



## ASO Author Reflections: Managing Symptoms at the End-of-Life—Some Progress, Many Unanswered Questions

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### PAST

Managing symptoms during the cancer disease trajectory is critical, particularly near the end-of-life when symptoms may escalate. Uncontrolled symptoms are distressing to patients and their caregivers and lead to suffering and increased healthcare utilization.<sup>1,2</sup> We previously reported a high incidence of hospitalization and emergency department visits in patients with gastrointestinal (GI) cancer in the final year of life and that palliative care (PC) was associated with a reduction in such healthcare utilization.<sup>3,4</sup> However, patient symptomatology as a contributing factor to these trends has not been studied. In the current study, we defined the symptom profile of patients with GI cancer and determined the effect of PC on symptom burden. Symptoms were assessed using the Edmonton Symptom Assessment System (ESAS), a validated screening tool developed to assist healthcare providers in the assessment of nine symptoms commonly observed in patients at the end-of-life, including pain, tiredness, drowsiness, nausea, lack of appetite, depression, anxiety, shortness of breath, and lack of well-being.<sup>5</sup>

### PRESENT

We conducted a population-based study of patients in Ontario, Canada who died of an alimentary canal GI cancer from January 1, 2003 through December 31, 2015 and who also had at least one ESAS score recorded in the final year of life.<sup>6</sup> The cohort included 11,242 patients who died [esophageal (17%), gastric (20%), colon (38%), and anorectal (26%) cancers].

ESAS scores in all categories escalated near the end-of-life. Fifty percent experienced moderate-severe scores in tiredness, well-being, and appetite earlier (weeks 18–12 before death), whereas 50% experienced moderate-severe scores in drowsiness, pain, and shortness of breath later (weeks 5–2 before death) in the disease course. Palliative-care naïve patients with moderate-severe symptom scores experienced a statistically significant decrease from 1 to 3 points in all symptom domains after first PC, with the greatest score reductions in the pain (− 1.91, 95% CI − 2.11, − 1.70) and nausea (− 3.01, 95% CI − 3.31, − 2.71) domains.

### FUTURE

We have shown that patients with GI cancer experience escalation of symptoms near the end-of-life; however, the severity and timing of escalation depends on the specific symptom domain. While we have shown that a single PC encounter significantly reduced symptoms in those with moderate-severe scores, many questions remain. What is the precise intervention that resulted in improved symptoms? This could range from general counselling and support to more specific interventions, such as prescription medications, to address symptoms, such as nausea, pain, and anxiety. Furthermore, does a reduction in symptom score translate into reduced healthcare utilization for that specific problem? Finally, what is the ideal frequency of follow-up for patients with moderate-severe scores to

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ensure that symptoms do not re-escalate? These are questions that remain unanswered and will serve the basis for future investigations by our research group.

**DISCLOSURES** Shaila J. Merchant has no conflicts of interest to disclose.

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