

Research Article

Digestive Cancers at the Conakry University Hospital Center: Epidemiological, Clinical, Histological, and Therapeutic Aspects

Naby Fofana^{*} , Ansoumane Conde , Abdoulaye Yattara, Alpha Mohamed Youla, Aminata Fofana, Mohamed Saliou Bangoura, Mamadou Sakoba Barry, Aboubacar Toure

Department of General Surgery, Ignace Deen National Hospital, Conakry, Guinea

Abstract

Aim: The aim of this study was to investigate the epidemiological, anatomo-clinical and therapeutic aspects of cancers of the digestive tract. **Material and Methods:** This was a retrospective descriptive study lasting 6 years (January 1, 2014 to December 31, 2019), based on the complete records of patients hospitalized and operated on for histologically proven digestive tract cancers. **Results:** Out of 4681 patient records, we collected 297 cases of digestive cancers (6.34%). The mean age was 52.70 years. Male predominance was noted, with a sex ratio of 1.17. Fifty-seven percent of patients resided in Conakry, and 64.30% of cases were treated at the Donka oncology unit. Housewives were most represented, with a predominance of married patients; alcohol was the most common vice (7.07%). Gastro-duodenal ulcer was the most common comorbidity. The average consultation time was 9.86 ± 10.4 months; 29.62% of patients were seen after more than 9 months. The clinical picture was dominated by epigastralgia, nausea and vomiting. The stomach was the predominant site, followed by the colon. For histological analysis, surgical specimens were the most common. Adenocarcinoma was the most frequent histological type, and macroscopically, the infiltrating type was the most common. Surgical treatment was the most common, with tumor resection the most frequently performed procedure. Follow-up was uncomplicated in 71.04% of cases, with morbidity of 5.05% and mortality of 23.91%. **Conclusion:** Cancers of the digestive tract are frequent, of late diagnosis and of poor prognosis. Equipping hospitals, screening and early treatment, as well as raising public awareness, could improve prognosis.

Keywords

Cancers, Digestive Tract, Epidemiology, Histology

^{*}Correspondence: Naby Fofana (bounafofana02@gmail.com)

Received: 25 January 2026; **Accepted:** 5 February 2026; **Published:** 24 February 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Digestive cancers were rare in developing countries, but with the advent of diagnostic tools and changes in lifestyle habits in these countries, we are seeing an increase in the frequency of this disease [1, 2]. The lack of diagnostic, therapeutic, and preventive resources makes it difficult to manage these digestive cancers in developing countries [3]. Numerous epidemiological studies have recently focused on cancers of the digestive tract due to their increasing frequency and severity [4]. In Niger, despite relatively frequent endoscopic examinations, digestive cancers are diagnosed late because most patients seek medical attention when symptoms are obvious and worrying, thus worsening the prognosis. The aim of this study was to examine the epidemiological, clinical, and therapeutic aspects of digestive tract cancers at the Conakry University Hospital.

2. Materials and Methods

This was a retrospective, descriptive, and analytical study conducted over a six-year period, from January 1, 2014, to December 31, 2019. The study was conducted in the general and visceral surgery departments and the oncology unit of the Conakry University Hospital, which are the referral centers for the treatment of digestive cancers in Guinea.

The study population consisted of all patients hospitalized and/or operated on for primary cancer of the digestive tract during the study period. Patients with complete medical records containing usable clinical data and formal histological confirmation of the diagnosis of digestive cancer were included. Incomplete records, secondary cancers of the digestive tract, and patients without histological evidence were excluded.

Data were collected from several sources: consultation records, the oncology unit database, individual patient medical records, surgical records, and pathology reports. A standardized survey form was used to systematically collect information.

The variables studied included: sociodemographic data (age, gender, place of residence, occupation, marital status); risk factors and medical history (alcohol, tobacco, digestive comorbidities, particularly peptic ulcer disease); clinical parameters (reasons for consultation, time to consultation, general condition according to the WHO (performance index); anatomopathological data (tumor location, histological type, macroscopic appearance, nature of samples); therapeutic modalities (surgery, type of procedure performed, adjuvant treatments when available); postoperative course (morbidity and mortality, complications, clinical outcome).

