



THE DIGITAL AGE PARADOX: DELAYED DIAGNOSIS CONTINUES TO DRIVE ADVANCED CANCER PRESENTATION - A STUDY FROM A TERTIARY CARE CENTRE IN CENTRAL INDIA

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ABSTRACT

The issue of delayed cancer diagnoses remains apparent during a time when healthcare services expand, and digital connectivity permeates the healthcare system. Although modern technology and increased healthcare resources have emerged, diagnosis delays continue to be a crucial challenge across healthcare settings. The research highlights that these delays arise from various factors, including personal and cultural dimensions, as well as systemic and structural issues. The interplay of health literacy deficits, economic insecurity, reliance on non-professional caregivers, and insufficient primary care support contributes to this ongoing problem. A comprehensive solution necessitates a whole-system approach that integrates community-based strategies with system-wide collaboration. Enhancements in public health education, coupled with improved primary care training, digital health integration, and financial support, will foster environments that accelerate cancer detection and treatment, ultimately leading to better patient outcomes. Achieving timely and effective cancer care for all entails ongoing cooperation among healthcare providers, policymakers, and community members to address these challenges, irrespective of socioeconomic status.

Keywords: Delayed Cancer Diagnosis, Digital Health Integration, Non-Professional Caregivers, Public Health Education, Patient Outcomes.

INTRODUCTION

The rising number of cancer cases and deaths throughout India and other developing nations has become a substantial public health matter for the twenty-first century. [1]. According to Global Cancer Observatory (GLOBOCAN) 2020 data, India faces over 1.3 million new cancer diagnoses and more than 850,000 cancer-related fatalities each year [2]. The cancer statistics are expected to escalate over the coming decades. Research in precision medicine, along with advancements in biomarkers and molecular imaging, has not eliminated the population of patients who remain undiagnosed with cancer in its early stages [3]. The so-called digital age, with its rapid information

exchange and technological advancements, continues to encounter serious under-recognized delays in cancer diagnosis[4]. Inefficiencies in the healthcare system, along with provider errors and patient-related factors such as ignorance and sociocultural stigmas, contribute to delayed cancer diagnosis [5]. These delays pose significant concerns in healthcare facilities across many resource-limited areas of Central India, where tertiary care centers serve as the primary referral points for a substantial underprivileged patient population[6].

Health researchers have conducted numerous investigations on delayed cancer diagnosis; however, inconsistencies in data collection hinder the universal applicability of their findings[7]. Digital record systems, alongside structured screening programs developed by high-income nations, fail to achieve similar standards in the Indian subcontinent due to poorly executed implementations or programs that are just beginning[8]. This research investigates patterns of



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diagnostic delays and risk factors for cancer patients visiting a tertiary care center in Central India[9].

Effective cancer management depends heavily on prompt diagnosis because it determines both patient treatment possibilities and survival statistics and prognosis results. Patients receive more favorable consequences combined with less invasive treatment options through detecting cancer at an early stage. The identification of cancer at advanced stages occurs frequently in low- and middle-income countries, including India, because diagnostic delays continue to persist[10].

Oncology delayed diagnosis presents multiple factors, which include patient-related elements alongside systemic problems and healthcare provider mistakes [11]. Delayed diagnosis occurs at different pivotal points during the diagnostic process, starting from symptom detection failure to result in misinterpretation, and diagnostic communication breakdown and ending with delayed treatment initiation after diagnosis confirmation [12]. Significant diagnostic delays occur through individual issues or combined effects among these issues, which negatively impact patient outcomes

Patient Delay

The period linking symptom recognition by patients to their medical consultation initiation defines patient delay. The time between symptom recognition and medical consultation usually depends on patients' symptom unawareness and cancer-related stigma and fear of diagnosis and economic challenges, and geographic barriers to healthcare facilities [13, 14].

Doctor's Delay (Provider Delay)

The first medical appointment through the point of specialist referral for diagnostic assessment marks this period. Medical professionals frequently experience delays because of poor clinical assessment and unrecognizable cancer indicators and substandard primary care practices[15].

System Delay

The time it takes for patients to receive their definitive diagnosis or treatment begins after referral, depending on structural and administrative barriers such as delayed diagnostic testing and insufficient oncology services, and flawed referral procedures, and complex system red tape [16].

The study aims to identify the elements that must be transformed to reduce diagnosis delays and develop evidence-based methods for improving rapid detection and successful cancer outcomes in regions with similar resource limitations.

MATERIALS AND METHODS:

The research took place at the Department of General Surgery within the Netaji Subhash Chandra Bose (NSCB) Medical College and Associated Hospitals in Jabalpur, Madhya Pradesh, India, from October 2022 to October 2024. During the study period, the research involved 209 patients. The study included all patients who received biopsy confirmation of malignancy at the surgical outpatient department shown in Figure 1. The study included patients whose malignancies were confirmed by biopsy results, regardless of their cancer stage or location, who visited the surgical outpatient department. The study eliminated participation by patients who had chronic debilitating illnesses that were not cancer-related or those with unconfirmed malignancies and people who refused to take part.

