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Invited Commentary

Albumin-to-alkaline phosphatase ratio as a novel prognostic indicator for patients undergoing minimally invasive lung cancer surgery: Propensity score matching analysis using a prospective database

We read with interest the recently published article by Li et al. 'Albumin-to-alkaline phosphatase ratio as a novel prognostic indicator for patients undergoing minimally invasive lung cancer surgery: A prospective propensity score matching study' [1].

Albumin and alkaline phosphate have long been considered independently for their prognostic value. The use of albumin-to-alkaline phosphatase ratio (AAPR) is, however, a novel measure that has emerged within the literature only over recent years. Chan et al. first described its use in patients with hepatocellular carcinoma in their 2015 paper [2]. They found powerful prognostic value and thus generated interest in its use for hepatocellular carcinoma and other types of malignancy. The measure has since been studied in patients with cholangiocarcinoma, breast cancer, upper urothelial cancers, pancreatic ductal adenocarcinoma and even metastatic nasopharyngeal carcinoma. Throughout the existing literature, it has been consistently found to be a valuable prognostic indicator.

The utilisation of AAPR for non-small-cell lung cancer has been considered previously for survival of patients with metastatic disease [3]. This is, of course, a very different patient cohort to Li et al. [1] who's study considered a subgroup of patients undergoing VATS lobectomy for early, operable, primary non-small-cell lung cancer. The clinical relevance within this population is clear, considering the poor overall survival rate of approximately 18%. Prognostic indicators can play an important role in improving the early delivery of better-targeted treatment to patient groups such as these.

Potential clinical applications of AAPR would, of course, be in conjunction with other known prognostic factors. Confounders such as tumour size, lymphatic involvement, age and premorbid status are well known to impact survival considerably. Given the retrospective nature of the existing literature, use of statistical techniques such as multivariate type analyses and propensity score matching is of crucial importance to reduce the effects of such confounders. The use of propensity score matching is a definite strength of Li et al.'s study. This allowed a more robust conclusion surrounding the independent prognostic value for the preoperative AAPR.

Li et al. have shown further promise for the use of AAPR as a simple, quick and low-cost prognostic marker [1]. Consideration of AAPR across further prospective, multi-centre studies will help to clarify its role, alongside other important variables, in survival prediction and risk stratification.

Conflicts of interest

None to declare.

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