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Access to Breast Cancer Screening Programs for Ugandan Women: A Review

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ABSTRACT

Breast cancer is a growing public health concern in Uganda, where many women are diagnosed at advanced stages, leading to poor outcomes. Early detection through screening and timely diagnostic pathways can significantly improve prognosis, yet Uganda faces multiple barriers to effective screening, including health-system limitations, geographic and financial disparities, and sociocultural factors. This review examines the current state of breast cancer screening in Uganda, including epidemiology, screening methods, barriers to access, and recent innovations such as mobile screening units, task-shifting, and patient navigation programs. We explore the roles of institutional actors like the Uganda Cancer Institute and highlight the challenges that remain in expanding equitable screening coverage. Additionally, we propose pragmatic solutions to overcome these barriers, with a focus on policy interventions, resource mobilization, and community engagement to improve early detection and reduce breast cancer mortality. By synthesizing peer-reviewed studies, national reports, and program descriptions, this review offers valuable insights for strengthening breast cancer screening efforts in Uganda and improving health outcomes for women.

Keywords: Breast cancer, Uganda, screening programs, early detection, health barriers, mobile screening.

INTRODUCTION

Breast cancer is the most commonly diagnosed cancer among women worldwide and remains a leading cause of cancer-related morbidity and mortality [1]. According to the Global Cancer Observatory, an estimated 2.3 million new cases of breast cancer were diagnosed globally in 2020, representing nearly 12% of all new cancer diagnoses. The burden of breast cancer is not evenly distributed: while high-income countries have seen improvements in survival due to early detection and advanced treatment options, low- and middle-income countries (LMICs) continue to experience rising incidence coupled with high mortality rates [2]. In Uganda, breast cancer is the second most prevalent cancer among women after cervical cancer, with national cancer registry data indicating an upward trend in incidence over the past decade. Despite this increase, survival outcomes remain poor, largely due to late-stage presentation and limited access to effective screening, diagnostic, and treatment services [3].

Early detection of breast cancer is widely recognized as the cornerstone of effective cancer control. Methods for early detection include increasing community awareness about breast cancer signs and risk factors, routine clinical breast examination (CBE) by trained health workers, imaging modalities such as mammography and ultrasound, and timely referral for diagnostic confirmation and treatment [4]. Evidence from both high-income and resource-limited settings consistently demonstrates that women diagnosed at early stages of the disease have significantly higher survival rates compared to those diagnosed at advanced stages. Unfortunately, in Uganda, as in many LMICs, these interventions are hindered by a combination of structural, financial, and sociocultural barriers, which collectively contribute to delays in diagnosis and poor clinical outcomes [5].

The health system in Uganda faces several challenges in providing equitable breast cancer screening services. There is an uneven distribution of diagnostic infrastructure, with advanced imaging facilities largely concentrated in

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tertiary hospitals within urban centers, leaving rural and peri-urban populations underserved [6]. Resource constraints, including shortages of trained healthcare providers, limited availability of mammography units, and gaps in follow-up and referral systems, further exacerbate inequities in access. Additionally, socioeconomic and cultural factors, such as low health literacy, fear of diagnosis, stigma, and competing financial priorities, often delay women from seeking care until symptoms are advanced. As a result, the majority of Ugandan women with breast cancer present at stages III or IV, when treatment is less effective, more expensive, and survival outcomes are poor [7].

Several pilot initiatives and community-based programs have been introduced in Uganda to enhance early detection and screening coverage. These include mobile outreach clinics, community health worker-led education programs, and partnerships with non-governmental organizations (NGOs) to provide subsidized screening services [8]. While these interventions have demonstrated potential in improving awareness and uptake of screening, they are typically limited in scale, short-lived, or dependent on donor funding, which raises concerns about sustainability and integration into national health systems. Moreover, there is limited systematic documentation and synthesis of these efforts to inform policy and programming [9]. This creates a critical knowledge gap regarding the effectiveness, feasibility, and scalability of breast cancer screening interventions in the Ugandan context.

