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Invited Commentary

An invited commentary on "Postoperative outcomes in elderly patients undergoing pancreatic resection for pancreatic adenocarcinoma: A systematic review and meta-analysis" (Int J Surg 2019 Sep 30. pii: S1743-9191(19)30262-6. doi: 10.1016/j.ijsu.2019.09.030. [Epub ahead of print])

Pancreatic cancer is diagnosed most commonly in elderly patients. According to the Surveillance, Epidemiology, and End Results (SEER) database, approximately 2/3 of pancreatic cancer patients are older than 65 years and the median age at diagnosis is 70. While surgery is the only therapeutic modality that can provide a potential cure or long term survival, geriatric patients are at risk for under-treatment due to age-dependent care disparities. It is well documented that in a variety of solid tumors including pancreatic cancer, the rate of oncologic resection declines steadily as age increases [1]. This under-treatment stems from a variety of physician- and patient-associated factors. A major barrier is an under-recruitment of elderly patients in clinical trials and subsequent lack of level one evidence to guide treatment in this patient population [2].

In this issue of *International Journal of Surgery,* Tan et al. reported the results of a systemic review of the outcomes of the elderly patients who underwent resection of pancreatic adenocarcinoma [3]. In this meta-analysis of 12 retrospective studies, the authors compare the outcomes of oncologic pancreatic resection between elderly and younger patients. The key findings, as most anticipated, include similar tumor pathology, higher comorbidities in elderly, and less aggressive and sometimes under-treatment of elderly patients with a lower rate of adjuvant treatment and fewer attempts for vascular resection and reconstruction. Positive margin was observed more frequently. Complications associated with surgical resection including postoperative pancreatic fistula, delayed gastric emptying, and postoperative hemorrhage were similar in all age groups, while systemic complications, specifically respiratory complication, and overall complications were higher in the elderly. Postoperative mortality was not higher in elderly patients and subgroup analysis demonstrated longitudinal improvement in the more recent years. The pooled overall survival was lower in the elderly group. The study was not designed to investigate the differences in survival. Nonetheless, the differences in several factors that have been demonstrated to be independently associated with survival, including a higher positive margin and a lower rate of adjuvant chemotherapy, could at least in part, explain the differences in survival.

This study provides further proof that resection of pancreatic cancer is reasonably safe in the geriatric population. To address the added benefits of offering surgical intervention to the geriatric patients, the appropriate comparison should be between those who undergo pancreatic resection and those who refuse to receive the operative care or denied to be offered surgical management. To support the clinical decision with strong evidence, we need a comprehensive prospective assessment of not only perioperative morbidity and mortality, but also long term outcomes and longitudinal assessment of the quality of life. Another missing piece in the clinical decision making for the geriatric population is a prospectively validated practical tool for a comprehensive assessment of surgical candidacy. While several frailty assessment tools and functional capacity assessment instruments have been introduced and some proven to be thorough and comprehensive, they lack the pragmatism to be introduced and incorporated in the busy surgical preoperative planning setting [4]. With a thorough assessment of patients' functional capacity, frailty index, cognitive status, and present comorbidities, age can be taken out of the decision making process. Chronologic age can sometimes be a non-representative surrogate of the biological status and should never be the sole factor to deny offering pancreatic cancer resection to the elderly.

Declaration of competing interest

The author has no conflict of interest.

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