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Carcinomas: prevention strategies, early diagnosis, and impacts on public health.

Carcinomas: prevention strategies, early diagnosis, and impacts on public health

Carcinomas: prevention strategies, early diagnoses and impacts on public health

Luzinete Azevedo de Jesus1
Jhones do Nascimento Dias2

SUMMARY

This study addresses the main challenges related to the diagnosis, treatment, and management of carcinomas in the Brazilian population, highlighting factors that directly impact clinical outcomes, such as limited access to health services, late diagnosis, and structural constraints of the health system. This is a bibliographic research, based on the analysis of scientific articles, aiming to understand the strategies adopted in the prevention, detection, and treatment of these neoplasms. The results show that the incorporation of diagnostic technologies, combined with the continuous training of health professionals, is fundamental for improving cancer care. Furthermore, the use of epidemiological data and the organization of care flows prove to be effective strategies for optimizing patient care. By overcoming these challenges, it is possible to increase the efficiency of health services, promote early diagnosis, and improve the quality of life of patients. This study therefore offers a relevant analysis with practical contributions to the improvement of policies and practices in addressing carcinomas.

Keywords: Carcinomas; early diagnosis; public health; artificial intelligence in healthcare.

ABSTRACT

This study addresses the main challenges in the diagnosis, treatment, and management of carcinomas in the Brazilian population, highlighting factors that directly affect clinical outcomes, including limited access to healthcare services, late diagnosis, and structural constraints within the healthcare system. This is a bibliographic research, based on the analysis of scientific articles, to understand the strategies adopted in the prevention, detection, and treatment of these neoplasms.

The results show that incorporating diagnostic technologies, combined with continuous training for health professionals, is fundamental to improving oncological care. Furthermore, using epidemiological data and organizing care flows are effective strategies for optimizing patient care.

By overcoming these challenges, it is possible to increase the efficiency of health services, promote early diagnosis, and improve patients' quality of life. This study, therefore, offers a relevant analysis with practical contributions to improving policies and practices in addressing carcinomas.

Keywords: Carcinomas; early diagnosis; public health; artificial intelligence in healthcare.

1. INTRODUCTION

Cancer constitutes one of the greatest challenges to global public health, both because of its high risk...

incidence is high, as are mortality rates. Among its different types, the following stand out:

Carcinomas, which account for the majority of diagnosed cases and have a significant impact.

[1] Luzinete Azevedo de Jesus, student of the Biomedicine Course at the IESB University Center.
. Email: luzinete.jesus@iesb.edu.br.

2 Lecturer in the Biomedicine course at the Higher Education Institute of Brasília – IESB. PhD in pathology.
Molecular Physics graduate from the University of Brasília. Email: jhones.dias@iesb.edu.br

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in the quality of life of the population (NATIONAL CANCER INSTITUTE, 2026).

These neoplasms, which originate in epithelial cells, can affect various organs, such as The skin, lungs, breasts, prostate, and gastrointestinal tract. Early detection is crucial. since diagnosis in early stages considerably increases the chances of a cure and reduces the costs for health services (BARBOSA *et* al., 2016).

Skin cancer is the most prevalent neoplasm in Brazil, accounting for approximately 30% of cases. all malignant tumors registered in the country (ROCHA *et al.,* 2024). Among its forms, the following stands out: if squamous cell carcinoma (SCC), which accounts for approximately 25% of skin cancers Non-melanoma skin cancer has a multifactorial etiology, with exposure to ultraviolet radiation being the main risk factor for the development of these neoplasms (SIMÕES *et* al., 2023).

Squamous cell carcinoma results from accumulated sun exposure throughout life, and can... arising from pre-existing lesions and presenting metastatic potential when not treated early (SIMÕES *et* al., 2023). In this context, primary prevention measures, such as the use Regular use of sunscreen, wearing appropriate clothing, and reducing exposure to radiation are all important steps. Sun exposure, especially between 10 am and 4 pm, is essential to reduce the risk of developing skin cancer (SIMÕES *et* al., 2023).

