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REVIEW ARTICLE

Epidemiological and Diagnostic Overview of Cancers at the Treichville University Hospital in 2024

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Abstract

Introduction: Cancer represents a major public health issue worldwide and particularly in low-resource countries. The paucity of national data, including at the Treichville University Hospital, is one of the challenges the Ivorian national cancer control program aims to address.

Objective: To contribute to improving the quality of cancer data in Côte d'Ivoire.

Methodology: We conducted a retrospective, descriptive study including all cancer patients managed at the Treichville University Hospital. The study covered a 12-month period, from January 1 to December 31, 2024.

Results: The most frequent cancers, both sexes combined, were prostate cancer (15.48%), breast cancer (13.49%), and cervical cancer (11.90%). The mean age of the patients was 51.94 years (±7.1), with extremes ranging from 19 to 85 years? There was a slight female predominance, with a sex ratio of 0.97. Most patients originated from Abidjan (62.70%). The three main hospital departments managing cancer patients were the oncology unit (29.76%), followed by urology (17.46%), and the combined departments of otorhinolaryngology and stomatology (16.67%). Squamous cell carcinoma was the most frequent histological type. Locally advanced disease was the most common stage at diagnosis (52%), followed by metastatic disease in 41% of cases.

Conclusion: The cancer landscape at the Treichville University Hospital highlights the profile of patients managed in this institution and underscores the infrastructural disparities in Côte d'Ivoire. These findings provide a foundation for strengthening the national cancer control strategy.

Keywords: Overview; Cancer; Treichville University Hospital

Introduction

Cancer represents a major public health challenge worldwide, particularly in low- and middle-income countries where management is often limited by insufficient resources [1, 2]. Global data show a concerning increase in cancer incidence, with projections estimating nearly 30 million new cases per year by 2040 [1, 2]. Cancer is currently the second leading cause of death after cardiovascular diseases [1].

In Africa, the situation is especially worrisome due to challenges related to healthcare infrastructure, limited access to treatment, and inadequate public awareness [1, 3]. Cancer can occur at any age, with markedly variable frequencies across age groups [1, 2]. In Côte d'Ivoire, the opening of the Abidjan Cancer Registry in 1994 and the establishment of the National Cancer Control Program in 2004 have renewed interest in cancer research and surveillance [3, 4].

The Treichville University Hospital (CHU) in Abidjan plays a central role in the diagnosis, treatment, and management of cancer. The hospital has implemented significant strategies to improve early detection, treatment quality, and patient education. The lack of reliable data remains a major challenge faced by cancer control initiatives in Africa and in Côte d'Ivoire more specifically [5, 6].

To contribute to improving the quality of cancer-related data in Côte d'Ivoire, we conducted this study to describe the profile of cancer patients managed in our institution.

Materials and Methods

Study Setting

The Treichville University Hospital (CHU) is one of the five university hospitals in Côte d'Ivoire four located in Abidjan (southern region) and one in Bouaké (central region). The facility obtained university hospital status in 1976. It comprises several clinical and paraclinical departments offering specialized consultations to address the needs of the population.

Among these units is the Department of Oncology, created by ministerial decree on May 27, 1992. Like the other hospital departments, this oncology unit is involved in the management of adult patients with solid tumors. Patients are referred from other hospitals in Abidjan as well as from health facilities across the country. Increasingly, multidisciplinary tumor boards implemented by the oncology department have strengthened collaboration between departments, optimizing patient care and improving care pathways.

Study Design

We conducted a retrospective, descriptive study including all cancer patients managed at the Treichville University Hospital. The study covered a 12-month period from January 1 to December 31, 2024.

Inclusion Criteria

- Age > 18 years
- Histologically confirmed cancer or clinical-radiological evidence fulfilling malignancy criteria

Exclusion Criteria

- Pediatric cancers

Data Collection

Authorization to conduct this study was obtained from the hospital authorities.

