

# Imaging diagnosis

---

## Case 432

### 2. Intraductal papillary mucinous neoplasm (high risk group)

#### 【Progress】

Our internal medicine physician advised her to consult with pancreas surgeons in university hospital about whether to receive pancreatectomy or not.

#### 【Discussion】

Intrapapillary mucinous neoplasm (IPMN) is the tumor growing in the pancreatic duct secreting mucinous fluids, inducing pancreatic dilatation. IPMN can be malignant in two patterns; shift from IPMN to intrapapillary mucinous carcinoma (IPMC) : pancreatic ductal cancer emerges based on IPMN. Pancreatic duct cancer that equals pancreatic cancer, occurs with the incidence of one per 20000, while pancreatic cancer occurs based on IPMN with the incidence of one per 2000 (1-3). It indicates 10-fold higher incidence of pancreatic cancer in IPMN that is the ground for the importance of the interval follow-up to detect the early stage of pancreatic cancer.

IPMN is categorized into three types: branch duct type, main duct type, and mixed type.

High risk group of branch type of IPMN includes pancreatic duct branch diameter is greater than 5mm, cyst diameter 30mm or greater, solid component protruding into lumen, thickening cyst mural, or rapidly growing cyst size. The annual malignancy rate of branch type is 2-3% per year (1-6).

High risk group of main duct type of IPMN includes main pancreatic duct diameter 10mm or greater, nodules present in the cyst mural or jaundice (4-6). High risk group of mixed types of IPMN includes main duct diameter 10mm or greater, wall nodules, cyst diameter 30mm or greater, solid protrusion in the cyst, thickened cyst mural or rapidly growing cyst (4-6).

In the past, we encountered two patients of branch type IPMN who experienced metastatic liver cancer: one patient with IPMN whose pancreatic duct diameter, 8.3mm, cyst size 10.2mm, ADC values, 1.408. Fifteen months later, high signal intensity area of pancreas parenchyma was depicted on DWI indicative of water proton diffusion disorder. Another patient with branch type of IPMN, pancreatic duct 2.4mm, cyst size 38.7mm, was depicted on contrast-enhanced CT, experienced IPMC with metastatic liver tumor three months later.

In the present case, pancreatic duct of 11mm in diameter was depicted on abdomen CT, more clearly on arterial phase of contrast-enhanced CT rather than non-enhanced CT, indicative of fulfilling high risk stigmata.

IPMN progress from dysplastic nodule to high differentiated adenocarcinoma, moderate differentiated adenocarcinoma and further, poorly differentiated carcinoma. Even if retrospectively, it is sometimes difficult to judge when radiological treatment of surgical resection should be recommended. The guideline says that high risk stigmata for IPMN includes solid components of 5mm or greater, pancreatic duct of 10mm or greater, or pancreatic cyst 30mm or greater (1-3).

## **【Summary】**

We presented a seventy-year-old female with IPMN whose pancreatic duct was 11mm in diameter on abdomen CT. It filled the criteria of high-risk stigmata for IPMC. She was introduced to university hospital where radical surgical resection was served. It is borne in mind that high-risk stigmata of IPMN for IPMC are pancreatic duct 10mm greater, solid component 5mm or greater or pancreatic cyst 30mm or greater.

## **【References】**

1. Ohtsuka T, et al. International evidence-based Kyoto guidelines for the management of intraductal papillary mucinous neoplasm of the pancreas. *Pancreatology*, 2024; 24:255-270
2. Tanaka M, et al. International consensus guidelines 2012 for the management of IPMN and MCN of the pancreas. *Pancreatology*, 2012;12: 183-197
3. Ohno E, Balduzzi A, et al. Association of high-risk stigmata and worrisome features with advanced neoplasia in intraductal papillary mucinous neoplasms (IPMN): a systematic review. *Pancreatology*.
4. Kazmi SZ, et al. Systematic review on surveillance for non-resected intraductal papillary mucinous neoplasms of the pancreas. *Pancreatology*. in press.
5. Correa-Gallego C, et al. Surveillance after resection of non-invasive intraductal papillary mucinous neoplasms (IPMN). A systematic review *Pancreatology*, 2023; 23:258-265
6. Wood LD, et al. Systematic review of challenging issues in pathology of intraductal papillary mucinous neoplasms. *Pancreatology*, 2023; 23: 878-891

[back](#)

2026.5.15