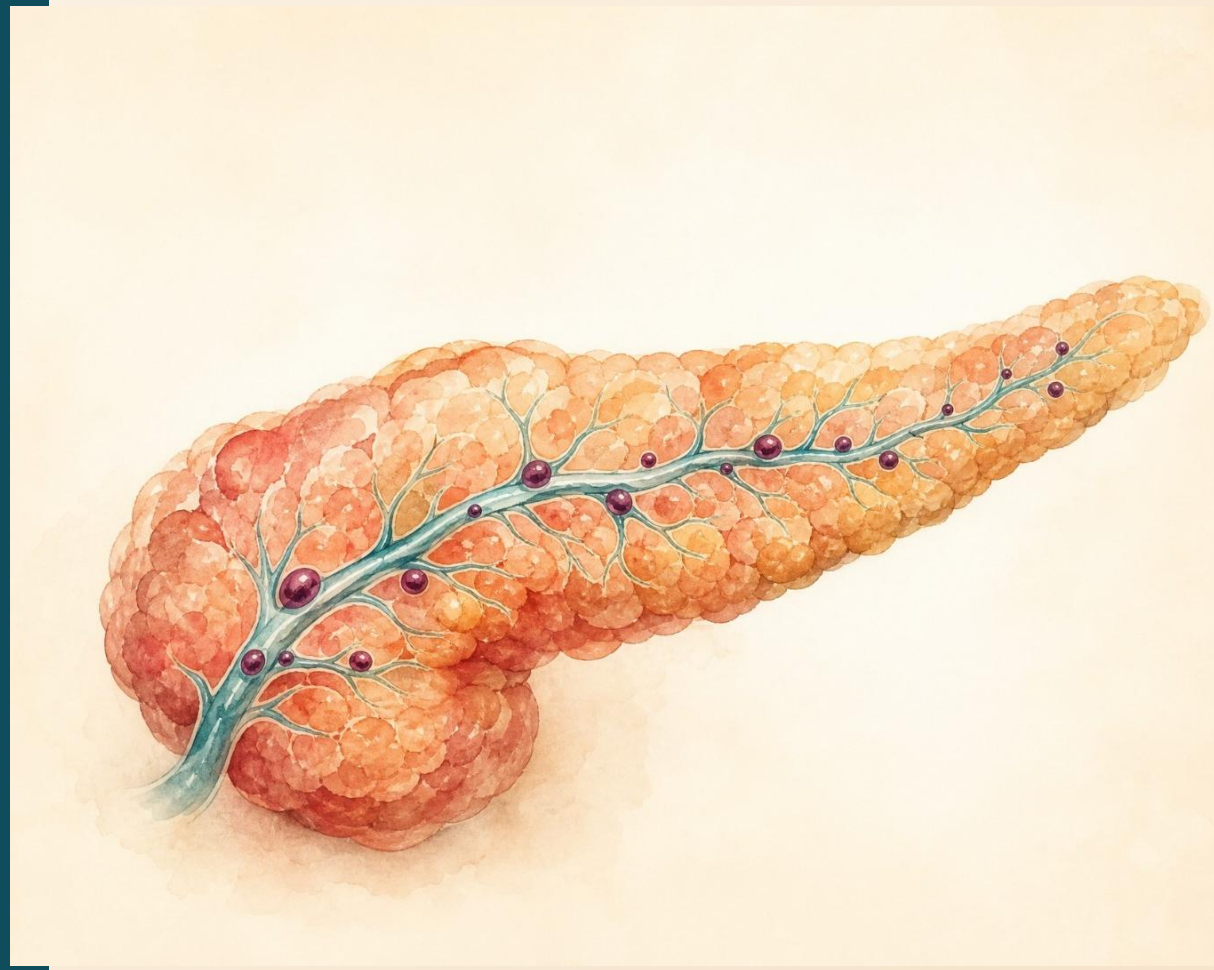
JSRS 2026 · Copenhagen

Pancreatic IPMN in Clinical Practice

A descriptive analysis of 1,082 patients referred to multidisciplinary evaluation



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A systematic approach to pancreatic cysts

Categories

1 · Pseudocysts

Inflammatory; follow pancreatitis or trauma.

2 · Common cystic neoplasms

IPMN · SCN · MCN — split by imaging into *microcystic* vs *macrocystic*, then by pancreatic-duct (PD) connection.