Data were collected from outpatient and inpatient medical records, registries of the relevant departments, and the National Cancer Control Program database of Côte d'Ivoire.

A structured, standardized, and anonymized data collection form was used to record the following variables

Variables

- Sociodemographic characteristics (age, sex, residence)
- Disease characteristics (primary site, histological type, stage at diagnosis)
- Hospital department involved in patient management

Data Analysis

Data analysis was performed using SPSS version 12.0. Quantitative variables were described using means and standard deviations, while qualitative variables were expressed as proportions. Informed consent was obtained from each patient included in the study. Confidentiality and ethical standards were strictly observed.

Results

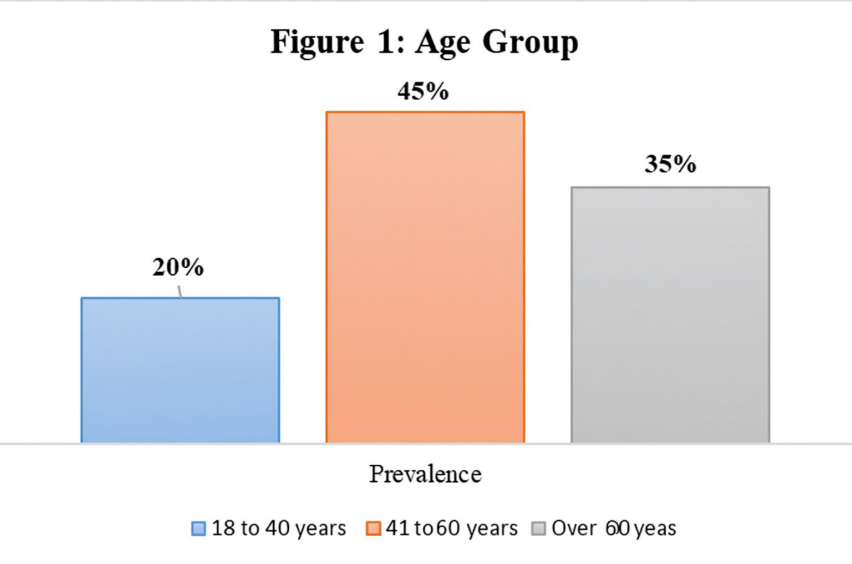

Figure 1: Distribution of Patients by Age Group

During the study period, 504 patients were included at the Treichville University Hospital. The most frequent cancers, all sexes combined, were prostate cancer (15.48%), breast cancer (13.49%), and cervical cancer (11.90%). The most common cancer in men was prostate cancer, and in women, breast cancer.

The mean age of patients was 51.94 years (±7.1), with a range from 19 to 85 years. There was a slight female predominance with a sex ratio of 0.97. Most patients originated from Abidjan (62.70%), followed by the northern region (11.90%) and the western region (9.92%). Patients primarily resided in the municipality of Yopougon.

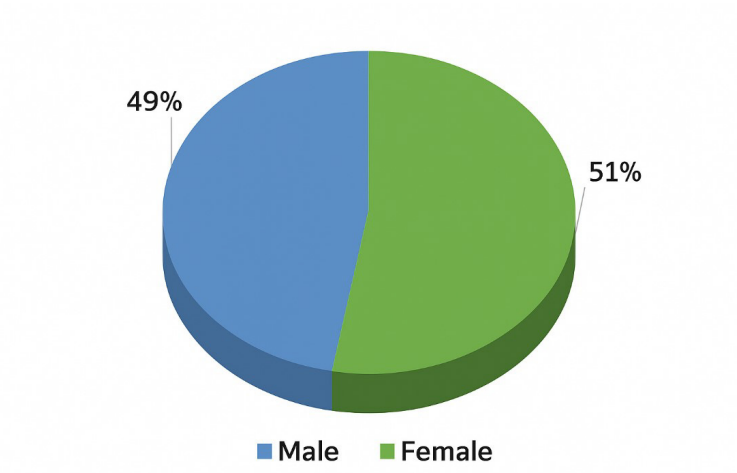

Figure 2: Distribution of Patients by Sex

The three main hospital departments managing cancer patients were Oncology (29.76%), Urology (17.46%), Combined ENT and Stomatology departments (16.67%) Squamous cell carcinoma was the most common histological type. The most frequent stage at diagnosis was locally advanced disease (52%), followed by metastatic disease (41%).

