

Comparing Traditional and Modern Cancer Treatment Approaches in Eastern Nigeria: Barriers and Opportunities

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ABSTRACT

Cancer remains a growing public health concern in Nigeria, with Eastern Nigeria bearing a significant burden due to limited healthcare access and deeply rooted cultural practices. This review compares traditional and modern cancer treatment approaches in the region, analyzing their effectiveness, accessibility, cultural relevance, and associated challenges. Traditional medicine, deeply embedded in local belief systems, continues to serve as a primary form of care for many rural populations, often delaying biomedical intervention. Modern cancer care—encompassing surgery, chemotherapy, radiotherapy, and targeted therapy—is hampered by systemic barriers such as inadequate infrastructure, limited oncology specialists, high costs, and late-stage presentation. The review identifies key opportunities for integrative approaches, policy reform, community education, and investment in healthcare infrastructure to bridge the gap between traditional and modern care. A harmonized framework that respects cultural values while promoting evidence-based treatment is vital for improving cancer outcomes in Eastern Nigeria.

Keywords: Cancer treatment, Eastern Nigeria, traditional medicine, modern oncology, barriers, healthcare access, integrative medicine, public health policy.

INTRODUCTION

Cancer is a leading global health challenge, currently ranking as the second leading cause of death after cardiovascular diseases [1]. According to the World Health Organization (WHO), approximately 10 million people died from cancer in 2020, with an alarming increase in incidence and mortality projected in the coming decades [2]. Although traditionally associated with high-income countries, the burden of cancer is rapidly shifting towards low- and middle-income countries (LMICs), where health systems are often unprepared to respond effectively. Nigeria, Africa's most populous country, exemplifies this transition, experiencing a growing cancer burden against a backdrop of weak healthcare infrastructure, poor health-seeking behavior, limited access to care, and pervasive socioeconomic challenges [3].

Eastern Nigeria comprising the five southeastern states of Enugu, Abia, Imo, Anambra, and Ebonyi—presents a unique setting for understanding the complexities surrounding cancer diagnosis and treatment. The region is known for its vibrant culture, strong community ties, and persistent influence of traditional medicine [4]. While efforts have been made to improve healthcare delivery through tertiary hospitals and oncology centers, access to timely and effective cancer care remains constrained by several factors, including inadequate health education, stigmatization, high cost of treatment, limited diagnostic capabilities, and weak referral systems. Furthermore, cultural beliefs and reliance on alternative or traditional healers continue to shape treatment choices and delay medical intervention [5].

Cancer care in Eastern Nigeria is characterized by a dualism between traditional and orthodox medicine. Traditional medicine, deeply rooted in indigenous knowledge systems, has served as a primary source of care for centuries, especially in rural communities. Herbal remedies, spiritual interventions, and other alternative treatments are often sought before or alongside hospital care [6]. This phenomenon is not unique to Eastern Nigeria but is particularly pronounced in this region due to historical reliance on community-based health systems and spiritual healing.

However, as the incidence of cancer continues to rise, so does the need for timely and accurate diagnosis, evidence-based treatment, and coordinated patient care. Common cancers in the region include breast, cervical, prostate, colorectal, and liver cancers. Unfortunately, many patients present with late-stage disease when curative treatment is no longer feasible. Diagnostic delays, poor treatment adherence, and the underutilization of screening services exacerbate poor outcomes [7]. Eastern Nigeria also faces a critical shortage of oncology professionals, radiation therapy units, and modern diagnostic tools. The few existing cancer care centers are often concentrated in urban areas, leaving rural dwellers at a disadvantage. Even in cities, out-of-pocket expenses for cancer care are often unaffordable for the average Nigerian, leading to catastrophic health expenditure or treatment abandonment.

