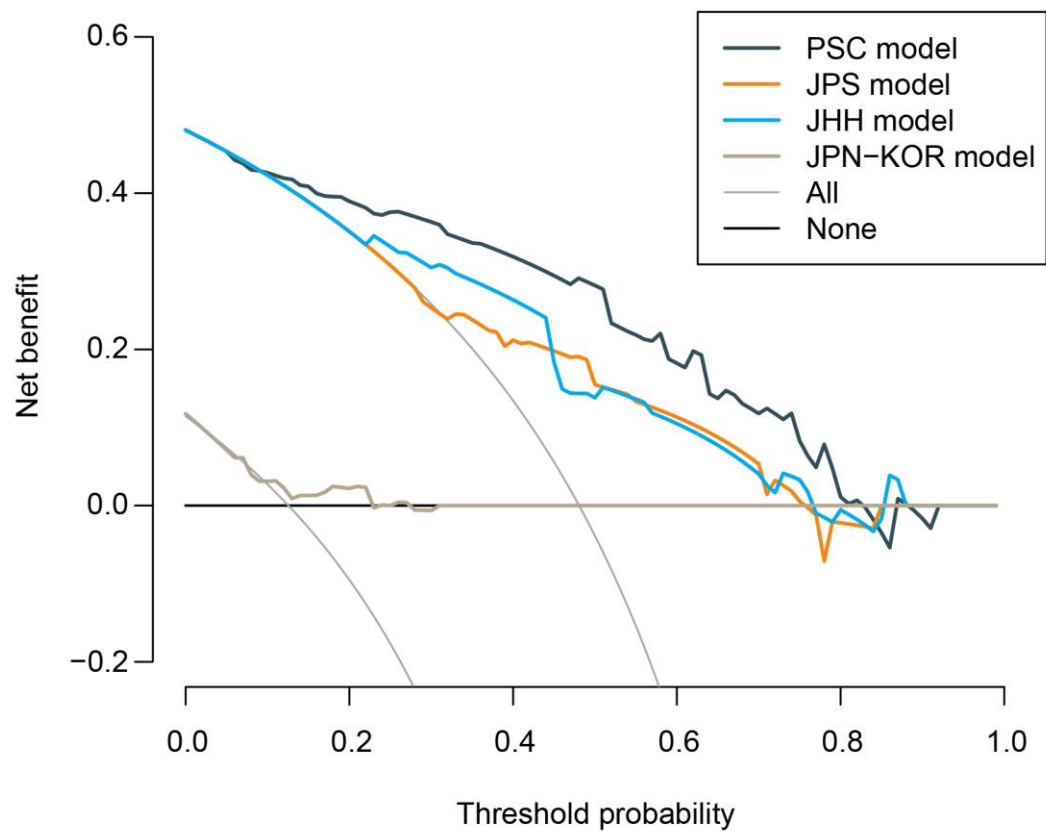


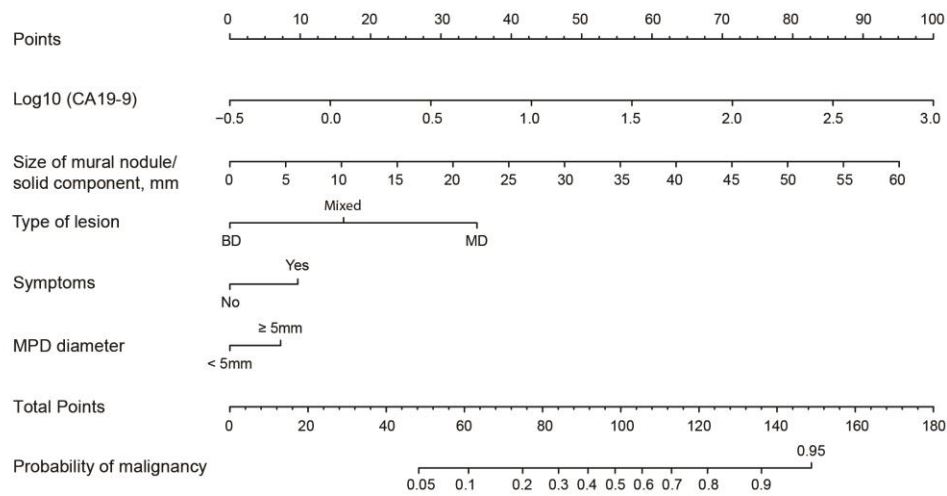
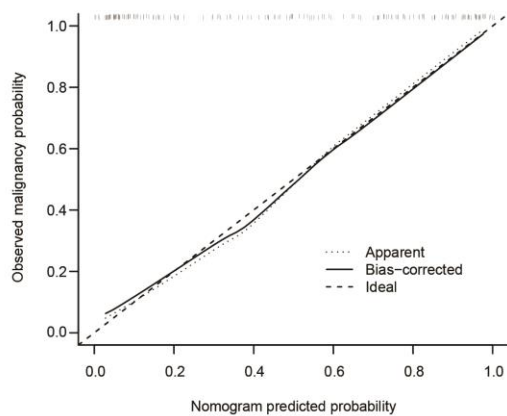
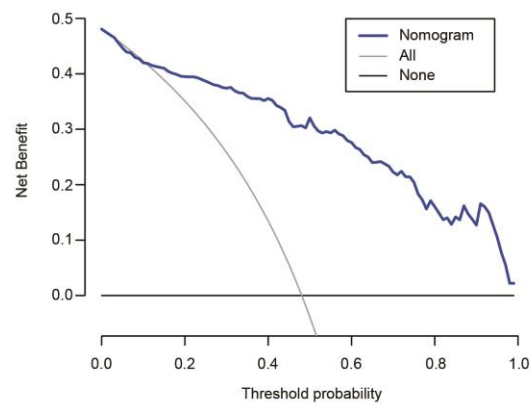
**Supplementary Figure 1. Representative endoscopic ultrasound images of the four morphological classifications proposed by Ohno *et al.*<sup>[15]</sup>** **A:** type I – cystic wall containing fine, papillary, protruding components; **B:** type II – a smooth-surfaced component (diameter: 6.1 mm) protruding into the cyst (the image in the lower left corner shows the characteristics of the polypoid nodule using the real-time 3D function); **C:** type III – a large, irregular, papillary nodule protruding into the cyst, with blood flow signals representing the blood supply; **D:** type IV – an irregular papillary nodule with an ill-defined connection to the cystic wall.