Statistical analysis was performed using Epi Info software version 7.2.2.3 and Excel 2013 spreadsheet software. Quantitative variables were expressed as mean $\pm$ standard deviation and qualitative variables as numbers and percentages.

3. Results

Over the four-year period, we collected 297 cases ($n=4681$) of digestive cancers, representing 6.34% of all cancers. The average age of our patients was 52.70 years, with extremes of 13 and 84 years; the most affected age group was those over 60 years of age. We noted a male predominance with a sex ratio of 1.17. Fifty-seven percent of patients resided in Conakry, and 64.30% of cases were treated at the Donka oncology unit. Housewives were the most represented (32.66%); there was a predominance of married patients (66.33%); alcohol was the most common vice (7.07%). Gastroduodenal ulcer was the most common comorbidity (28.96%). The average time to consultation was 9.86 months $\pm$ 10.4 months, with extremes of 1 month and 5 years; 29.62% of patients were seen after more than 9 months of progression. The clinical signs are shown in Table 1. In 32.32% of cases, the WHO performance status index on admission was not specified, and 27.27% of patients had an index of 3. Table 2 shows the different sites of cancer in the diges[tive tract. For histological analysis, surgical specimens were the most commonly received (59.93%), but in 33% of cases there was no specification. The histological types are shown in Table 3; macroscopically, the infiltrating type was the most common (41.41%). We noted the predominance of surgical treatment (85.19%). The surgical procedures are shown in Table 4. The outcome was favorable in 71.04%; the morbidity rate was 5.05% and the mortality rate was 23.91%. Sixty-one point ninety-seven percent of deaths occurred after surgical treatment.

Table 1. Frequency of patients according to reason for consultation.

Reasons for consultation	Number	Percentages
Epigastric pain	191	64.31
Vomiting	131	44.11
Weight loss	81	27.27
Constipation	23	7.74
Abdominal pain	13	4.38
Abdominal mass	7	2.36

Table 2. Frequency of patients according to cancer site.

Site	Number	Percentage
Esophagus	23	7.74
Stomach	119	40.07
Small intestine	7	2.36
Colon	108	36.36

Site	Number	Percentage
Anorectal	48	16.16

Table 3. Distribution of digestive tract cancers by histological type.

Histological type	Number	Percentage
Adenocarcinoma	196	65.99
Squamous cell carcinoma	98	33
Lymphoma	3	1.01
Total	297	100

Table 4. Distribution of cancers according to surgical procedure.

Surgical procedure	Number	Percentage
Tumor resection	231	91.30
Derivation	22	8.70
Colostomy	13	5.14
Gastrojejunal	09	3.56
Total	253	100

4. Discussion

Digestive tract cancers are a major public health problem in developing countries, with incidence rates continuing to rise. Globally, they account for a significant proportion of cancer incidence and mortality, with a particularly heavy burden in low- and middle-income countries [5-8]. Several recent African studies report a high incidence of these cancers, reflecting changes in dietary habits, increasing urbanization, improved diagnostic methods, and the persistence of preventable risk factors [2, 4, 9, 10]. In our series, the frequency of digestive cancers (6.34%) is comparable to that reported by Bagny et al. [2] in Togo and Salamatou et al. [4] in Niger, but remains lower than that observed in Côte d'Ivoire by Kissi Anzouan-Kacou et al [1]. This variability could be explained by methodological differences, the duration of the studies, access to specialized care, and the availability of pathology services, as also highlighted in global cancer surveillance analyses [6, 7].

The male predominance observed in our study is consistent with data from African and international literature. This trend is often attributed to men's greater exposure to risk factors such as alcohol and tobacco, which are particularly implicated in esophageal and stomach cancers [4, 11, 12].

The relatively young average age of our patients, compared to Western countries, has also been reported in several African

series. This situation could be explained by the young demographic structure of the African population, but also by early exposure to certain carcinogens, particularly *Helicobacter pylori* infection, which is recognized as a major factor in gastric carcinogenesis [12-14]. Conversely, in developed countries, digestive cancers occur mainly at an older age, in line with the aging of the population and organized screening programs [15, 16].

The majority of patients resided in Conakry, which could be linked to the concentration of specialized cancer diagnosis and treatment facilities in the capital. However, this centralization limits access to care for rural populations, contributing to the diagnostic delay observed in our series, a phenomenon widely described in resource-limited countries [3, 16].

