

## INTRODUCTION

### Background

- Gastric cancer (stomach cancer): 5th most frequently diagnosed; 3rd leading cause of cancer deaths worldwide in 2018.
- Patients experience concurrent and synergistic disease- and treatment-related symptoms.
- The undertreated symptoms negatively impact patients' functional performance, emotional status, quality of life, and increase the cost of treatment.

### Research Questions

- Question 1: What are the experiences (severity, frequency, distress, meaning) of symptoms for gastric cancer survivors?
- Question 2: How do patients with gastric cancer describe their symptom clusters?

## METHODS

- Design:** Qualitative descriptive study
- Sample and Setting:** Purposive sample of 10 participants, the Duke Cancer Institute
- Inclusion and exclusion criteria:**

#### Inclusion criteria

- 1) diagnosed with malignant neoplasm of the stomach (ICD-O, C16)
- 2) stage III and IV
- 3) 18 years and older
- 4) received one of the following therapies: gastrectomy, chemotherapy, radiation therapy, immunotherapy
- 5) were able to read, write and understand English

#### Exclusion criteria

- 1) diagnosed with a major psychiatric illness
- 2) had cognitive impairment

- Data collection:** DUHS IRB approval, 10 interviews in clinic infusion room; audio recorded and transcribed
- Data analysis:** 4 steps to content analysis (NVivo software): data preparation, writing memos and reflexivity, coding, and categorizing and connecting

## RESULTS

**Table 1. Demographic and clinical characteristics of participants (n=10)**

Cases	Age	Gender	Race/Ethnicity	Marital Status	Education (yr)	Family Income
1	45	Male	White, NH*	Married	12	High
2	59	Male	Black, NH	Married	14	Medium
3	46	Male	White, NH	Married	16	High
4	46	Female	Black, NH	Single	17	Low
5	75	Male	Black, NH	Married	14	Low
6	68	Male	Black, NH	Married	16	Medium
7	70	Female	White, NH	Married	15	High
8	27	Female	Black, NH	Single	8	Low
9	21	Female	Black, NH	Widowed	14	Medium
10	40	Female	Black, NH	Single	4	Medium

\*NH: Non-Hispanic

- Mean age: 50 yrs, male (n=5), African American (n=7), married (n=6), more than 12-year education (n=8), medium to high family income (n=7). All had advanced gastric cancer and received chemotherapy.

### Themes

#### Theme 1: The complex and dynamic nature of patients' symptom experience

- The severity and frequency of symptoms varied markedly following treatment
- Most prevalent symptoms: gastrointestinal symptoms, fatigue, depression/anxiety
- Complex symptom experience

#### Theme 2: Living with multiple co-occurring symptoms

- Felt "sick in the stomach"
- Focused on two or three symptoms that were of particular significance
- Lacked awareness of symptom clusters

#### Theme 3: The typologies and interrelationships in symptom clusters

- Gastrointestinal pain–dysphagia–vomiting
- Bodily pain–constipation–diarrhea
- Stomach discomfort–sleep disturbance–fatigue–depression/anxiety
- Nausea/vomiting–constipation/diarrhea–lack of appetite–weight loss

### Quotes

"For me, the biggest treatable is abdominal pain, if I deal with the pain, that takes away a lot of things, but it brings a lot of side effects. Because I have much pain, the pain kind of distract you from a lot of things, so that becomes your focus, once you are able to take care of pain, it allows you to deal with other things." (Case 3)

"There was no burning, no pain, just feeling uncomfortable, sick in the stomach. They can come anytime, day and night, mostly come at night or early in the morning. My stomach is not right, I can't go to sleep ... then I felt lack of energy next day." (Case 5)

"It was just hard to swallow. And I didn't have any space to keep any food down, I had limited space issues, that was pretty much about it. It's hard to keep food down when I swallowed, feel like my food easily stuck. Then I felt really pain, in my esophagus, so I end up throwing up. I throw up about 15 times a day." (Case 1)

## LIMITATIONS

- The generalizability of the results of this study may be limited because we did not include Asian or Hispanic American patients and we only recruited from one clinical site

## IMPLICATIONS

- Use common data elements for symptom clusters research in gastric cancer population
- Strengthen awareness of assessing for and educating gastric cancer patients on symptom clusters
- Develop effective and efficient interventions for symptom clusters

## CONCLUSIONS

- Gastric cancer patients experienced multiple concurrent symptoms yet had a limited awareness of symptom clusters.
- Patients focus on the meanings associated with individual symptoms.
- Future research on interventions targeted the symptom clusters to self-manage multiple symptoms.

## REFERENCES

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