Despite the growing burden of breast cancer in Uganda, access to early detection and screening services remains critically inadequate. The country's health system infrastructure is poorly equipped to extend such services to women in rural and peri-urban areas, resulting in pronounced geographic inequities in healthcare access. Most screening programs are concentrated in urban tertiary hospitals, leaving vast populations underserved and vulnerable [10]. Financial constraints, limited community awareness, sociocultural misconceptions, and weak referral and follow-up systems exacerbate delays in diagnosis and treatment. Consequently, a large proportion of breast cancer cases are detected at advanced stages when treatment options are limited, and survival rates are low. This situation reflects systemic challenges in Uganda's healthcare delivery, including resource shortages, inadequate public education, and the absence of comprehensive national screening programs. Addressing these challenges requires a clear understanding of existing services, barriers, and promising interventions. Without coordinated and evidence-based strategies, efforts to reduce breast cancer mortality will remain fragmented. Thus, strengthening early detection through equitable, accessible, and community-oriented screening initiatives is essential for improving outcomes and saving lives.

Epidemiology and burden in Uganda

Recent epidemiological analyses and institutional data reveal a growing burden of breast cancer in Uganda, characterized by a steady rise in incidence and persistently high mortality rates. According to national cancer registries and hospital-based studies, breast cancer has become one of the leading malignancies among Ugandan women, with an increasing number of new cases reported annually [10]. The majority of patients present at advanced stages (stage III or IV), largely due to limited access to screening services, inadequate diagnostic infrastructure, and low levels of public awareness about early symptoms. This pattern reflects significant delays in health-seeking behavior and gaps in early detection systems, particularly in rural areas where healthcare resources are scarce. Furthermore, disparities in access to specialized oncology care, coupled with financial constraints and sociocultural factors, contribute to poor treatment outcomes and survival rates. The high proportion of late-stage diagnoses not only increases the cost of management but also places immense strain on the healthcare system [11]. These alarming trends emphasize the urgent need to strengthen nationwide screening programs, improve diagnostic capacity, and implement community-based awareness initiatives to promote early detection and reduce the overall burden of breast cancer in Uganda.

Screening and diagnostic methods used in Uganda

Breast cancer screening and diagnosis in Uganda employ a combination of low-cost, practical, and progressively advancing methods suited to the country's resource constraints. Breast self-examination (BSE) remains widely promoted through public awareness campaigns as an accessible and empowering practice that encourages women to become familiar with their breasts and seek medical attention promptly for any abnormalities [12]. Although BSE alone does not significantly reduce mortality, it serves as a critical entry point for early detection. Clinical breast examination (CBE), performed by trained healthcare providers such as nurses and midwives, is the primary early-detection method in most health facilities. It is affordable, scalable, and effective when coupled with proper training, supervision, and reliable referral pathways. Imaging techniques, particularly ultrasound and mammography, complement these examinations. Ultrasound is more commonly available and useful for evaluating palpable lumps, while mammography, though the gold standard in high-income countries, remains limited to a few urban referral hospitals and private centers due to equipment scarcity and cost. Referral and pathology services form the final link in diagnosis, yet remain a major bottleneck due to centralized pathology labs and workforce shortages.

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Strengthening diagnostic infrastructure, histopathology capacity, and result turnaround times is vital for translating early detection into timely and effective breast cancer management in Uganda [13].

