

Understanding the Trajectory of Cancer Diagnosis and Treatment Delay in Nigeria

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Abstract: *Despite the fact that cancer is one of the most important public-health issues in Nigeria, the poor survival rate is not due to the incidence of cancer, but the time interval between the onset of the first recognisable symptom and the initiation of definitive treatment. This paper argues that cancer diagnosis and treatment delay in Nigeria is a multi-faceted process, spanning the appraisal, help-seeking, diagnostic and treatment intervals, and that it is preventable if targeted interventions are coordinated and implemented at the intervals, instead of relying on incidence alone to drive messages. It collates and analyses literature from 2020 to 2026 from both the international and Nigerian context, and suggests that the major drivers to this advanced presentation of cancer in Nigeria are low symptom appraisal and cancer stigma, catastrophic out of pocket expenses and poor diagnostic and radiotherapy infrastructure which work synergistically. The paper argues that the nursing workforce, which is at each point in the chain of care, is the most practical and cost-effective way to shorten these delays, since they can be measured in terms of lives lost for every four-week delay in the process. It finds that formalised nurse navigation, improved oncology and palliative care skills, and increased health-insurance coverage and localised delay research are the key responses.*

Keywords: cancer; diagnostic delay; treatment interval; late-stage presentation; oncology nursing; Nigeria

INTRODUCTION

Cancer is now one of the leading causes of death globally and has been rapidly increasing in low and middle-income countries (LMICs) where it accounts for a disproportionate number of cases and deaths. In 2022, there were almost 20 million new cases of cancer and 9.7 million cancer deaths globally, and approximately 1 in 5 will develop cancer at some point in their lives (Bray et al., 2024). New estimates for 2024 indicate that the burden is about 20.6 million

new cancer cases and 9.8 million cancer deaths, and that there is a brighter side: almost half of all cancer deaths are estimated to be preventable if they can be prevented, detected and treated in time (Sung et al., 2026). Cancer is now responsible for almost one in six deaths worldwide in 2021, and the absolute burden of cancer is expected to increase through 2050, largely due to demographic ageing and population growth in LMICs (GBD 2023 Cancer Collaborators, 2025). Nigeria is on the trajectory of this trend with 269,109 new cancer cases in 2022, the most common being breast and prostate cancer (Ogunniyi et al., 2025).

The main premise of this paper is that the high mortality rate of cancer in Nigeria is not so much an issue of incidence but one of time. The delay between the time the first recognisable symptom occurs and the time when the patients seek curative treatment is, in the Nigerian context, so long that a large majority of the patients reach the health system when the disease is too far advanced to be treated with easily available, affordable and effective treatment. When put in this light, delay is not an unfortunate by-product of the cancer experience, it is the mechanism which can be changed, and by which a survivable diagnosis turns into a fatal one. The corollary is that the direction of the diagnosis and treatment delay (not just the incidence) should be the target of national cancer-control effort and that the interventions should target each of the segments of the delay.

The trajectory itself is best thought of as a set of successive, but related, intervals. Modern definitions include a patient interval from the onset of symptoms to when a patient first sought help from a health professional, as well as a primary-care interval, a healthcare-system interval, and a diagnostic interval, which ends with a treatment interval that lasts until the start of treatment (Rabanales-Sotos et al., 2025). There is a possibility of accumulation at each interval and delay at any early interval carries over to the subsequent intervals. This conceptualisation is important because it shifts the focus from viewing “patient delay” as a competing explanation to “system delay” or vice versa to seeing them as sequential steps in a chain, each of which can be targeted for intervention.

The clinical implications are clear. One systematic review and meta-analysis of curative, neoadjuvant and adjuvant indications in seven major cancers revealed that there was a linear relationship between waiting time and death, with every four weeks' delay in treatment associated with a measurable increase in death, ranging from six to thirteen per cent depending on the treatment modality (Hanna et al., 2020). These increases compounded over the numerous months that are often spent in Nigerian care pathways can have a significant impact on survival. It is exactly this relationship between time and mortality, which is continuous, not threshold, that allows for population level increases in survival due to even modest reductions in each interval.

This argument is accentuated by the structural context in Nigeria. The physical resources for diagnosing and treating cancer are severely limited, and the most commonly reported challenges such as lack of diagnostic equipment, high out-of-pocket expenses for cancer treatment and delayed diagnosis due to poor health-information and service delivery correspond to the intervals of the delay trajectory (Ogunniyi et al., 2025) in a country with an estimated 27 cancer-treatment centres serving a population of more than 218 million people.