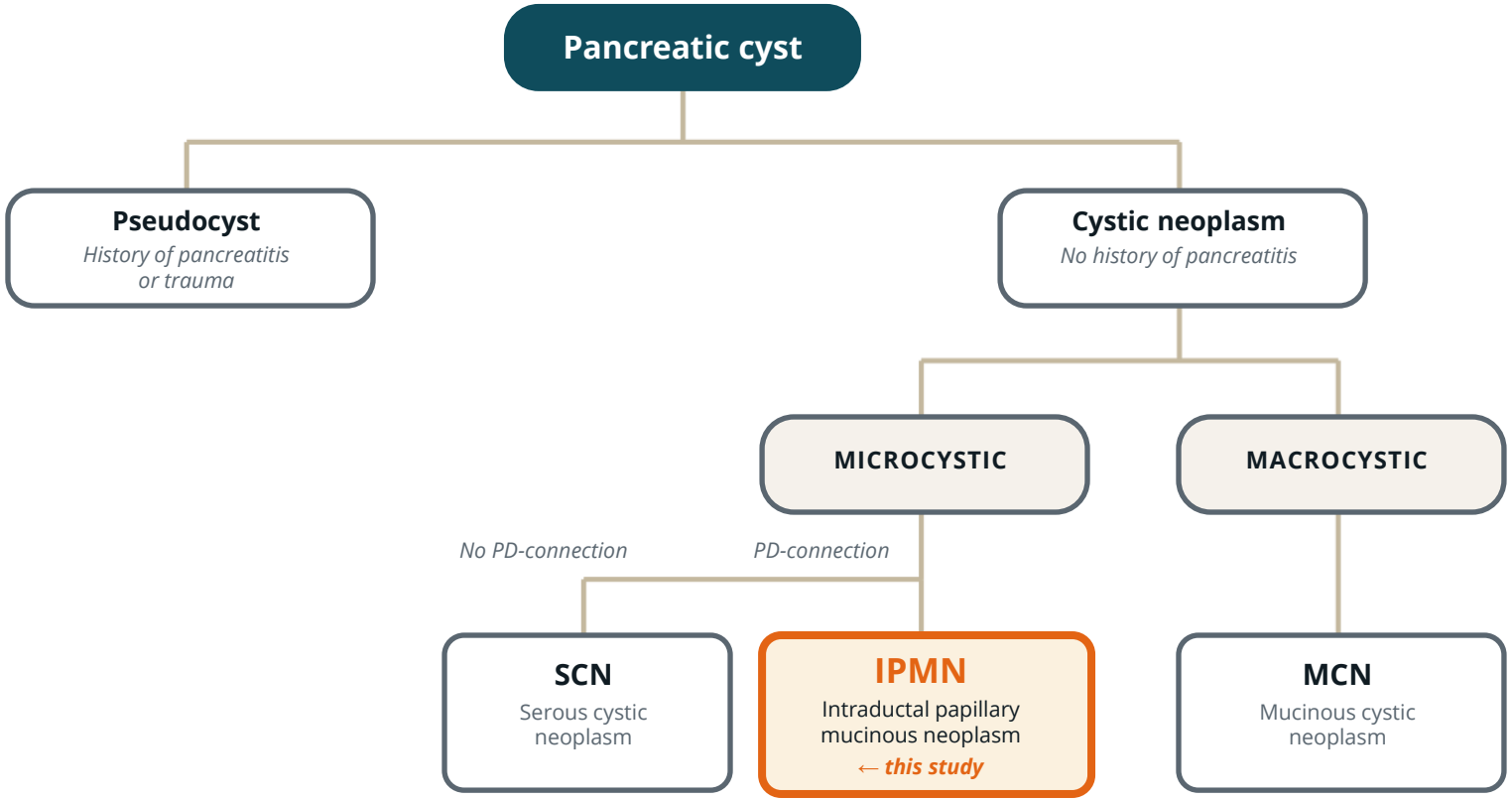
3 · Uncommon cystic neoplasms

SPEN — solid pseudopapillary epithelial neoplasm.

4 · Tumours with cystic degeneration

Pancreatic adenocarcinoma · neuroendocrine tumours (NET).

IPMN is the most common, has the best-defined precursor risk — and is the focus of this work.