Current programs and institutional actors

The Uganda Cancer Institute (UCI), in collaboration with the Ministry of Health and various development partners, plays a central role in coordinating national cancer control efforts, including breast cancer screening, awareness campaigns, and capacity-building programs for healthcare professionals [14]. UCI's initiatives are complemented by services provided at tertiary hospitals such as Mulago National Referral Hospital (MNRH), regional referral hospitals, a few private healthcare facilities, and non-governmental organizations (NGOs) engaged in cancer prevention and control. Mobile screening units and outreach clinics, often supported through donor funding, international research collaborations, or public–private partnerships, have proven effective in reaching rural and hard-to-access communities, helping to overcome geographical barriers to care. Despite these efforts, screening services remain limited in scope, with significant disparities in access between urban and rural populations. Moreover, the absence of a well-coordinated national screening program and inadequate integration between public and private health sectors contribute to low coverage and inconsistent quality of services. Strengthening institutional collaboration, expanding community-based screening models, and improving health infrastructure are therefore essential steps toward achieving equitable and sustainable cancer prevention and early detection efforts in Uganda [15].

Barriers to access

Access to breast cancer screening in Uganda is significantly hindered by a combination of health-system, geographic, financial, sociocultural, and systemic barriers. Health-system challenges include inadequate diagnostic infrastructure, with a shortage of mammography units, ultrasound facilities, and pathology services, particularly outside major urban areas [16]. Despite recent national efforts to establish diagnostic standards, these infrastructure gaps persist. Additionally, there is a shortage of skilled professionals, such as radiographers, breast imaging specialists, and pathologists, which further delays the screening process and diagnosis. Geographic and financial barriers also contribute to the inequity of breast cancer screening. The majority of diagnostic services are concentrated in Kampala and other urban centers, limiting access for rural women. Even though screening may be offered free or at low cost, the high out-of-pocket expenses for diagnostic imaging, biopsies, and travel often deter women from seeking timely care. Furthermore, low awareness of breast cancer symptoms, compounded by cultural stigma and misconceptions about the disease, prevents early recognition and prompt health-seeking behaviors [17]. Gender roles and family responsibilities can also hinder women's ability to travel for screening or accept necessary diagnostic procedures. Finally, fragmented referral pathways between peripheral clinics and tertiary diagnostic centers often result in long delays in diagnosis and treatment, though patient navigation systems are emerging as potential solutions to these delays.

Innovations and promising interventions

Innovations and promising interventions in Uganda and other low-resource settings have shown great potential for expanding access to healthcare, particularly in the areas of cancer screening and treatment. Mobile screening units, often in the form of mobile vans equipped with imaging devices like ultrasound or clinical breast examinations (CBE), have proven effective in reaching underserved rural and peri-urban populations [18]. These units often combine breast and cervical cancer screenings to maximize their public health impact, addressing multiple health concerns simultaneously. Additionally, task-shifting and training initiatives, where nurses, midwives, and clinical officers are trained to perform high-quality CBEs and basic breast ultrasounds, have significantly increased detection capabilities at lower health system levels. However, regular supervision and quality assurance are essential to maintaining standards. Patient navigation programs, which assign trained navigators to guide patients through diagnostic steps and treatment referrals, have also been successfully piloted, showing a reduction in diagnostic delays and improving care linkage, especially for those from rural areas [19]. Finally, telemedicine and remote imaging review, including tele-radiology and remote pathology consultations, allow specialists to extend their expertise to peripheral health facilities, enabling faster diagnostic decisions and triage. Together, these innovative strategies contribute to improving healthcare access and outcomes in resource-constrained settings.

Policy context and national plans

Uganda's cancer control efforts involve the Ministry of Health and the UCI, with policies emphasizing awareness, early detection, vaccination (where applicable), and strengthening tertiary care. However, implementation of a national population-level breast screening program (e.g., mammography-based) is currently impractical because of resource constraints; instead, policy emphasis has been on opportunistic screening, awareness raising, downstaging through CBE, and building diagnostic capacity at referral centers [20]. Recent national work such as establishing

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diagnostic reference levels for mammography, signals steps toward safer and standardized imaging as capacity expands.