These are not vague harms, but canvassed bottlenecks and there is hope because a problem in an interval can be solved by an interval-matched response.

Hence, this paper will move from framework to evidence to implication. It first outlines the interval model as an analytical lens; it then brings to the fore the latest evidence of the size and impact of late presentation, globally, continentally and in Nigeria; it considers the key factors driving delay in the Nigerian pathway, and posits that the nursing workforce, at every node of the pathway, is the most practical tool for shortening delay in a resource-limited system. All the while, it's not just to list the problem, but to make a case: cancer delay in Nigeria is not only systemic and cumulative, but also, importantly, preventable, and the solution needs to be based on the trajectory itself.

The Trajectory of Delay: A Framework for a Fragmented Pathway

To understand delay, a common language of the pathway that it accrues on is necessary. In current cancer-diagnosis research, the process of getting from symptoms to treatment is divided into a series of intervals: the appraisal interval (or patient interval), which is the time between a person detecting a change in his or her body and considering it as a potential health problem; the help-seeking interval, which is the time between the decision to seek help and the first contact with a formal health provider; the diagnostic interval, which is the time between the first contact with a formal health provider and the diagnosis of cancer; and the treatment interval, which is the time between the diagnosis of cancer and the initiation of treatment (Rabanales-Sotos et al., 2025). The strength of the framework is that it breaks down one negative outcome (late diagnosis) into parts, which can be separately measured, compared, and addressed.

Of the framework two points are particularly relevant for a country like Nigeria. Firstly, the intervals are sequential and cumulative: a long appraisal interval not only adds days to the interval, but also shifts the whole appraisal pathway downstream, squeezing the window for the time when the curative treatment is still possible. Second, the proportion of each interval is not standard, but depends upon the setting, the type of cancer and the health-system configuration. Primary-care evidence has shown that the patient interval may be as large as 50% of the total delay, meaning that a significant amount of the delay is occurring prior to the patient even entering the formal system (Rabanales-Sotos et al., 2025). While not a get-out-of-jail-free card for health systems, it does provide a sign of where some of the most significant and initial progress can be made.

The delay attribution framework also disciplines how delay is attributed. In breast and gynaecological cancer, interval analysis has revealed that longer diagnostic and treatment intervals are independently linked to higher stage and poorer prognosis: a significant proportion of patients (more than one in six) had a diagnostic interval >60 days, while a quarter had a treatment-initiation interval (Sánchez-Galindo et al., 2025). In the wider literature, patient-related, health-system-related and tumour-related factors are also editorialised into categories, with a focus on the systematic increase in the pathway for the most vulnerable, which is mediated by disparities, such as geographic, socioeconomic and educational (Haddadi et al.,

2024). The message from the analysts is clear: delay is multi-location and interventions that focus on only one delay will be dampened by other delays that are not addressed.

The application of the framework to Nigeria instantly brings to light where the days are lost. The study of gastrointestinal cancers presented to a tertiary health centre in south-western Nigeria revealed that approximately half of the patients presented to the health centre after ninety days of first noticing the symptoms, and that patients with stage III–IV gastrointestinal cancers were significantly more likely to be late presenters (Onwuka et al., 2024). Interestingly, the diagnostic interval at the tertiary centre was relatively short, with most patients being diagnosed within a month of presentation, with many diagnosed on the same day, due to the fact that advanced disease is often more readily diagnosed and that patients were often already investigated in other centres before reaching the tertiary centre (Onwuka et al., 2024). So, the bottleneck was at the point of overwhelming before arriving at the specialist centre, between appraisal and seeking help.

This was supported and expanded by a larger, geographically balanced study. It found that, overall, the delays were longer in the north compared to the south, and that more than half of the delay was after the patient presented to the local health sector, as opposed to before (Fayehun et al., 2025). This discovery challenges the simple story of the patient's sole responsibility for any delay: whilst there are appraisal and help-seeking delays, a significant proportion of the lost time is after the patient has sought help, in a disjointed primary and secondary care system that is plagued by misdiagnosis, multiple referrals and slow onward progress through the system. The trajectory framework embraces both, placing them in the right time periods and signaling the need for both community and systems level interventions.