The main goal of this investigation focused on understanding and evaluating elements that cause cancer patient diagnostic delays while examining digital healthcare access expansion. The research employed a structured questionnaire, which had been validated to detect diagnostic delays and classify their types. The questionnaire distributed in Hindi contained additional support to maintain precision and fullness of answers.

The assessment of diagnostic delay occurred at three different levels, including patient-level and doctor-level, and system-level. Patient-level delays involved patients' recognition of symptoms and their health-seeking actions, and their use of self-treatment or alternative remedies, as well as their socioeconomic and educational barriers. Doctor-level delays included misdiagnosis together with poor clinical suspicion and communication gaps, and lack of referral and misdiagnosis. The health system encountered delays because of insufficient infrastructure, together with delayed test scheduling and ineffective referrals, and restricted specialist services[12].

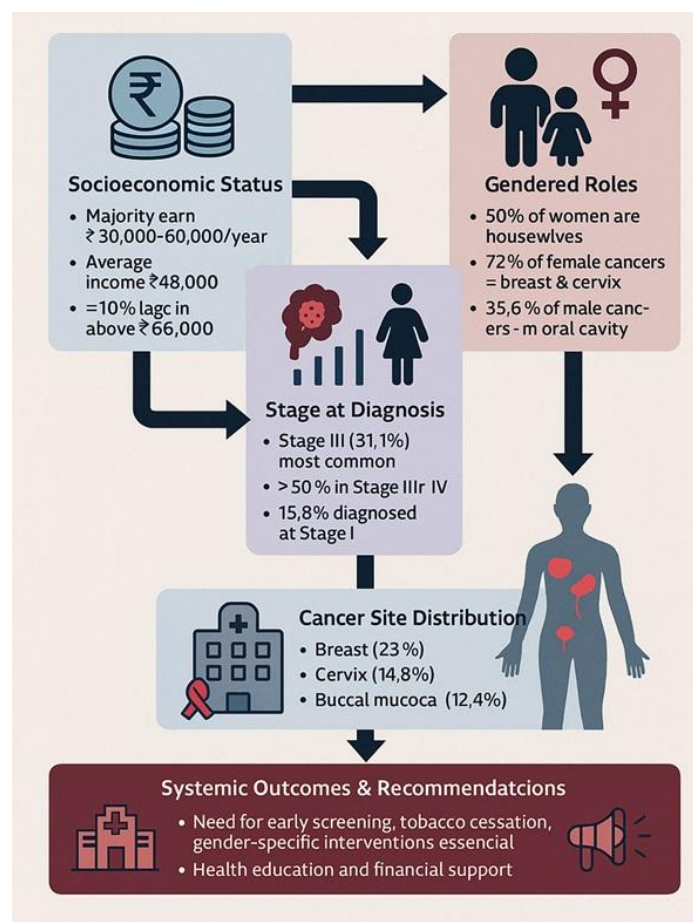


Figure 1: Factors Influencing Cancer Diagnosis and Outcomes in India

Both descriptive and inferential statistical techniques analyze the obtained data to evaluate the frequency and influence of multiple delay factors. The researchers conducted subgroup evaluations to study how demographic characteristics affected the various delay types.

RESULTS AND DISCUSSION

The research examines cancer patient diagnostic delays across multiple stages within the digital era through a prospective study. The research took place at Netaji Subhash Chandra Bose (NSCB) Medical College and its affiliated hospitals throughout October 2022 to October 2024. Health infrastructure improvements and information availability have not reduced the time it takes for patients to receive proper diagnosis. The diagnostic process includes three distinct delay phases starting from system-level and progressing through physician-level and patient-level factors. The different categories individually contribute to delayed diagnosis and delayed treatment start.

Patient-Level Delay

A total of 209 cancer patients received medical confirmation, and among them, 90.9% (n=190)

delayed the consultation process with an average delay of 3 months. European research confirms behavioral reluctance and incorrect symptom identification as major factors that lead to delays in medical care[17].

Demographic Trends:

- Mean Age: 49.1 years (range: 15–82).
- Gender Ratio: 1.1:1 (male:female); no significant gender difference in delay ($p=0.77$).
- Age and Delay: Patients >50 years reported significantly longer delays (mean: 9.41 months) than those <50 years (mean: 7.60 months), indicating age as a potential influencing factor in Figure 2.

The current diagnostic delay patterns match worldwide statistics because psychological and behavioral factors represent major obstacles. Research findings show no delay variation between male and female patients but older patients experience longer delays possibly because they mistake symptoms for normal aging effects. Age-specific awareness campaigns should be developed to address this problem[18].

