Surgical Pathological Conference

報告者:宋明璋
主治醫師:蘇正熙主任
日期: 2014/10/25

General Data

Name: OOO

Chart: OOOOOOO

Gender: Female

Age: 35 year-old

Hospitalization: 2014/9/16 ~ 2014/09/30

Chief Complaint

Intermittent back soreness and LLQ pain off and on for years

Past History and Personal History

- Denied systemic diseases
- Operation:

  C/S x3
- Allergy: NKA
- Alcohol (-) Betal nut (-) Cigaratte (-)
- Travel (-), Animal (-)
- Family history: Mother: DM, liver disease

  Father: prostate cancer

  Grandfather: HCC

Physical Examination

General: fair looking

HEENT: Sclera: not icteric Conj: not pale

Neck: no LAPs, sore throat (-)

Chest: Breathing sound: clear, no wheezing

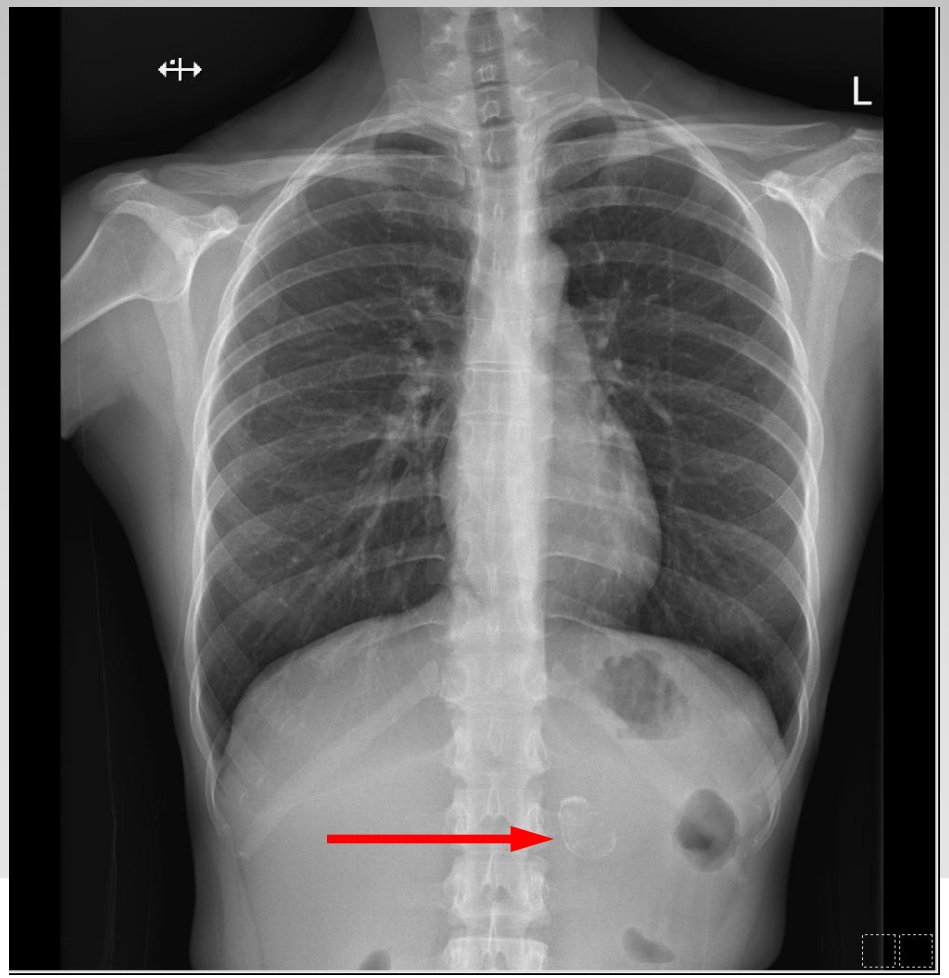
Abdomen: Soft and flat, no palpable mass, no tenderness over abdomen

