GARIBALDI: perioperative treatment patterns in patients with Stage II-IVa gastric cancer or gastroesophageal junction cancer in the United States

Vishal Patel,[1] Michael Baglio,[2] Ling Cai,[3] Pooja Gupta,[4]* Niamh Hogan,[5] Linlin Luo,[6] Heide Stirnadel-Farrant[1]

*Affiliation at the time the study was conducted.

[1]Oncology Outcomes Research, AstraZeneca, Cambridge, UK; [2]US Medical Affairs, AstraZeneca, Gaithersburg, MD, USA; [3]Oncology Biometrics, AstraZeneca, South San Francisco, CA, USA; [4]US Medical Affairs, AstraZeneca, New York, NY, USA; [5]Global Medical Affairs, AstraZeneca, Cambridge, UK; [6]Oncology Medical Above Brand, AstraZeneca, Gaithersburg, MD, USA

Objective

- To describe patient characteristics and perioperative treatment patterns for 212 patients with Stage II-IVa gastric cancer (GC)/ gastroesophageal junction cancer (GEJC) in the US

Conclusions

- Over a third of patients with Stage II-IVa GC/GEJC did not undergo surgery and had suboptimal prognosis
- In total, 65.8% of patients with GC and 40.0% of patients with GEJC underwent surgery, of which 31.0% and 83.3% received neoadjuvant treatment, and 50.0% and 29.2% received adjuvant treatment, respectively. Few patients received both neoadjuvant and adjuvant treatment to optimise surgical resection
- The most common neoadjuvant treatments for patients with GC and GEJC were FLOT and chemoradiotherapy, respectively, while adjuvant treatments were more heterogenous for GC
- Among patients who had surgery, >20% of patients with GC did not receive perioperative treatment, and 69.0% and 50.0% did not receive neoadjuvant or adjuvant treatment, respectively
- Irrespective of surgery, median overall survival (OS) was approximately 2 years or less, indicating an unmet need in GC and GEJC management
  - Limitations of the study were the low sample size, limited follow-up time, and potential for immortal time bias in the surgery sub-group, which impacted interpretation of the treatment patterns and OS results

Poster

Please scan this quick response (QR) code with your smartphone camera or app to obtain a copy of these materials. Alternatively, please click on the link below.

https://bit.ly/3YUDu0e

Poster SA9

Plain language summary

Why did we perform this research?

- In 2024, it is estimated that there will be 26,890 newly diagnosed cases and 10,880 associated deaths due to gastric cancer (GC) in the United States (US)
- Treatment guidelines recommend perioperative treatment (treatment that takes place around the same time as surgery) alongside surgery for patients with GC or gastroesophageal junction cancer (GEJC) who are eligible for surgery to treat their cancer
- We performed this research to describe the characteristics of and the treatments received by patients with Stage II-IVa GC/GEJC in the US

How did we perform this research?

- We analysed data on adult patients diagnosed with Stage II-IVa GC/GEJC between 1 January 2016 and 28 February 2022 from the Tempus GC/GEJC datasets

What were the findings of this research?

- Over one third of patients with Stage II-IVa GC/GEJC did not receive surgery
- For patients with GC who did receive surgery, over 20% did not receive perioperative treatment
- Whether patients received surgery or not, the amount of time that patients lived after the start of treatment was about 2 years or less

What are the implications of this research?

- The data provided in this analysis indicate that there is an unmet need for perioperative treatment options in GC and GEJC management

This study was funded by AstraZeneca
Poster presented at ISPOR Europe (EU) 2024 by Heide Stirnadel-Farrant

Poster presented at ISPOR Europe (EU) 2024, Barcelona, Spain, 17–20 November 2024
Corresponding author email address: Heide.Stirnadel-Farrant@astrazeneca.com

