



**Supplementary Fig. S1. Stage IV appendiceal mucinous tumor with low-grade appendiceal mucinous neoplasm (LAMN) and disseminated peritoneal mucinous tumor.** (A) A LAMN, displaying pushing invasion by mucinous epithelium with low-grade cytology. (B) Immunohistochemical stain of cytokeratin (CK) 20 in LAMN. (C) Immunohistochemical stain of CDX2 in LAMN. (D) A disseminated peritoneal mucinous tumor with low-grade cytology diagnoses as low-grade mucinous carcinoma peritonei. (E) Immunohistochemistry of CK20 in the disseminated peritoneal mucinous tumor. (F) Immunohistochemistry of CDX2 in the disseminated peritoneal mucinous tumor. Immunohistochemistry can support the appendiceal origin and the diagnosis of LAMN with peritoneal involvement.