Equity considerations

Screening access in Uganda is uneven: urban, wealthier, and privately insured women have higher access to mammography and specialist care, while rural and low-income women rely on intermittent outreach and face greater diagnostic delays. Equity-focused strategies should prioritize decentralizing services, subsidizing diagnostic costs, and integrating screening into primary care with strong referral linkages. Community health workers and women's groups can be leveraged to improve outreach to marginalized populations [21].

Research gaps

The use of community-based education (CBE) can significantly enhance outreach to marginalized populations, especially in low-resource settings like Uganda, where access to health services is often limited. However, several key research gaps must be addressed to optimize the effectiveness of such interventions. One critical area is the comparison of CBE-led downstaging of cancers versus opportunistic mammography, specifically in the Ugandan context [22]. Research on the cost-effectiveness of these approaches could provide valuable insights into their feasibility and impact. Additionally, there is a need for implementation studies focusing on the scalability and sustainability of mobile imaging units, which could bridge the gap in rural and underserved areas where traditional healthcare infrastructure is lacking. Furthermore, operational research on patient navigation models is essential to understand how such strategies can influence the stage at diagnosis and improve survival outcomes. Effective navigation ensures patients are supported throughout their care journey, particularly in complex systems. Finally, health systems research should focus on solutions to improve pathology turnaround times, as delays in diagnostics can significantly impact treatment outcomes [23]. Investigating the feasibility of tele-pathology and task-sharing within the healthcare workforce could be pivotal in enhancing diagnostic capacity, streamlining processes, and ultimately improving cancer care outcomes in marginalized populations.

Recommendations

To enhance healthcare delivery in Uganda, particularly in cancer diagnosis and treatment, several short- and medium-term recommendations are proposed, tailored to the local context. First, scaling training in community-based education (CBE) and basic ultrasound techniques at district hospitals and health centers, combined with clear referral protocols, can improve diagnostic capabilities. This approach is both feasible and highly beneficial, fostering early detection through primary care providers [24]. Second, expanding mobile outreach programs to underserved areas, integrating breast and cervical cancer screening, could maximize resources while increasing community acceptance. These programs could be sustained through public-private partnerships or donor funding, transitioning to the Ministry of Health (MOH) support over time. Third, implementing patient navigation services at referral centers would track key metrics such as time-to-diagnosis and time-to-treatment, improving treatment timelines. Fourth, investing in telemedicine infrastructure, including tele-radiology and remote pathology, can help mitigate the shortage of specialists and reduce diagnostic delays. Additionally, reducing financial barriers for low-income women, through targeted diagnostic subsidies, waivers, or conditional cash transfers for travel, would make cancer care more accessible [25]. Lastly, strengthening community engagement through culturally appropriate education, using village health teams (VHTs) and women's groups, is vital in reducing stigma, improving symptom recognition, and encouraging timely care-seeking behaviors.

CONCLUSION

In conclusion, improving access to breast cancer screening in Uganda is crucial for reducing the burden of advanced disease and improving survival rates among women. Structural, financial, and sociocultural barriers remain significant obstacles, but innovative interventions such as community-based education, mobile screening units, and task-shifting have shown promise in addressing these challenges. Strengthening the healthcare infrastructure, particularly in rural and underserved areas, is essential for expanding screening coverage and ensuring timely diagnoses. Policy efforts must prioritize equitable access, integrating screening into primary care, and reducing financial barriers for marginalized populations. By fostering collaboration between the Ministry of Health, Uganda Cancer Institute, healthcare providers, and community organizations, Uganda can enhance early detection efforts and improve outcomes for women with breast cancer. A comprehensive, sustainable approach that emphasizes outreach, patient navigation, and capacity building is key to making significant strides in cancer control.

