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EDITORIAL – THORACIC ONCOLOGY

Association of the Modified Albumin–Bilirubin Grade with Survival Outcomes in Esophageal Squamous Cell Carcinoma

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The albumin–bilirubin (ALBI) grade was initially developed to assess residual liver function in patients with hepatocellular carcinoma.[1] To date, several studies have consistently indicated a significant correlation between ALBI grade and the prognosis of hepatocellular carcinoma.[1–3] Similar findings have also been reported in pancreatic[4] and colorectal cancer.[5] The ALBI grade includes two parameters, albumin and serum bilirubin, which can reflect a patient's impaired nutritional status and liver dysfunction. Currently, several preoperative nutritional and immune-inflammation indexes have been reported to predict survival in patients with malignant tumors.[6,7]

In this issue of *Annals of Surgical Oncology*, Shinozuka et al.[8] showed that the modified ALBI (mALBI) Grade 2 group had significantly worse disease-specific survival (hazard ratio [HR] 2.47, 95% confidence interval [CI] 1.58–3.86; $p < 0.0001$) than the mALBI Grade 1 group. Moreover, mALBI Grade 2 was found to be an independent prognostic factor for adverse disease-specific survival (HR 1.86, 95% CI 1.18–2.93; $p = 0.0074$). The authors concluded that additional prospective multicenter studies are required to investigate the correlation between mALBI grade and survival outcomes in esophageal cancer patients.

As described above, it is interesting that mALBI grade has a clinically significant impact on patient survival. Due to the easy accessibility from routine preoperative chemistry tests, the mALBI may be introduced as a simple and alternative prognostic indicator. However, the prognosis for patients with esophageal cancer depends on multiple factors, including patient performance, stage, biological characteristics, therapeutic option, and response to therapy. To what extent the differential effect of mALBI grade might affect the prognosis remains to be comprehensively assessed. In addition, the study reported by Shinozuka et al.[8] did not describe the therapy after disease recurrence, and this could mask or dilute the potential long-term benefits of adjuvant therapy when comparing the prognosis between two groups. Neoadjuvant chemoradiotherapy plus surgery has been established as the standard treatment in patients with resectable esophageal cancer. However, the 10-year follow-up was disappointing, with only 38% of patients treated with the CROSS strategy being cured.[9] Pathologic complete response was achieved in 29% of patients in the neoadjuvant chemoradiotherapy group,[10] meaning that most patients had residual therapy-resistant cancers. Thus, novel biomarkers that can predict the response to neoadjuvant treatment are needed. Further investigation of the correlation between nutritional or inflammatory markers and the response to a given treatment seems warranted.

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