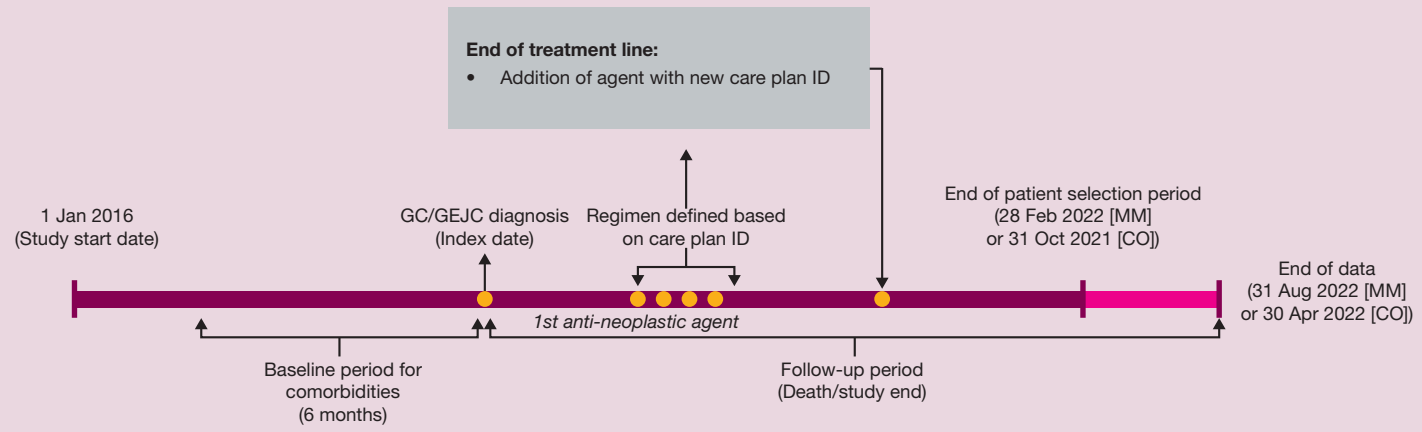
Introduction

- In 2024, it is estimated that there will be 26,890 newly diagnosed cases of GC and 10,880 associated deaths due to GC in the US[1]
- Treatment guidelines recommend perioperative (adjuvant and neoadjuvant) treatments alongside surgical resection for patients with resectable GC or GEJC; however, limited options are available[2]
- The aim of this study is to describe the characteristics and treatments received for patients with Stage II-IVa GC/GEJC in the US

Methods

- Deidentified data on patients with Stage II-IVa GC/GEJC were retrospectively analysed from the Tempus Gastric Cancer Clinical Only and Multimodal datasets, which contain data from a range of US providers. For a patient to be included in the MM dataset, in general, the patient must have survived to the point of their tumour being sequenced
- Adult patients diagnosed with GC/GEJC between 1 January 2016 and 28 February 2022 were included (**Figure 1**)
- Patients with another cancer diagnosis prior to index (defined as date of GC/GEJC diagnosis) were excluded

Figure 1. GARIBALDI study design



MM dataset: patients with GC or GEJC diagnosed from 2016 onwards who have received at least one anti-neoplastic treatment. This dataset has been enriched with histology data.
CO dataset: patients with GC or GEJC diagnosed from June 2000 onwards who have received at least one anti-neoplastic treatment.
CO, Clinical Only; GC, gastric cancer; GEJC, gastroesophageal junction cancer; MM, Multimodal.

Results and interpretation

Patient characteristics

- Overall, 152 patients with GC and 60 patients with GEJC were included in the analysis (**Table 1**)
- The median age of patients with GC and GEJC was 62.0 and 68.0 years, with 63.8% and 85.0% male patients, respectively (**Table 1**)
- Among patients with GC, 100 (65.8%) patients underwent surgical resection, with subtotal gastrectomy being the most common type of resection received (**Table 1**)
- For patients with GEJC, 24 (40.0%) patients underwent surgical resection, and oesophagogastrectomy was the most common type of resection received (**Table 1**)
- Adenocarcinoma was the most commonly observed histology for both patients with GC and GEJC (**Table 1**)

