Revista ARACÊ
ISSN: 2358-2472

DOOR-TO-TREATMENT TIME IN WOMEN WITH GYNECOLOGICAL AND BREAST NEOPLASMS

https://doi.org/10.56238/arev7n4-309

Submitted on: 03/30/2025 **Publication date:** 04/30/2025

Vivianne Soares Domingos da Silva[1], Mariana Boulitreau Siqueira Campos Barros[2], Viviane de Araújo Gouveia[3], Gabrielly Laís de Andrade Souza[4], Glícia Maria de Oliveira[5], Ellen Cristina Barbosa dos Santos[6], Augusto Cesar Barreto Neto[7] and Maria da Conceição Cavalcanti de Lira[8]

ABSTRACT

Introduction: Cancer is the main public health problem in the world, affecting both men and women. Among the specific cancers of the female genitourinary system, we have cancer of the vulva, vagina, cervix, endometrium and ovary. In addition, there is a predominance of 99% of breast cancer cases in women. Several factors influence a good prognosis of the disease, including the time between diagnosis and treatment. **Objective:** To analyze the post-treatment time of women with female cancers treated at a university hospital in Recife. **Methodology:** This is an ecological, retrospective and descriptive study, with a quantitative approach. Sampling is non-probabilistic for convenience and census-

[1]Undergraduate student in Nursing.
Federal University of Pernambuco, Academic Center of Vitória.
Email: vivianne.sdsilva@ufpe.br
ORCID: https://orcid.org/0000-0002-7082-2398
[2]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
Email: mariana.cbarros@ufpe.br
ORCID: https://orcid.org/0000-0002-3576-2369
[3]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
E-mail: viviane.agouveia@ufpe.br
ORCID: https://orcid.org/0000-0002-7233-5411
[4]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
E-mail: gabrielly.andrade@ufpe.br
ORCID: https://orcid.org/0000-0003-2078-9574
[5]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
Email: glicia.maria@ufpe.br
ORCID: https://orcid.org/0000-0002-4415-5931
[6]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
E-mail: ellen.santos@ufpe.br
ORCID: https://orcid.org/0000-0003-3377-913X
[7]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
E-mail: augusto.barretont@ufpe.br
ORCID: https://orcid.org/0009-0007-3608-2780
[8]Doctor.
Federal University of Pernambuco, Academic Center of Vitória.
E-mail: maria.cclira@ufpe.br
ORCID: https://orcid.org/0000-0001-5788-6728

Revista ARACÊ
ISSN: 2358-2472

based. Data from the RHC of HC/UFPE/EBSERH were used, in the period from January 2017 to December 2021, the final sample was composed of 774 records. The analysis was based on descriptive statistical techniques, such as absolute and relative frequencies, means, and standard deviation. **Results and Discussion:** The door-to-treatment time varied significantly among the different types of cancer, being longer for patients with vulvar cancer and shorter for those with ovarian cancer. **Conclusion:** Strategies such as the awareness of professionals to complete the medical records and the use of electronic medical records are fundamental. The identification of patients with long waiting times, through the door-to-treatment time, reinforces the need to optimize screening, speed up diagnosis, and ensure faster treatment initiation to reduce the morbidity and mortality associated with cancer.

Keywords: Time to Treatment. Epidemiology. Neoplasms. Female Genitals. Breast Neoplasms. Oncology.

Revista ARACÊ
ISSN: 2358-2472

INTRODUCTION

Cancer is a group with more than a hundred diseases, characterized by the disordered proliferation of cells with mutations and invasion of adjacent tissues and organs. Genetically altered cells generate malignant tumors, affecting the physiological regulation of the body and bringing a diversity of signs and symptoms. (INCA, 2020)

Cancer is the leading public health problem in the world and the second leading cause of death in the world, behind coronary artery disease, and is expected to become the leading cause by 2060 (Schwartz, 2024). Cancer incidence and mortality have been increasing worldwide, partly due to aging, population growth, as well as changes in the distribution and prevalence of cancer risk factors, especially those associated with socioeconomic development. (Capelli et al., 2023)

