

Economic Evaluation of Advanced Cervical Cancer Management within the Tanzanian Health System: A Patient-Level Costing Study

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Author notes

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Abstract

Background:

Cervical cancer is a leading cause of cancer-related mortality among women in Tanzania, with most cases diagnosed at an advanced stage. Comprehensive data on the health system costs of managing advanced disease are scarce, hindering resource planning and policy formulation.

Purpose and **objectives:**
This study determined the direct health system costs of managing advanced-stage cervical cancer in Tanzania from the provider's perspective and identified the primary cost drivers.

Methodology:

A patient-level micro-costing study was conducted at two regional referral hospitals between 2023 and 2025. Resource use data for diagnostics, inpatient stays, chemotherapy, radiotherapy, and palliative care were collected from hospital records for a cohort of 127 patients diagnosed with FIGO stages III-IV cervical cancer. Costs were calculated in Tanzanian Shillings and converted to 2024 US dollars.

Findings:

The mean total health system cost per patient was USD 1,842. Inpatient admissions constituted the largest cost component (47% of total expenditure). Chemotherapy and radiotherapy combined represented 38% of costs.

Conclusion:

The management of advanced cervical cancer imposes a substantial economic burden on the Tanzanian health system, driven predominantly by inpatient care and oncological treatments.

Recommendations:

Health policy should prioritise investment in cost-effective primary and secondary prevention, notably HPV vaccination and screening programmes, to reduce the incidence of advanced disease. Hospitals require standardised treatment protocols and budgeting informed by these cost analyses.

Key

Cervical cancer, health economics, cost analysis, Tanzania, health systems, oncology.

words:

Contribution

This study provides the first detailed patient-level costing evidence for advanced cervical cancer management in Tanzania, offering crucial data for national cancer control planning and economic evaluations of prevention strategies.

statement:

Keywords: *cervical cancer, economic evaluation, patient-level costing, Tanzania, health system, advanced-stage disease, sub-Saharan Africa*