Treatment patterns

- For patients with GC who had surgery, 31 (31.0%) patients received neoadjuvant treatment and 50 (50.0%) patients received adjuvant treatment (**Table 2**)
- For patients with GEJC who had surgery, 20 (83.3%) patients received neoadjuvant treatment and 7 (29.2%) patients received adjuvant treatment (**Table 2**)
- In total, 13 (13.0%) patients with GC received continuous pre-/ post-surgery treatment, and 21 (21.0%) patients did not receive any perioperative treatment. Data were not available for patients with GEJC due to low patient numbers (**Table 2**)
- Among patients who had surgery, 26 (26.0%) patients with GC and 10 (41.7%) patients with GEJC received both neoadjuvant and adjuvant treatment (**Table 2**)
- While the total number of patients in each category was low, FLOT was the most commonly received neoadjuvant treatment, FOLFOX was the most common adjuvant treatment received, with FLOT the most common continuous pre-/post-surgery treatment among patients with GC (**Table 2**)
- For patients with GEJC, chemoradiotherapy was the most commonly received neoadjuvant treatment. The most common type of adjuvant treatment and pre-/post-surgery treatment received was not available in patients with GEJC due to low patient numbers (**Table 2**)

Overall survival

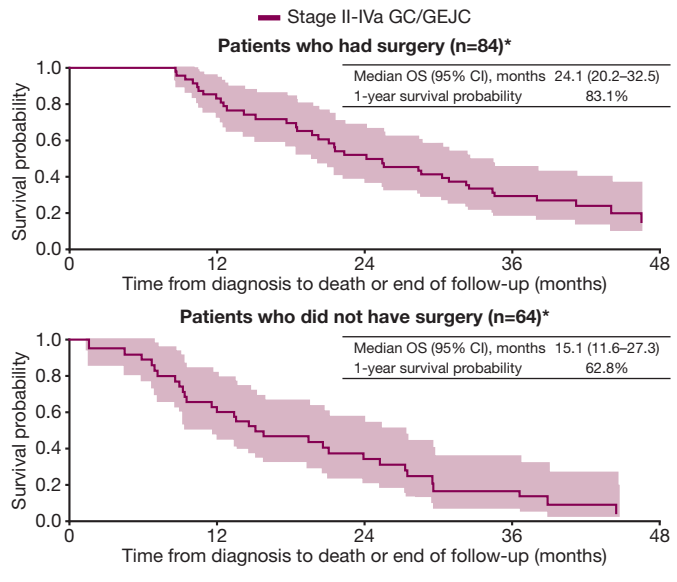
- Median OS (95% CI) in patients with GC or GEJC who had surgery was 22.9 (19.6–30.9) months and 18.5 (10.9–32.3) months, respectively
- Median OS (95% CI) for patients with GC and GEJC combined who had surgery was 24.1 (20.2–32.5) months (**Figure 2**)
- Median OS (95% CI) in patients with GC or GEJC who did not have surgery was 12.0 (9.9–13.8) months and 12.0 (9.0–15.1) months, respectively
- Among patients with GC and GEJC combined who did not have surgery, median OS (95% CI) was 15.1 (11.6–27.3) months (**Figure 2**)

Table 1. Patient characteristics

	GC (N=152)	GEJC (N=60)
Median (IQR) age, years	62.0 (52.0–71.0)	68.0 (62.0–73.5)
Male patients, n (%)	97 (63.8)	51 (85.0)
Surgical resection, n (%)	100 (65.8)	24 (40.0)
Type of resection,* n (%)		
Subtotal gastrectomy	61 (40.1)	NA
Total gastrectomy	19 (12.5)	NA
Gastrectomy	13 (8.6)	NA
Oesophagectomy	10 (6.6)	7 (11.7)
Oesophagogastrectomy	NA	15 (25.0)
ECOG performance status, n (%)		
0	50 (32.9)	21 (35.0)
1	45 (29.6)	22 (36.7)
2 or 3	16 (10.5)	6 (10.0)
Unknown	41 (27.0)	11 (18.3)
Histology, n (%)		
Adenocarcinoma†	112 (73.7)	54 (90)
Other/unknown	40 (26.3)	6 (10.0)

NA, data are not presented in order to preserve patient identity due to low patient numbers.
*Surgical resections were evaluated within 6 months before or after the primary diagnosis date. Patients could receive more than one type of resection. †Includes adenocarcinoma and signet ring cell carcinoma.
ECOG, Eastern Cooperative Oncology Group; GC, gastric cancer; GEJC, gastroesophageal junction cancer; IQR, interquartile range; NA, not available.