Genders and biological sex play important roles in cancer development. Studies show that gender inequalities also contribute to the increased risk of some cancer groups in women, affecting access to prevention, detection, and treatment of the disease (Haupt et al., 2021). Among the cancers that affect women, there are those specific to the female parent system, which are vulvar cancer, vaginal cancer, cervical cancer, endometrial or uterine body cancer, unspecified uterine cancer and ovarian cancer. In addition, a predominant, but not exclusive, cancer of women is breast cancer. (INCA, 2020)

The causes of cancer are multifactorial and include, in addition to genetics, environmental and behavioral factors. Studies show that biological, clinical, and therapeutic aspects influence a more favorable prognosis, resulting in a better response to treatment and a greater chance of survival. Early diagnosis, staging of the disease, the patient's general status, the door-to-treatment time, and adequate access to treatment are among the main determinants of better outcomes. (Brito et al., 2024)

The door-to-treatment time corresponds to the interval between the patient's first contact with the health service and the beginning of cancer treatment. Its measurement can occur in different ways, considering, for example, the time between the first consultation and the start of treatment or between the conclusive diagnosis and the start of therapy. It is a crucial factor in patient survival, impacting therapy and prognosis. (Sobral et al., 2022)

Federal Law No. 12,732, of November 22, 2012, popularly known as "the 60-day Law", determines the start of cancer treatment within 60 days after the diagnosis is confirmed. (Brazil, 2012) However, reducing this time is still one of the main challenges of

Revista ARACÊ
ISSN: 2358-2472

national public health, since several issues permeate, such as institutional infrastructure, access to diagnostic tests and the insufficient number of specialized professionals according to demand. (Brazil et al., 2025)

Cancer surveillance, within the actions to control non-communicable diseases, is based on morbidity and mortality data obtained from the Population-Based Cancer Registries (RCBP), Hospital Cancer Registries (RHC), Cancer Information System (SISCAN), Hospital Information System (SIH/SUS) and Mortality Information System (SIM) of the Department of Informatics of the Unified Health System (DATASUS). providing subsidies for managers to monitor and organize actions for cancer control, as well as directing cancer research. (INCA, 2023)

In Brazil, the regulation of the RHC was instituted through Ordinance No. 741/2005, with the objective of standardizing and stratifying data on cancer patients in the country (Brasil, 2005). In addition, Ordinance No. 1,399/2019, which redefines the National Policy for the Prevention and Control of Cancer in the SUS, highlights the strengthening of early detection, the guarantee of timely and full-time access to adequate treatment, the continuous monitoring of cases, and the encouragement of research in the area. (Brazil, 2019)

Therefore, it is pertinent to understand the panorama of the port-to-treatment time of cancer patients in health services, analyzing the efficiency of the care flow and identifying possible gaps in care. In addition, investigations are necessary to manage strategies, generate health indicators, and provide notions of subsidies for public policies and improvement of institutional protocols.

Therefore, the study aims to analyze the door-to-treatment time of women with female cancers treated at a university hospital in Recife, considering both the general analysis and the stratification by staging.

METHODOLOGY

STUDY DESIGN

The study is an ecological, retrospective and descriptive research, with a quantitative approach.

Revista ARACÊ
ISSN: 2358-2472

CASUISTRY

The data were made available by the Hospital Cancer Registry sector of the HU available in the SISRHC software, a tool for recording and processing the files.

The sample is composed of female biological patients, diagnosed with breast, vulva, vagina, uterus, endometrial and ovarian cancer, followed up at a University Hospital (HU) in Recife from January 2017 to December 2021. Sampling is non-probabilistic for convenience and census-based. We obtained a total of 1006 records in the initial sample. Patients who started treatment at another institution were excluded from the sample; diagnosis of uterine cancer not specified; patients who refused or abandoned treatment; duplicate or inconsistent records; male patients with breast cancer; patients in terminal or palliative stage at the time of diagnosis and/or death before the start of treatment. The final sample consisted of 774 records notified in the Hospital Cancer Registry database.

Initially, the study considered unspecified uterine cancer as one of the categories analyzed. However, this classification presented only two cases in a five-year period, which makes it impossible to obtain representative descriptive measures.

DATA COLLECTION

A self-developed form was used as a data collection instrument, previously validated based on the following variables: age, gender, date of first consultation, date of diagnosis, location of the primary tumor, staging, date of first treatment, reason for not undergoing treatment at the hospital, date of death, and underlying cause of death. The instrument was based on the RHC Tumor Registration Form.

