Poster RWD157

K2GC: real-world treatments and outcomes amongst patients with resectable gastric and gastroesophageal junction cancer in the United States

Leonardo Passos Chaves,[1] Michael Baglio,[2] Vishal Patel,[3] Pooja Gupta,[4] Di He,[5] Niamh Hogan,[6] Heide Stirnadel-Farrant[3]

[1]Oncology Outcomes Research, AstraZeneca, Gaithersburg, MD, USA; [2]US Medical Affairs, AstraZeneca, Gaithersburg, MD, USA; [3]Oncology Outcomes Research, AstraZeneca, Cambridge, UK; [4]US Medical Affairs, AstraZeneca, New York, NY, USA; [5]Global Oncology Data & Analytics, AstraZeneca, Gaithersburg, MD, USA; [6]Global Medical Affairs, AstraZeneca, Cambridge, UK

Objective

- To describe patient characteristics and perioperative treatment patterns and outcomes in patients with resectable gastric cancer (GC) or gastroesophageal junction cancer (GEJC) in the United States (US)

Conclusions

- A small proportion of patients with resectable GC or GEJC who had surgery received both neoadjuvant and adjuvant treatment; many patients with GC did not receive any perioperative treatment
- For patients with GC, the most frequent perioperative treatment was combined 5-fluorouracil, leucovorin, oxaliplatin, and docetaxel (FLOT), except in patients who received adjuvant treatment only where it was chemoradiotherapy
- For patients with GEJC, the most frequent perioperative treatment was chemoradiotherapy, except in patients who received both adjuvant and neoadjuvant treatment where the most frequent adjuvant treatment was nivolumab
- For patients with GC who received or had surgery planned, median event-free survival (EFS) and median overall survival (OS) were <3 and <5 years, respectively. For patients with GEJC who received or had surgery planned, EFS and OS were <2 and <4 years, respectively. Outcomes were particularly poor for patients with GC or GEJC who did not receive or have surgery planned, as both EFS and OS were <2 years. Median EFS was similar in GEJC regardless of surgery status
- These results demonstrate the need to optimize perioperative treatments to improve long-term outcomes in patients with resectable GC or GEJC

Plain language summary

Why did we perform this research?

- It was predicted that there would be over 26,000 new cases of gastric cancer (GC) diagnosed in the United States (US) in 2024, and an estimated 10,880 deaths related to GC
- For people with newly diagnosed GC and gastroesophageal junction cancer (GEJC) who can have their cancer surgically removed, additional treatments before (neoadjuvant) or after (adjuvant) surgery are available
- We wanted to understand what additional treatments people with GC and GEJC who had surgery received in the US, and how these additional treatments affected the length of time to events such as the return of the cancer and survival time after treatment

How did we perform this research?

We looked at 1717 adults diagnosed with resectable (able to be surgically removed) GC or GEJC, from the Flatiron dataset, between January 1, 2016 and January 1, 2023

What were the findings of this research and what are the implications?

- A small proportion of people with GC or GEJC who had surgery had additional treatment both before and after surgery. Many patients did not receive any of these treatments
- For people with GC, the most frequent treatment before surgery was chemotherapy that combines the following four medicines: 5-fluorouracil, leucovorin, oxaliplatin, and docetaxel (FLOT). The most frequent treatments after surgery were chemoradiotherapy and FLOT
- For people with GEJC, the most frequent treatment before surgery was chemoradiotherapy. The most frequent treatments after surgery were chemoradiotherapy and nivolumab, a type of treatment called immunotherapy which uses the immune system to kill tumor cells
- The length of time people were free of events (such as the return of the cancer) after cancer treatment, and the length of time people survived after starting treatment, was longer for patients who had surgery or had surgery planned than those who did not

What are the implications of this research?

- The data showed that there is a need to optimize the treatments received around the time of surgery to improve long-term outcomes for people with resectable GC or GEJC

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Poster

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Corresponding author email address: leonardo.passoschaves@astrazeneca.com

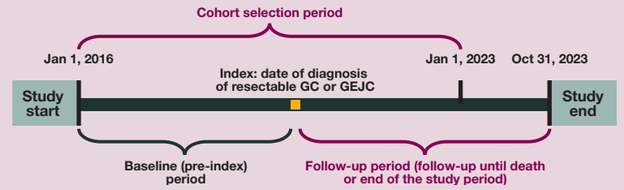
Introduction

- In the US, GC accounts for ~1.3% of all newly diagnosed cancers each year; an estimated 10,880 GC-related deaths were expected in 2024[1]
- Current treatment guidelines recommend perioperative treatments in combination with surgical resection for patients with resectable GC or GEJC; however, limited treatment options exist for these patients[2]
- Data on real-world treatment patterns and outcomes in patients with resectable GC or GEJC are limited
- The timeframe for this study was before the publication of the ESOPEC trial, which showed perioperative FLOT improved survival versus neoadjuvant 41.4 Gy plus carboplatin (CROSS) in participants with resectable esophageal adenocarcinoma[3]