Despite advances in screening and educational campaigns, inequality still exists in access to diagnosis and treatment, especially in the most vulnerable regions of Brazil, where the Mortality rates are higher among the elderly and men with phenotypes more susceptible to radiation. ultraviolet (ROCHA *et al.,* 2024). In this context, innovative technologies, such as Intelligent Artificial intelligence (AI) is being investigated as a tool to support early diagnosis, capable to expedite the analysis of tests and assist in the planning of public health strategies (AMARO JUNIOR *et al.,* 2024).

Given this scenario, the present research aims to analyze the impacts of carcinomas in public health, emphasizing the importance of early diagnosis and comprehensive care. oncological care and the use of innovative strategies.

2. METHODOLOGY

This study is characterized as a qualitative research approach, with the objective descriptive-exploratory study, developed through a literature review. Its purpose is to gather... and to analyze knowledge already published in the scientific literature on the proposed topic, with emphasis in prevention strategies, early diagnosis, and public health impacts.

Data collection and analysis were performed through searches in databases.

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SciELO (Scientific Electronic Library Online), PubMed (National Library of Medicine), Google Scholar and the CAPES Periodicals Portal, as well as institutional documents. published by official bodies, such as the National Cancer Institute (INCA) and the Ministry of Health. (MS) and the National Policy for the Prevention and Control of Cancer (PNPCC). The following were used descriptors in Portuguese, such as "carcinomas", "early diagnosis", "cancer prevention", "Public health" and "artificial intelligence in healthcare".

3. RESULTS

The data analysis was performed in an interpretive manner, with the aim of identifying Patterns, convergences, and divergences among the analyzed studies were identified. The results were organized... in thematic categories, including epidemiology of carcinomas, prevention strategies, early diagnosis, public health policies and the use of innovative technologies, such as Artificial intelligence. Selected articles, including title, authors, year of publication, objectives. The main results used in the discussion are presented in Table 1.

