Letter to the Editor

Quantitative definitions of prognostic indicators of resectable pancreatic cancer

Hang Sun, Huayu Yang, Yilei Mao

Department of Liver Surgery, Peking Union Medical College (PUMC) Hospital, PUMC & Chinese Academy of Medical Sciences, Beijing, China
Correspondence to: Huayu Yang; Yilei Mao. Department of Liver Surgery, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, No. 1 Shuaifuyuan, Dongcheng District, Beijing 100730, China. Email: dolphinyahy@hotmail.com; pumch-liver@hotmail.com.
Comment on: Xu D, Wang J, Liu T, *et al.* Quantitative definitions of pain, CA19-9, and tumor size as high-risk features of resectable pancreatic cancer: a single-center retrospective cohort study. Gland Surg 2021;10:770-9.

Submitted Jun 13, 2022. Accepted for publication Aug 25, 2022.
doi: 10.21037/gs-22-354
View this article at: https://dx.doi.org/10.21037/gs-22-354

As a malignant tumor with poor prognosis, the best treatment strategies are still early screening, surgical resection, and postoperative adjuvant chemotherapy (1-3). How to judge the prognosis of resectable pancreatic cancer is an urgent problem to be solved. Recently, we read with great interest the article by Xu *et al.* (4) in the issue of *Gland Surgery* entitled "*Quantitative definitions of pain, CA19-9, and tumor size as high-risk features of resectable pancreatic cancer: a single-center retrospective cohort study*". The authors carried out a single-center retrospective cohort study including 211 patients with clearly resectable pancreatic cancer aimed to assess the relationship between overall survival (OS) after surgery and high-risk features and to define the precise criteria for these high-risk features that were often defined vaguely in past clinic guidelines. Their studies are novel and significant and exist a few concerns that may deserve further discussion.

Firstly, in this study, the authors utilized visual analogue scale (VAS) to assess the levels of abdominal and/or back pain and found that pain was not significantly associated with prognosis. However, the age range of patients included in the study cohort was wide and the average age was 63. The VAS may not be suitable for pain-prognosis correlation analysis in elderly cancer patients (5). In the studies of Zhang *et al.* and Ceyhan (6,7) *et al.* pancreatic perineural invasion (PNI) and pain sensation were demonstrated to be independent prognostic factors for survival in patients with pancreatic cancer. The pain analysis methods used vary from one to another in these studies. Therefore, the quantitative definitions of pain still deserve further study.

Secondly, we did not see patients' total bilirubin (TBil) information in patient characteristics in this study. A recent study by Xu *et al.* (8) confirmed that CA19-9/TB was an independent risk factor for long-term survival of PHC (pancreatic head carcinoma) and the lower the CA19-9/TB, the better the long-term prognosis of patients. Considering elevated bilirubin was an independent risk factor for increased CA19-9 index, we suggest that the authors could attempt to use the ratio of CA19-9/TB as a quantitative indicator in subsequent studies.

Finally, it is worth noting that all patients in the cohort received regular postoperative adjuvant chemotherapy (based on S1 or gemcitabine) and the authors used OS as the only prognostic indicator. The published systematic review and meta-analysis on adjuvant chemotherapy of S-1 and gemcitabine for resected pancreatic cancer demonstrated the benefits of adjuvant chemotherapy (9). And a Japanese clinic trial showed that postoperative adjuvant chemotherapy with S-1 significantly extended overall and relapse-free survival of patients with resected pancreatic cancer compared with gemcitabine (10). Considering this point, we suggest that more prognostic indicators should be additionally analyzed according to different adjuvant chemotherapy regimens. Besides, quantitative definitions of high-risk features need to be verified by a large sample of data. The authors' study was limited by the single-center retrospective study and the number of samples.

In conclusion, we thank the authors for their promising study that defined and quantified three significant high-risk features of resectable pancreatic cancer for clinical prognosis

prediction in resectable pancreatic cancer patients.

Acknowledgments

Funding: This study was supported by Beijing Municipal Natural Science Foundation (No. 7212077).

Footnote

Provenance and Peer Review: This article was a standard submission to the journal. The article did not undergo external peer review.

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://gs.amegroups.com/article/view/10.21037/gs-22-354/coif). All authors report that this study was supported by Beijing Municipal Natural Science Foundation (No. 7212077). The authors have no other conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

References

1. Neoptolemos JP, Kleeff J, Michl P, et al. Therapeutic developments in pancreatic cancer: current and future perspectives. Nat Rev Gastroenterol Hepatol 2018;15:333-48.
2. Brown ZJ, Cloyd JM. Surgery for pancreatic cancer: recent progress and future directions. Hepatobiliary Surg Nutr 2021;10:376-8.
3. Neoptolemos JP, Ghaneh P, Hackert T. Multimodality standard of care treatment of resectable and borderline resectable pancreatic cancer. Hepatobiliary Surg Nutr 2021;10:714-6.
4. Xu D, Wang J, Liu T, et al. Quantitative definitions of pain, CA19-9, and tumor size as high-risk features of resectable pancreatic cancer: a single-center retrospective cohort study. Gland Surg 2021;10:770-9.
5. Urban D, Cherny N, Catane R. The management of cancer pain in the elderly. Crit Rev Oncol Hematol 2010;73:176-83.
6. Zhang JF, Hua R, Sun YW, et al. Influence of perineural invasion on survival and recurrence in patients with resected pancreatic cancer. Asian Pac J Cancer Prev 2013;14:5133-9.
7. Ceyhan GO, Bergmann F, Kadihasanoglu M, et al. Pancreatic neuropathy and neuropathic pain--a comprehensive pathomorphological study of 546 cases. Gastroenterology 2009;136:177-86.e1.
8. Xu WL, Wang J, Lyu SC, et al. Ratio of CA19-9 level to total bilirubin as a novel prognostic indicator in patients with pancreatic head carcinoma following curative resection. Gland Surg 2021;10:980-91.
9. Liao WC, Chien KL, Lin YL, et al. Adjuvant treatments for resected pancreatic adenocarcinoma: a systematic review and network meta-analysis. Lancet Oncol 2013;14:1095-103.
10. Uesaka K, Boku N, Fukutomi A, et al. Adjuvant chemotherapy of S-1 versus gemcitabine for resected pancreatic cancer: a phase 3, open-label, randomised, non-inferiority trial (JASPAC 01). Lancet 2016;388:248-57.

Cite this article as: Sun H, Yang H, Mao Y. Quantitative definitions of prognostic indicators of resectable pancreatic cancer. Gland Surg 2022;11(9):1584-1585. doi: 10.21037/gs-22-354