

Overt Gastrointestinal Bleeding in Patients with Cancer: Clinical Characteristics and Outcomes

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BACKGROUND / AIMS

- Characteristics and outcomes of patients with overt gastrointestinal bleeding (GIB) and known cancer are not well characterized.
- We compared GIB between cancer patients (CP) and non-cancer patients (NCP) in terms of baseline characteristics, clinical presentation, severity, etiology of bleeding and outcomes.

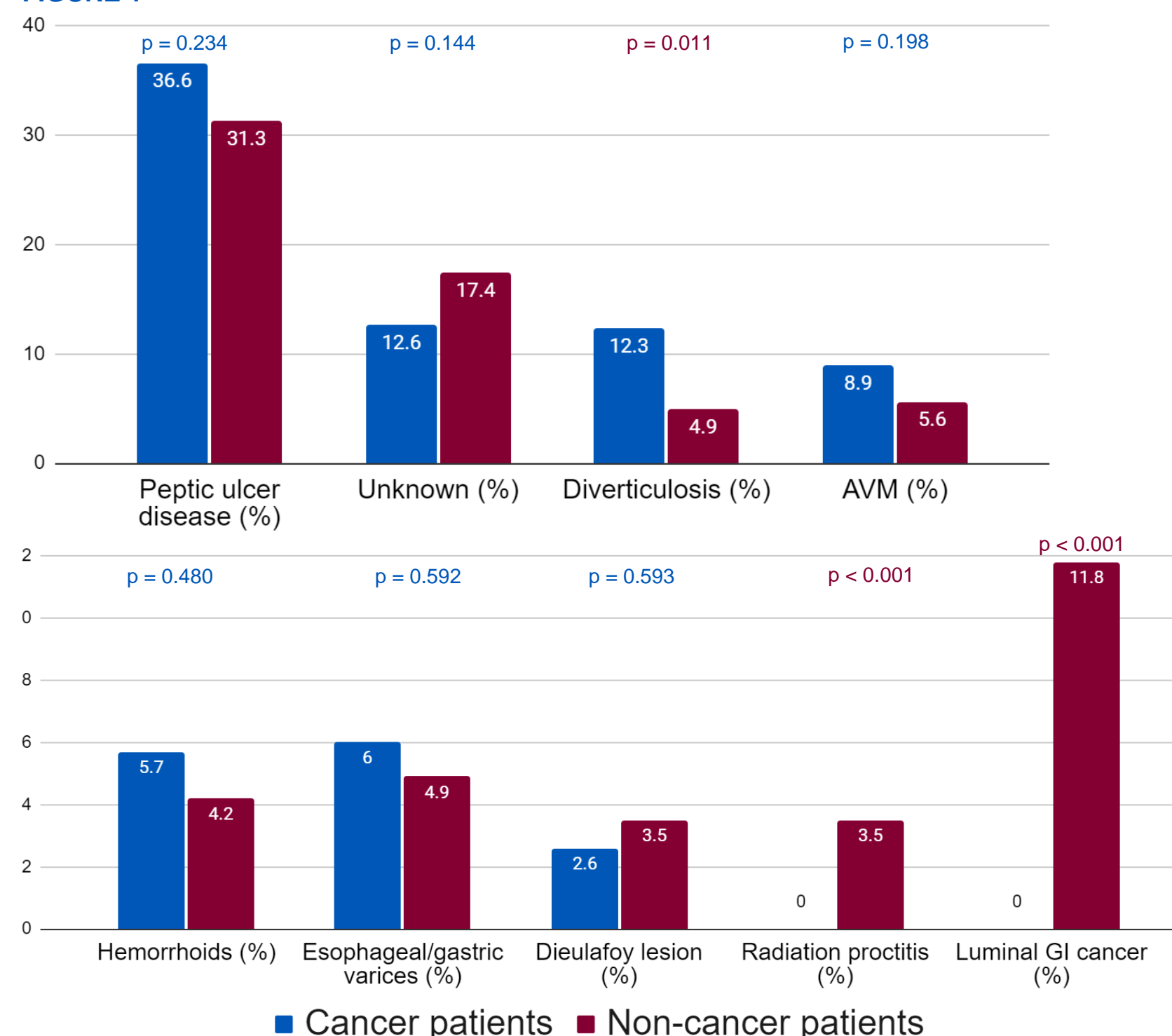
METHODS AND MATERIALS

- A prospective, observational, single-center cohort study
- Inclusion criteria: All patients aged ≥ 18 years presenting to the American University of Beirut Medical Center with overt GIB between January 2013 and December 2021.
- The participants were followed-up for a median of 52 months.
- A bivariate analysis compared characteristics and outcomes of CP and NCP, including rebleeding and mortality rates.