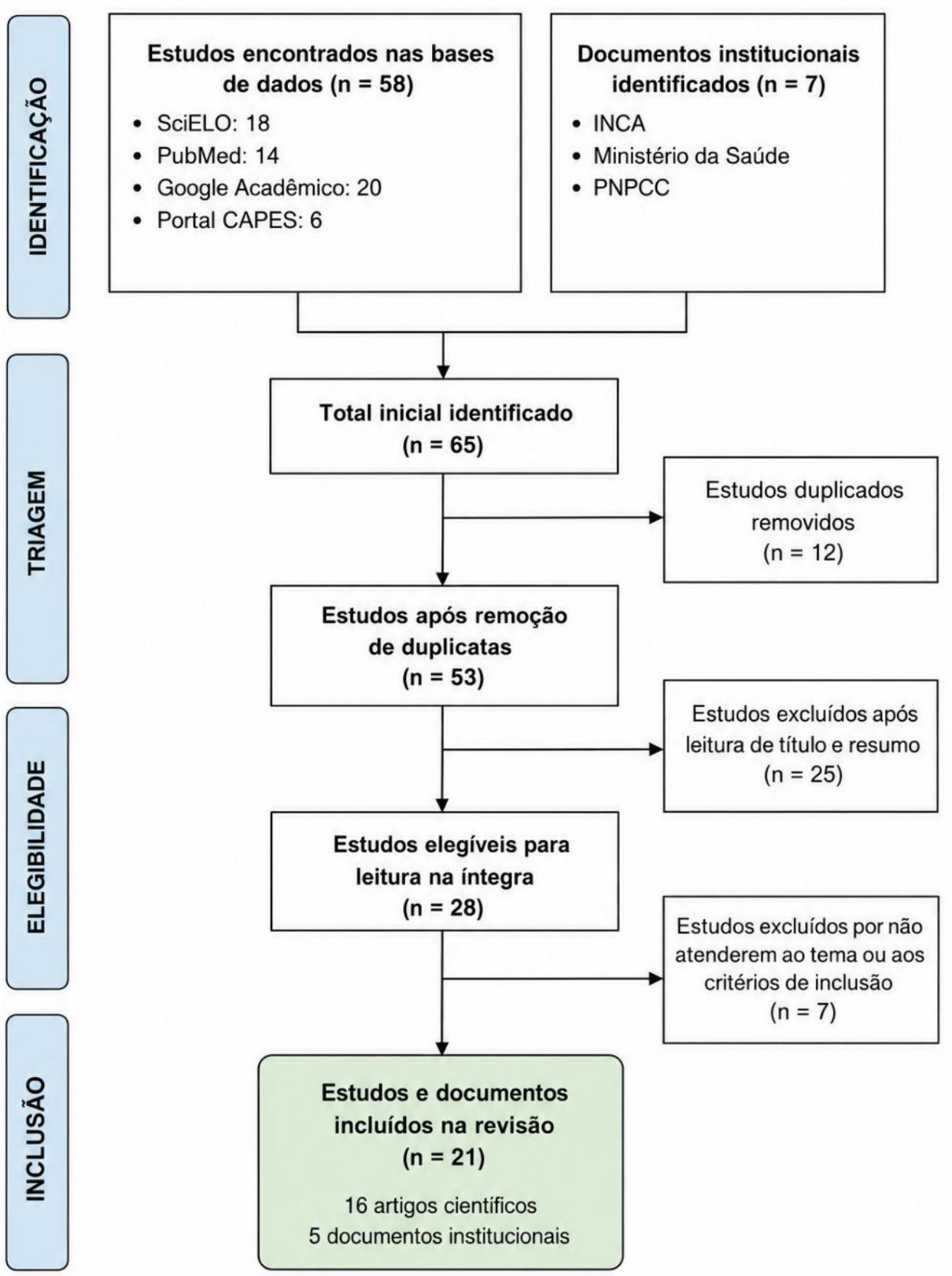
After applying the inclusion and exclusion criteria, the study selection process is... as presented in Figure 1. The inclusion criteria selected 21 studies, in addition to... Technical reports and official guidelines relevant to the Brazilian context, published between 2006 and 2026, which directly addressed carcinomas. Exclusion criteria included... Duplicate articles, incomplete studies, and publications outside the established period were disregarded. and those that did not have a direct relationship with the proposed theme.

Figure 1 – Study selection flowchart

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Table 1 – Characteristics of the studies and documents analyzed, according to title, authors, Year, objective and results, 2026.

Author(s)	Year	Title	Objective	Results/Conclusion
JÁCOME *et al.*	2024	Artificial intelligence in tracking and prostate cancer diagnosis: an integrative review	To analyze the role of AI in the screening and diagnosis of prostate cancer.	AI improves diagnostic accuracy and assists in early detection, complementing medical work.
ROCHA *et al.*	2024	Applications of artificial intelligence in the early diagnosis of urological neoplasms.	To evaluate the use of AI in the early diagnosis of urological neoplasms.	AI algorithms increase They increase diagnostic sensitivity and reduce interobserver variability.
GONÇALVES *et al.*	*2024*	Machine learning applied to the analysis of prostate magnetic resonance imaging.	To investigate the performance of machine learning models in multiparametric RM analysis.	The models achieved accuracy greater than 85% in detecting clinically significant lesions.
BARBOSA *et al.*	*2024*	Artificial intelligence and tracking population-based prostate cancer in Brazil	Discussing AI applications in tracking population-based prostate cancer.	AI can expand the access to Tracking is possible, but it requires local validation and adequate infrastructure.
LIMA *et al.*	*2023*	Deep learning in the histopathological classification of prostate cancer.	Evaluate convolutional neural networks for Gleason classification.	Deep networks reached agreement with experienced pathologists (kappa > 0.80).
BOARETTO *et al.*	*2023*	AI-based CAD systems in prostate cancer diagnosis: a systematic review	Systematically review AI-based CAD systems.	CAD systems have demonstrated diagnostic performance comparable to that of radiologists.
SILVA *et al.*	*2023*	Application of artificial neural networks in predicting prostate cancer risk.	Develop an RNA model to predict the risk of prostate cancer.	The model presented an AUC of 0.89, higher than that of traditional nomograms.
OLIVEIRA *et al.*	*2023*	Artificial intelligence and PSA: new perspectives for tracking	Analyze the use of AI combined with PSA. in tracking.	The combination of AI + PSA reduced the number of unnecessary biopsies by up to 30%.
CAR *et al.*	*2022*	Artificial intelligence in prostate cancer screening: a systematic review	Systematically review the use of AI in prostate cancer screening.	AI has shown promise, but methodological heterogeneity limits its use. generalization.
PEREIRA *et al.*	2022	AI-based predictive models for cancer	Evaluating AI predictive models in Brazilian cohorts.	Local models performed better than

