

## NEW PATHOLOGICAL RESPONSE SYSTEM; SHRINKAGE PATTERNS FOR RESECTABLE/ BORDERLINE RESECTABLE PANCREATIC CANCERS.

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**Background** : An increasing number of patients with pancreatic ductal adenocarcinoma (PDAC) have undergone resection following neoadjuvant therapy (NAT). Therefore, it is important to establish a standardized pathological assessment method that contributes to the prediction of clinical outcomes and, ultimately, the management of PDAC patients.

**Methods** : A total of 206 patients with resectable or borderline resectable PDAC who underwent resection following NAT between 2010 and 2021 were included. Pathological shrinkage patterns were analyzed and classified into four categories: Type I and II (concentric shrinkage with or without surrounding lesions), Type III (shrinkage with residual multinodular lesions), and Type IV (multiple residual carcinomas). We defined the concentric types as Type I and II, and the multinodular types as Type III and IV. Overall survival (OS) and disease-free survival (DFS) were compared according to shrinkage patterns and the College of American Pathologists (CAP) grading.

**Results** : Types I, II, and III were found in 71 patients (34.5%), 69 patients (33.2%), and 66 patients (32.3%), respectively. The median OS was 132.8 months for the concentric type and 32.0 months for the multinodular type. The median DFS was 32.4 months for the concentric type and 17.7 months for the multinodular type. OS and DFS were significantly longer in the concentric type than in the multinodular type ( $p < 0.001$ ). Multivariate analyses revealed that the pathological shrinkage pattern, but not CAP grading, was independently associated with survival (HR 2.6,  $p = 0.02$ ).

**Conclusions** : The clinical assessment of pathological shrinkage patterns can be recommended for predicting prognosis in patients with resectable or borderline resectable PDAC after NAT.

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