- Severe GIB was defined as the presence of SBP < 100 mmHg, > 2 units of blood transfused, or ≥ 2 units drop in hemoglobin.
- Among CP, hematological malignancies (HCP) were compared to solid tumors (SCP) and luminal cancers compared to non-luminal cancers.
- We performed a cause of death analysis comparing CP to NCP and different subgroups.
- The associations with categorical variables were assessed with the Chi-square test, and the t-test was used for continuous ones.

RESULTS

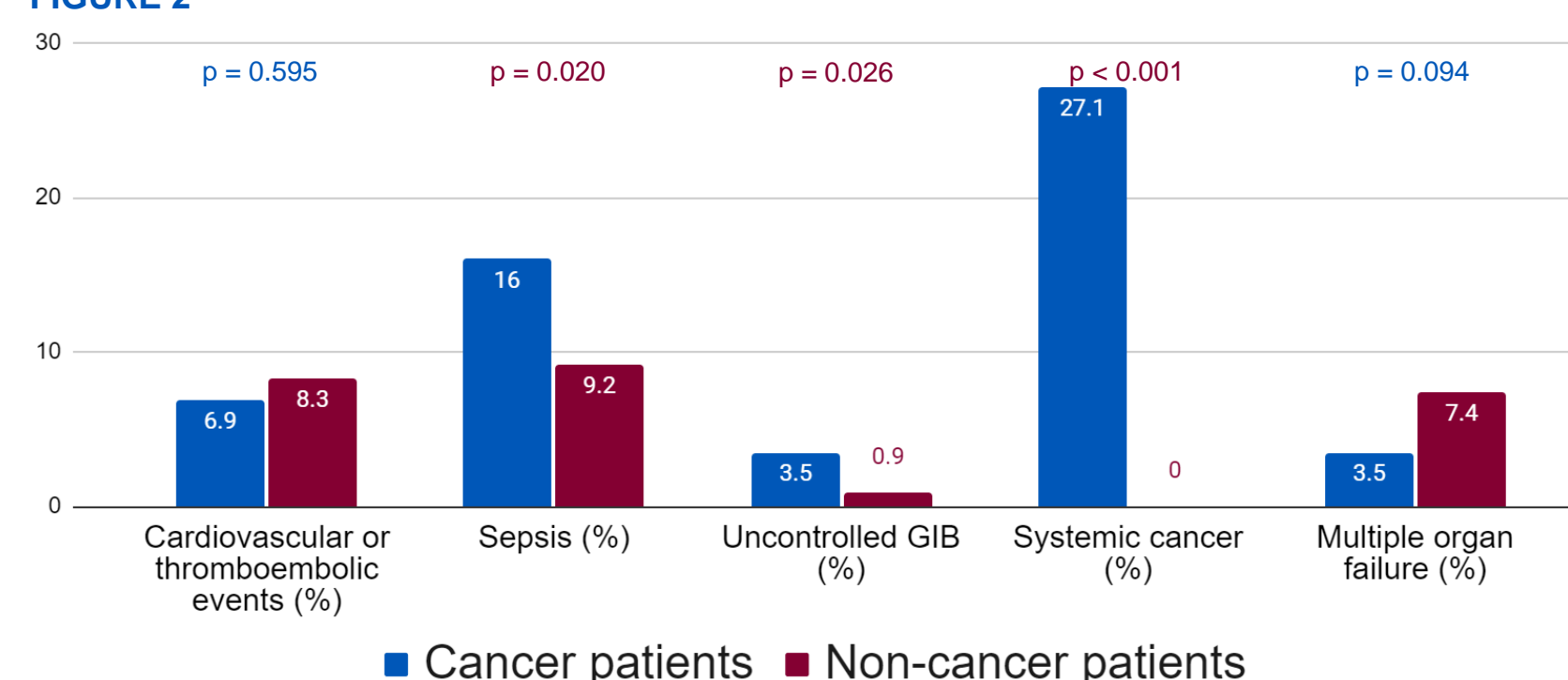
- A total of 674 patients were included, of whom 144 (21%) were CP, and 530 (79%) were NCP.
- The age-adjusted Charlson Comorbidity Index (CCI) was higher in CP (7 ± 3) compared to NCP (4 ± 2), $p < 0.001$, and among SCP (8 ± 3) compared to HCP (6 ± 2), $p < 0.001$.
- Severe GIB was equally prevalent between the 2 groups, but CP were more likely to receive blood transfusion (68.3% vs. 54.2%, $p = 0.002$).
- NCP were more likely to undergo endoscopy (90% v. 76%, $p < 0.001$), and endoscopic therapy (33% vs. 24%, $p = 0.029$) than CP.