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		prostate in Brazilian populations		Imported models without adjustment.
FERREIRA *et al.*	*2022*	Radiomics and artificial intelligence in the diagnosis of prostate cancer.	To investigate the role of radiomics in relation to AI.	Radiomics + AI improved the characterization of PI-RADS 3 lesions.
MARTINS *et al.*	*2021*	Artificial intelligence applied to the interpretation of prostate biopsies.	Evaluating AI in the interpretation of digitized prostate biopsies.	Algorithms have helped in the detection of small tumor foci, reducing errors.
COSTA *et al.*	*2021*	Telemedicine and AI in prostate cancer screening in remote areas.	Discussing AI and telemedicine in tracking in remote areas.	Integration has made it possible to expand access and screening in underserved regions.
ALMEIDA *et al.*	2020	Use of machine learning algorithms in prostate cancer	Mapping machine learning applications in prostate cancer management.	ML applied to diagnosis, prognosis, and personalization of treatment.
SOUZA *et al.*	*2020*	Artificial intelligence and multiparametric magnetic resonance imaging of the prostate.	Evaluate AI applied to multiparametric MRI.	AI has improved the reproducibility of interpreting PI-RADS images.
RIBEIRO *et al.*	*2019*	Intelligent systems in support of urological diagnosis.	Review intelligent urological diagnostic support systems.	Decision support systems have demonstrated the potential to reduce diagnostic errors.
MENDES *et al.*	*2018*	Deep learning applied to urological oncology	To discuss applications of deep learning in urologic oncology.	Deep learning excelled in image classification and segmentation tasks.
NASCIMENTO *et al.*	2017	Computational intelligence in the early diagnosis of prostate cancer.	Analyze computational intelligence techniques applied to early diagnosis.	Hybrid techniques (ANN + fuzzy logic) have shown good performance in pilot studies.
BARBOSA *et al.*	*2016*	Bioinformatics and artificial intelligence in prostate cancer	Review the use of bioinformatics and AI in prostate cancer.	Omics + AI integration paves the way for precision medicine in prostate cancer.

4. DISCUSSION

Understanding carcinomas today requires not only knowledge of their...
clinical manifestations and their risk factors, but also the analysis of effective strategies for Prevention, early diagnosis, and treatment. Carcinomas represent a growing challenge. for public health, requiring the integration of policies and care practices aimed at detection. Early and comprehensive cancer care.

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According to the Ministry of Health (BRAZIL, 2022), the PNPCC aims to To structure a comprehensive care network for people with chronic diseases, focusing on diagnosis. Early and timely access to treatment. This guideline reinforces the importance of strategies preventive measures and the continuous improvement of diagnostic protocols, considering the different Types of carcinomas and their clinical specificities.