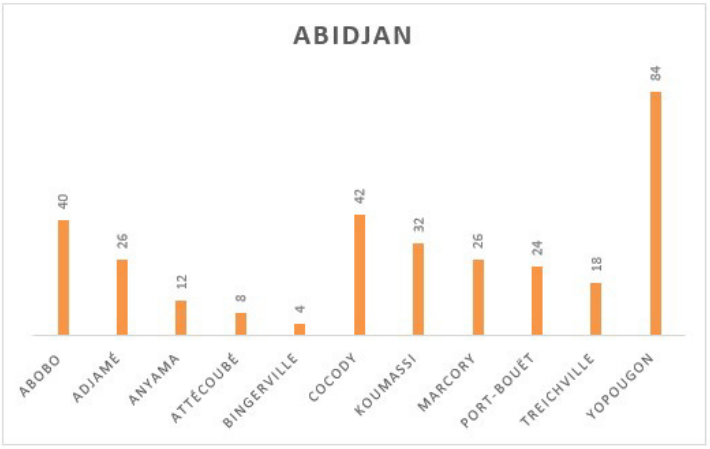

Figure 3: Distribution of Patients According to Place of Residence in Abidjan

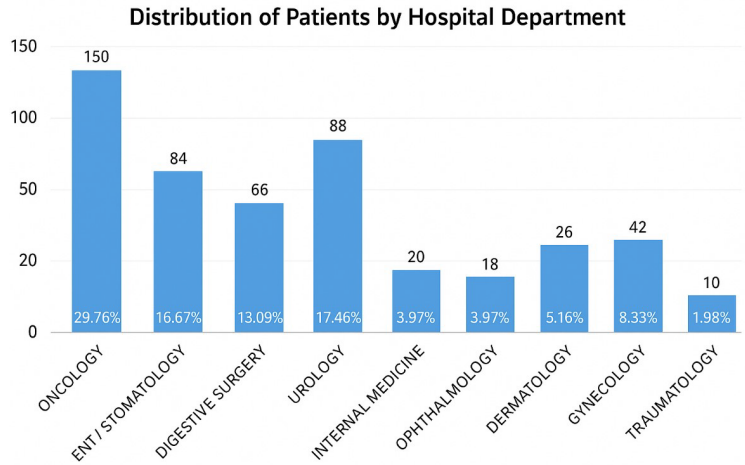

Figure 4: Distribution of Patients by Hospital Department

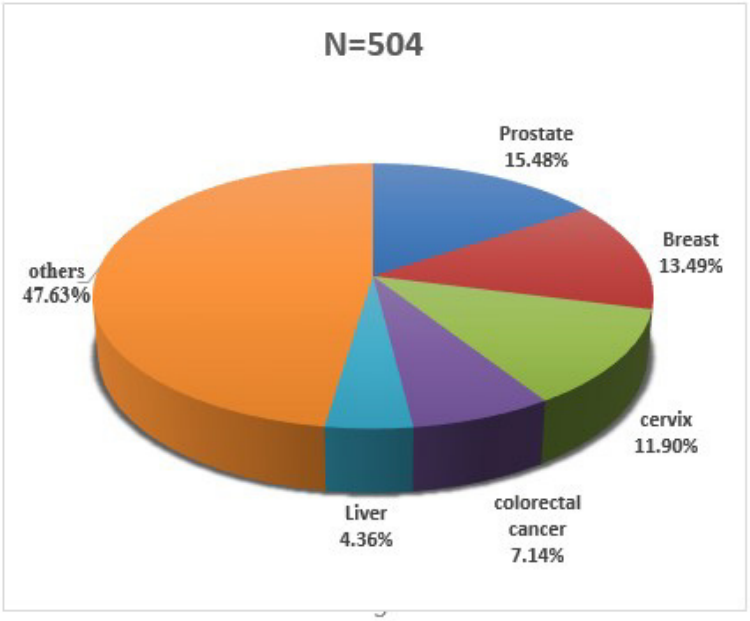

Figure 5: Distribution of the Five Most Common Cancers in Both Sexes Combined

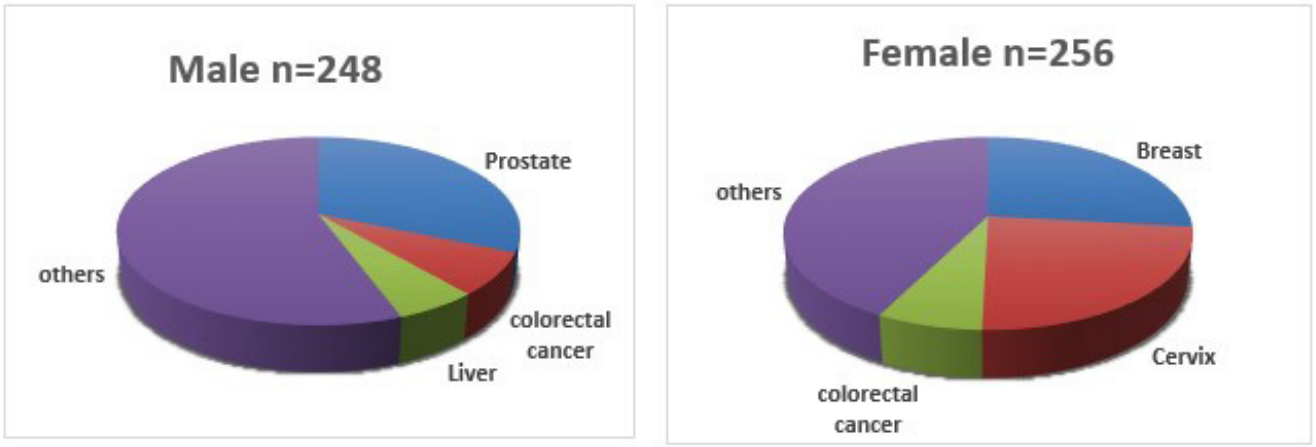

Figure 6: Distribution of the Three Most Common Cancers by Sex

Table I: Distribution of Patients According to Area of Residence

Area of residence	Number	Percentage
Abidjan	**316**	**62.70%**
Outside of Abidjan	**188**	**37.30%**
Northern Region	60	11.90%
Southern Region	34	6.74%
Central Region	26	5.16%
Eastern Region	18	3.57%
Western Region	50	9.92%

Table II: Distribution of Cancer Cases by Organ

Organ	Number	Percentage
Prostate	78	15.48%
Breast	68	13.49%
Cervix uteri	60	11.90%
Colorectal	36	7.14%
Liver	22	4.36%
Skin	20	3.97%
Eye and eyelid	20	3.97%
Maxillofacial region	20	3.97%
Larynx	18	3.57%
Stomach	14	2.78%
Pharynx / hypopharynx	14	2.78%
Endometrium	12	2.38%
Ovary	12	2.38%
Œsophagus	12	2.38%
Gallbladder	10	1.98%
Salivary gland	10	1.98%
Pancréas	8	1.58%
Soft Tissu	8	1.58%
Bone	8	1.58%
Oral cavity	8	1.58%
Kidney	6	1.19%
Bladder	6	1.19%
Thyroid	6	1.19%
Anus	6	1.19%
Lung	6	1.19%
Vulva	4	0.79%
Primary cancer of unknown origin (CUP)	4	0.79%
Lymphnode	4	0.79%