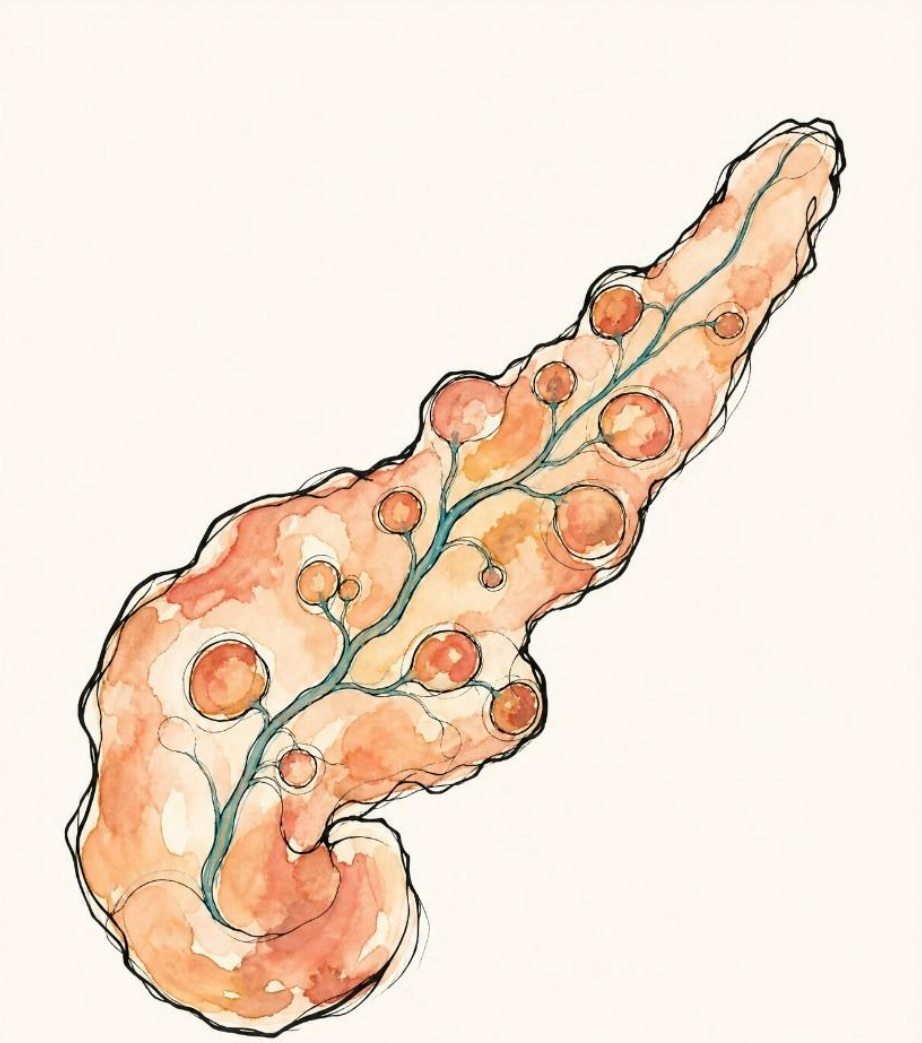


Classification framework adapted from the Radiology Assistant systematic approach to pancreatic cystic lesions.

What is an IPMN?

Intraductal Papillary Mucinous Neoplasm

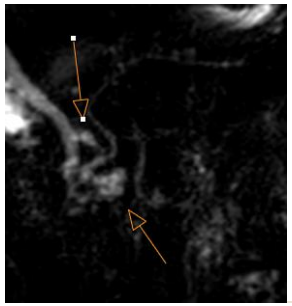
A mucin-producing epithelial neoplasm that arises **within the pancreatic ductal system** and grows with characteristic papillary projections.



Why it matters

A recognised **precursor** of pancreatic ductal adenocarcinoma — one of the few we can detect on imaging.

Three duct-based subtypes — three risk profiles



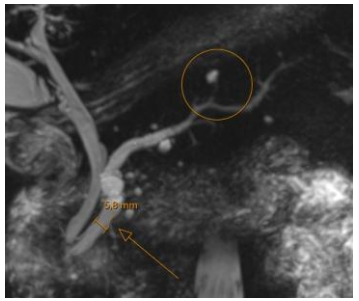
Lower risk

Branch-duct IPMN

BD-IPMN

Cystic lesion ≥ 5 mm communicating with the main duct; the MPD itself remains normal.

Low risk · size & feature-dependent



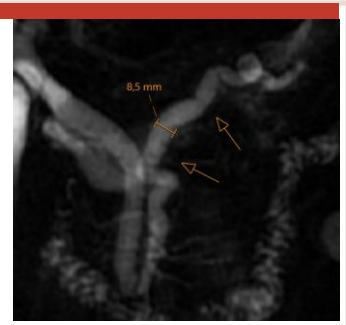
Intermediate

Mixed-type IPMN

MT-IPMN

Branch-duct cyst *plus* segmental or diffuse main-duct dilatation.

Treated as main-duct in algorithms



Higher risk

Main-duct IPMN

MD-IPMN

Segmental or diffuse main pancreatic duct dilatation ≥ 5 mm with no other obstructive cause.