The technique used was manual collection to extract the relevant information. Subsequently, the data were organized in an electronic spreadsheet for subsequent tabulation and analysis.

STRATIFICATION OF VARIABLES

The age variable was categorized in years. The type of cancer was categorized according to the International Classification of Diseases (ICD), a standardized system of the World Health Organization (WHO) to classify pathologies. Thus, breast cancer (ICD C50), vulvar cancer (ICD C51), vaginal cancer (ICD C52), cervical cancer (ICD C53), endometrial or uterine body cancer (ICD C54) and ovarian cancer (ICD C56) were described. (WHO, 2013)

Revista ARACÊ
ISSN: 2358-2472

Staging was classified according to the FIGO system (International Federation of Gynecology and Obstetrics), scored by progressive numerical stages (I, II, III and IV), according to tumor extension and progression. Stage I refers to the tumor located in the organ of origin. In stage II, there is tumor invasion into nearby structures. In stage III, there is a spread at the regional level, such as lymph nodes. In stage IV, the tumor is advanced, progressing to metastasis of distant organs.

The post-treatment time was categorized in days, analyzing the interval between the date of diagnosis and the date of treatment initiation.

TABULATION AND ANALYSIS

Tabulation was performed using the Google Sheets software, in which data were inserted, organized, and the corresponding tables were prepared, using descriptive statistical techniques, such as absolute and relative frequencies, means, and standard deviation. To ensure the reliability of the data, double checking of the information entered was performed, minimizing possible transcription errors. The graphs were generated using the Google Colab software, a tool that allows you to run Python code directly in the browser, using scripts programmed for data analysis.

ETHICAL ASPECTS

The article is part of the research entitled "Epidemiological Profile of Cancer Cases in the State of Pernambuco Registered at the Hospital das Clínicas of UFPE". The study was conducted and approved by the Ethics Committee for Research with Human Beings of the Hospital das Clínicas of the Federal University of Pernambuco (HC/EBSERH/UFPE) (CAAE: 73432123.4.0000.8807), under opinion 6.280.044.

The confidentiality of the participants' information was strictly respected, ensuring the confidentiality of the data, according to resolution 466/12 of the National Health Council. The costs of this research were financed exclusively by the researcher himself, without ties to funding agencies or external institutions.

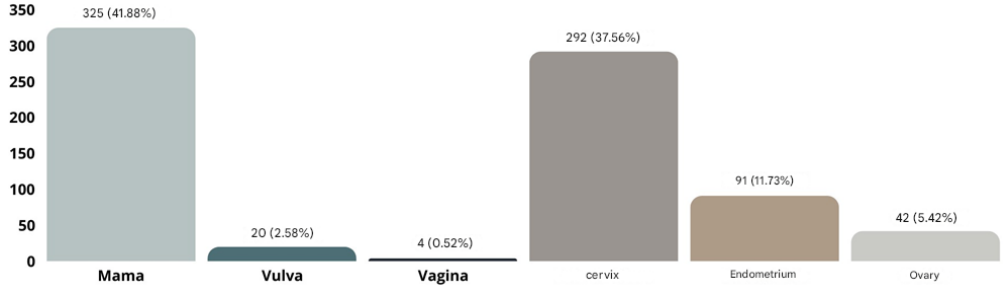
RESULTS

The study totaled 774 cases, among which breast cancer was the most prevalent, with 325 cases, followed by cervical cancer, with 292 cases, as shown in Figure 1. Endometrial cancer had a significant number of cases, 91. Ovarian cancer revealed a total

Revista ARACÊ
ISSN: 2358-2472

of 42 cases. However, vulvar and vaginal cancers did not have a significant sample size with 20 and 4 cases, respectively.