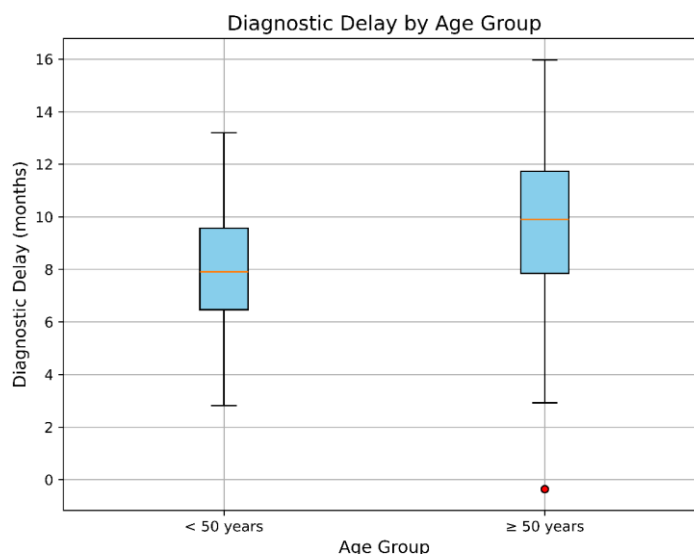


Figure 2: Diagnostic Delay by Age Group

Socioeconomic and Educational Factors

The educational level together with occupational status determined the length of time needed to receive a diagnosis. The diagnostic delay duration for illiterate in Figure 3 patients reached 8.94 months on average; graduate patients obtained a diagnostic delay of 6.38 months as shown by statistical significance ($p=0.038$). The patient population mostly consisted of people who attended

primary school or received no education at all. Laborers who comprised 43.1% of the study participants experienced the longest delay of 9.17 months ($p=0.04$) presumably because they had limited health literacy and restricted access to care facilities. The patients resided in rural areas while earning an average annual income of ₹48,000 as their economic status and geographic location contributed to delayed care.

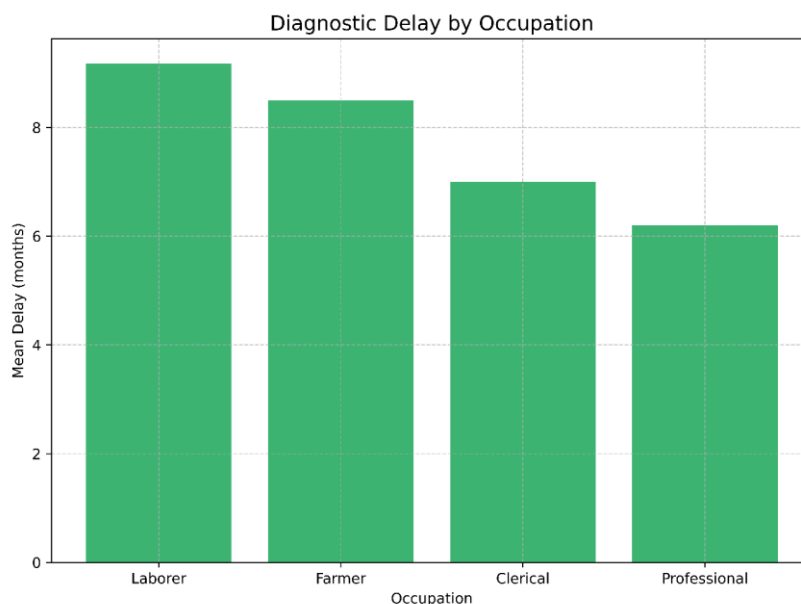


Figure 3: Diagnostic Delay by Occupation

The research reveals that inadequate education combined with manual work and insufficient income leads patients to receive delayed healthcare. Health

education and access should be the primary focus of interventions since they benefit rural communities with limited resources[19].