Despite efforts to improve cancer awareness and healthcare access in Nigeria, the morbidity and mortality associated with cancer remain unacceptably high in Eastern Nigeria. The region continues to witness preventable deaths due to late presentation, poor health literacy, and a lack of coordinated cancer control strategies [8]. A significant number of patients continue to rely on traditional medicine either due to cultural beliefs, economic constraints, or distrust in the formal healthcare system. This coexistence of traditional and modern medicine is rarely harmonized, leading to missed opportunities for integrated care that respects local realities while adhering to clinical best practices [9]. Furthermore, current cancer control programs often lack context-specific strategies that address the socio-cultural and infrastructural realities of Eastern Nigeria. This gap highlights the urgent need for a comprehensive understanding of the factors contributing to diagnostic delays, treatment non-adherence, and poor outcomes in cancer patients in the region [10]. The primary aim of this study is to comprehensively explore the multifaceted challenges and opportunities surrounding cancer diagnosis and treatment in Eastern Nigeria, a region characterized by a complex dual healthcare system where both modern and traditional medical practices coexist. This study specifically seeks to assess the current state of cancer diagnosis and treatment infrastructure in the region, focusing on the availability, accessibility, and geographic distribution of oncology services to understand how well-equipped health facilities are to manage the increasing cancer burden [11]. Additionally, it aims to examine patient perceptions, cultural beliefs, and health-seeking behaviors that influence how individuals recognize symptoms, pursue diagnosis, and choose among available treatment options. Given the prominent role of traditional medicine in the region, the study will analyze how reliance on indigenous and alternative therapies impacts cancer care outcomes and treatment timelines, exploring whether these practices delay or complement modern medical interventions [12]. The research will also identify systemic and individual-level barriers including infrastructural deficits, economic constraints, social stigma, and lack of awareness that hinder timely cancer diagnosis and limit the effectiveness of treatment protocols. Drawing on these insights, the study intends to recommend evidence-based, culturally appropriate interventions designed to improve cancer care delivery, promoting better integration of traditional and modern healthcare approaches [13]. To guide this investigation, key research questions address the availability and accessibility of cancer services, the influence of cultural factors on treatment outcomes, the role and effects of traditional medicine in cancer management, the infrastructural and economic challenges faced by patients, and strategies for harmonizing healthcare practices. The significance of this study lies in its potential to inform public health policy, healthcare planning, and cancer control efforts in Eastern Nigeria and similarly challenged low- and middle-income countries. By illuminating the intersection between indigenous and biomedical health systems, the findings will help design culturally sensitive programs that encourage early diagnosis, improve patient compliance, and optimize treatment pathways. This research will support policymakers, healthcare providers, and development partners in creating targeted public health campaigns, enhancing patient navigation systems, and training community health workers in integrative approaches. Ultimately, fostering collaboration between traditional and formal healthcare sectors could increase patient trust, improve treatment adherence, and reduce cancer morbidity and mortality, making this study a critical step toward sustainable improvements in cancer care in the region.

Traditional Cancer Treatment in Eastern Nigeria

Traditional cancer treatment in Eastern Nigeria is deeply rooted in cultural heritage and predominantly practiced by herbalists, spiritual healers, and bone setters, whose knowledge and skills are often passed down through generations. This form of healthcare is especially prevalent and trusted in rural communities where access to modern medical facilities is limited [14]. The treatment approaches encompass a variety of methods, including herbal remedies sourced from indigenous plants such as *Carica papaya*, *Morinda lucida*, and *Gongronema latifolium*, which are believed to possess medicinal properties. Spiritual interventions also play a significant role, involving prayers, rituals, and divination practices that reflect the widespread belief that cancer may stem from spiritual or ancestral curses. Additionally, dietary regimens, including the use of bitter herbs and fasting, are commonly employed to support healing. These traditional methods are valued for their high cultural acceptance, affordability, accessibility, and holistic approach, addressing not only the physical but also the spiritual and emotional well-being of patients.

However, these approaches face significant limitations, notably the lack of rigorous scientific validation and clinical trials to support efficacy and safety. The unregulated nature of herbal formulations raises concerns about potential toxicity. Furthermore, reliance on traditional treatments can result in delayed hospital visits, increasing the risk of cancer progression and metastasis. Misdiagnosis and the absence of standardized treatment protocols also contribute to the challenges of integrating traditional and modern cancer care in the region [15].

Modern Cancer Treatment Approaches

Modern cancer treatment in Nigeria encompasses a range of established modalities including surgery, chemotherapy, radiation therapy, and, more recently, advanced approaches such as immunotherapy and targeted therapies [16]. These treatments are primarily available at tertiary healthcare institutions such as the University of Nigeria Teaching Hospital (UNTH) and various Federal Medical Centres, which serve as regional oncology hubs despite their limited number. Surgical interventions are frequently employed for cancers of the breast, cervix, and prostate, while chemotherapy protocols often utilize drugs like cisplatin and doxorubicin. Radiotherapy, an essential component of many treatment regimens, faces significant constraints due to the scarcity of radiotherapy machines across the country. Palliative care services, though gaining recognition for their importance in improving quality of life for advanced cancer patients, remain underdeveloped and insufficiently integrated into the healthcare system. The strengths of Nigeria's cancer treatment landscape lie in its adherence to evidence-based, scientifically validated protocols, facilitating early diagnosis and the provision of targeted therapies within multidisciplinary care frameworks. However, the sector grapples with notable limitations, including high out-of-pocket treatment costs compounded by inadequate health insurance coverage, a shortage of specialized oncology professionals and diagnostic resources, and the prevalent issue of late-stage cancer diagnosis driven by poor health-seeking behaviors. Furthermore, geographic disparities in access to specialized oncology centers pose significant barriers, disproportionately affecting rural and underserved populations and impeding equitable cancer care delivery nationwide [17].

