

Validation Of Anatomical And Biological Definition Of Borderline Resectable Pancreatic Cancer According To The 2017 International Consensus For Survival In Patients With Resectable And Borderline Rese

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Background : In 2017, international consensus criteria (ICC) was redefined patients with borderline resectable pancreatic ductal adenocarcinoma (BR-PDAC) according to three distinct dimensions: anatomical, biological, and conditional criteria. However, until now, there have been few validation studies for this new criterion. The aim of study was to validate the anatomical and biological definitions of BR-PDAC for oncological outcomes in patient with resectable (R) and BR-PDAC undergoing upfront surgery.

Methods : A total of 404 patients who underwent upfront surgery for R- and BR-PDAC from 2004 to 2020 were included. The patients were classified according to the ICC; Resectable (R) (n=259), Anatomical borderline (BR-A) (n=43), Biologic borderline (BR-B) (n=81), and Anatomical and Biologic borderline (BR-AB) (n=21).

Results : BR-A (32.5%) and BR-AB (33.4%) had higher postoperative complication rates than R (16.5%) and BR-B (27.2%) ($P<0.001$). R0 resection rates of BR-A (65.1%) and BR-AB (61.9%) were significantly lower than those of R (85.7%) and BR-B (80.2%) ($P=0.003$). In comparison, BR-B (32.1%) and BR-AB (57.1%) had higher rates of early recurrence (within postoperative 6 months) than R (16.5%) and BR-A (25.6%) ($P<0.001$). The 3-year recurrence-free survival rates of BR-B (12.1%) and BR-AB (7.8%) were significantly lower than those of R (36.1%) and BR-A (20.7%) ($P<0.001$).

Conclusions : Anatomically defined BR-PDAC was associated with higher risk of margin-positive resection and postoperative complication, while biologically defined BR-PDAC was associated with higher early recurrence rates and lower survival rates. These findings suggest that anatomical and biological definitions are useful in predicting the prognosis and determining the use of neoadjuvant therapy.

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