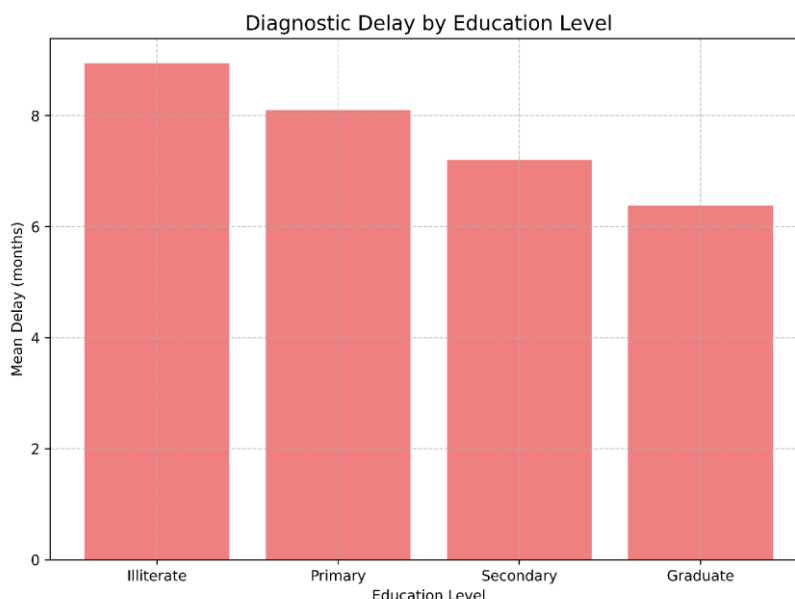


Figure 4: Diagnostic Delay by Education Level

The research analyzed the first signs that cancer patients showed at a tertiary care center in Central India through a thorough examination of site-specific cancer indicators[20]. A painless breast lump stood as the leading complaint at 22.0% of cases thus demonstrating the severe impact of breast cancer together with the diagnostic delays that can result from misinterpretation of symptoms. The combination of per vaginal discharge (14.4%) with cheek ulcers (12.9%) and tongue ulcers (4.8%) and neck lumps (5.3%) served as indicators of gynecological and tobacco-related head and neck cancers[21]. 17.4% of patients presented non-

specific symptoms, including dyspepsia and nausea and rectal discharge. These symptoms frequently caused physicians to delay diagnosis because they lacked clinical suspicion. Tumor biological factors together with socioeconomic status and restricted healthcare access influence how long it takes for patients to receive their diagnoses[22]. The study data support efforts that focus on primary care training enhancement as well as community education initiatives and digital decision-making tools to enhance early cancer diagnosis for underprivileged populations studied in Figure 4.

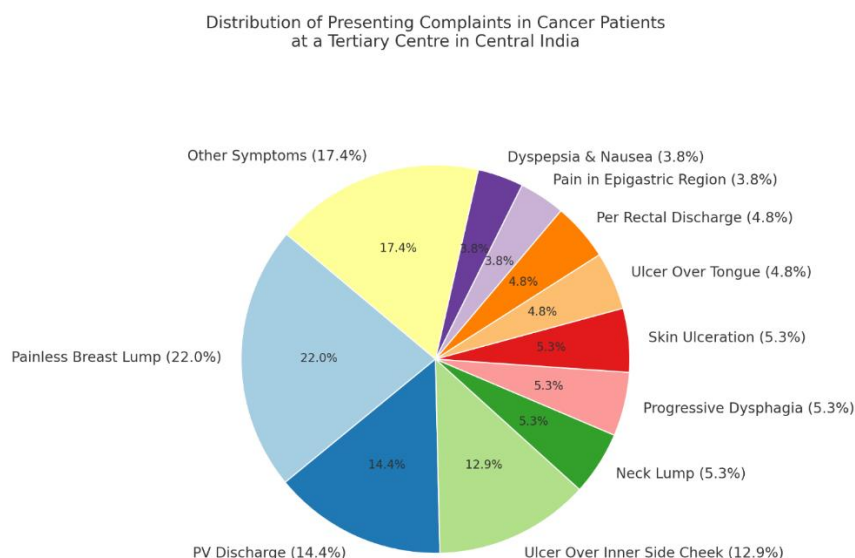


Figure 5: Distribution of Presenting Complaints in Cancer Patients at a Tertiary Centre in Central India

The most frequent presenting symptoms of cancer patients were painless breast tumors (22.0%) and PV discharge (14.4%) and oral ulcers (12.9%) according to a study conducted at a tertiary care hospital in Central India shown

in Figure 5. Neck lumps combined with dysphagia and skin ulcers occurred in 5.3% of patients these symptoms presented challenges to early detection because 17.4% of patients exhibited non-specific or unusual symptoms[23].

Digital health information accessibility does not eliminate the occurrence of diagnostic delays in medical practice[24]. Healthcare professionals' failure to address early symptoms from patients is called the "Digital Age Paradox" because patients show clear cancer indicators although diagnosis occurs late. Healthcare institutions with limited resources along with unclear symptoms contribute to both medical errors and delayed patient referral processes.

Family Dynamics and Health-Seeking Behaviour

The delay in family members being informed about symptoms proved a major reason behind delayed

diagnosis[25]. When patients delayed sharing their symptoms with family members for longer than six months their diagnostic delay reached 18.38 months ($p < 0.001$) which demonstrates a direct link between family communication problems and delayed care-seeking. The majority of patients (66.6%) waited two months or less to tell their family about symptoms, although only 8.6% of patients shared their symptoms immediately upon noticing them which shows in Figure 6 that delayed initial disclosure adversely affects diagnostic timelines.

Delay in seeking healthcare emerges from three main factors including stigma concerns and denial attitudes and economic limitations which are common barriers observed in cancer care delays within resource-limited areas. The early engagement of family members remains essential because it helps both with emotional care and logistical needs as well as with making quick healthcare access decisions[26].