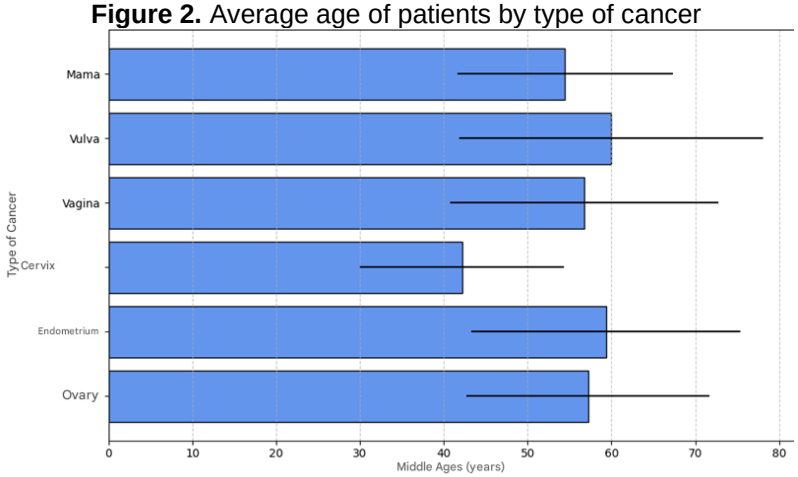
Figure 1. Absolute and relative frequency of breast and gynecological cancers



Source: Prepared by the authors based on data from RHC/HC/EBSERH/UFPE, 2025

The mean age of the patients varied among the different types of cancer. For breast cancer, the mean age was 54.47 years (SD±12.82), while for vulvar cancer it was 59.95 years (SD±18.12). In cases of vaginal cancer, the ages recorded were 42, 68, 44 and 73 years, resulting in a mean of 56.75 years (SD±16.03). Cervical cancer had a mean age of 42.17 years (SD±12.17), and endometrial cancer, 59.34 years (SD±16.03). Ovarian cancer, on the other hand, had a mean age of 57.24 years (SD±14.50). Thus, it is observed that female cancers were prevalent in the middle age group.

Figure 2. Average age of patients by type of cancer



Source: Prepared by the authors based on data from RHC/HC/EBSERH/UFPE, 2025

There was a predominance of self-declared brown patients in all types of gynecological cancer analyzed. In breast cancer, most patients were brown (62.77%), followed by white (26.77%) and black (7.38%). In cervical cancer, the trend continued, with

Revista ARACÊ
ISSN: 2358-2472

66.44% brown, 21.58% white and 8.90% black. In endometrial cancer, 65.93% of the patients also declared themselves brown, while 26.37% were white. Ovarian cancer had 69.05% of brown patients, followed by 16.67% of white patients. For vulvar cancer, 55% were brown and 40% white. Notably, in vaginal cancer, 100% of patients were classified as brown. The indigenous race was present in only two cases: one of breast cancer and the other of cervical cancer. The yellow race was identified in only two cases of cervical cancer (0.68%). The proportion of records with missing information ranged from 2.05% to 7.14% in the different types of cancer, indicating gaps in the completion of racial data in the medical records analyzed.

Table 1. Distribution of race/color according to cancer type

Breast cancer		
Race	**N**	**%**
White	87	26,77
Black	24	7,38
Brown	204	62,77
Indigenous	1	0,31
No information	9	2,77
Vulvar cancer		
Race	**N**	**%**
White	8	40
Brown	11	55
No information	1	5
Vagina cancer		
Race	**N**	**%**
Brown	4	100
Cervical cancer		
Race	**N**	**%**
White	63	21,58
Black	26	8,90
Yellow	2	0,68

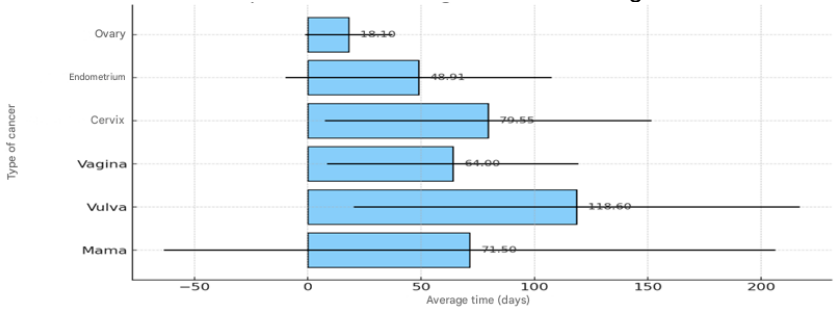
Revista ARACÊ
ISSN: 2358-2472

Brown	194	66,44
Indigenous	1	0,34
No information	6	2,05
Endometrial cancer		
Race	N	%
White	24	26,37
Black	3	3,30
Brown	60	65,93
No information	4	4,40
Ovarian cancer		
Race	**N**	**%**
White	7	16,67
Black	3	7,14
Brown	29	69,05
No information	3	7,14