High — resection often advised

Tanaka M. et al., Fukuoka (2017) and Kyoto (2024) IAP consensus guidelines for the management of IPMN/MCN of the pancreas.

Rationale

Why IPMN — and why this project

01

Guideline gap

Fukuoka, Kyoto, ACG and European guidelines still disagree on thresholds, intervals and stopping rules — clinicians must choose.

02

Real-world cohort

A 5-year, single-centre MDT cohort shows how worrisome features actually behave outside trial populations.

03

Help radiologists

Inform which imaging features actually predict malignancy — so reporting can be calibrated, not categorical.

The study

Purpose

Primary aim

To evaluate the relationship between imaging features, cyst growth, and malignant outcomes in patients with IPMN.

Secondary objectives

A

Describe subtype & feature distribution in a 1,082-patient MDT cohort.

B

Quantify the rate of new worrisome features and rapid cyst growth.

C

Examine histopathology of operated cases against imaging predictors.

The study

Methods

Step 01

Identify

1,532 patients referred to weekly IPMN MDT (2019–2023).

→

Step 02

Confirm

Radiologic IPMN diagnosis on MRI/MRCP ± CT; EUS where needed.

→

Step 03

Include

1,082 patients with radiologically confirmed IPMN.

→

Step 04

Track outcomes

Imaging, new features, surgery, histopathology — REDCap.

Key definitions

Malignancy

High-grade dysplasia or invasive adenocarcinoma on resected specimen.

Rapid growth

Fukuoka: ≥ 5 mm / 2 yrs · Kyoto 2024: ≥ 2.5 mm / yr

Imaging & data

All patients evaluated by **MRI/MRCP and/or CT**. EUS was performed selectively (n = 112) when ductal communication was uncertain or surgery was being considered.

Descriptive statistics; data captured in REDCap.

Results · 01

Cohort & demographics

Patients included

1,082

Radiologically-confirmed IPMN, 2019–2023.

24 mo

Median follow-up (IQR 19.9)

Patient profile

Mean age at entry

69.8 yrs

SD ± 10.1 · Female 68.9 · Male 70.4

Sex distribution

Female · 57.1% (n=618) | **Male · 42.9% (n=464)**

Lesion location

53.2%	31.2%	14.9%
Head	Body	Tail

Results · 02

Branch-duct IPMN dominates — by a wide margin

Distribution by duct involvement (n = 1,082)

Branch-duct

95.3%

n = 1,032

The overwhelming majority — and the group with the lowest individual malignancy risk.

Mixed-type

3.3%

n = 36

Branch-duct cyst with main-duct involvement — treated as main-duct in surveillance algorithms.

Main-duct

1.3%

n = 14

Rare in this referral cohort, but the subtype that most often drives surgical decision-making.

Implication — a referral cohort like ours is, in practice, a **BD-IPMN surveillance cohort**.

Results · 03

Worrisome features — how common, how often new?

At baseline

19.1%

207 patients had ≥ 1 worrisome feature at first MDT evaluation.

New during follow-up

4.1%

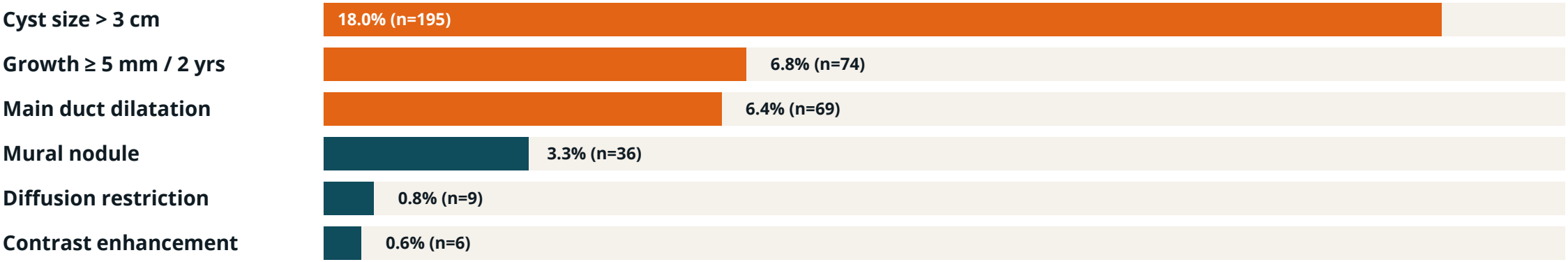
47 additional patients developed a new feature on imaging.

Cumulative

23.2%

251 patients with ≥ 1 worrisome feature at any time-point.