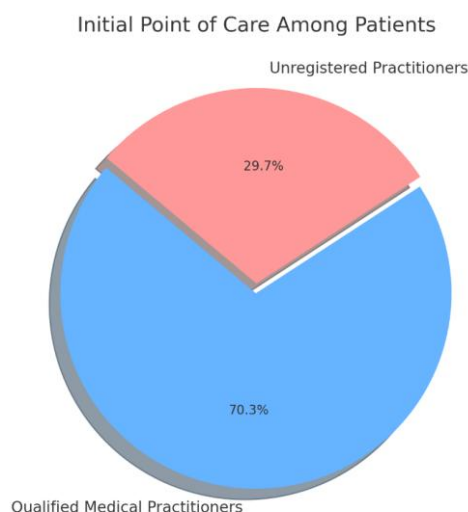


Figure 6: Initial Point of Care among Patients

Physician-Level Delays Post Initial Consultation

Patient access to medical care rapidly in this subset of cases exposed delays at the physician level that extended through the consultation process[15]. The cohort data showed that 40.7% of patients received proper diagnosis recommendations which demonstrated accurate clinical assessments by doctors. The patients who received specialist referrals amounted to 32.5% of the total cases, while showing appropriate triaging but experienced varying times until their final diagnosis was determined. The diagnosis of these patients proved incorrect or symptomatic treatment led to a five-month average delay period. The improper handling of these cases resulted in prolonged diagnostic periods that affected patients with diagnosis-

delaying cancer symptoms that were unobvious or ambiguous [27].

Patients who encountered physician delays longer than 5 months ended up waiting 25.68 months for their diagnosis on average, whereas those without such delays waited 5.83 months ($p < 0.001$). Medical tests that doctors prescribed were abandoned by 19.1% of patients because they encountered financial barriers or logistical issues. The healthcare system should implement interventions such as testing discounts and patient facilitation services during this vital diagnostic stage to boost patient outcomes shown in Figure 7[28].

The research demonstrates two significant challenges, which combine provider mistakes in diagnosis with economic obstacles experienced by

patients. The resolution of these problems demands physician training improvements, combined with simplified referral processes along with specific

assistance systems for disadvantaged communities[29].

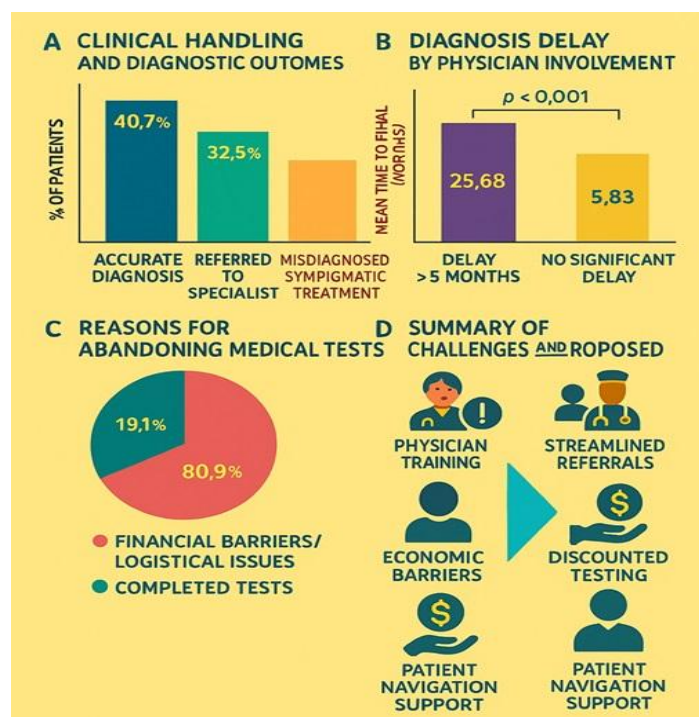


Figure 7: Infographic Diagnostic Stages of Tumor

System-Level (Institutional) Delay

Procedural and diagnostic delays impacted only some patients who received care at tertiary healthcare facilities in Figure 8. The delay in appointment scheduling was noted by 5.3% of patients, which indicated that access constraints were minor but still significant. The diagnostic process was prolonged for patients with unclear FNAC or biopsy results, which affected 20.1% of patients and required additional tests[30]. Mean

investigation reporting times were: FNAC: 4 days Biopsy: 7–12 days The established clinical norms for these investigation durations were met but patients who needed multiple procedures experienced procedural delays alongside emotional stress, which delayed their treatment start. System-level factors such as protocols and scheduling showed no significant relation to diagnostic delays ($p = 0.87$) which indicates stable institutional efficiency.