Source: Prepared by the authors based on data from RHC/HC/EBSERH/UFPE, 2025

The post-treatment time was initially analyzed using the mean number of days between diagnosis and the start of treatment. For breast cancer cases, the mean time was 71.50 days (SD±134.89). Patients with vulvar cancer had a mean of 118.6 days (SD±98.35), while those with vaginal cancer had a mean time of 64 days (SD±55.39). For cervical cancer, the mean time was 79.55 (SD±71.97). Endometrial cancer registered a mean of 48.91 days (SD±58.76). For ovarian cancer, the mean time was 18.10 days (SD±19.31). (Figure 3)

Figure 3. Mean time and standard deviation of time between diagnosis and start of treatment



Source: Prepared by the authors based on data from RHC/HC/EBSERH/UFPE, 2025

Revista ARACÊ
ISSN: 2358-2472

The analysis according to the staging of the disease, presented in Table 1, was performed using the mean and standard deviation technique for the groups, with the exception of vulvar cancer and unspecified uterine cancer, which have a small sample size. In these cases, we use the minimum and maximum number of days of the door-to-treatment time of each staging.

Table 2. Door-to-treatment time according to cancer staging

Breast cancer			
Staging	**N**	**Average Days**	**Standard deviation**
Stage I	22	64,82	74,99
Stage II	57	61,41	76,75
Stage III	69	45,30	78,04
Stage IV	25	38,50	43,32
No information*	152	-	-
Vulvar cancer			
Staging	**N**	**Minimum Days**	**Maximum Days**
Stage I	2	56,5	68,58
Stage II	1	166	-
Stage III	3	28	95
Stage IV	1	118	-
No information*	13	-	-
Cervical cancer			
Staging	**N**	**Average Days**	**Standard deviation**
Stage I	5	86	72,01
Stage II	16	92,4	58,62
Stage III	35	79,86	52,80
Stage IV	22	61,95	68,01
No information*	214	-	-
Endometrial cancer			
Staging	**N**	**Average days**	**Standard deviation**
Stage I	10	46,63	46,21

Revista ARACÊ
ISSN: 2358-2472

Stage II	9	58,71	57,09
Stage III	16	39,92	48,00
Stage IV	6	50,67	23,33
No information*	50	-	-

Ovarian cancer

Staging	**N**	**Average days**	**Standard deviation**
Stage I	4	24,50	11,15
Stage III	8	29,50	11,82
Stage IV	12	22,36	34,43
No information*	18	-	-

*The database did not contain information regarding staging. **Source:** Prepared by the authors based on data from RHC/HC/EBSERH/UFPE, 2025

It was not possible to present the analysis regarding vaginal cancer, due to the lack of information on the staging of the four cases registered.

DISCUSSION

Regarding the mean age of the patients, in all types of neoplasms, with the exception of vulvar cancer, the highest prevalence occurred in the age group corresponding to middle age (40 to 59 years), according to the age categories usually adopted in epidemiology. Vulvar cancer was more prevalent among the elderly population. These findings are in agreement with the data available in the literature. (Siegel et al., 2022)

According to Cancer Research UK (2025), more than 40% of vulvar cancer cases occur in women aged 75 and over. In addition, elderly patients often have comorbidities such as hypertension, obesity, and diabetes, which can influence staging and treatment.

The predominance of self-declared brown patients in the different types of gynecological cancer observed in this study is in line with the demographic profile of the Brazilian population, especially in the regions with the highest representation of this racial classification. However, it is important to highlight that color or race, as a social marker, may reflect structural inequalities in access to health services, early diagnosis, and timely treatment. Studies indicate that black and brown women, often inserted in contexts of greater socioeconomic vulnerability, face more significant barriers in the cancer care

Revista ARACÊ
ISSN: 2358-2472

network, which can have a negative impact on clinical outcomes (Gaddy et al., 2022). The underrepresentation of white and black women in some categories may also be associated with difficulties in adequately recording the race/color variable in hospital systems.

Research published in the Journal of Racial and Ethnic Health Disparities showed that black women had a 44% higher risk of cervical cancer compared to white women, in addition to a 27% higher mortality rate. These disparities are attributed to factors such as lower coverage of screening programs, limited access to quality treatment, and unfavorable socioeconomic conditions. (De Melo et. al., 2023)

The high proportion of records with "no information" or absent race in certain types of cancer reinforces the need for improvement in data collection and systematization in health services. The non-notification of fundamental variables, such as race/color, compromises the epidemiological analysis and hinders the formulation of equitable public policies. In addition, it prevents the identification of possible racial disparities in patients' door-to-treatment time.