Housewives were the most represented in our series, which corroborates the study by Ouedraogo S, et al. [17] in Burkina Faso in 2018. They reported that the population's unfavorable socioeconomic factors play a role in the occurrence of these cancers. Digestive cancers affect very low-income populations, limiting their access to health services for diagnosis and care, but also for prevention [4]. Alcoholism and smoking have been implicated by authors in the occurrence of digestive cancers [2, 17], and we made the same observation in our series. In our study, we found a 28.96% history of gastroduodenal ulcers; the same observation was made by Bagny A et al [2] in their study.

Clinically, the average time to consultation was long, reflecting late diagnosis at an advanced stage of the disease. The main reasons for consultation were abdominal pain, vomiting, and deterioration in general health, symptoms that are generally indicative of advanced forms of the disease. This delay in diagnosis is one of the main factors contributing to the poor prognosis for digestive cancers in sub-Saharan Africa [3, 7, 17].

Gastric cancer was the most common site in our study, followed by colon and anorectal cancers. This predominance of gastric cancer is widely described in African series, unlike in developed countries where the incidence of stomach cancer tends to decrease in favor of colorectal cancers [12, 15, 18, 19]. The role of *Helicobacter pylori* infection, peptic ulcer disease, and nutritional factors remains central to this anatomical distribution [12, 14].

Histologically, adenocarcinoma was largely predominant, which is consistent with data from the global and African literature [2, 4, 7, 11]. The frequently observed infiltrating macroscopic appearance also reflects the advanced nature of the lesions at the time of diagnosis.

Surgery was the main treatment modality in our series, with tumor resection being the most frequently performed procedure when the patient's general condition allowed it. However, international recommendations advocate multimodal management combining surgery, chemotherapy, and/or radiotherapy depending on the tumor stage, options that are often limited in low-resource countries [15, 20].

The mortality rate observed remains high, although lower

than that reported in some West African series. It is mainly related to delayed consultation, advanced tumor stage, associated comorbidities, and the limitations of the available therapeutic arsenal. International studies have shown that survival rates for digestive cancers are closely correlated with the level of development of the healthcare system and access to specialized care [16].

5. Conclusion

Cancers of the digestive tract are common in Guinea and constitute a major public health problem. They are most often diagnosed at an advanced stage, due to significant delays in seeking medical advice. This late diagnosis limits treatment options and worsens the prognosis.

Mortality remains high in our context, reflecting the severity of these cancers. Treatment is mainly based on surgery. Adjuvant treatments, particularly chemotherapy and radiotherapy, are not widely available. In many cases, surgery is performed for palliative purposes.

The lack of diagnostic and therapeutic resources is a major constraint.

Early screening and rapid treatment could improve survival rates.

Raising public awareness remains essential to improving the prognosis.

Abbreviations

WHO World Health Organization

Author Contributions

Naby Fofana: Conceptualization, Project administration, Data curation, Validation, Formal Analysis, Methodology

Ansoumane Conde: Data curation, Writing – review & editing, Formal Analysis, Methodology, Software, Visualization