Methods

- De-identified data from the Flatiron Health Enhanced Data Mart between January 1, 2016 and January 1, 2023 on adult patients diagnosed with resectable (≥T2, N0–3, and M0, or T0–4, N1–3, and M0) GC or GEJC were retrospectively analyzed for advanced GC / esophageal cancer / GEJC, plus data from an additional early GC patient-level dataset (derived from electronic health records from >280 cancer clinics with >2.4 million US patients with active cancer) (**Figure 1**)
- Patients with other cancer diagnoses prior to index (defined as date of resectable GC or GEJC diagnosis) were excluded
- Patient characteristics, treatments received, EFS (time from diagnosis to surgery cancelled due to progressive disease, disease recurrence, or death) and OS are described here

Figure 1. Study design



GC, gastric cancer; GEJC, gastroesophageal junction cancer.

Results and interpretation

Patient characteristics (Table 1)

- Of 1717 patients included, 901 had GC and 816 had GEJC
- Median age of patients with GC and GEJC was 68.0 and 69.0 years; 62.4% and 83.3% of patients were male, respectively
- Adenocarcinoma was the most frequently observed histology
- 683 (75.8%) patients with GC and 454 (55.6%) patients with GEJC received or had surgical resection planned
  - 641 (71.1%) patients with GC and 391 (47.9%) patients with GEJC underwent surgical resection
  - Subtotal gastrectomy and esophagogastrectomy were the most frequent types of resection for GC and GEJC, respectively

Table 1. Patient and disease characteristics

	GC (N=901)	GEJC (N=816)
Median (IQR) age, years	68.0 (59.0–76.0)	69.0 (61.0–75.0)
Male patients, n (%)	562 (62.4)	680 (83.3)
Tumor stage,* n (%)		
T1	43 (4.8)	23 (2.8)
T2	187 (20.8)	208 (25.5)
T3	458 (50.8)	555 (68.0)
T4	213 (23.6)	30 (3.7)
Histology, n (%)		
Adenocarcinoma	877 (97.3)	789 (96.7)
Adenosquamous	NA	NA
Other	19 (2.1)	6 (0.7)
Squamous cell carcinoma	NA	20 (2.5)
Unknown / not documented	NA	NA
Surgical resection received or planned, n (%)†	683 (75.8)	454 (55.6)
Surgical resection received, n (%)	641 (71.1)	391 (47.9)
Type of resection, n (%)		
Esophagectomy	NA	105 (26.9)
Esophagogastrectomy	27 (4.2)	268 (68.5)
Subtotal gastrectomy	419 (65.4)	NA
Total gastrectomy	170 (26.5)	NA
ECOG performance status, n (%)		
0	299 (33.2)	287 (35.2)
1	202 (22.4)	220 (27.0)
2	56 (6.2)	50 (6.1)
3	9 (1.0)	7 (0.9)
4	NA	NA
Unknown	331 (36.7)	252 (30.9)

NA, not available (data not presented to preserve patient identity due to low patient numbers).
*Including 33 patients (GC, n=28; GEJC, n=5) with T4b stage. †Number of patients who received surgery plus patients who had surgery cancelled due to progression.
ECOG, Eastern Cooperative Oncology Group; GC, gastric cancer; GEJC, gastroesophageal junction cancer; IQR, interquartile range.

Treatment patterns (Table 2)

- Among patients with GC and GEJC who had surgery, respectively:
  - 100 (15.6%) and 274 (70.1%) received neoadjuvant treatment only
  - 169 (26.4%) and 22 (5.6%) received adjuvant treatment only
  - 160 (25.0%) and 68 (17.4%) received both
  - 212 (33.1%) and 27 (6.9%) received no perioperative treatment
- Among patients who received only neoadjuvant therapy, the most frequent treatment was FLOT for GC and chemoradiotherapy for GEJC
- Among patients who received only adjuvant therapy, the most frequent treatment was chemoradiotherapy for both GC and GEJC

Treatment patterns (continued)

- Among patients who received neoadjuvant + adjuvant treatment, the most frequent:
  - Neoadjuvant treatment was FLOT for GC and chemoradiotherapy for GEJC
  - Adjuvant treatment was FLOT for GC and nivolumab for GEJC

