatment modalities, adherence, survival outcomes, and financing mechanisms. Qualitative data will undergo thematic analysis to identify key themes, patterns, and barriers related to clinical care pathways and financial access to bladder cancer services in Nigeria. Comparative analysis will also be conducted to highlight variations between Nigeria's data and regional or international standards. The findings will be presented using tables, figures, and narrative summaries to ensure clarity and comprehensive interpretation.

METHODS

Strategy of data synthesis Data will be analyzed using both quantitative and qualitative synthesis approaches. Quantitative data extracted from eligible studies will be summarized using descriptive statistics such as frequencies, percentages, and proportions to illustrate trends in diagnostic delays, treatment modalities, adherence, survival outcomes, and financing mechanisms. Qualitative data will undergo thematic analysis to identify key themes, patterns, and barriers related to clinical care pathways and

financial access to bladder cancer services in Nigeria. Comparative analysis will also be conducted to highlight variations between Nigeria's data and regional or international standards. The findings will be presented using tables, figures, and narrative summaries to ensure clarity and comprehensive interpretation.

Eligibility criteria Studies will be included if they focus on any aspect of bladder cancer involving patients in Nigeria (of any histological subtype) between 2010 and 2025. Eligible studies must address one or more components of the care continuum, such as presentation, diagnosis, treatment, follow-up, or financial barriers including out-of-pocket costs and insurance coverage. Comparative studies that contrast Nigerian findings with regional or global data will also be considered. Only studies published in English, including peer-reviewed journal articles, review papers, and conference abstracts, will be included. Studies with inaccessible full texts or abstracts will be excluded, studies written in other languages other than English will also be excluded.

Source of evidence screening and selection Comprehensive literature search will be conducted across five databases: Medline, ResearchGate, ScienceDirect, African Journals Online (AJOL), and Scientific Research. The search, scheduled for November to December 2025, will use a combination of Medical Subject Headings (MeSH) and free-text terms such as "bladder cancer," "urothelial carcinoma," "transitional cell carcinoma," "adenocarcinoma," "squamous cell carcinoma," "Nigeria," "Africa," "schistosomiasis," "epidemiology," "risk factors," "treatment," and "financing." Boolean operators (AND, OR) and truncation will be applied to optimize search sensitivity and specificity. Reference lists of relevant papers will be manually screened (snowballing) to identify additional eligible studies.

Data management All identified records will be imported into EndNote and Microsoft Excel for screening and data extraction. Duplicates will be automatically detected and removed. Screening will be conducted in two stages, title/abstract screening and full-text review, by at least two independent reviewers. A standardized data extraction form will be used to ensure uniformity and transparency in data collection. Extracted information will include study characteristics (author, year, design), patient demographics, clinical pathways, treatment modalities, financing mechanisms, and reported outcomes. All data files will be stored securely in password-protected

folders accessible only to the review team at Move Against Cancer Africa (MACA).

Reporting results / Analysis of the evidence

Results will be reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines. Findings will be synthesized narratively, supported by tables and visual frameworks to display the distribution of studies, key themes, and evidence gaps. The analysis will highlight variations in clinical care pathways, treatment outcomes, and financing mechanisms across Nigerian health facilities. Where possible, evidence will be presented through narrative summaries, tables, and visual frameworks, including PRISMA flow diagrams, to enhance clarity and interpretability.

Presentation of the results The review process and study selection will be illustrated using a PRISMA flow diagram to show the number of records identified, screened, excluded, and included in the final synthesis. Results will be presented through thematic charts, summary tables, and descriptive narratives organized around the major objectives: (1) clinical pathways, (2) treatment adherence and outcomes, (3) health financing mechanisms, and (4) barriers to care. Visual frameworks will also be developed to depict the continuum of bladder cancer care and existing system gaps across Nigeria.

Language restriction Yes. Only studies published in English between 2010 and 2025 will be included. Studies published in other languages will be excluded.

Country(ies) involved Nigeria.

Keywords Bladder cancer; clinical care pathways; treatment outcomes; health financing; urothelial carcinoma; schistosomiasis; oncology; Nigeria; Africa; scoping review; cancer policy; health.

Dissemination plans Findings from this scoping review will be disseminated through multiple platforms, including peer-reviewed journal publication, conference presentations, and policy briefs targeting the Federal Ministry of Health, oncology associations, and non-governmental organizations involved in cancer care in Nigeria. Additionally, the results will be shared via the Move Against Cancer Africa (MACA) website, newsletters, and social media platforms to reach broader public health stakeholders. The evidence generated will inform advocacy for the development of standardized national bladder

cancer care pathways and improved health financing mechanisms.

Contributions of each author

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