The descriptive analysis of the time to treatment showed great variability in the times to treatment, which may indicate differences in access to treatment according to the type of cancer. Breast cancer, with an average time of 71.50 days, shows a delay in the implementation of therapy. A retrospective cohort study with 540,529 patients, published in INCA, revealed a median of 63 days between diagnosis and start of treatment in this cancer, with an interquartile range of 36 to 109 days, indicating that a significant portion of patients do not start treatment within the recommended period (Medeiros et al., 2022). Delay in treatment can be related to several factors, including barriers in accessing health services, overload of the public system, and the need for complementary tests for therapeutic definition (Ferreira et al., 2020).

Vulvar cancer had the longest duration, with an overall average of 118.6 days. Some factors may be related to this difference, such as the need for complementary tests to define the therapy, since vulvar cancer often manifests as chronic lesions, and can be confused with dermatological diseases. In addition, this type of neoplasm is less studied compared to other more prevalent cancers. Generally, treatment is indicated for surgery, sometimes with associated neoadjuvant therapy, which prolongs the start of treatment due to factors intrinsic to the non-emergent surgical procedure. (Tan et al., 2019) Vaginal cancer had a mean port-treatment time of 64 days. Studies show that vaginal cancer is a rare neoplasm, corresponding to less than 2% of gynecological tumors (Siegel et al.,

Revista ARACÊ
ISSN: 2358-2472

2022), which can contribute to delays in diagnosis. The absence of specific screening programs for this type of cancer can hinder its early detection, making cases more advanced and complex at the time of treatment (Kulkarni et al., 2022).

However, even in the face of these factors, most patients started treatment within a reasonable period of time.

The mean duration of cervical cancer was 79.55 days. The relatively long time to cervical cancer may be related to the need for multiple diagnostic steps, such as colposcopy, biopsy, and imaging tests to define staging and treatment (Corrêa et al., 2022). The strengthening of primary care, the expansion of screening with Pap smears, and the optimization of the care flow can contribute to reducing delays and improving clinical outcomes.

Endometrial cancer had a mean time between diagnosis and treatment of 48.91 days. The shorter average time, compared to other types of cancer analyzed, may be associated with the fact that most cases are diagnosed in early stages, when symptoms, such as abnormal uterine bleeding, lead patients to seek care early (Koh et al., 2018).

Ovarian cancer is the most aggressive and with the worst prognosis in the study of this study, requiring rapid intervention, in which it often presents in more advanced stages and with symptoms. Studies indicate that, although delays in the start of treatment are worrisome, the biological aggressiveness of the tumor may have a greater impact on survival than the door-to-treatment time itself (Zhao et al., 2024). Therefore, the reduced port-to-treatment time in this study may be associated with aggressiveness in the diagnosis and the need for immediate surgical or neoadjuvant intervention.

All cancers had a high standard deviation due to the characteristics of the sample. Regarding the ideal time recommended by legislation, only endometrial and ovarian neoplasms obtained averages within 60 days. Vaginal cancer came close, but its sample size was low, with fewer interferences and variations. Therefore, more advanced cases and less incident neoplasms tend to require more detailed evaluations and multidisciplinary therapeutic planning, which may justify longer times in some scenarios.

The absence of information in the Hospital Cancer Registry (RHC) presents a challenge for epidemiological analysis and for the definition of disease control strategies. This underreporting negatively affects hospital management and, consequently, public health policies, compromising the quality of research and making it difficult to assess the effectiveness of therapeutic conducts.

Revista ARACÊ
ISSN: 2358-2472

The progressive replacement of manual medical records by computerized systems has demonstrated improvements in the quality of health records, especially with regard to complete data, standardization, and availability of data. In the present study, the recurrent absence of relevant information can be attributed, in part, to the use of physical medical records, which are more vulnerable to filling out failures, illegibility, and document loss. Electronic systems, on the other hand, offer greater accuracy and traceability, in addition to requiring the mandatory completion of key variables, which contributes to the construction of more robust and consistent databases, to support both epidemiological analyses and the formulation of public policies in oncology. (Asih, Indrayadi, 2024)

CONCLUSION

The main findings obtained demonstrate that the treatment time-varied significantly among the different types of cancer, being longer for patients with vulvar cancer and shorter for those with ovarian cancer. Only endometrial and ovarian cancers had a mean rate of treatment initiation time below 60 days after diagnostic confirmation, according to Brazilian legislation. Certain types of cancer had reduced samples, which indicates the importance of extending the analysis period in future research.

