REPLY

Comment on "Hand grip strength-based cachexia index as a predictor of cancer cachexia and prognosis in patients with cancer" by Xie et al. — The authors reply

Hailun Xie[1,2,3], Lishuang Wei[4], Guotian Ruan[1,2,3], Heyang Zhang[1,2,3] & Hanping Shi[1,2,3]* (iD)

[1]*Department of Gastrointestinal Surgery, Department of Clinical Nutrition, Beijing Shijitan Hospital, Capital Medical University, Beijing, China;* [2]*Beijing International Science and Technology Cooperation Base for Cancer Metabolism and Nutrition, Beijing, China;* [3]*Key Laboratory of Cancer FSMP for State Market Regulation, Beijing, China;* [4]*Department of Respiratory and Critical Care Medicine, Beijing Institute of Respiratory Medicine and Beijing Chao-Yang Hospital, Capital Medical University, Beijing, China*

Correspondence to: Han-Ping Shi, Department of Gastrointestinal Surgery, Department of Clinical Nutrition, Beijing Shijitan Hospital, Capital Medical University; Beijing International Science and Technology Cooperation Base for Cancer Metabolism and Nutrition, Beijing 100038, China. Email: shihp@ccmu.edu.cn
Hailun Xie, Lishuang Wei, Guotian Ruan and Heyang Zhang contributed equally to this work.

To the Editor:
We have read the valuable external validation and expansion provided by Ding et al.[1] regarding our recently published study in the *Journal of Cachexia Sarcopenia and Muscle*.[2]

In our study,[2] we developed the hand grip strength-based cachexia index (H-CXI) as a reliable and promising prognostic assessment tool for patients with cancer. We achieved this by replacing the complex and expensive skeletal muscle index (SMI) with a simple and effective measurement of hand grip strength (HGS). Additionally, we extensively validated H-CXI across three different cohorts: primary cohort (6592), internal validation cohort (2820) and external validation cohort (5270). The findings reaffirm the reliability of H-CXI in assessing prognosis and predicting cachexia in patients with cancer, while highlighting its broad prospects. However, as mentioned by Ding et al.,[1] different types of tumours with varying pathological factors may influence the results. Further validation of H-CXI's clinical applicability still requires prospective studies with strict inclusion criteria.

In the study conducted by Ding et al., they explored the clinical applicability of H-CXI as a prognostic factor for cancer cachexia and prognosis in patients with locally advanced gastric cancer (LAGC) through a cohort study registered under the identifier NCT01516944. The cohort prospectively recruited LAGC patients who underwent curative surgical resection. It was a prospective study with strict inclusion criteria, complete clinical and pathological data, and a long follow-up duration. They found that patients in the high H-CXI group had a significantly lower risk of cancer cachexia compared to those in the low H-CXI group. Additionally, the high H-CXI group had significantly better overall survival (OS) and disease-free survival (DFS) than the low H-CXI group.

This study further confirmed the effectiveness of H-CXI in evaluating cancer cachexia and adverse prognosis of patients with cancer within an external prospective cohort, aiding in the clinical guidance of prognosis assessment and individualized treatment for patients with cancer. We sincerely appreciate Ding et al.[1] for their further exploration of the clinical effectiveness of the H-CXI tool. Their contribution is recognized and acknowledged.