Cancer, especially carcinomas, represents one of the greatest public health challenges. of the 21st century, with direct repercussions on morbidity, mortality, and the quality of life of the population. In this context, it is one of the most prevalent diseases at all ages, characterized by uncontrolled growth of cells with the potential for invasion and metastasis (BOARETTO *et* al., 2023).

According to the National Cancer Institute (INCA, 2023), 704,000 cases are expected. New cancer cases are projected for the three-year period 2023–2025, of which 483,000 are expected when skin cancers are excluded. non-melanoma. Among the most common types is female breast cancer (73 thousand). cases), prostate cancer (71,000), colon and rectal cancer (45,000), lung cancer (32,000), stomach cancer (21 thousand) and cervical cancer (17 thousand).

These data demonstrate the magnitude of carcinomas in Brazil and reinforce the need for preventive actions and public policies focused on health education, screening, and Early diagnosis, especially in regions with lower human development indices. Cancer control involves an ongoing set of actions that include prevention and detection. Early intervention and organization of health services are essential to reducing the burden of disease in population (INCA, 2023).

Furthermore, significant regional inequalities can be observed in the country. While the South and Southeast regions exhibit epidemiological patterns more associated with factors In terms of lifestyle, the North and Northeast regions face greater challenges in accessing services. health, which directly impacts early detection and mortality rates (ROCHA *et* al., 2024). These inequalities reflect socioeconomic and structural differences that influence the Incidence and mortality profile for cancer in Brazil (INCA, 2023).

The epidemiological profile also differs between men and women. The literature points out What biological, hormonal, and behavioral factors contribute to the variation in cancer types? more incidents among the sexes, highlighting the need for specific strategies. Tracking and prevention (BOARETTO *et* al., 2023). Strengthening education programs In healthcare, encouraging preventive screenings and the use of innovative technologies can... contribute significantly to the tracking and early detection of cases. Diagnosis Early intervention is directly associated with reduced harm, greater therapeutic efficacy, and better outcomes.

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patient prognosis, in addition to positively impacting quality of life (BOARETTO *et* al., 2023). In this way, such measures are fundamental to reducing the social, economic and impacts. Human cancer cases and promote greater efficiency in the management of public health services.

According to INCA (2023), among the most frequent carcinomas in Brazil, the following stand out: Breast, non-melanoma skin, and prostate cancer. Each of these types presents its own characteristics. Distinct epidemiological patterns and require specific prevention and diagnostic approaches.

According to the National Cancer Institute (INCA, 2026), an estimated 781 thousand new cancer cases per year in Brazil in the three-year period 2026–2028, of which approximately 518 one thousand cases, when non-melanoma skin cancers are excluded. Among men, the most common types are: The most common cancers will be prostate, colon and rectal, and lung cancer; among women, the following stand out. Breast, colon and rectal, and cervical cancers. Non-melanoma skin cancer remains the... more frequent in both sexes, highlighting the magnitude of these neoplasms as a problem. public health.

Breast cancer is a significant public health problem, being one of the Neoplasms are the most common among women. The progression of the disease presents variations. significant changes depending on the stage at the time of diagnosis, which directly influences the prognosis and survival rates of patients (CAR et al., 2022). In this context, detection Early intervention plays a fundamental role, as it enables more effective therapeutic interventions and less invasive, contributing to a reduction in mortality (CAR et al., 2022). In addition, Studies highlight the relevance of tumor characterization for a better understanding of clinical behavior and for defining individualized therapeutic strategies (JÁCOME et al. al., 2024).

Basal cell carcinoma accounts for approximately 80% of non-streptococcal skin cancers. melanoma is strongly associated with chronic sun exposure, especially in regions such as neck and face (RULLI *et* al., 2025). According to the authors, basal cell carcinoma (BCC) is the most common cutaneous neoplasm, originating from the basal cells of the epidermis and presenting greater incidence in fair-skinned individuals exposed to the sun for extended periods.