Evidence from Nigeria, also viewed through the interval lens, also warns against making assumptions from high income systems. Where diagnostic capacity is high, the diagnostic interval may be the more dominant interval, as in Nigeria, the tertiary diagnostic interval can be short because patients arrive at the health facility late and in an advanced stage of illness, whilst the earlier intervals (awareness, belief and access) are the more significant (Onwuka et al., 2024; Fayehun et al., 2025). This is instructive as even in a middle-income setting like Malaysia, more than half of patients had presentation delays with a median delay of sixty days and the most frequent cause reported was that patients did not believe their symptoms were serious (Gyeltshen et al., 2024). The fact that this appraisal mechanism is repeated in different LMIC contexts adds to the evidence that the patient interval is a target that is generalisable and therefore can be addressed.

Overall, the framework and evidence that it organizes reinforces the position of the paper. Delay is not a single entity, but a series of steps in which the Nigerian patients lose time in the process of appraisal, help-seeking and, significantly, to a slow and disjointed system after presentation. A credible response must therefore be interval-specific, addressing the appraisal interval by means of community awareness; the help-seeking interval by providing easy access points; the diagnostic interval by providing for streamlined referral; and the treatment interval by providing easy access to therapy. The rest of this paper argues that all these intervals are

extended in Nigeria by a consistent set of drivers, and that the nursing workforce is particularly well-placed to address all these drivers.

The Weight of Late Presentation: Global, Continental and Nigerian Evidence

The empirical evidence for considering delay as Nigeria's main oncological problem is the continued high rate of late stage presentation despite the ten-year attention to it through policy. A systematic review and meta-analysis of the distribution of breast cancer cases in Nigeria between 2018 and 2023 revealed that advanced stage disease was still the predominant presentation with approximately four out of every five patients presenting with late disease, and that there was no evidence of migration towards any of the early stages but rather an increase in the proportion of patients presenting with stage III disease (Agodirin et al., 2025). This stagnation was juxtaposed with the recognized failure of the national cancer-control plan for 2018–2022 that was based on awareness alone, without a focus on the stage distribution, lending direct support to the argument that awareness-only strategies are not having an impact on the stage distribution and that the trajectory of delay itself must be the target (Agodirin et al., 2025).

It's not just breast cancer. Prostate cancer which accounts for a significant proportion of cancer diagnosis in men in Nigeria and is the leading cause of cancer mortality among males is also characterised by late presentation, which has been blamed on low perceived susceptibility and poor health-seeking behaviour among men who do not perceive themselves as being at risk (Olorunniyi & Ogo, 2025). The fact that the two most prevalent cancers in the country – one mostly in females and the other in males – share the same signature in the late stages of the disease indicates that there is a common upstream cause in the appraisal and help-seeking interval rather than in tumour biology and provides further support for interval-directed interventions.

The importance of late presentation is defined by the treatment-delay literature. Every four weeks of delay in treatment comes with a clear increase in death rates for all surgical, systemic and radiotherapy indications; and the many months routinely lost along the Nigerian pathways equate to significant and avoidable survival losses (Hanna et al., 2020). Late stage compounds this in two ways: it makes the treatment lengthier and more complicated, and it leaves less options for treatment, so that the patient arriving late is sicker, more expensive to treat and less likely to benefit. The interval framework and the mortality evidence thus agree on one thing: that the time that is lost early in the pathway, is paid for in lives lost later.

All these are part of a national picture set against a continental and global backdrop which only heightens the urgency. Cancer is an expanding burden in Africa with the latest global estimates predicting further absolute cancer cases and deaths through mid-century, most of which will be in LMICs, where health systems are least equipped to manage the burden (GBD 2023 Cancer Collaborators, 2025). Importantly for the current discussion, these global analyses also conclude that a significant proportion of cancer deaths can be avoided by timely detection and treatment (Bray et al., 2024; Sung et al., 2026). If there is a significant proportion of deaths that are preventable, but largely due to delay, then the playfield of delay becomes the critical space

of cancer control, and the preventability estimate is the empirical hinge of a position paper on delay.

The stakes are real in Nigeria, as the country has its own burden figures. With treatment infrastructure of about 27 treatment centres, treatment intervals in 2022 were necessarily extended, as the number of new cases was 269,109, which is structurally greater than the treatment capacity, given the population of over 218 million people. At this level of capacity, delay is not just a behavioural or information problem, it is an arithmetic problem – there are not enough points at which to complete the pathway in a timely manner. This is why, according to the paper, awareness campaigns are not enough but can hasten the journey towards a system that is not ready for the increased demand.