FIGURE 1



Major causes of GIB among cancer patients and non cancer patients

FIGURE 2



Cause of death analysis comparing CP and NCP

RESULTS

Cause of GIB

- Major causes of bleeding are shown in Figure 1.
- Peptic ulcer disease (PUD) was the major cause of GIB among both CP and NCP, and among SCP and non-luminal CP.
- AVM was the major cause of GIB in HCP, and luminal cancer itself was the most common cause of GIB among luminal CP.
- Patients who bled from PUD (both CP and NCP) were more likely to have taken a non-steroidal anti-inflammatory drug (19% compared to 7%, $p < 0.001$) and less likely to be taking PPIs (31% compared to 52%, $p < 0.001$) compared to patients who bled from other causes.
- CP with GIB due to PUD were more likely to have undergone surgery (58%) compared to those with causes other than PUD (37%), $p = 0.022$.

Length of Hospital Stay

- The mean length of hospital stay was 8 days among CP and NCP.
- HCP had a longer average hospital stay than SCP (15 vs. 6 days), $p = 0.006$.

Rebleeding

- There was no difference in rebleeding rates between CP and NCP.
- CP with luminal cancer had higher in-hospital rebleeding rates than non-luminal cancer (10% vs. 2%, $p = 0.03$), as well as higher 1-month rebleeding rates (17% vs. 5%, $p = 0.023$).

Mortality

- CP had higher in-hospital (12 vs. 6%), 1-month (20 vs. 8%), 1-year (48 vs. 16%) and end of follow-up mortality (72 vs. 39%) compared to NCP ($p = 0.018$, < 0.001 , < 0.001 , < 0.001 respectively).
- CP were more likely to die of sepsis, uncontrolled GIB and systemic cancer than NCP. Causes of death are shown in Figure 2.
- Among HCP, sepsis accounted for more deaths compared to those with SCP (31% vs. 12%, $p = 0.007$).
- SCP died primarily from the systemic cancer itself.

CONCLUSIONS

- CP did not present with more severe GIB compared to NCP, however they were less likely to have diagnostic and therapeutic endoscopy and more likely to receive transfusion than NCP.
- Both CP and NCP primarily bled from PUD.
- They had comparable rebleeding rates, but higher short and long-term mortality.
- Steps to identify CP at risk for GIB and to improve their outcomes merit consideration and further investigation.