In addition to exposure to ultraviolet radiation, other associated risk factors include age. advanced, history of sunburn, exposure to ionizing radiation, immunosuppression and genetic predisposition, as observed in nevoid basal cell carcinoma syndrome (RULLI *et* al., 2025). In this context, the Brazilian population, especially in regions with high levels of sunshine, faces increasing sun exposure, which is one of the main causes of skin carcinoma.

This type of cancer has a slow evolutionary course and rarely metastasizes; however,

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This does not diminish the need for treatment. Despite having a more indolent clinical course. When compared to melanoma, basal cell carcinoma has a high incidence and elevated rates of local recurrence, which entails a great aesthetic and functional impact on patients (RULLI *et* al., 2025; GONÇALVES *et* al., 2024).

Early diagnosis is crucial for achieving more favorable clinical outcomes. From this perspective, dermatoscopy and, when necessary, histopathological analysis are tools indispensable for diagnostic confirmation (RULLI *et* al., 2025). Such measures contribute to More effective management allows for a more favorable prognosis and better quality of life. life for affected patients.

Prostate cancer is currently one of the most common cancers among men. In Brazil, it is the second most common type of cancer among men, constituting a an important public health problem (BRAVO *et al.,* 2022). Furthermore, it exhibits behavior The clinical course is variable, and can progress slowly or aggressively, which reinforces the need for early diagnosis and treatment (PEREIRA *et* al., 2021).

The geographical distribution of the disease shows a strong influence of environmental factors and Dietary restrictions are more prevalent in developed countries. Studies indicate that populations People of East Asian descent who migrate to Western countries have a significantly increased risk of the disease. highlighting the role of environment and diet as determining factors (REIS *et al.,* 2006).

From a clinical standpoint, prostate cancer is often asymptomatic in its early stages. initial stages, which makes early detection difficult. When symptoms do appear, they are usually... related to urinary changes, such as dysuria and pollakiuria, which may progress to hematuria and pain. Bone involvement in more advanced cases (SANTOS *et* al., 2017). Early diagnosis is fundamental for To increase patient survival and quality of life. Digital rectal examination and antigen testing. Prostate-specific antigen (PSA) is one of the main screening methods. PSA is a marker. specific biological test for the prostate, but not exclusive to cancer, and may have limitations, the which makes it necessary to combine it with a physical examination for greater diagnostic accuracy (REIS *et al.,* 2006).

Treatment for prostate cancer varies depending on the clinical stage, age, and other factors. Patient conditions. The main therapeutic modalities include surgery, radiotherapy and Chemotherapy, in addition to hormonal therapies in advanced cases (SOUSA *et* al., 2019). It should be noted, Furthermore, it is important to consider the patient's quality of life and to avoid overtreatment in cases of indolent tumors (REIS *et* al., 2006).

Therefore, prostate cancer in contemporary men is a highly prevalent disease. prevalence and complexity, the approach to which requires the integration of prevention, screening,

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early diagnosis and individualized treatment, in addition to overcoming sociocultural barriers that
They hinder access to health services.

4.2 DIAGNOSIS AND THERAPEUTIC STRATEGIES

The fight against cancer in Brazil is guided by public policies that aim to guarantee...
Comprehensive care and equitable access to health services, in accordance with the principles of the
Unified Health System (SUS). These policies have historically evolved from actions
fragmented and sectoral approaches are being replaced by an articulated and regionalized approach, encompassing everything from...
prevention and early diagnosis, treatment, rehabilitation and palliative care (SILVA
et al., 2024).

The creation of the National Policy for Oncological Care (PNAO) in 2005 marked a
progress in consolidating a structured cancer care network. This policy
It introduced the concept of comprehensive care, coordinating actions for promotion, prevention, diagnosis,
treatment and rehabilitation at all levels of health care (SILVA *et* al., 2024).
Subsequently, the National Policy for the Prevention and Control of Cancer (PNPCC), established by
Ordinance No. 874/2013 replaced the PNAO and consolidated more comprehensive guidelines aimed at
integration of services and regionalization of cancer care, stimulating development.
of state plans to combat cancer (BRAZIL, 2013). According to Silva *et al.* (2024), the
PNPCC seeks to ensure a coordinated response between levels of government, promoting actions
surveillance, screening, early diagnosis and timely treatment, in addition to structuring the
Oncology Care Networks (RAO). This network aims to organize the flow of patients.
and to strengthen the coordination between levels of care, especially between primary care and the
specialized.