These pressures manifest themselves in the late-stage presentation that has been reported in the Nigerian literature for various types of cancers with majority of the patients diagnosed at stage III or IV which are mostly incurable and expensive to treat (Agodirin et al., 2025; Onwuka et al., 2024). This is what the trajectory framework anticipates and what the mortality literature deems death. It is also, significantly, the outcome that policy has so far not changed – so the continued prevalence of diagnosis at an advanced stage after a full cycle of national policy should not be interpreted as evidence that the problem is unsolvable, but rather as evidence that the levers being pulled are the wrong ones. The stage distribution has not been compressed, so no movement of the stage distribution.

The evidence collected here thus clearly points to an intermediate conclusion. Late presentation in Nigeria is ubiquitous, cross-cutting and enduring; is the immediate cause of the high mortality rate from cancer in Nigeria; and, on the basis of global evidence, is largely preventable. What is still to be understood is why the intervals are still long; what are the drivers that make the move of Nigerian patients through the pathway still slow and why? Now it's the turn of these drivers.

Where the Days Are Lost: The Drivers of Delay

When the result is late presentation, the reasons for this in Nigeria fall into three inter-dependent domains: the appraisal and help-seeking environment that is influenced by the awareness and stigma surrounding the condition; the financing environment that punishes those who present; and the diagnostic and treatment environment that cannot move people through fast enough. This paper argues that these domains are not mutually exclusive and therefore cannot be ranked, but rather are forces that need to be addressed concurrently as to relieve one while neglecting others is merely to move the “bottleneck” around.

Limited awareness and beliefs that discourage or delay formal care are the first appraisal and help-seeking intervals lengthened. In rural areas of Enugu state, a low level of knowledge about breast cancer and the cost of mammography screening was a major factor in low uptake of the screening services, even when available (Nwagu et al., 2023). The trend holds true for cervical cancer, where Nigeria has one of the highest morbidity and mortality rates in sub-Saharan Africa, with a study in Bayelsa State showing that while most women knew about cervical cancer, a large proportion did not know of the Pap smear as a screening tool, with low

awareness, poor decision-making power, lack of partner support and stigma being key barriers to uptake (Okaba, 2024). The barriers are the appraisal-interval barriers of the framework, that is, they are barriers that are present before and around the decision to seek care and that affect whether a symptom is considered serious or not.

This interval is as much a product of culture and communication as it of information. Qualitative research based on a cultural model of health communication in North-Central Nigeria has revealed that the way and source of messages, not just what is said, dictate women's response to cervical-screening messages, suggesting that raising awareness without taking into account the cultural context is unlikely to alter behaviour (Dadem, 2025). Stigma exacerbates the issue for all types of cancer: a synthesis of the evidence on cancer stigma and stigma-focused interventions found that stigma has a measurable impact on screening and treatment outcomes, deterring presentation and interfering with the continuity of care once it has begun (Akin-Odanye & Husman, 2021). In the Nigerian context, however, the process of appraisal is intertwined with the processes of stigma, gendered agency and spiritual interpretation, and requires locally specific and relational responses to be meaningfully engaged with, as opposed to generic information campaigns (Gyeltshen et al., 2024; Okaba, 2024).

Health workers themselves are at the interface of these barriers to appraisal and can either shorten or lengthen the interval. A qualitative study of providers in Ogun State revealed that opportunistic breast-cancer screening and health education for women during maternal health visits were not always carried out and that challenges include inadequate manpower, lack of screening facilities at the secondary level, geographical location, and women's limited awareness and cultural/religious beliefs (Olubodun et al., 2025). The same study placed these failures in the backdrop of an epidemiological reality, Nigeria having the highest age-standardised breast-cancer mortality rate in Africa of 25.5 per 100,000 (Olubodun et al., 2025). It is not only the lay public that has been reported to have appraisal deficits; even among hospital staff, knowledge and use of breast-cancer screening methods have been found wanting, indicating that appraisal deficits are not limited to the lay public but extend to the workforce expected to combat them (Esangbedo et al., 2025). This is an important patient, provider, and system-level lesson for a position paper. The appraisal interval is not only a patient problem, but a provider, and system problem, and can be shortened by training the workforce to identify and intervene in the early signs.

The second domain is financing, which extends the time period between help-seeking and treatment due to the lack of affordability of treatment at the time of need. A prospective study at a south-western Nigerian tertiary hospital revealed that the average cost of breast-cancer treatment amounted to thousands of dollars, with over seventy per cent of the patients incurring catastrophic health expenditure and majority of the patients not having any health insurance, which essentially meant that the decision to present or continue treatment was a decision to impoverish the household (Wuraola et al., 2024). Retrospective analysis has also estimated the risk of financial catastrophe to breast cancer patients in Nigeria, and has shown that the risk is not exceptional (Zaza et al., 2025). The current health-financing system is not well positioned to pick these costs up, leading to delayed presentation when symptoms become more intolerable, and advanced disease and treatment is even more expensive—a vicious cycle that

the health-financing literature has identified as a key driver of delay and abandonment (Ndoh et al., 2022; Ajala et al., 2026). The policy literature thus conceives of extended, up-front coverage as a treatment delay intervention, as it takes away the financial barrier that is often the point of failure for the treatment interval (Ndoh et al., 2022).