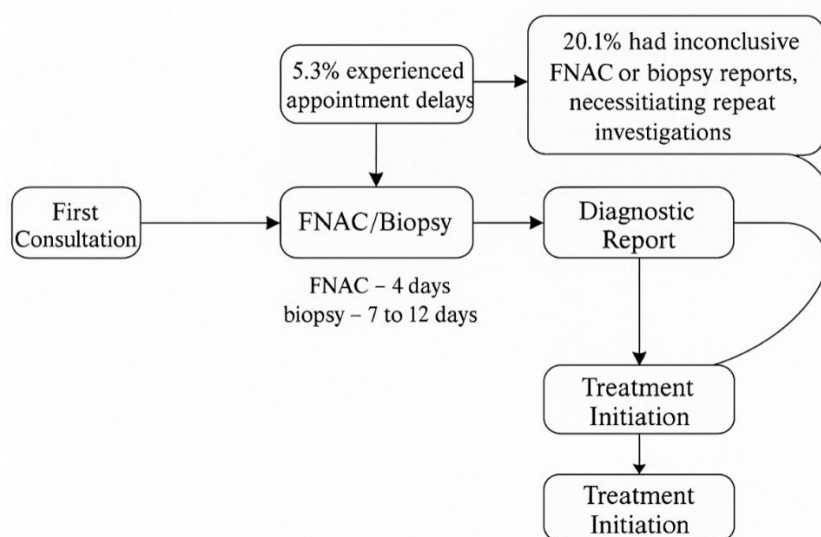


Figure 8: Diagnostic and Treatment Pathway

Cancer Type and Stage at Diagnosis

The study population showed breast cancer (23.0%) as the most common diagnosis, followed by cervical cancer (14.8%) and buccal mucosa cancer (12.4%), which aligns with gender-based and lifestyle-associated national cancer statistics.

Most patients presented with advanced-stage diseases during their diagnosis, according to a key study result. Stage III: 31.1%, Stage II: 27.8%, Stage IV: 20.6% and Stage I: 15.8%.

The percentage of patients diagnosed with cancer at Stage I remained at 15.8% even though digital health knowledge and accessibility have increased. Latent diagnosis opportunities exist together with inadequate screening protocols and health literacy practices, and referral processes at the community level.

The late-stage diagnosis of cancer leads to a range of negative effects, which underscores the necessity of better primary care connections and patient guidance systems in cancer control plans[31].

Core Barriers to Timely Cancer Diagnosis

A comprehensive solution needs to address clinical and community-level obstacles to fulfill the goal of improving cancer diagnosis and early detection. The proposed interventions serve as a collective pathway for improving both diagnostic streamlining and optimal treatment initiation[32].

Primary care training needs substantial improvement as the first step toward progress. Training sessions with defined formats and Continuing Medical Education (CME) programs need to be structured into regular programs to boost the early cancer sign detection skills of primary healthcare providers. Medical staff need to use evidence-based criteria and their clinical skills to detect early signs of cancer[33]. Identifying cancer among patients who exhibit unexplained symptoms through active inclusion of cancer diagnosis in differential evaluation helps detect tumors at their earliest stages.

