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Comment on "Prognostic Effect of Liver Resection in Extended Cholecystectomy for T2 Gallbladder Cancer Revisited: A Retrospective Cohort Study with Propensity-Score-Matched Analysis"

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We read with great interest the article recently published in Annals of Surgery by Park et al.[1] "Prognostic Effect of Liver Resection in Extended Cholecystectomy for T2 Gallbladder Cancer Revisited: A Retrospective Cohort Study with Propensity-Score-Matched Analysis."[1] It is a well-designed retrospective study that demonstrates the possibility of omitting liver resection for T2 gallbladder cancer (GBC). The authors should be commended for their meticulous approach to analyzing the data and providing valuable insights into the prognostic effect of liver resection in this context. However, before immediately implementing these results into routine clinical practice, there are several important considerations that need to be taken into account.

First, despite performing propensity score matching, there is still a potential for patient selection bias between the lymph node dissection (LND) group and the LND + liver resection (LND + L) group. This study is retrospective, and patients were selected based on the pathological examination of resected specimens. As it is well known, preoperative diagnosis of depth of invasion for GBC is challenging, and there may be cases included that were diagnosed as cT1 or cT3 preoperatively. It is conceivable that the LND + L group had more cT3 cases, whereas the LND group had more cT1 cases. Therefore, even if they were all pT2 lesions, there might have been a difference in the extent of subserosal invasion between the 2 groups. Furthermore, despite the disappearance of statistical significance after propensity score matching, there are more T2b lesions in the LND + L group. It is a concern that the LND group has fewer T2b lesions, which are considered to have a poorer prognosis, yet the survival curve is slightly lower in the LND group.

Second, there is the issue of whole-layer cholecystectomy (WLC). In one of the participating institutions in this study, WLC was performed for cases with no obvious invasion into the liver. Unlike simple cholecystectomy, which is commonly performed in general facilities and involves dissection within the subserosal layer, WLC is a procedure that includes cholecystectomy involving the cystic plate and entails resection of the entire subserosal layer.[2] The significance of this procedure has not been fully elucidated, but it may offer higher curability for pT2 lesions compared with simple cholecystectomy. Therefore, when extrapolating the conclusion of this study that "liver resection is unnecessary" to general facilities, caution is needed to avoid interpreting it as "simple cholecystectomy is sufficient." Because WLC is not a globally standardized procedure, we believe it should have been further emphasized that patients in the LND group of this study underwent WLC instead of simple cholecystectomy.

Third, there is a possibility of statistical β-error. Looking at Figures 1(b), 2(b), supplementary figures 2(b), and 3(b), although there is no statistically significant difference, there appears to be a consistent widening gap between the LND group and the LND + L group. Observing statistical significance with a larger sample size could have been possible. It is indeed a fact that there is no solid evidence supporting the benefit of liver resection for pT2 GBC. However, given that liver metastases around the gallbladder bed are occasionally encountered,[3] and the current standard surgical procedure for pT2 lesions is LND + L in the guidelines,[4,5] the question of whether liver resection can indeed be omitted should be addressed not based on the lack of statistical significance but rather by prospectively verifying the noninferiority of LND compared with 'LND + L' with an appropriate noninferiority margin. The authors concluded, 'These findings should be validated with well-designed prospective studies,' and we wholeheartedly agree.

Finally, we extend our heartfelt appreciation to the authors for their significant contributions to the field of GBC research.

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