

## DIETARY PATTERNS AND CLINICAL OUTCOMES IN COLORECTAL CANCER PATIENTS IN BRAZIL: AN EPIDEMIOLOGICAL STUDY USING SECONDARY DATA

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**Introduction:** Colorectal cancer is one of the most prevalent malignant neoplasms in Brazil and worldwide, with high morbidity and mortality, especially in advanced stages. Scientific literature highlights a direct relationship between dietary patterns and the risk, progression, and prognosis of colorectal cancer. Diets rich in fiber, fruits, and vegetables and low in processed meats are associated with a lower risk, while excessive intake of ultra-processed foods, saturated fats, and red meats is linked to higher incidence and worse clinical outcomes. Moreover, the nutritional status of oncology patients significantly influences treatment tolerance and clinical progression. This study aims to investigate indirect nutritional indicators in hospitalized patients with colorectal cancer using national public data. **Objectives:** To analyze the occurrence of nutritional indicators and their impact on clinical outcomes in hospitalized patients diagnosed with colorectal cancer in Brazil, from 2015 to 2022, based on data from DATASUS, SIVEP, and SIM. **Methods:** This is an epidemiological, observational, and retrospective study based on secondary data extracted from the public databases DATASUS (SIH/SUS), SIVEP, and SIM, covering the period from 2015 to 2022. All hospital admissions with a primary diagnosis of malignant neoplasm of the colon and rectum (ICD-10: C18, C19, C20) were included. Indirect nutritional indicators were considered as co-diagnoses of malnutrition (ICD-10: E40–E46), obesity (E66), abnormal weight loss (R63.4), and cachexia (R64). Data were stratified by region, sex, age group, length of hospital stay, and clinical outcome (discharge, death, or transfer). Mortality data from SIM were analyzed to assess the

frequency of deaths with or without nutritional co-diagnoses. Descriptive analysis was conducted using absolute and relative frequencies, and time trend analysis was performed using simple linear regression. Special focus was given to geographic disparities. **Results:** During the study period, 72,015 hospital admissions for colorectal cancer were recorded in Brazil. Of these, 21,082 (29.2%) had a co-diagnosis of malnutrition, 6,478 (9%) of obesity, 5,116 (7.1%) of abnormal weight loss, and 2,377 (3.3%) of cachexia. The Northeast region showed the highest prevalence of malnutrition (34.5%), while the Southeast region had the highest proportion of obesity (11.4%). The hospital mortality rate among patients with nutritional co-diagnoses was 33.6%, compared to 18.9% in those without such conditions. Patients with weight loss and cachexia had an average hospital stay 2.8 days longer than those without these conditions. SIM mortality records confirmed a higher lethality associated with malnutrition indicators, especially in elderly individuals with multiple comorbidities. **Conclusion:** The study revealed a high prevalence of unfavorable nutritional conditions among patients with colorectal cancer in Brazil, associated with worse clinical outcomes, including longer hospital stays and higher mortality rates. These findings highlight the importance of nutritional surveillance and early dietary intervention in oncologic care, particularly in more vulnerable regions. Public health policies should prioritize nutritional screening and the promotion of healthy eating patterns as integral components of oncology care.

**Keywords:** Colorectal cancer; hospital malnutrition; nutritional epidemiology.