The third domain is infrastructure - this directly extends the diagnostic and treatment intervals. The capacity to complete the pathway in a timely fashion is simply not available given the limited number of cancer-treatment centres (around 27) for a population of over 218 million and the limited capacity of radiotherapy, even a recent commentary counted only fourteen radiotherapy centres in the country (Ogunniyi et al., 2025; Ajala et al., 2026). Poor availability of diagnostic equipment and poor service delivery has been reported as key challenges to prompt diagnosis, while the geographically balanced Nigerian delay study revealed that over half of the delay occurred post presentation in a system characterised by misdiagnosis, repeat referral and slow onward movement (Ogunniyi et al., 2025; Fayehun et al., 2025). Here, infrastructure and financing are interwoven with awareness: a patient who is aware of the need to present early but is unable to get a scan, or cannot afford the out-of-pocket cost, or the radiotherapy machine is out of service, so that the early appraisal is wasted by a lack of infrastructure and/or financing downstream. This interlocking provides the empirical foundation for the paper's argument for simultaneous, interval matched action, rather than single domain fixes, that occur one after another.

The Nursing Imperative: Repositioning Nurses Across the Continuum

When delay is spread over the intervals and caused by the interacting domains listed above, then the intervention best suited to the problem is one that is spread over the pathway and can impact across all the domains of awareness, access, coordination and continuity simultaneously. This paper takes a stance that the nursing workforce is that intervention. Nurses are at the starting point where appraisal is done, at the first point of contact where decisions are made to seek help or not, in the referral chain where diagnostic delay may occur and at the bedside where treatment is negotiated and abandoned, and in most Nigerian facilities are the most abundant cadre. There is thus a need to increase and formalise their role, which is the most pragmatic and cost-effective lever in a system where specialist oncologists are scarce.

The arguments for the repositioning of nurses in LMIC oncology have been clearly articulated in the recent literature and are based on the premise that expanded oncology-nursing roles will be a realistic and cost-effective solution to the shortage of specialists and limited system capacity, exactly what is present in cancer care in Nigeria (Tran et al., 2026). The argument is given three practical expressions in the intervals. In the appraisal interval, nurses who provide education and opportunistic screening in the community through their routine contacts (maternal, immunisation and family-planning clinics) can reduce the time it takes to recognize the signs of asbestos-related disease, particularly if their messages are culturally framed rather than just informational (Dadem, 2025; Olubodun et al., 2025). This role is dependent on increasing the knowledge of the providers themselves, which has been shown to be inconsistent (Esangbedo et al., 2025), and thus is as much educational as operational.

The nurse as a navigator is a new role in the help-seeking and diagnostic intervals. Many of these facilities already have nurses who are doing informal navigation – keeping tabs on patients in the referral chain, making appointments, explaining the pathways and following up via phone, but these are not formalised in job descriptions or trained for, and result in role strain and the potential of delay not being realised. Institutionalization of oncology nurse navigation, with clear roles and support, provides a means to shorten the journey time for Nigerian patients, which is the time lost between presentation and diagnosis, a time when patients are misdiagnosed and undergo repeated referrals (Fayehun et al., 2025). Navigation is aligned with the post presentation delay identified by the Nigerian evidence as being over 50% of the total, and thus is well aligned to the problem's shape as opposed to being borrowed uncritically from high income models.

The nursing contribution in the treatment interval is for the prevention of abandonment and palliative competence for the very large majority who present late. While most patients present with advanced disease, nurses need to be skilled in systematic pain assessment, symptom control and psychosocial support; however, the Nigerian palliative-care literature shows that despite the relative strength of nurses as the backbone of what palliative care is available, there are still many challenges to be addressed, including limited access to opioids, staffing issues, stigma and weak institutional support (Obiezu-Umeh et al., 2025). Therefore, the strengthening of palliative capacity is not a standalone agenda but is part of the delay agenda: competent and financially literate nurses at the point of treatment can prevent the discontinuation that is the hallmark of the delay agenda and can sustain patients through the pathways that are disrupted by financing and infrastructure (Wuraola et al., 2024; Obiezu-Umeh et al., 2025).

