

## ALP TO PLATELET RATIO INDEX (ALPRI) AS A NOVEL PROGNOSTIC MARKER IN INTRADUCTAL PAPILLARY NEOPLASM OF THE BILE DUCT (IPNB)

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**Background** : Intraductal papillary neoplasm of the bile duct (IPNB) is recognized as a distinct entity. Numerous studies have reported on prognostic serum markers for IPNB. We introduce the novel marker, ALP-to-Platelet ratio (ALPRI), for its predictive and prognostic utility in IPNB. This research is the inaugural demonstration of the correlation between this marker and the survival of IPNB patients.

**Methods** : We retrospectively reviewed medical records of 494 patients who were diagnosed with IPNB between January 2007 and December 2022. All clinical parameters were analyzed.

**Results** : The median of ALPRI was 0.52, and was used as the primary cut point. Patients, therefore, were divided into those with  $ALPRI < 0.52$  ( $n = 241$ ; 48.8%) and those with  $ALPRI \geq 0.52$  ( $n = 253$ ; 51.2%). The demographic and operative variables were comparable between the two groups, with the exception of a higher incidence of abdominal pain in individuals with  $ALPRI < 0.52$ , and an increased occurrence of clinical jaundice, fever, INR levels, bilirubin levels, and liver enzyme levels in those with  $ALPRI \geq 0.52$ . The median overall survival time in  $ALPRI < 0.52$  group was significantly greater than  $ALPRI \geq 0.52$  group (2,672 vs 1,300 days,  $p < 0.001$ ). The 1-, 3-, and 5-years overall survival rate in  $ALPRI < 0.52$  were 92.3, 72.7, and 62.5% compared to  $ALPRI \geq 0.52$  that were 85.3, 53.7, and 39.5% respectively.

**Conclusions** : ALPRI can serve as a novel prognostic marker of IPNB patients. Patients with  $ALPRI \geq 0.52$  is shown to have lower survival.