Therefore, strategies for filling out and reporting patient information, as well as continuous training of the professionals responsible for the registry are essential. The identification of patients with long waiting times, through the door-to-treatment time, reinforces the need to optimize screening, speed up diagnosis, and ensure faster treatment initiation to reduce the morbidity and mortality associated with cancer.

Revista ARACÊ
ISSN: 2358-2472

REFERENCES

1. Brasil. (2012). Lei n.º 12.732, de 22 de novembro de 2012. Dispõe sobre o primeiro tratamento de paciente com neoplasia maligna comprovada e estabelece prazo para seu início no âmbito do Sistema Único de Saúde - SUS. Diário Oficial da União, seção 1. Retrieved February 27, 2025, from http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12732.htm

2. Brasil. Ministério da Saúde. (2005). Portaria nº 741, de 19 de dezembro de 2005. Institui a Rede Nacional de Câncer (RHC). Diário Oficial da União, seção 1. Retrieved March 15, 2025, from https://bvsms.saude.gov.br/bvs/saudelegis/sas/2005/prt0741_19_12_2005.html

3. Brasil. Ministério da Saúde. (2019). Portaria nº 1.399, de 17 de dezembro de 2019. Redefine os critérios e parâmetros para a habilitação de estabelecimentos de saúde na alta complexidade em oncologia no âmbito do SUS. Diário Oficial da União, seção 1. Retrieved March 15, 2025, from https://bvsms.saude.gov.br/bvs/saudelegis/saes/2019/prt1399_19_12_2019.html

4. Brito, B. T., Sá, A. J. M., Santos, P. H. O. S., Novaes, C. O. L., & Gomes, K. A. (2024). Análise geral do diagnóstico, tratamento e prognóstico do câncer de mama no Brasil: Uma revisão sistemática. Pesquisa, Sociedade e высокой Desenvolvimento, 13(5), e2913545748. https://doi.org/10.33448/rsd-v13i5.45748

5. Cancer Research UK. (n.d.). Vulval cancer incidence. Retrieved April 15, 2025, from https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/vulval-cancer/incidence

6. Capelli, C. C., & Yonegura, W. H. T. (2023). Perfil epidemiológico de pacientes com câncer de mama entre 30 e 40 anos em um hospital de referência no Oeste do Paraná. Brazilian Journal of Implantology and Health Sciences, 5(4), 2682–2696. https://doi.org/10.36557/2674-8169.2023v5n4p2682-2696

7. Corrêa, F. M., Migowski, A., Almeida, L. M. de, & Soares, M. A. (2022). Cervical cancer screening, treatment and prophylaxis in Brazil: Current and future perspectives for cervical cancer elimination. Frontiers in Medicine, 9, 945621. https://doi.org/10.3389/fmed.2022.945621

Revista ARACÊ
ISSN: 2358-2472

8. De Melo, A. C., et al. (2023). Population-based trends in cervical cancer incidence and mortality in Brazil: Focusing on Black and Indigenous population disparities. Journal of Racial and Ethnic Health Disparities. Advance online publication.

9. Ferreira, N. A. S., Schoueri, J. H. M., Sorpreso, I. C. E., Adami, F., & Figueiredo, F. W. S. (2020). Waiting time between breast cancer diagnosis and treatment in Brazilian women: An analysis of cases from 1998 to 2012. International Journal of Environmental Research and Public Health, 17(11), 4030. https://doi.org/10.3390/ijerph17114030

10. Gaddy, J. J., et al. (2022). Evaluation of facilitators and barriers of timely breast cancer care in North Carolina (NC): A qualitative study. Journal of Clinical Oncology, 40(28_suppl), 134. https://doi.org/10.1200/JCO.2022.40.28_suppl.134