REFERENCES

1. Obeagu E. I, Ahmed Y. A, Obeagu G. U, Bunu U. O, Ugwu O. P. C, Alum E. U (2023). Biomarkers of breast cancer: Overview. *Int. J. Curr. Res. Biol. Med, (1), 8-16.*

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2. Sung, H., Ferlay, J., Siegel, R.L., Laversanne, M., Soerjomataram, I., Jemal, A., Bray, F.: Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA: A Cancer Journal for Clinicians. 71, 209–249 (2021). https://doi.org/10.3322/caac.21660
3. Koon, K.P., Lehman, C.D., Gralow, J.R.: The importance of survivors and partners in improving breast cancer outcomes in Uganda. The Breast. 22, 138–141 (2013). https://doi.org/10.1016/j.breast.2012.12.017
4. Fegade, B., Chaudhari, S.Y., Likhar, R.V. *et al.* Design, synthesis, molecular docking and molecular dynamics studies of some 3-methoxy flavone derivatives as an anti-breast cancer agent. *Discov Onc* **16**, 773 (2025). https://doi.org/10.1007/s12672-025-02491-6.
5. Iqbal, J.: Women-Centric Breast Cancer Care in Low- and Middle-Income Countries: Challenges, Solutions, and a Roadmap for Equity.
6. Sathi, K.T., Yeo, K.H., Naicker, P., Pichay, L., Fuleihan, A., Waiswa, P., Yazdi, Y.: 233 Uganda-based Survey of Challenges in Breast Cancer Detection in Low and Middle Income Countries. J Clin Transl Sci. 7, 71–72. https://doi.org/10.1017/cts.2023.302
7. Magadani, R., Ndinteh, D.T., Roux, S., Nangah, L.P., Atangwho, I.J., Uti, D.E., et al. Cytotoxic Effects of *Lecaniodiscus Cupanioides* (Planch.) Extract and Triterpenoids-derived Gold Nanoparticles On MCF-7 Breast Cancer Cell Lines. Anticancer Agents Med Chem. 2025 Jan 27. doi: 10.2174/0118715206325529241004064307. Epub ahead of print. PMID: 39871566.
8. Haver, J., Brieger, W., Zoungrana, J., Ansari, N., Kagoma, J.: Experiences engaging community health workers to provide maternal and newborn health services: Implementation of four programs. International Journal of Gynecology & Obstetrics. 130, S32–S39 (2015). https://doi.org/10.1016/j.ijgo.2015.03.006
9. Alum, E.U., Nwuruku, A.O., Edwin, N. Targeting Oxidative Stress in Cancer Management: The Role of Antioxidant Phytochemicals. KIU J. Health Sci., 4(2): 1-10. https://doi.org/10.59568/KJHS-2024-4-2-01
10. Center, C.D./ F.H.C.R.: Breast cancer early detection and diagnostic capacity in Uganda, https://www.fredhutch.org/en/news/spotlight/2020/06/phs_scheel_cancer.html
11. XiuCen, W., GuiHua, C., Qin, L., XiXin, Z., Huan, T.: Factors influencing economic toxicity and coping strategies in lung cancer patients: A scoping review. Heliyon. 10, e37809 (2024). https://doi.org/10.1016/j.heliyon.2024.e37809
12. Obeagu, E. I., Ugwu, O. P. C., Orji, O. U., Adepoju, A. O., Amusa, M. O. Edwin, N. Exploring natural plant products in breast cancer management: A comprehensive review and future prospects**.** *International Journal of Innovative and Applied Research.* 2023; 11(12):1-9.Article DOI:10.58538/IJIAR/2055. DOI URL:*http://dx.doi.org/10.58538/IJIAR/2055*
13. Dan, Q., Zheng, T., Liu, L., Sun, D., Chen, Y.: Ultrasound for Breast Cancer Screening in Resource-Limited Settings: Current Practice and Future Directions. Cancers (Basel). 15, 2112 (2023). https://doi.org/10.3390/cancers15072112
14. Tufail, T., Uti, D.E., Aja, P.M., Offor, C.E., Alum, B.N. et al Utilizing Indigenous Flora in East Africa for Breast Cancer Treatment: An Overview. Anticancer Agents Med Chem. 2024 Sep 18. doi: 10.2174/0118715206338557240909081833. Epub ahead of print. PMID: 39297456.
15. Kreuter, M.W., Thompson, T., McQueen, A., Garg, R.: Addressing Social Needs in Health Care Settings: Evidence, Challenges, and Opportunities for Public Health. Annu Rev Public Health. 42, 329–344 (2021). https://doi.org/10.1146/annurev-publhealth-090419-102204
16. Ilaboya, D., Gibson, L., Musoke, D.: Perceived barriers to early detection of breast cancer in Wakiso District, Uganda using a socioecological approach. Globalization and Health. 14, 9 (2018). https://doi.org/10.1186/s12992-018-0326-0
17. Moïse M V, Barthelemy Y A, Patricia K W, Franck K S, Soumonla D, Gaspard G D (2024). Breast cancer in adult man treated in a rural hospital: A case report. International Journal of Surgery Case Reports, 117, 109534. https://doi.org/10.1016/j.ijscr.2024.109534.
18. Jatho, A., Mugisha, N.M., Kafeero, J., Holoya, G., Okuku, F., Niyonzima, N.: Mobile cancer prevention and early detection outreach in Uganda: Partnering with communities toward bridging the cancer health disparities through "asset-based community development model." Cancer Medicine. 9, 7317–7329 (2020). https://doi.org/10.1002/cam4.3387