There are direct implications for nursing education from these practice implications. To reduce the time frame of the appraisal, undergraduate and postgraduate curricula should go beyond the textbook description and introduce early symptom recognition of the cancers that comprise the burden in Nigeria, as well as using case material from a culturally grounded perspective that reflects spiritual and social interpretations of illness common in the setting (Dadem, 2025; Olubodun et al., 2025). Nurses need to be trained to be care coordinators, to know how to refer, to be health-system advocates, and to collaborate inter-professionally, if they are to navigate. If they are to advise patients who are experiencing catastrophic costs or advanced disease, education should also involve structured communication for giving bad news and discussing prognosis, to minimise fear and misinformation, which can also contribute to help-seeking delay at the point of contact (Akin-Odanye & Husman, 2021). The necessary reform of education is therefore not a single module, but a reorientation of the preparation of nurses with regard to the path of delay.

The final implication is for nursing research; it is the research which will produce the evidence locally standardised on which the interval-specific intervention is dependent. The limited scope of the literature in Nigeria is due to the lack of consistent operational definitions of delay, the use of retrospective designs and small sample sizes, making it difficult to compare and hindering the design of interventions (Onwuka et al., 2024; Fayehun et al., 2025). Nurse researchers are uniquely positioned to address this by using the standardised interval framework, prospective designs, and assessing nurse-led navigation, triage and education

programmes by outcomes that are important to the trajectory (time to treatment, stage at diagnosis, treatment completion rates, and patient experience) (Rabanales-Sotos et al., 2025; Tran et al., 2026). The scope of practice and task-shifting are also areas of research that should be studied as workforce constraints, on their own, increase the treatment interval, and evidence of these areas can support workforce planning and financing, which ultimately underpins durable delay reduction (Ndoh et al., 2022; Ajala et al., 2026).

The nursing imperative is the logical conclusion of the analysis of the paper, when read as a whole. Given the distributed nature of delay and the interaction between the drivers of delay, the intervention needs to be distributed and integrated; and given that nurses are present in every interval and outnumber every other cadre, their formalised repositioning – clinically as navigators and palliative providers, educationally through a trajectory-oriented curriculum, and scientifically through standardised local research – is the intervention most precisely matched to the structure of the problem..

CONCLUSION AND POSITION

This paper has posited that the huge mortality rate of cancer in Nigeria is not so much due to the number of the cancers as the time it takes to recognise, diagnose and treat the cancer. The journey of delay, as understood from the interval framework, is a series of activities (appraisal, help-seeking, diagnosis and treatment) that Nigerian patients experience during the process of presenting, with significant time being lost to low symptom appraisal and stigma, and further lost to a disjointed and under-resourced health system (Rabanales-Sotos et al., 2025; Fayehun et al., 2025). Since each four-week delay in treatment is a measurable increase in the risk of death and a significant proportion of cancer-related deaths are preventable due to timeliness, the terrain of time won or lost is the key battleground of cancer control (Hanna et al., 2020; Sung et al., 2026). The continued high rate of late presentation (about 80%) over a full national plan cycle does not represent an intractable problem, but rather a lack of organisation of the response around the trajectory itself (Agodirin et al., 2025).

The next position is that delay is systemic, cumulative and preventable as well as the fact that its main causes (appraisal deficits and stigma, catastrophic financing and infrastructural scarcity) are interlinked and need to be tackled together in order to shift the bottleneck (Nwagu et al., 2023; Wuraola et al., 2024; Ogunniyi et al., 2025). In practice this means reducing the appraisal interval, but not overwhelming the system that cannot cope, by scaling nurse-led community awareness and opportunistic screening activities within existing maternal, immunisation and non-communicable-disease programmes, and in a culturally appropriate manner (Dadem, 2025; Olubodun et al., 2025). It suggests extending the prepaid insurance plan to cover basic diagnostic and first-line treatment, eliminating the financial gate that frequently keeps people from starting treatment and preventing households from spending too much and abandoning treatment (Ndoh et al., 2022; Zaza et al., 2025). It suggests investment in diagnostics and radiotherapy infrastructure which is scarce and increases the diagnostic and treatment time. But it does not suggest that these traditional and religious pathways to seeking care, which many patients use as their first point of contact, should be ignored or bypassed, and

instead should be used as a way to get to timely referral (Akin-Odanye & Husman, 2021; Okaba, 2024).