However, the implementation of these policies faces structural and regional challenges.
According to Silva *et al.* (2024), only a minority of the states analyzed presented plans for
oncological care compatible with the guidelines of Ordinance No. 874/2013, which reflects weaknesses.
in the planning, monitoring, and financing of cancer care. These problems
These problems are exacerbated by regional inequality in the provision of services, which is concentrated mainly in...
The South and Southeast regions, which compromises timely access to diagnosis and treatment.

Complementing this analysis, Silva *et al.* (2024) highlight the underfunding of the Unified Health
System (SUS), the scarcity of specialized professionals, and the low coverage of
Tracking programs remain significant barriers to policy effectiveness.
Oncological. According to the authors, compliance with the legislation that mandates the start of...

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Treatment within 60 days of a confirmed diagnosis of malignant neoplasm is not fully guaranteed, which reflects logistical and management deficiencies in several Brazilian states (BRAZIL, (2012). These findings demonstrate that, although Brazil has a regulatory framework Solid, the effectiveness of public oncology policies depends on strengthening management. regional, improving epidemiological surveillance and expanding capacity Technological and healthcare-related. Such measures are fundamental for the SUS (Brazilian Public Health System) to offer a line of... continuous and humanized care, guaranteeing the principles of comprehensiveness and universality in treatment of malignant neoplasms.

4.3 National Campaigns

The national campaigns promoted by the Ministry of Health (MS), through INCA, They play a key role in prevention, early diagnosis and awareness. about the different types of cancer. These actions are focused on health education and mobilization. social and the reduction of risk factors associated with the disease, constituting essential strategies in tackling carcinomas in the country.

Among the most important campaigns is Pink October, dedicated to raising awareness. Regarding breast cancer, the most common cancer among Brazilian women. According to the Institute National Cancer Day (2026), the movement seeks to encourage screening and early diagnosis. through clinical examination and mammography, in addition to promoting self-care and access to health services.

In the context of men's health, Movember is another important initiative. focused on the prevention and detection of prostate cancer, the most common type of cancer among men in Brazil. Brazil. According to the National Cancer Institute (2026), the campaign aims to demystify the examination. preventive measures include promoting comprehensive health care and disseminating information about risk factors. factors such as family history and advanced age have contributed to increasing adherence to consultations and early diagnosis positively impact survival rates.

Other complementary campaigns, such as Green July, which addresses head and neck cancer, and Neck cancer awareness and the Blue March campaign, focused on colorectal cancer, reinforce the importance of education. continued and regular clinical follow-up. According to the National Cancer Institute (2026), These initiatives aim to raise public awareness about healthy lifestyle habits, such as cessation. Smoking cessation, a balanced diet, and physical activity are measures that contribute to... for cancer prevention.

Furthermore, campaigns such as World No Tobacco Day (May 31) and National Day of

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The campaign against smoking (August 29th) is also highlighted, as it warns about the harm caused by smoking. Smoking is one of the main risk factors for the development of various types of cancer (NATIONAL CANCER INSTITUTE, 2026).

Thus, it can be observed that the campaigns developed by the National Cancer Institute are Important tools for promoting public health and tackling cancer. Through
Among these, it is possible to expand access to information, reduce stigma, and strengthen policies. Cancer prevention, early diagnosis, and treatment in Brazil.