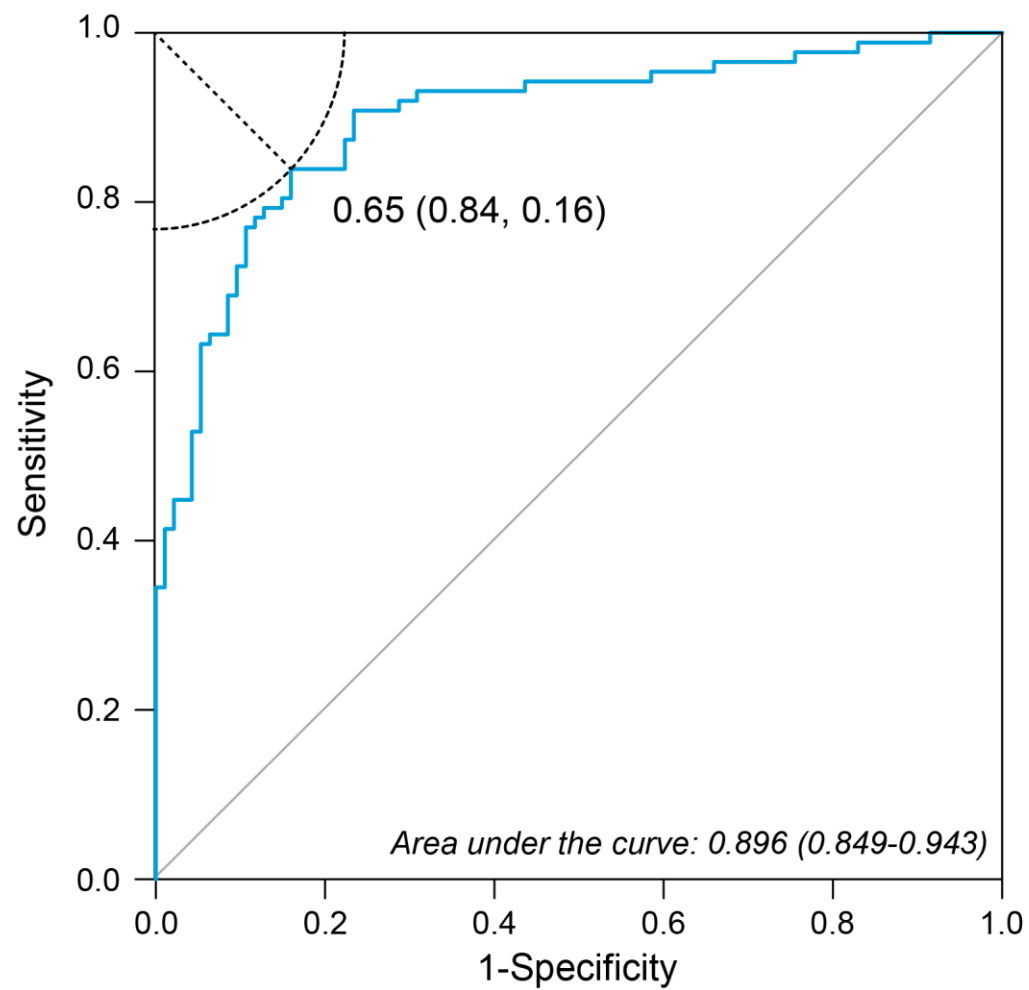
**Supplementary Figure 2. Decision curve analysis demonstrating the net benefit associated with the use of the four models.** The highest net benefit was found for the PSC model. The JPS and JHH models were comparable with regard to their net benefit. The JPN-KOR model also demonstrated a net benefit compared to the assumption that all or no patients had branch duct-type malignant disease. JHH, Johns Hopkins Hospital; JPN-KOR, Japan-Korea; JPS, Japan Pancreas Society; PSC, Pancreatic Surgery Consortium.



**A****B****C**

**Supplementary Figure 3. A:** Nomogram derived from our cohort of 181 patients for predicting the malignancy of IPMN. **B:** Calibration plot showing the agreement between the predicted and observed probability of malignancy. **C:** Decision curve analysis demonstrating the net benefit associated with the use of the nomogram for predicting malignancy. CA, carbohydrate antigen; IPMN, intraductal papillary mucinous neoplasm; MPD, main pancreatic duct.





**Supplementary Figure 4. Optimal cut-off on the receiver operating characteristic curve using our nomogram for predicting the malignancy of intraductal papillary mucinous neoplasms.**



**Supplementary Table 1. Details of reported models for predicting malignancy in patients with intraductal papillary mucinous neoplasms**

Study	Year	No. of patients	No. of institutions	C-index	Factors included in the model
JPS model	2018	1130	11	0.763 (TS) 0.725 (VS)	Mural nodule, main duct diameter, cyst size of BD-IPMN
PSC model	2016	1028	3	0.82 (TS) 0.81 (VS)	For MD-IPMN: cyst size, solid component/mural nodule, weight loss, symptoms, main duct diameter For BD-IPMN: age, cyst size, solid component/mural nodule, symptoms, gender
JPN-KOR model	2016	1914	22	0.787 (TS) 0.737 (VS)	Age, logCEA, logCA19-9, main duct diameter, cyst size, mural nodule
JHH model	2016	272	1	0.895	NLR, cyst size, main duct diameter, solid component, jaundice

**Abbreviations:** BD, branch duct; IPMN, intraductal papillary mucinous neoplasm; JHH, Johns Hopkins Hospital; JPN-KOR, Japan-Korea; JPS, Japan Pancreatic Society; MD, main duct; NLR, neutrophil-to-lymphocyte ratio; PSC, Pancreatic Surgery Consortium; TS, training set; VS, validation set.