According to a new study, the overall rates of major upper abdominal cancer resections in octogenarians have risen over time. Madalyn G. Neuwirth, MD, a general surgery resident at the Hospital of the University of Pennsylvania in Philadelphia and colleagues found that this increase has been driven by increases in liver and pancreatic resections. The investigators observed that these increases have occurred despite a less favorable patient morbidity profile over time. The results of the study, which suggest that there are shifting criteria for octogenarians undergoing major abdominal surgery, recently were published in Cancer (Cancer. 2018;124:125-135).

**Study Details**

The investigators used the Nationwide Inpatient Sample database, which includes hospitals participating in the Healthcare Cost and Utilization Project, which is sponsored by the Agency for Healthcare Research and Quality. “We observed that surgical volume among octogenarians is increasing significantly, especially for oncologic indications, even when adjusted for rates of cancer incidence within this age group,” wrote the authors in their discussion. Specifically, they found that the number of major liver and pancreatic resections for cancer increased dramatically during the study period between 2001 and 2011, with average annual percentage changes of 11.52% and 6.67%, respectively. However, they also noted that the inpatient mortality rates across all major abdominal resections for cancer in octogenarians decreased, even though this patient group experienced an increase in the mean number of comorbidities as measured by the Elixhauser Comorbidity Index. The Elixhauser Comorbidity Index calculates comorbidity via dichotomized International Classification of Diseases diagnoses based on 30 categories identified as significant predictors of postoperative outcomes. Thus, despite their increased comorbidity burden, these patients are experiencing consistent improvements in short-term survival after surgery.

The authors suggest that the observed trends may be due to an emboldened surgical approach, especially at high-volume centers, within the context of increasingly favorable inpatient mortality rates from elective surgeries of the pancreas and liver.

**KEY POINTS**

- The overall rates of major upper abdominal cancer resections in octogenarians have increased over time.
- The number of major liver and pancreatic resections for cancer in this demographic has more than doubled from 2001 to 2011.
- This trend may be the result of an emboldened surgical approach within the context of increasingly favorable inpatient mortality rates from elective surgeries of the pancreas and liver.

**Implications**

This retrospective study raises important questions regarding the policy and health care allocations for the nation’s aging population. “What’s noteworthy is that it is really focusing on a growing demographic,” explains Arti Hurria, MD, director of the City of Hope’s Center for Cancer and Aging in Duarte, California. She emphasizes that it is important for physicians to address the needs of these older patients with cancer.

Dr. Hurria explains that physicians require better tools that will help them to select the right patient for the right therapy. That said, she acknowledges that “the results suggest that we might be doing a better
job selecting the right patients for surgery given the declining mortality rates. However, both patients and doctors would profit from geriatric assessment tools to understand the ‘functional age’ of the patient in order to weigh the risks and benefits of surgery.”

According to Dr. Hurria, the study by Dr. Neuwirth and her colleagues suggests that there is an opportunity to create a risk calculator for patients considering surgery that would parallel the risk calculators available for patients considering chemotherapy. Such a risk calculator would estimate which patients have a greater life expectancy and which are frail and unlikely to survive surgery or derive long-term benefits from it. However, Dr. Hurria acknowledges that frailty can be difficult to diagnose. “There are some times that you can look at a patient and you know that they are frail,” she explains. “The challenge is that for most of the patients that is not obvious.”

Dr. Neuwirth agrees that the elderly population requires a more nuanced evaluation. “The oncology community should take into account the demographic changes in the cancer patient population, particularly when considering age of diagnosis and age of patients undergoing major operations for upper abdominal cancer,” she says. “Many cancer patients are now aged older than 65; however, they still have longevity in terms of life expectancy, and survival outcomes are favorable with many of these major operations. This is important when considering multimodality therapy for older cancer patients, as age is not necessarily a contraindication to pursue aggressive treatments.”

However, older patients may benefit from a different approach to care. Dr. Hurria suggests that, in particular, there is an important place for palliative care specialists on the geriatric team. Palliative care focuses on the entire patient and thus plays a role in providing outstanding care, no matter the treatment decision. Although palliative care originally may have been considered useful only for patients with limited treatment options, research continues to demonstrate the value of involving palliative care early in the treatment process.

Geriatricians focus on this specific patient population and can help other clinicians to assess and optimize the overall health state of the patient, elicit the patient’s preferences and treatment goals, and use these to inform recommendations to tailor treatment. Although elderly patients care about the endpoint of 30-day mortality, they also care about the ability to maintain independence over time, the need for caregiver support, and longitudinal changes in function over time. “I think that the overall message [of this study] is reassuring,” says Dr. Hurria. “The overall bottom line findings show that we are moving in the right direction.”

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