Most importantly, this paper argues that the nursing workforce is the most practical means of providing these interval matched responses. Nurses are present at all nodes of the pathway, and their numbers surpass all other cadres, and with education, formalised navigation and palliative competence, and financial counselling, they can shorten the appraisal interval (Tran et al., 2026; Obiezu-Umeh et al., 2025). It is therefore important to design a programme of inquiry that will provide evidence that can be directly translated into nurse-led interventions and health-policy reform, among patients attending Nigerian tertiary hospitals, to determine the determinants of stage at presentation. Cancer in Nigeria is more survivable than it is fatal – and it is the time between diagnosis and survival that a trajectory-oriented nurse centred system can be constructed to save.

REFERENCES

- Agodirin, O., Chijindu, C., Fathi, M., Ganiyu, R., Samuel, O., Julius, O., & Halima, A. (2025). Nigeria's 6-year (2018–2023) stage distribution of breast cancer at diagnosis: A systematic review and meta-analysis. *ecancermedicalscience*, 19, 1899. <https://doi.org/10.3332/ecancer.2025.1899>
- Ajala, D. E., Ogunmodede, E. O., & Ishola, R. O. (2026). Strengthening public policy to address the financial burden of breast cancer care in Nigeria: A critical imperative. *Cancer Control*, 33, 10732748251414203. <https://doi.org/10.1177/10732748251414203>
- Akin-Odanye, E. O., & Husman, A. J. (2021). Impact of stigma and stigma-focused interventions on screening and treatment outcomes in cancer patients. *ecancermedicalscience*, 15, 1308. <https://doi.org/10.3332/ecancer.2021.1308>
- Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R. L., Soerjomataram, I., & Jemal, A. (2024). Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 74(3), 229–263. <https://doi.org/10.3322/caac.21834>
- Dadem, N. (2025). “The message is the manner”: Patterns of influence in communicating pap screening in North-Central Nigeria. *Qualitative Research in Medicine & Healthcare*, 9(1), 100004. <https://doi.org/10.1016/j.qrmh.2025.100004>
- Esangbedo, J. O., Oduyemi, R. O., Aduroja, D., Tola, Y. O., Dele-Alonge, O., Adesuyi, E. O., Ajiboye, M. O., & Akingbade, O. (2025). Uptake of breast cancer screening methods: Perspectives of members of staff of Federal Medical Centre, Abeokuta. *ecancermedicalscience*, 19, 1930. <https://doi.org/10.3332/ecancer.2025.1930>
- Fayehun, O., Apenteng, P., Umar, U. A., Yakasai, I. A., et al. (2025). Diagnosis of cancer in the South and North of Nigeria: Duration and causes of delay. *BMC Health Services Research*, 25, 738. <https://doi.org/10.1186/s12913-025-12707-8>
- GBD 2023 Cancer Collaborators. (2025). The global, regional, and national burden of cancer, 1990–2023, with forecasts to 2050: A systematic analysis for the Global Burden of Disease Study 2023. *The Lancet*, 406(10512), 1565–1586. [https://doi.org/10.1016/S0140-6736\(25\)01635-6](https://doi.org/10.1016/S0140-6736(25)01635-6)

