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Clinical validation of new 2017 international consensus guidelines for IPMN of the pancreas

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Introduction : The new 2017 international consensus guideline (ICG) for intraductal papillary mucinous neoplasm (IPMN) of the pancreas was recently released. Elevated serum carbohydrate antigen 19-9 (CA 19-9) and a rapid cyst growth (>5mm per 2 year) were added in the worrisome features. This study was to validate the 2017 ICG in clinical circumstances and compare the diagnostic performance between the 2017 and 2012 ICG.

Methods : This was a retrospective cohort study. Between January 2000 and January 2017, patients who underwent complete surgical resection, and had pathologic confirmation of branch-duct (BD) or mixed-type IPMN were enrolled. Demographic, laboratory, and radiologic data were obtained in the prospectively collected database. For evaluating diagnostic performance, the areas under the receiver operating curves (AUCs) were evaluated.

Results : Total 448 patients were enrolled. The presence of mural nodule (hazard ratio [HR] 9.12, 95% CI 4.60 – 18.09, P=0.001), MPD dilatation (>5mm) (HR 5.32, 95% CI 2.67 – 10.60, P=0.001), thickened cystic wall (HR 3.40, 95% CI 1.51 – 7.63, P=0.003), and elevated CA 19-9 level (>37 unit/mL) (HR 5.25, 95% CI 2.05 – 13.42, P=0.001) were significantly associated with the malignant IPMN. Malignant lesion showed >5mm/2year of cyst growth rate more frequently than benign lesion (60.9 vs 29.7%, P=0.012). The AUC was higher of the 2017 than those of the 2012 ICG (0.784 vs. 0.746).

Conclusions : The 2017 ICG for IPMN is valid and has better diagnostic performance than the 2012 ICG. The introduction of elevated serum CA 19-9 level and cyst growth rate to the 2017 ICG is appropriate.

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