11. Haupt, S., Caramia, F., Klein, S. L., Rubin, J. B., & Haupt, Y. (2021). Sex disparities matter in cancer development and therapy. Nature Reviews Cancer, 21(6), 393–407. https://doi.org/10.1038/s41568-021-00348-y

12. Hastin Atas Asih, & Indrayadi, I. (2024). Transformation from manual medical records to electronic medical records: A phenomenological study. Contagion: Scientific Periodical Journal of Public Health and Coastal Health, 6(1), 25. https://doi.org/10.30829/contagion.v6i1.18566

13. Instituto Nacional de Câncer (INCA). (2020). ABC do câncer: Abordagens básicas para o controle do câncer (5th ed.). Rio de Janeiro, Brazil: INCA. Retrieved March 14, 2025, from https://www.inca.gov.br/sites/ufu.sti.inca.local/files/media/document/livro-abc-5-edicao.pdf

14. Instituto Nacional de Câncer (INCA). (2023). Registro Hospitalar de Câncer – RHC do Instituto Nacional de Câncer. Revista Brasileira de Cancerologia, 36(1/4), 81. https://rbc.inca.gov.br/index.php/revista/article/view/3131

15. Kulkarni, A., Dogra, N., & Zigras, T. (2022). Innovations in the management of vaginal cancer. Current Oncology, 29(5), 3082–3092. https://doi.org/10.3390/curroncol29050250

16. Medeiros, G. C., Teodózio, C. G. C., Fabro, E. A. N., Aguiar, S. S. de, Lopes, A. H. M., Conte, B. C. de, Silva, E. V. da, Coelho, L. L. P., Muniz, N. F., & Schuab, S. I. P. de C. (2020). Fatores associados ao atraso entre o diagnóstico e o início do

Revista ARACÊ
ISSN: 2358-2472

tratamento de câncer de mama: Um estudo de coorte com 204.130 casos no Brasil. Revista Brasileira de Cancerologia, 66(3), e-09979. https://doi.org/10.32635/2176-9745.RBC.2020v66n3.979

17. Koh, W. J., Abu-Rustum, N. R., Bean, S., Bradley, K., Campos, S. M., Cho, K. R., Chon, H. S., Chu, C., Cohn, D., & Crispens, M. A. (2018). Uterine neoplasms, Version 1.2018, NCCN clinical practice guidelines in oncology. Journal of the National Comprehensive Cancer Network, 16(2), 170–199. https://doi.org/10.6004/jnccn.2018.0006

18. Organização Mundial da Saúde (OMS). (2013). CID-O: Classificação Internacional de Doenças para Oncologia. São Paulo, Brazil: Editora USP.

19. Santos, B. M., & Schneider, I. J. C. (2025). Sobrevida livre de doença em mulheres com câncer de mama: Coorte de 36 e 60 meses. Revista Brasileira de Cancerologia, 70(4), e-144726. https://doi.org/10.32635/2176-9745.RBC.2024v70n4.4726

20. Siegel, R. L., Miller, K. D., Fuchs, H. E., & Jemal, A. (2022). Cancer statistics, 2022. CA: A Cancer Journal for Clinicians, 72(1), 7–33. https://doi.org/10.3322/caac.21708

21. Sobral, G. S., Araújo, Y. B., Kameo, S. Y., Silva, G. M., Santos, D. K. da C., & Carvalho, L. L. M. (2022). Análise do tempo para início do tratamento oncológico no Brasil: Fatores demográficos e relacionados à neoplasia. Revista Brasileira de Cancerologia, 68(3), e-122354. https://doi.org/10.32635/2176-9745.RBC.2022v68n3.2354

22. Schwartz, S. M. (2024). Epidemiology of cancer. Clinical Chemistry, 70(1), 140–149. https://doi.org/10.1093/clinchem/hvad202

23. Tan, A., Bieber, A. K., Stein, J. A., & Pomeranz, M. K. (2019). Diagnosis and management of vulvar cancer: A review. Journal of the American Academy of Dermatology, 81(6), 1387–1396. https://doi.org/10.1016/j.jaad.2019.07.055

24. Zhao, J., Chen, R., Zhang, Y., Wang, Y., & Zhu, H. (2024). Impact of treatment delay on the prognosis of patients with ovarian cancer: A population-based study using the Surveillance, Epidemiology, and End Results database. Journal of Cancer, 15(2), 473–483. https://doi.org/10.7150/jca.87881