**Fig. e5** Contrast-enhanced harmonic endoscopic ultrasonography (CH-EUS) of intraductal papillary mucinous neoplasms (IPMNs). Area under the receiver operating characteristic (AUROC) for time–intensity curve parameters: **a** echo intensity change; **b** echo intensity reduction rate; **c** nodule/pancreatic parenchyma contrast ratio.

**Fig. e7** Comparison of microvessel density in intraductal papillary mucinous neoplasms (IPMNs), between those showing low and intermediate grade dysplasia (LGD/IGD) and those showing high grade dysplasia and invasive carcinoma (HGD/invasive carcinoma). Microvessel density was significantly higher in the HGD/invasive carcinoma group than in the LGD/IGD group ($P=0.002$).

**Fig. e8** Correlation between the echo intensity change and microvessel density of mural nodules in intraductal papillary mucinous neoplasms (IPMNs). There was a strong, positive linear correlation between echo intensity change and microvessel density ($r=0.803$, $P<0.001$).