



DISPARITIES IN LUNG CANCER CARE IN SUB-SAHARAN AFRICA: A SYSTEMATIC REVIEW OF ACCESS, DIAGNOSIS AND TREATMENT GAPS

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INTRODUCTION

- Lung cancer is emerging as an important and growing public health challenge in Sub-Saharan Africa (SSA).
- Lung cancer in SSA is frequently characterized by **late-stage presentation and delayed diagnosis**.
- Limited access to timely diagnostic services also contributes to delays in identifying the disease and these challenges reduce opportunities for effective, potentially curative treatment.
- HIV infection and environmental exposures** are increasingly recognized as important contributors to the disease burden.
- Existing evidence on lung cancer in SSA remains fragmented, with important gaps across the region. This study therefore evaluated lung cancer epidemiology, clinical characteristics, Treatment patterns, survival outcomes and health-system barriers to lung cancer care in SSA.

METHODS

- A systematic review and qualitative evidence synthesis were conducted to evaluate lung cancer care in Sub-Saharan Africa.
- The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.
- The review **focused on studies conducted across Sub-Saharan Africa (SSA)**. Eligible studies were published between January 2010 and February 2026.
- The review included retrospective cohort studies, cross-sectional studies, case series, population-based registries, and scoping reviews.
- Studies were included **if they involved adult patients diagnosed with lung cancer** and provided evidence relating to epidemiology, diagnosis, treatment, or health system barriers in Sub-Saharan Africa, and were published in English.

DISCUSSION AND CONCLUSION

- The predominant use of chemotherapy and palliative care, with **minimal access to surgery**, radiotherapy, and advanced therapies, demonstrates major treatment gaps. These limitations reduce opportunities for effective disease control and curative treatment.
- The short median survival of **3.3–4.4 months** highlights the consequences of late diagnosis and restricted treatment access. Better outcomes among patients with earlier-stage disease and access to treatment further emphasize the importance of timely care.
- The findings further demonstrate that poor outcomes are influenced by broader health-system limitations, including inadequate infrastructure, workforce shortages, and financial constraints. **The relevance of HIV** and environmental exposures also highlights the need for approaches that reflect the regional context.
- Overall, the findings demonstrate that lung cancer outcomes in **Sub-Saharan Africa** remain poor, driven largely by late diagnosis, limited access to comprehensive treatment, and health-system constraints.

Future Direction

- Future studies should evaluate practical strategies for reducing diagnostic delays and increasing early-stage **lung cancer detection across SSA**.
- Research should explore feasible models for expanding access to surgery, radiotherapy, systemic therapies, and other evidence-based treatment options.
- Further research should investigate** the roles of HIV, environmental exposures, and health-system factors in shaping lung cancer outcomes across SSA.

REFERENCES & ACKNOWLEDGEMENTS

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RESULTS

- A total of 21 studies from Nigeria, Ghana, Uganda, Kenya, South Africa, and multi-country analyses were included. Sample sizes **ranged from 18 to over 2,000 patients**. Participants were predominantly adults aged 50–60 years, with a slight male predominance.
- Tobacco smoking was the most common reported risk factor, with **prevalence ranging from 33–80%**. HIV infection, particularly in Uganda, was associated with earlier mortality and late-stage presentation. Environmental exposures also contributed to the regional disease burden. Common presenting symptoms included cough, chest pain, dyspnea, hemoptysis, weight loss, and fatigue. Atypical presentations were reported among HIV-positive patients. These clinical patterns may contribute to challenges in timely recognition of the disease.
- Most patients presented with advanced-stage lung cancer (Stage III–IV), **ranging from 75–96%**. Late presentation was associated with diagnostic delays, limited imaging and pathology access, and referral inefficiencies. Only a small proportion of patients were diagnosed at earlier stages.
- Treatment primarily involved chemotherapy and palliative care, while surgery, radiotherapy, and advanced therapies were underutilized (**<5%**). **Median survival ranged from 3.3 to 4.4 months**. Younger age, early-stage diagnosis, NSCLC histology, and treatment access were associated with improved outcomes.
- Major barriers to lung cancer care included limited oncology infrastructure, workforce shortages, and financial constraints. These systemic challenges contributed to delays in diagnosis and restricted access to appropriate treatment. Overall, **access to comprehensive lung cancer care remained limited across SSA**.

Reported Risk Factors for Lung Cancer in Sub-Saharan Africa

