論 文 要 旨

Pancreatic neuroendocrine tumors: Correlation between the
contrast-enhanced computed tomography features and the pathological
tumor grade

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Objective:　To determine whether CT features can predict the pathological grades of pancreatic neuroendocrine tumors (PanNETs) according to the recent WHO classification.

Materials and methods: In all, 28 patients with histologically confirmed PanNETs underwent preoperativecontrast CT examinations. Thirteen tumors were classified as G1 and 15 as G2. Two radiologists inde-pendently evaluated the CT features (tumor delineation, peripancreatic vascular involvement, upstreampancreatic duct dilatation, N (regional lymph node metastasis) and M (distant metastasis) grades, tumorhomogeneity, cystic or necrotic change, and tumor conspicuity). The tumor sizes and Hounsfield unitvalues of all PanNETs during each phase on CT were measured by one radiologist. We compared the CT fea-tures between tumor grades using Fisher's exact test for nominal scales and Mann–WhitneyU test for ordinal scales or continuous variables. Additionally, we evaluated the performances of the CTfindings and their combinations to diagnose G2 tumors.

Results: G2 tumors showed significantly larger in tumor size than G1 tumors ($p = 0.029$). All 4 tumors with hepatic metastases were G2. Non-hyperattenuation compared with pancreatic parenchyma during portal venous phase (PVP) was significantly associated with G2 ($p = 0.016$). The accuracy for G2 diagnosis of tumor size (≥ 20 mm), M grade (M1), and tumor conspicuity (non-hyperattenuation during PVP) were71%, 61%, and 71%, respectively, while the accuracy of their combination was 82%.

Conclusion: Contrast-enhanced CT features (tumor size, M grade, and tumor conspicuity during PVP) can predict the pathological grades of PanNETs.