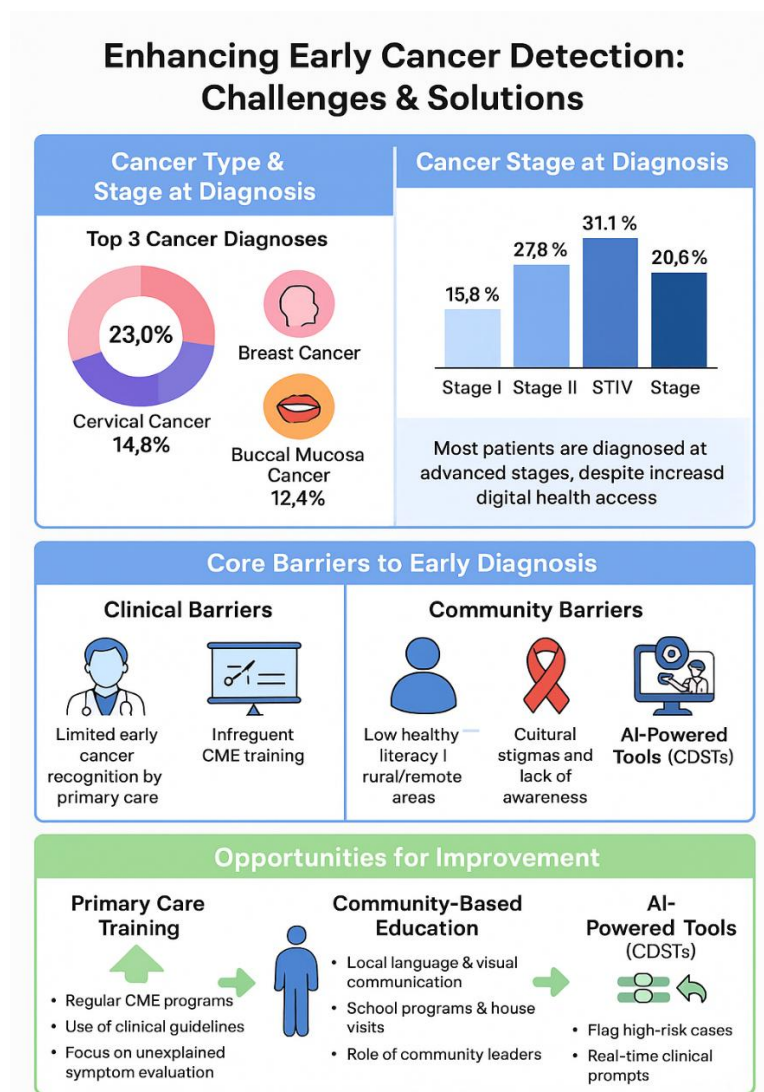


Figure 9: Enhancing Early Cancer Detection: Challenges & Solutions

Figure 9 shows Enhancing Early Cancer Detection: Challenges & Solutions. The establishment of community-based awareness programs stands equally vital in this process. Early help-seeking advice can be promoted in communities through multiple venues by using cultural messaging approaches, including native language communication and visual content distribution and community leaders engagement[34]. Balanced health education provided in schools and house-to-house programs prove effective in teaching the public about cancer more effectively among remote and disadvantaged communities. These initiatives create an environment where the population grows to recognize cancer symptoms early and seek medical care without delay.

AI-driven decision-support tools called CDSTs show potential as a promising solution at primary care facilities. Healthcare providers use these digital tools to detect high-risk symptoms which leads to prompt specialist oncology referrals[35]. CDSTs improve diagnostic accuracy while offering low-resource environments special benefits through their ability to deliver practice-based clinical prompts in real time.

CONCLUSION

The problem of delayed cancer diagnoses remains evident during a period when healthcare services grow while digital connectivity spreads throughout the healthcare system. The diagnosis delay problem remains significant across healthcare settings though modern technology and expanded healthcare resources have appeared. The research emphasizes that delayed cancer diagnoses stem from multiple factors between personal and cultural aspects as well as systemic and structural elements. The combination of poorly educated individuals and vulnerable socio-economic status with informal care dependence alongside suboptimal primary care systems creates the identified problem. The essential solution requires a whole-system approach which combines community-based strategies with system-wide integration. The combination of public health education enhancement and primary care training advancement together with digital health integration and financial backing will establish a detection and therapeutic system that enhances patient results. Effective cancer care must be achieved by sustained efforts between medical personnel and policymakers together with community stakeholders to provide equal access to cancer services for all people regardless of social position or residence.

Declarations

Data Availability Statement

All the data is collected from the simulation reports of the software and tools used by the authors. Authors are working on implementing the same using real world data with appropriate permissions.

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Conflicts of Interest

The authors declare that they have no conflict of interest.

Ethical Approval and Human Participation

No ethics approval is required.

REFERENCES

1. Smith, R.D. and M.K. Mallath, History of the Growing Burden of Cancer in India: From Antiquity to the 21st Century. *Journal of Global Oncology*, 2019(5): p. 1-15.
2. Kulothungan, V., et al., Burden of female breast cancer in India: estimates of YLDs, YLLs, and DALYs at national and subnational levels based on the national cancer registry programme. *Breast Cancer Research and Treatment*, 2024. 205(2): p. 323-332.
3. Tenchov, R., et al., Biomarkers for Early Cancer Detection: A Landscape View of Recent Advancements, Spotlighting Pancreatic and Liver Cancers. *ACS Pharmacology & Translational Science*, 2024. 7(3): p. 586-613.
4. Betz, U.A.K., et al., Game changers in science and technology - now and beyond. *Technological Forecasting and Social Change*, 2023. 193: p. 122588.
5. Zafar, A., et al., Barriers to access cancer-related services for men in high-income countries: A narrative review looking beyond socioeconomic disadvantages. *Aging and Cancer*, 2022. 3(3-4): p. 147-160.
6. Hoagland, A. and S. Kipping, Challenges in Promoting Health Equity and Reducing Disparities in Access Across New and Established Technologies. *Canadian Journal of Cardiology*, 2024. 40(6): p. 1154-1167.
7. Hesso, I., et al., Cancer care pathways across seven countries in Europe: What are the current obstacles? And how can artificial intelligence help? *Journal of Cancer Policy*, 2024. 39: p. 100457.
8. Pool, J., et al., A systematic analysis of failures in protecting personal health data: A scoping review. *International Journal of Information Management*, 2024. 74: p. 102719.
9. Thakur, N.A., A.Y. Humne, and L.B. Godale, Delay in presentation to the hospital and factors affecting it in breast cancer patients attending tertiary care center in Central India. *Indian Journal of Cancer*, 2015. 52(1).
10. Zhou, Y., et al., Tumor biomarkers for diagnosis, prognosis and targeted therapy. *Signal Transduction and Targeted Therapy*, 2024. 9(1): p. 132.