Inspired by the study conducted by Ding et al., we further explored the prognostic value of H-CXI in GC patients. We also found that patients in the high H-CXI group had significantly better OS than those in the low H-CXI group (OS: 64.5% vs. 50.8%, $P < 0.0001$) (Figure 1A). Additionally, subgroup analysis showed that H-CXI could effectively stratify the prognosis of advanced-stage patients (Stage III-IV) rather than stage I-II patients, which is consistent with the findings of Ding et al.[1] to some extent (Figure 1B). These results suggest that H-CXI, as a comprehensive indicator reflecting muscle, nutrition, and inflammatory status, is a simple and effective tool for prognostic assessment and evaluation of cancer cachexia in GC patients, especially for those in advanced stages.
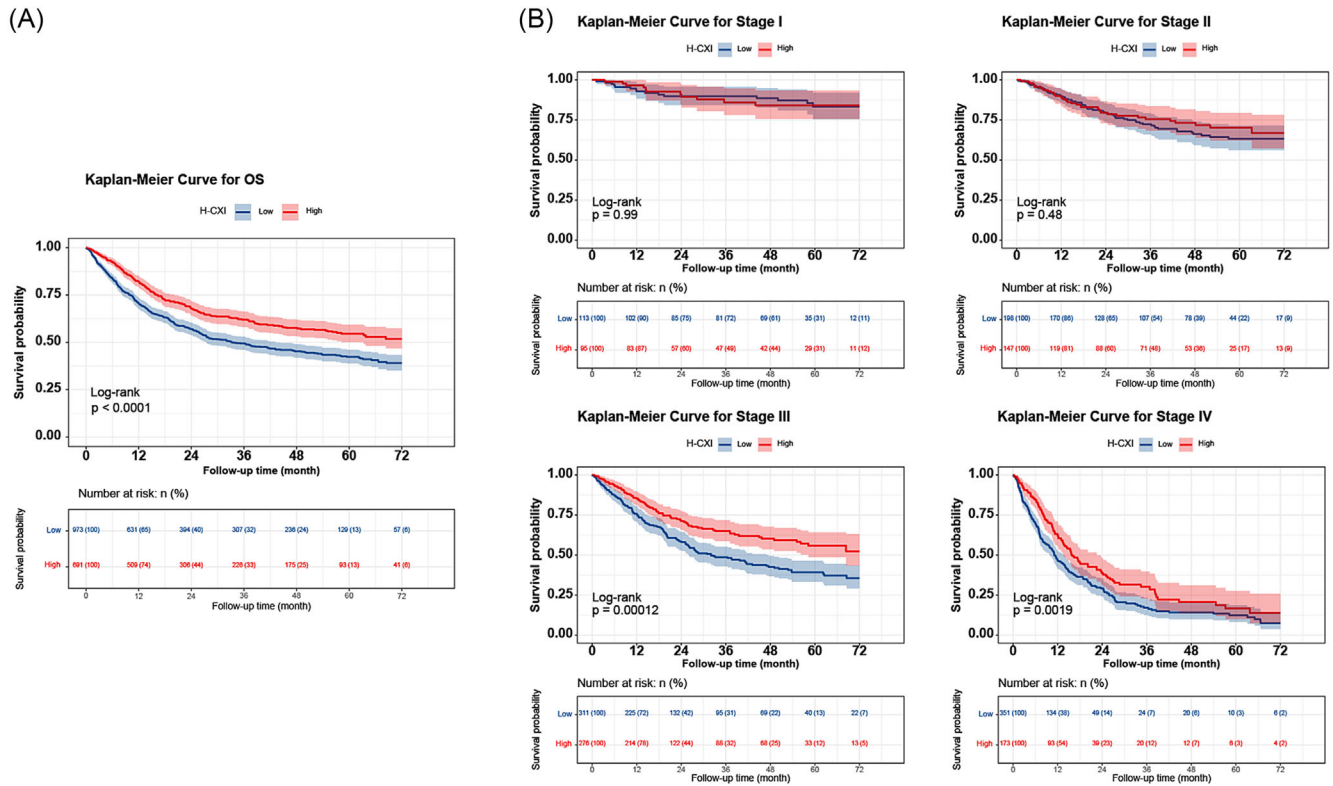
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(A)

(B)

Figure 1 Kaplan–Meier curves of different H-CXI levels in gastric cancer patients. (A) All patients. (B) Subgroup analysis based on different stages.

Conflict of interest

The authors declare no competing interests.

References

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