4.4 POTENTIAL OF ARTIFICIAL INTELLIGENCE.

Artificial intelligence (AI) has proven to be an indispensable ally in the evolution of contemporary medicine, especially in the field of oncology. Through systems capable of
In order to process large volumes of clinical, laboratory, and imaging data, AI has been improving the diagnosis, treatment and follow-up of patients with carcinomas. According to (AMARO JUNIOR *et* al., 2024), AI applied to healthcare is already a reality, with the potential to transforming diagnostic processes and medical decision-making, although its adoption should to occur in an ethical, regulated manner, backed by scientific evidence.

In the oncology context, the creation of intelligent databases integrating images Histopathological, laboratory results, and genetic data can allow for comparison.
Automated sampling between different tests and patients. This type of structure allows to identify subtle patterns that indicate the presence of carcinomas in early stages, facilitating the early diagnosis and personalized therapeutic planning. According to Menezes *et al.* (2023), the Databases are essential for the efficient storage, organization, and retrieval of data. information, and the integration of AI into these systems allows for faster, more predictive analyses and precise, reducing human error and improving the quality of results.

Furthermore, AI applied to clinical data management is capable of achieving optimization. The semantics of queries, that is, understanding the intention of healthcare professionals when seeking information. information and structuring of data to facilitate the retrieval of relevant information. (MENEZES *et* al., 2023). This process, when applied to oncology systems, enables the Direct comparison between imaging exams and previous biopsies, allowing for follow-up. more precise and individualized assessment of tumor progression.

AI-based databases also enable the creation of national repositories. of clinical samples, connecting hospitals, laboratories, and research centers. This favors the development of deep learning models capable of recognizing patterns of

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malignancy and suggest differential diagnoses in real time. (AMARO JUNIOR *et al.,* 2024)
They highlight that AI has the potential to analyze image and genomic data simultaneously.
by providing support for clinical decision-making and increasing the accuracy rate in cancer diagnoses,
especially in carcinomas, whose heterogeneity requires a multidimensional analysis.

The union between artificial intelligence and databases represents a strategic advancement in
combating carcinomas by promoting faster diagnoses, effective treatments, and management.
More integrated and secure medical data. However, the implementation of these technologies must
to follow ethical and privacy principles, guaranteeing the confidentiality of information.
patients and the reliability of the results generated by the algorithms.

FINAL CONSIDERATIONS

Cancer, particularly carcinomas, is one of the greatest public health challenges worldwide.
And in Brazil, due to their high incidence and high mortality rates, carcinomas, which
They originate in epithelial cells and affect organs such as the breast, skin, prostate, and lung.
They represent the majority of diagnosed cases. Given this scenario, early detection is
This is fundamental, as early diagnosis significantly increases the chances of a cure.
and reduces costs for healthcare services. This work seeks to analyze the strategies that can
to mitigate the social, economic, and human impacts of these cancers in Brazil, especially
considering regional inequalities in access to diagnosis and treatment.

The relevance of this study lies in the critical analysis of the PNPCC, which seeks to structure a network.
comprehensive care, with a focus on early diagnosis. The research examines the structural barriers and
regional factors that hinder the full effectiveness of these policies, such as underfunding and...
concentration of services in the South and Southeast regions. Furthermore, the importance of integration
Innovative technologies, such as AI, contribute to improving early diagnosis, as it has...
potential to streamline the analysis of tests, identify subtle patterns of malignancy, and offer
Supporting clinical decisions, making processes faster and more accurate.

Therefore, this study offers a valuable contribution by analyzing how the combination of
preventive strategies (including encouraging national campaigns, such as Pink October and
Blue November (and awareness about risk factors) and the strategic use of AI can
To improve the early detection of carcinomas, the research aims to propose complementary measures that...
promote comprehensive and equitable cancer care within the Brazilian Unified Health System (SUS), contributing to ensuring that...
The system should offer a continuous and humanized line of care and, consequently, have an impact on...
a reduction of the 704,000 new cancer cases expected for the three-year period 2023-2025, excluding those

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Non-melanoma skin cancers.

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