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Kissi A-K HY, Doffou SA, Bangoura AD et al. Prise en charge des cancers digestifs en Côte-d'Ivoire : expérience du service d'hépatogastroentérologie du CHU de Yopougon. *J Afr Hépatogastroentérologie* 2017; 11: 13-8. <https://doi.org/10.1007/s12157-016-0699-8>
- [2] Bagny A, Bouglouga O, Darre T et al. Profil épidémiologique et diagnostique des cancers digestifs au CHU Campus de Lomé : à propos de 250 cas. *J Afr Hépatogastroentérologie* 2015; 9: 80-4. <https://doi.org/10.1007/S12157-015-0594-8>
- [3] Milano MC. Pauvreté et cancer au début du troisième millénaire. *Cancerol Dig* 2021; 4: 123-7. <https://doi.org/10.4267/2042/47604>
- [4] Salamatou MG, Hinde H, Abdelmadjid S, Ali Q, Harouna MZ, Hassan N. Les cancers digestifs au Niger. Fréquence relative sur une étude rétrospective de 1992 à 2009. *European Scientific Journal* 2014; 10(9): 339-349.
- [5] Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018. *CA Cancer J Clin*. 2018; 68: 394-424. <https://doi.org/10.3322/caac.21492>
- [6] Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020. *CA Cancer J Clin*. 2021; 71: 209-249. <https://doi.org/10.3322/caac.21660>
- [7] Arnold M, Abnet CC, Neale RE, et al. Global burden of gastrointestinal cancers. *Gastroenterology*. 2020; 159: 335-349. <https://doi.org/10.1053/j.gastro.2020.03.058>
- [8] Ribassin-Majed L, Le Teuff G, Hill C. La fréquence des cancers en 2016 et leur évolution. *Bull Cancer* 2017; 104: 20-29. <https://doi.org/10.1016/j.bulcan.2016.11.003>
- [9] Diallo AT, Soumaoro LT, Koulibaly M et al. Cancers du tube digestif: Profil épidémiologique et histo-pathologique dans le service de chirurgie générale du CHU de Conakry. *Carcinol Clin Afrique* 2014 ; 13(1) : 1 – 60.
- [10] Torre LA, Siegel RL, Ward EM, Jemal A. Global cancer incidence and mortality trends. *Cancer Epidemiol Biomarkers Prev*. 2016; 25: 16-27. <https://doi.org/10.1158/1055-9965.EPI-15-0578>
- [11] Benelkhaiat R, Rabbani K, Nasrollah N, Finech B, Louzi A, El Idrissi D A. Les cancers digestifs dans la région de Marrakech. *J Afr Cancer Afr J Cancer* 2010; 2: 160-5. <https://doi.org/10.1007/s12558-010-0096-y>
- [12] Rawla P, Barsouk A. Epidemiology of gastric cancer. *Prz Gastroenterol*. 2019; 14: 26-38. <https://doi.org/10.5114/pg.2018.81072>
- [13] Boukhris SA, Benajah D-a, El Rhazi K et al. Prevalence and distribution of *Helicobacter pylori* cagA and vacA genotypes in the Moroccan population with gastric disease. *European Journal of Clinical Microbiology & Infectious Diseases* 2012; 31(8): 1775-1781 <https://doi.org/10.1007/s10096-011-1501-x>
- [14] El-Omar EM, Oien K, Murray SL et al. Increased prevalence of precancerous changes in relatives of gastric cancer patients: critical role of *H. pylori*. *Gastroenterology* 2000; 118: 22-30. [https://doi.org/10.1016/S0016-5085\(00\)70410-0](https://doi.org/10.1016/S0016-5085(00)70410-0)
- [15] Dekker E, Tanis PJ, Vleugels JLA, Kasi PM, Wallace MB. Colorectal cancer. *Lancet*. 2019; 394: 1467-1480. [https://doi.org/10.1016/S0140-6736\(19\)32319-0](https://doi.org/10.1016/S0140-6736(19)32319-0)
- [16] Allemani C, Matsuda T, Di Carlo V et al. Global surveillance of cancer survival (CONCORD-3). *Lancet*. 2018; 391: 1023-1075. [https://doi.org/10.1016/S0140-6736\(17\)33326-3](https://doi.org/10.1016/S0140-6736(17)33326-3)

-
- [17] Ouedraogo S, Ouedraogo S, Kambire JL et al. Epidemiological, clinical, histological, and therapeutic profile of primary digestive cancers in the northern and eastern regions of Burkina Faso. *Bull Cancer (Paris)* 2018; 105: 1119-25. <https://doi.org/10.1016/j.bulcan.2018.09.001>
- [18] Togo A, Diakité I, Togo B et al. Cancer gastrique au CHU Gabriel Touré: aspects épidémiologique et diagnostique. *Journal Africain du Cancer*. 2011; 3(4): 227-231. <https://doi.org/10.1007/s12558-011-0167-8>
- [19] Asombang AW, Kelly P. Gastric cancer in Africa: what do we know about incidence and risk factors? *Transactions of the Royal Society of Tropical Medicine and Hygiene* 2012; 106: 69-74. <https://doi.org/10.1016/j.trstmh.2011.11.002>
- [20] Jemal A, Bray F, Center MM, Ferlay J, Ward E, Forman D. Global cancer statistics. *CA Cancer J Clin*. 2011; 61: 69-90. <https://doi.org/10.3322/caac.20107>