Figure 2. OS from time of primary diagnosis for patients with GC and GEJC combined



Median (IQR) follow-up time was 19.4 (10.5–29.7) months for patients who had surgery and 12.8 (6.3–22.8) months for patients who did not have surgery.
*The risk set adjustment method was used to perform the OS analysis, as the data were left-truncated. For patients in the MM dataset, the patient is considered "at risk" from the latter of the diagnosis date or Tempus sequencing date. For patients in the CO dataset, the patient is considered "at risk" from the diagnosis date. Patients with a sequencing date after death or last known alive date were removed for the OS analysis.
CI, confidence interval; CO, Clinical Only; GC, gastric cancer; GEJC, gastroesophageal junction cancer; IQR, interquartile range; MM, Multimodal; OS, overall survival.

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

Treatment patterns	GC (N=100)	GEJC (N=24)
Patients who received neoadjuvant treatment, n (%)	31 (31.0)	20 (83.3)
Neoadjuvant treatment, n (%)	N=31	N=20
FLOT	22 (71.0)	NA
FOLFOX	5 (16.1)	NA
Chemoradiotherapy	NA	16 (80.0)
Doublet chemotherapy	NA	NA
Other	NA	NA
Patients who received adjuvant treatment, n (%)	50 (50.0)	7 (29.2)
Adjuvant treatment, n (%)	N=50	N=7
FOLFOX	12 (24.0)	NA
FLOT	8 (16.0)	NA
Chemoradiotherapy	8 (16.0)	NA
Doublet chemotherapy	NA	NA
Immunotherapy	NA	NA
Capecitabine	NA	NA
Chemotherapy + IO	NA	NA
Other	11 (22.0)	NA
Patients who received continuous pre-/post-surgery treatment,* n (%)	13 (13.0)	NA
Continuous pre-/post-surgery treatment,* n (%)	N=13	NA
FLOT	9 (69.2)	NA
FOLFOX	NA	NA
Chemoradiotherapy	NA	NA
Chemoradiotherapy + IO	NA	NA
Other	NA	NA
Patients who did not receive perioperative treatment,† n (%)	21 (21.0)	NA
Patients who received both neoadjuvant and adjuvant treatment, n (%)	26 (26.0)	10 (41.7)

NA, data are not presented in order to preserve patient identity due to low patient numbers.
*Not considered neoadjuvant or adjuvant. †Included adjuvant, neoadjuvant or pre-/post-surgery treatment.
ECOG, Eastern Cooperative Oncology Group; FLOT, fluorouracil, leucovorin, oxaliplatin and docetaxel; FOLFOX, 5-fluorouracil plus oxaliplatin and leucovorin; GC, gastric cancer; GEJC, gastroesophageal junction cancer; IO, immunotherapy; IQR, interquartile range; NA, not available.

Acknowledgements

This study was sponsored by AstraZeneca. The authors acknowledge Nick Pyrih for contributing to the development of this poster. Medical writing support, under the direction of the authors, was provided by Derrick Bond, PharmD, CMC Connect, a division of IPG Health Medical Communications, and was funded by AstraZeneca, in accordance with Good Publication Practice (GPP 2022) guidelines.

Disclosures

VP, MB, LC, NH, LL and HS-F are employees and shareholders of AstraZeneca. PG is a former employee and shareholder of AstraZeneca.

References

1. National Cancer Institute. Cancer Stat Facts: Stomach Cancer. https://seer.cancer.gov/statfacts/html/stomach.html. Accessed 18 September 2024.
2. National Comprehensive Cancer Network® Clinical Practice Guidelines. Gastric Cancer v4.2024. https://www.nccn.org/professionals/physician_gls/pdf/gastric.pdf. Accessed 18 September 2024.