11. Vargas, I., et al., Understanding the health system drivers of delayed cancer diagnosis in public healthcare networks of Chile, Colombia and Ecuador: A qualitative study with health professionals, managers and policymakers. *Social Science & Medicine*, 2025. 365: p. 117499.
12. Richards, D., J.A. Morren, and E.P. Pioro, Time to diagnosis and factors affecting diagnostic delay in amyotrophic lateral sclerosis. *Journal of the Neurological Sciences*, 2020. 417: p. 117054.
13. Scott, E.C.S. and P.J. Hoskin, Health inequalities in cancer care: a literature review of pathways to diagnosis in the United Kingdom. *eClinicalMedicine*, 2024. 76: p. 102864.
14. Gebremariam, A., et al., Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia: a cross-sectional study. *BMJ Open*, 2019. 9(11): p. e032228.
15. Meyer, A.N.D., et al., Patient and clinician experiences of uncertainty in the diagnostic process: Current understanding and future directions. *Patient Education and Counseling*, 2021. 104(11): p. 2606-2615.
16. Muyisa, R., et al., Barriers to timely diagnosis and management of breast cancer in Africa: Implications for improved outcomes. *Health Sciences Review*, 2025. 14: p. 100221.
17. Corner, J., J. Hopkinson, and L. Roffe, Experience of health changes and reasons for delay in seeking care: A UK study of the months prior to the diagnosis of lung cancer. *Social Science & Medicine*, 2006. 62(6): p. 1381-1391.
18. Hoveling, L.A., et al., Diagnostic delay in women with cancer: What do we know and which factors contribute? *The Breast*, 2025. 80: p. 104427.
19. O'Donnell, O., Health and health system effects on poverty: A narrative review of global evidence. *Health Policy*, 2024. 142: p. 105018.
20. Chintapally, N., et al., State of Cancer Care in India and Opportunities for Innovation. *Future Oncology*, 2023. 19(39): p. 2593-2606.
21. Kumar, S., Assessment of Nodal Involvement of Different Neck Levels in Primary Oral Cavity Malignancies. 2019, Rajiv Gandhi University of Health Sciences (India).
22. Bright, K., et al., The role of health system factors in delaying final diagnosis and treatment of breast cancer in Mexico City, Mexico. *The Breast*, 2011. 20: p. S54-S59.
23. Thevasagayam, M.S. and A.J. Parker, Diagnosis and management of neck lumps. *Surgery (Oxford)*, 2009. 27(12): p. 523-529.
24. Paul, M., et al., Digitization of healthcare sector: A study on privacy and security concerns. *ICT Express*, 2023. 9(4): p. 571-588.
25. George, S., Being sick to a cancer patient: pathways of delay in help seeking and diagnosis of cancer in India. *Journal of Social and Economic Development*, 2023. 25(1): p. 52-69.
26. Wahyudi, A., et al., Patient and Family Engagement: The Secret Behind Quality Healthcare Services (Literature Review). *East Asian Journal of Multidisciplinary Research*, 2023: p. 3645.
27. Neal, R.D., et al., Is increased time to diagnosis and treatment in symptomatic cancer associated with poorer outcomes? Systematic review. *Br J Cancer*, 2015. 112 Suppl 1(Suppl 1): p. S92-107.
28. Renukappa, S., et al., Evaluation of challenges for adoption of smart healthcare strategies. *Smart Health*, 2022. 26: p. 100330.
29. Mennella, C., et al., Ethical and regulatory challenges of AI technologies in healthcare: A narrative review. *Heliyon*, 2024. 10(4): p. e26297.
30. Hafez, N.H. and N.S. Tahoun, Reliability of fine needle aspiration cytology (FNAC) as a diagnostic tool in cases of cervical lymphadenopathy. *Journal of the Egyptian National Cancer Institute*, 2011. 23(3): p. 105-114.
31. Green, T., K. Atkin, and U. Macleod, Cancer detection in primary care: insights from general practitioners. *Br J Cancer*, 2015. 112 Suppl 1(Suppl 1): p. S41-9.
32. Dlamini, Z., et al., Artificial intelligence (AI) and big data in cancer and precision oncology. *Computational and Structural Biotechnology Journal*, 2020. 18: p. 2300-2311.
33. Banks, I., et al., ECCO Essential Requirements for Quality Cancer Care: Primary care. *Critical Reviews in Oncology/Hematology*, 2019. 142: p. 187-199.
34. Al-Quran, M., Traditional media versus social media: challenges and opportunities. *Technium: Romanian Journal of Applied Sciences and Technology*, 2022. 4: p. 145-160.
35. Sutton, R.T., et al., An overview of clinical decision support systems: benefits, risks, and strategies for success. *npj Digital Medicine*, 2020. 3(1): p. 17.

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