Barriers to Effective Cancer Care

Barriers to effective cancer care in many regions, particularly low- and middle-income countries, are multifaceted and deeply entrenched in socio-cultural, economic, infrastructural, and health system challenges. Socio-cultural barriers include a strong preference for traditional healing methods, which often delays or prevents patients from seeking formal medical treatment [18]. Additionally, pervasive stigma and myths surrounding cancer contribute to fear, misinformation, and social isolation, further discouraging timely diagnosis and adherence to treatment. Gender-related barriers are especially prominent in gynecologic cancers, where women may face cultural restrictions or lack of autonomy in seeking care. Economically, poverty and unemployment significantly limit patients' ability to afford diagnostic tests, treatments, and transportation to healthcare facilities. This is compounded by infrastructural deficiencies such as the absence of functional cancer registries, which hampers effective monitoring, planning, and evaluation of cancer control programs. Frequent stock-outs of essential medications disrupt treatment continuity and worsen patient outcomes. Within the health system, there is often inadequate oncology training, leading to a shortage of skilled healthcare professionals and a brain drain to more developed countries. Referral systems tend to be fragmented, causing delays in diagnosis and treatment initiation. Furthermore, insufficient investment in cancer prevention, early detection, and research limits the development of context-specific strategies to combat the growing cancer burden. Addressing these barriers requires integrated, multisectoral approaches that combine community engagement, health system strengthening, and policy reforms [19].

Opportunities for Improvement

Opportunities for improving cancer care and outcomes in Nigeria are multifaceted and hold great promise through several key approaches. First, the adoption of integrative medicine models offers a significant avenue for progress by developing standardized, evidence-based traditional therapies that can complement conventional treatment [20]. Training traditional healers to recognize early cancer warning signs and refer patients promptly can bridge gaps between informal and formal healthcare systems, fostering earlier diagnosis and better prognosis. Second, strengthening the health system is critical and involves substantial investments in diagnostic and treatment infrastructure, which remain inadequate in many areas. Expanding oncology training programs will increase the number of skilled healthcare professionals capable of delivering quality cancer care. Additionally, the implementation and enforcement of national cancer control policies will provide a coordinated framework for prevention, treatment, and research. Third, community engagement and education play an essential role in combating cancer-related stigma and misinformation. Public awareness campaigns designed with culturally appropriate communication strategies can promote early screening and healthy behaviors. Engaging community leaders as advocates further strengthens outreach and acceptance. Finally, fostering international and local collaborations is vital for resource mobilization and knowledge exchange. Partnerships with global cancer institutions can provide technical support,

while research grants and funding for locally led innovations can stimulate context-specific solutions. Together, these integrated efforts offer a comprehensive path toward enhanced cancer control in Nigeria [21].

CONCLUSION

In conclusion, the cancer care landscape in Eastern Nigeria is marked by a complex interplay between traditional and modern treatment approaches, each with distinct strengths and limitations. Traditional medicine remains deeply embedded in the socio-cultural fabric of the region, providing accessible and culturally resonant care, yet it often lacks scientific validation and can delay critical biomedical intervention. Modern oncology services, while grounded in evidence-based practice, are hindered by infrastructural deficits, financial barriers, workforce shortages, and late-stage disease presentation. Addressing these challenges requires a multifaceted strategy that embraces integrative medicine models, strengthens health systems, and prioritizes community education to dispel myths and encourage early detection. Policy reforms and expanded investment in cancer infrastructure, alongside training more oncology specialists, are crucial for enhancing service availability and quality. Importantly, fostering collaboration between traditional healers and biomedical practitioners can promote timely referrals and improve treatment adherence. By harmonizing cultural values with clinical best practices and leveraging international partnerships, Eastern Nigeria can move toward a more equitable and effective cancer control framework, ultimately reducing morbidity and mortality and improving patient outcomes in this high-burden region.

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