Individual features — cumulative prevalence



Results · 04

Most cysts don't grow — the definition decides the rest

Growth distribution (Kyoto 2024 criteria)

Same cohort, two definitions of "rapid"

Fukuoka 2017 — ≥ 5 mm / 2 yrs	6.8%
Kyoto 2024 — ≥ 2.5 mm / yr	10.3%

Take-home

A guideline change — not biology — relabels +3.5% of our cohort as "rapid growers."

The tighter Kyoto threshold inflates the "high-risk" bucket without identifying additional malignancies in this cohort.

→ **Threshold ≠ progression**

Growth assessed on serial MRI/MRCP ± CT; consecutive examinations during the median 24-month follow-up.

Surgery — who, why, and what was found

Resected

5.7%

62 of 1,082 patients

Procedures

Distal pancreatectomy	48.4%
Whipple	29.0%
Total pancreatectomy	19.4%

Why surgery was offered

Worrisome features 59.7%

37 patients

Mixed-type IPMN 16.1%

10 patients

Solid tumour 14.5%

9 patients

Main-duct IPMN 9.7%

6 patients

Resection histology (n = 62)

Low-grade dysplasia
27 patients
43.5%

High-grade dysplasia
17 patients
27.4%

Mucinous adenocarcinoma
14 patients (3 unrelated)
22.6%

Other / benign · serous cystadenoma · normal
4 patients · 6.5%

Results · 06

Malignant transformation was rare

Across the whole 5-year cohort

Whole cohort

2.9%

31 of 1,082 patients

with high-grade dysplasia or invasive adenocarcinoma on resection.

For context

50%

of resected specimens harboured malignancy or high-grade dysplasia.

3 patients

developed unresectable advanced pancreatic cancer during follow-up.

Discussion

What the data tell us

01 BD-IPMN is the everyday reality

95.3% of MDT referrals — surveillance pathways must be optimised for this group, not for rare main-duct cases.

02 Most cysts stay stable

77% showed no growth over the median 24-month follow-up; new worrisome features developed in only 4.1%.

03 Single features under-perform

Worrisome features and rapid growth, taken individually, were inconsistent predictors of malignancy in this cohort.

Conclusion

In summary

01 **Malignancy was rare**

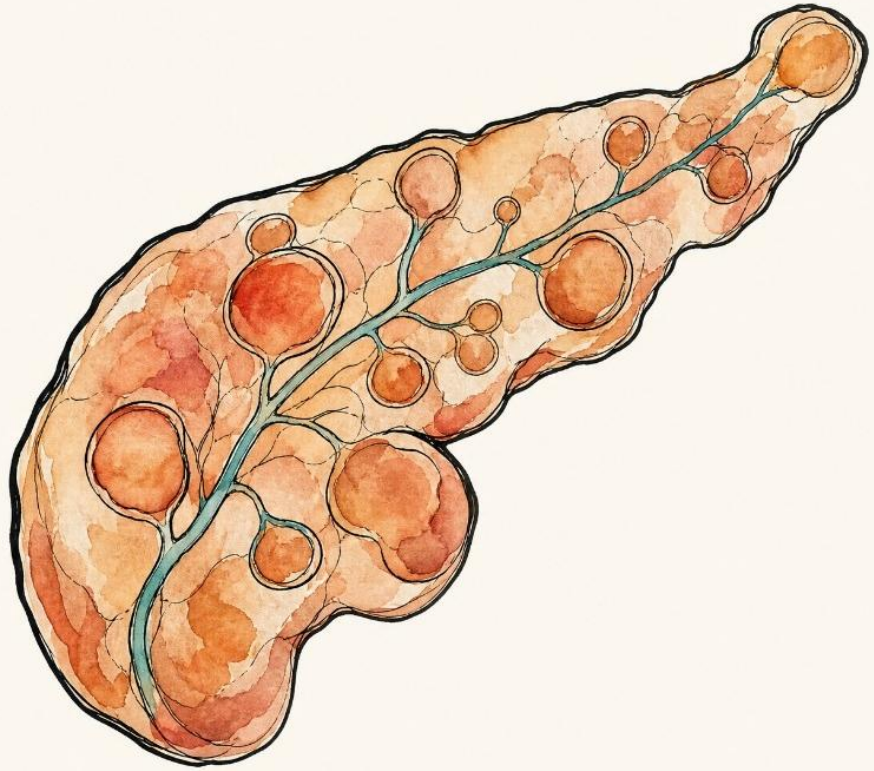
2.9% across 1,082 patients over 5 years.

02 **Single features under-perform**

No individual worrisome feature or growth pattern reliably predicted progression.

03 **Toward individualised surveillance**

Match intensity to combined risk, not single thresholds — risk-based, not algorithmic.



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Thank you

Questions are welcome

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