Table 2. Treatment patterns among patients with GC and GEJC who had surgery

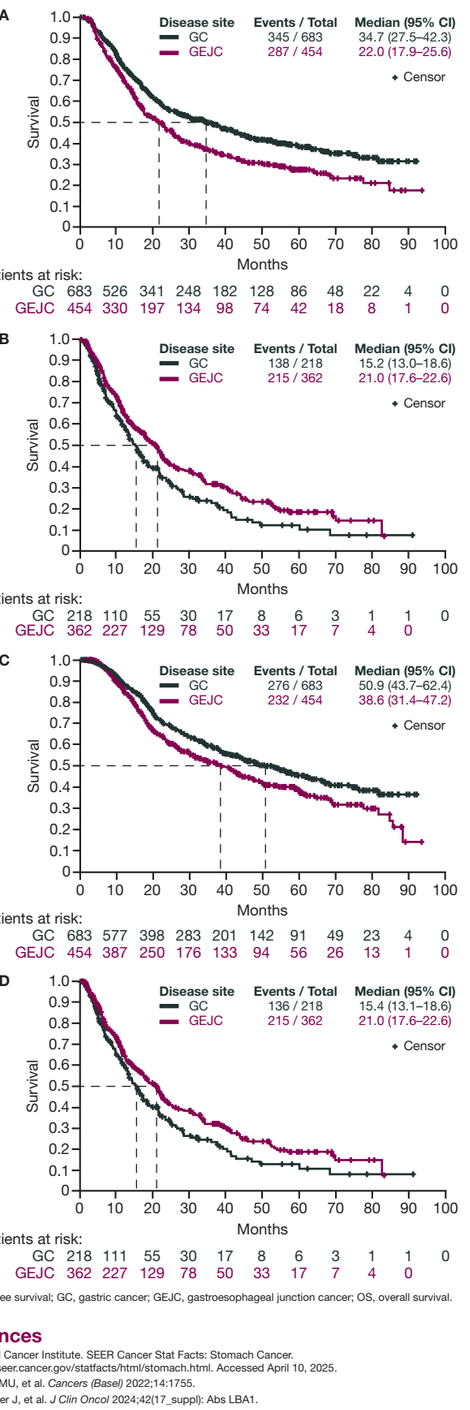
	GC (N=641)	GEJC (N=391)
Patients who received neoadjuvant treatment only, n (%)	**100 (15.6)**	**274 (70.1)**
Neoadjuvant treatment, n (%)		
FLOT	43 (43.0)	13 (4.7)
FOLFOX	19 (19.0)	5 (1.8)
Chemoradiotherapy	10 (10.0)	182 (66.4)
Radiotherapy	0	31 (11.3)
Doublet chemotherapy	19 (19.0)	37 (13.5)
Other chemotherapy	7 (7.0)	6 (2.2)
Patients who received adjuvant treatment only, n (%)	169 (26.4)	22 (5.6)
Adjuvant treatment, n (%)		
FLOT	4 (2.4)	0
FOLFOX	28 (16.6)	4 (18.2)
Chemoradiotherapy	67 (39.6)	12 (54.5)
Radiotherapy	7 (4.1)	0
Doublet chemotherapy	34 (20.1)	4 (18.2)
Other chemotherapy	26 (15.4)	1 (4.5)
Nivolumab	2 (1.2)	1 (4.5)
Patients who received both adjuvant and neoadjuvant treatment, n (%)	160 (25.0)	68 (17.4)
Neoadjuvant treatment, n (%)		
FLOT	86 (53.8)	9 (13.2)
FOLFOX	31 (19.4)	3 (4.4)
Chemoradiotherapy	3 (1.9)	46 (67.6)
Radiotherapy	2 (1.3)	0
Doublet chemotherapy	20 (12.5)	8 (11.8)
Other chemotherapy	9 (5.6)	0
Adjuvant treatment, n (%)		
FLOT	69 (43.1)	7 (10.3)
FOLFOX	31 (19.4)	13 (19.1)
Chemoradiotherapy	14 (8.8)	1 (1.5)
Radiotherapy	1 (0.6)	0
Doublet chemotherapy	26 (16.3)	7 (10.3)
Other chemotherapy	11 (6.9)	3 (4.4)
Nivolumab	2 (1.3)	31 (45.6)
Patients who received no adjuvant or neoadjuvant treatment, n (%)	212 (33.1)	27 (6.9)

FLOT, 5-fluorouracil, leucovorin, oxaliplatin, and docetaxel; FOLFOX, leucovorin, 5-fluorouracil, and oxaliplatin; GC, gastric cancer; GEJC, gastroesophageal junction cancer.

Event-free survival and overall survival (Figure 2)

- Median (95% confidence interval) EFS and OS, respectively, from diagnosis:
  - For patients who received or had surgical resection planned with:
    - GC: 34.7 (27.5–42.3) and 50.9 (43.7–62.4) months
    - GEJC: 22.0 (17.9–25.6) and 38.6 (31.4–47.2) months
  - For patients who did not receive or have surgery planned:
    - GC: 15.2 (13.0–18.6) and 15.4 (13.1–18.6) months
    - GEJC: 21.0 (17.6–22.6) months (both EFS and OS)

Figure 2. EFS among patients who (A) received or had surgical resection planned and (B) did not receive or have surgery planned, and OS among patients who (C) received or had surgical resection planned and (D) did not receive or have surgery planned



EFS, event-free survival; GC, gastric cancer; GEJC, gastroesophageal junction cancer; OS, overall survival.

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Disclosures

MB, VP, NH, and HS-F are employees and / or shareholders of AstraZeneca. LPC, PG, and DH were employees of AstraZeneca at the time of this analysis.

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