Table III: Distribution According to Histological Type

Histopathological Type	Number	Percentage
Squamous cell carcinoma	192	37.10%
Adenocarcinoma	174	34.52%
Invasive carcinoma of no special type (NST)	68	13.49%

Hepatocellular carcinoma	22	5.55%
Ostéosarcoma	8	1.59%
Papillary carcinoma	6	1.19%
Rhabdomyosarcoma	4	0.79%
Liposarcoma	4	0.79%
Clear cell carcinoma	4	0.79%
Kaposi sarcoma	4	0.79%
Urothelial carcinoma	4	0.79%
Undifferentiated carcinoma (nasopharynx)	4	0.79%
Basal cell carcinoma	2	0.40%
Lymphoma	2	0.40%

Discussion

Our study presents several limitations:

• **Missing Data**: the absence of complete information for some patients may affect the representativeness and accuracy of the findings.

• **Short Study Period**: The one-year duration may not fully reflect long-term trends in cancer incidence and management.

Despite these limitations, our results remain consistent with published data and allow relevant comparisons with the existing literature.

According to GLOBOCAN 2022, prostate cancer is the most common malignancy in terms of incidence, followed by breast cancer [2]. Our findings align with these global trends and reflect the general patterns observed in Côte d'Ivoire and worldwide [2,3].The literature, both African and Western, reports that cancer incidence increases with age [7]. In our study, the mean age was 51.94 ± 7.1 years, with a range from 19 to 85 years. Socioeconomic factors including education level, lifestyle, and access to healthcare may influence the age at diagnosis [8,9]. The observed increase in cancer incidence with age further supports the need for improved screening programs, particularly for prostate and breast cancers [10]. We observed a female predominance in our cohort, which may be explained by the fact that two of the most common cancers in Côte d'Ivoire breast cancer and cervical cancer occur exclusively in women, whereas only one common cancer (prostate cancer) is exclusive to men [2,3].

Most patients resided in Abidjan, the economic capital of Côte d'Ivoire, which hosts nearly one-third of the national population [11]. Additionally, the country's main cancer care facilities are concentrated in Abidjan. Nevertheless, more than one-third of patients (37.30%) came from other regions of the country. Reducing such disparities requires developing cancer care infrastructure in underserved areas and implementing targeted awareness and specialized programs [12].

The Treichville University Hospital provides a wide range of diagnostic and therapeutic services, including imaging, biopsies, surgery, and chemotherapy. Some departments, such as the oncology unit, are more specialized in cancer care, which may explain why nearly one-third of the patients (29.76%) were managed there. However, optimal cancer management requires a multidisciplinary approach involving oncologists, surgeons, radiologists, pathologists, and other healthcare professionals [13]. Effective coordination between these services is crucial to ensure integrated and comprehensive care [14].

The most frequent histological type found in our study was adenocarcinoma, representing nearly half of all cases. This finding is expected, as the most common cancers in Côte d'Ivoire (breast and prostate) originate from glandular tissues. Our results also show that most patients were diagnosed at advanced stages. This is consistent with the findings of the National Cancer Control Program in 2020 [3]. Several factors may explain this trend, including geographic disparities in healthcare access, financial constraints [15,16], and limited preventive strategies and awareness campaigns [17,18].

Conclusion

The cancer profile at the Treichville University Hospital highlights not only the characteristics of the patients managed in this institution but also the structural disparities that persist in Côte d'Ivoire. This study provides a foundational dataset to guide the development of an integrated approach combining prevention, early detection, multidisciplinary tumor boards, and effective treatment strategies, with the ultimate goal of improving patient outcomes and reducing the overall cancer burden in Côte d'Ivoire

Ethical Considerations

Conflict of Interest

The authors declare that they have no conflicts of interest.

Ethical Approval

Written informed consent was obtained from all patients included in the study.

Authors' Contributions

ODO B.A. designed the study. ODO B.A. and Madiou M.K.A. collected the data from patient records and drafted the manuscript. All authors reviewed the final version of the manuscript and approved its submission.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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