- Gyeltshen, T., Teh, H. S., Loo, C. E., Hing, N. Y. L., Lim, W. Y., Subramaniam, S., Wong, W. J., Wong, Z. S.-Y., & Hwong, W. Y. (2024). Factors influencing presentation delay among cancer patients: A cross-sectional study in Malaysia. *BMC Public Health*, 24, 1274. <https://doi.org/10.1186/s12889-024-18643-2>
- Haddadi, S., Dehghani, M., & D'Amato, G. (2024). Editorial: Delay in cancer diagnosis and factors affecting outcomes. *Frontiers in Public Health*, 12, 1442764. <https://doi.org/10.3389/fpubh.2024.1442764>
- Hanna, T. P., King, W. D., Thibodeau, S., Jalink, M., Paulin, G. A., Harvey-Jones, E., O'Sullivan, D. E., Booth, C. M., Sullivan, R., & Aggarwal, A. (2020). Mortality due to cancer treatment delay: Systematic review and meta-analysis. *BMJ*, 371, m4087. <https://doi.org/10.1136/bmj.m4087>
- Ndoh, K., Ahmed, A., Yates, R., Adeyemi, O., & Sullivan, R. (2022). Cancer control funding in Nigeria: A case for universal health coverage. *Journal of Cancer Policy*, 32, 100335. <https://doi.org/10.1016/j.jcpo.2022.100335>
- Nwagu, E. N., Abugu, L. I., & Ngwoke, A. N. (2023). Knowledge of breast cancer, willingness and barriers to mammography screening among rural women in Enugu State, Nigeria. *African Health Sciences*, 23(3), 280–290. <https://doi.org/10.4314/ahs.v23i3.34>
- Obiezu-Umeh, C., Ogbenna, A. A., Johnson, L. S., Caputo, M. T., Hirschhorn, L. R., Onyeka, T. C., et al. (2025). Barriers and facilitators to the implementation of palliative care services at five tertiary hospitals in Nigeria: A qualitative formative study. *BMC Health Services Research*, 25, 963. <https://doi.org/10.1186/s12913-025-13138-1>
- Ogunniyi, T. J., Fatokun, B. S., Isah, K. O., Abdulbaki, A., Emiola, A. R., & Batisani, K. (2025). Current status of cancer diagnosis and treatment in Nigeria. *Health Science Reports*, 8(6), e70877. <https://doi.org/10.1002/hsr2.70877>
- Okaba, E. (2024). Knowledge, attitude and practice concerning cervical cancer screening among reproductive age group women in low-resource settings, Yenagoa, Bayelsa State. *Nigerian Medical Journal*, 65(4), 512–523. <https://doi.org/10.60787/nmj-v65i3-492>
- Olorunniyi, S. B., & Ogo, C. N. (2025). Predictors of late diagnosis of prostate cancer among men of African ancestry receiving care at urology clinic, Federal Medical Centre, Abeokuta. *ecancermedicalscience*, 19, 1917. <https://doi.org/10.3332/ecancer.2025.1917>
- Olubodun, T., Olaniran, A., Wuraola, F. O., Morhason-Bello, I. O., Balogun, M., et al. (2025). Practice of opportunistic breast cancer screening and health education among healthcare workers in public health facilities in Ogun State, Southwest Nigeria: A qualitative study of barriers and facilitators. *BMC Health Services Research*, 25, 1119. <https://doi.org/10.1186/s12913-025-13418-w>
- Onwuka, J. U., Wuraola, F. O., Owoade, I. A., Ogunyemi, Y. F., Di Bernardo, M., Dare, A. J., et al. (2024). Delays in presentation, diagnosis, and treatment among patients with GI cancer in Southwest Nigeria. *JCO Global Oncology*, 10, e2400060. <https://doi.org/10.1200/GO.24.00060>
- Rabanales-Sotos, J., López-González, Á., Sánchez-Galindo, B., Blázquez-Abellán, G., Téllez-Lapeira, J. M., & López-Torres-Hidalgo, J. (2025). Time intervals in the pathway to diagnosis of patients with cancer. *Nursing Reports*, 15(7), 261. <https://doi.org/10.3390/nursrep15070261>

- Sánchez-Galindo, B., Rabanales-Sotos, J., López-González, Á., Castaño-Díaz, M., Sánchez-Martínez, C. M., & López-Torres-Hidalgo, J. (2025). Time intervals in the pathway to diagnosis and treatment of patients with breast and gynecological cancer. *Frontiers in Medicine*, 12, 1655888. <https://doi.org/10.3389/fmed.2025.1655888>
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2026). Global cancer statistics 2024: GLOBOCAN estimates of incidence and mortality worldwide for 34 cancers in 186 countries. *CA: A Cancer Journal for Clinicians*. <https://doi.org/10.3322/caac.70090>
- Tran, L. T. K., Nguyen, P. T. N., So, W. K.-W., Ngo, E., & Le, P. D. (2026). Expanding the role of oncology nursing in low- and middle-income countries: An urgent imperative. *Cancer Control*, 33, 10732748261441921. <https://doi.org/10.1177/10732748261441921>
- Wuraola, F. O., Blackman, C., Olasehinde, O., Aderounmu, A. A., Adeleye, A., Omoyiola, O. Z., Kingham, T. P., et al. (2024). The out-of-pocket cost of breast cancer care in Nigeria: A prospective analysis. *Journal of Cancer Policy*, 42, 100518. <https://doi.org/10.1016/j.jcpo.2024.100518>
- Zaza, N. N., Caputo, M., Uwechue, F. I., Olasehinde, O., Alatise, O. I., & Knapp, G. C. (2025). Risk of financial catastrophe for breast cancer patients in Nigeria: A retrospective analysis. *American Journal of Surgery*, 239, 116053. <https://doi.org/10.1016/j.amjsurg.2024.116053>