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ONLINE ISSN: 2992-5479
PRINT ISSN: 2992-605X

19. Okaliwe G, Glory M, Ogunkola O. I, IduEjemot-Nwadiaro R (2021). Breast cancer knowledge and mammography uptake among women aged 40 years and above in Calabar Municipality, Nigeria. *Asian Journal of Medicine and Health, 19, (8), 1-10.* https://doi.org/10.9734/ajmah/2021/v19i830351.
20. Jatho, A., Mugisha, N.M., Kafeero, J., Holoya, G., Okuku, F., Niyonzima, N.: Mobile cancer prevention and early detection outreach in Uganda: Partnering with communities toward bridging the cancer health disparities through "asset-based community development model." Cancer Med. 9, 7317–7329 (2020). https://doi.org/10.1002/cam4.3387
21. Ezenwaji, C.O., Alum, E.U. & Ugwu, O.PC. Bridging the gap: telemedicine as a solution for HIV care inequities in rural and vulnerable communities. *Int J Equity Health* **24**, 205 (2025). https://doi.org/10.1186/s12939-025-02584-2
22. Amalba, A., Abantanga, F.A., Scherpbier, A.J.J.A., van Mook, W.N.K.A.: The Role of Community-Based Education and Service (COBES) in Undergraduate Medical Education in Reducing the Mal-Distribution of Medical Doctors in Rural Areas in Africa: A Systematic Review. Health Professions Education. 6, 9–18 (2020). https://doi.org/10.1016/j.hpe.2019.09.003
23. Slamet W, Alkausyari A, Khayan K, Ahmad A (2024). A Cross-Sectional Study on the Knowledge and Awareness of Lung Cancer and Screening in Jazan Region, Saudi Arabia. *Journal of Multidisciplinary Healthcare, 3975-3976.* https://orcid.org/0000-0003-3936-1893
24. Byamugisha, J., Munabi, I.G., Mubuuke, A.G., Mwaka, A.D., Kagawa, M., Okullo, I., et al.: A health care professionals training needs assessment for oncology in Uganda. Hum Resour Health. 18, 62 (2020). https://doi.org/10.1186/s12960-020-00506-7
25. Bagayoko, C.O., Traoré, D., Thevoz, L., Diabaté, S., Pecoul, D., Niang, M., et al: Medical and economic benefits of telehealth in low- and middle-income countries: results of a study in four district hospitals in Mali. BMC Health Services Research. 14, S9 (2014). https://doi.org/10.1186/1472-6963-14-S1-S9

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