Extremities: No cyanosis, no pitting edema

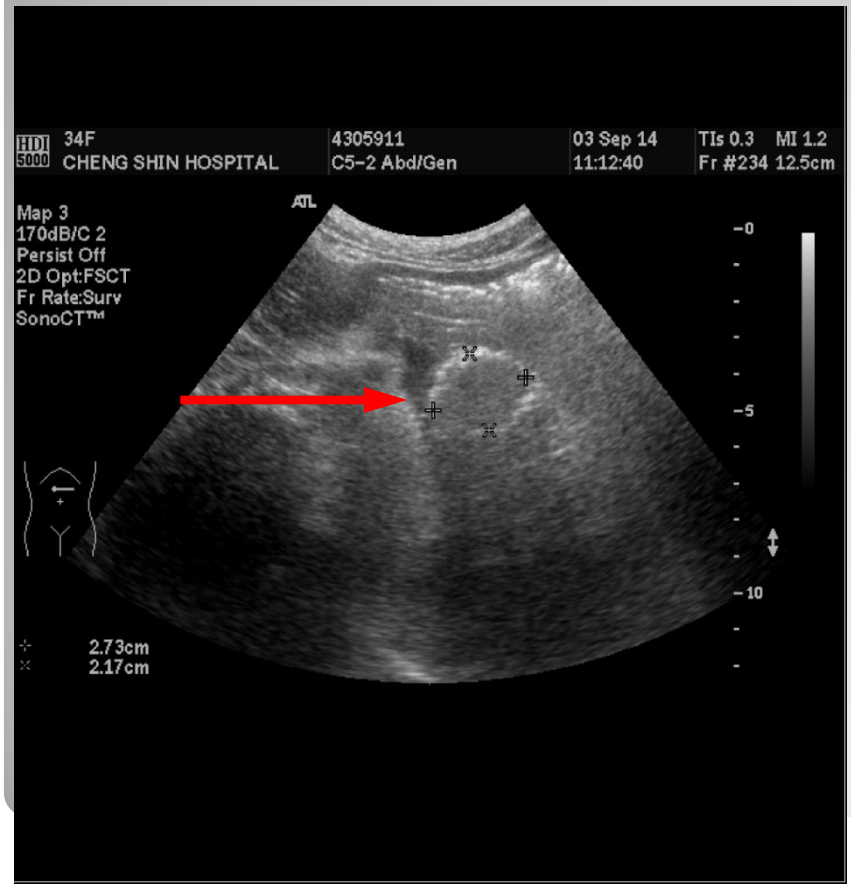
Present Illness

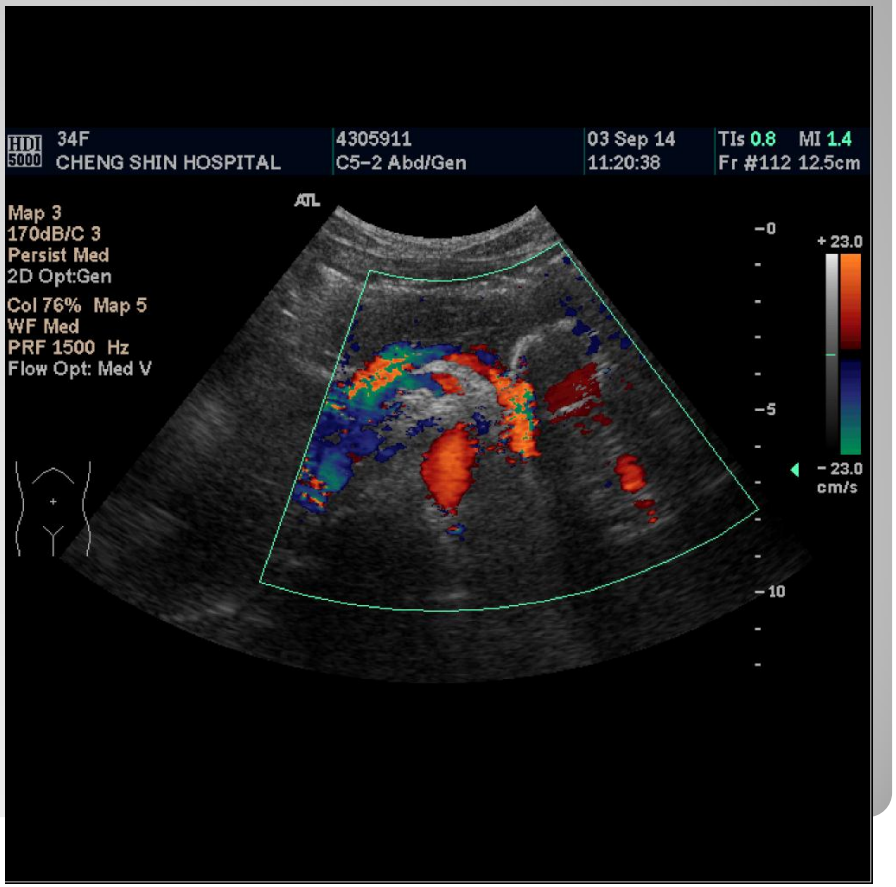
- She went to Dr.常 OPD for breast exam on 2014-8-12.
- Intermittent back soreness and LLQ pain off and on for years
- Chronic constipation

Incidental finding of a calcified lesion over left upper abdomen on chest x-ray



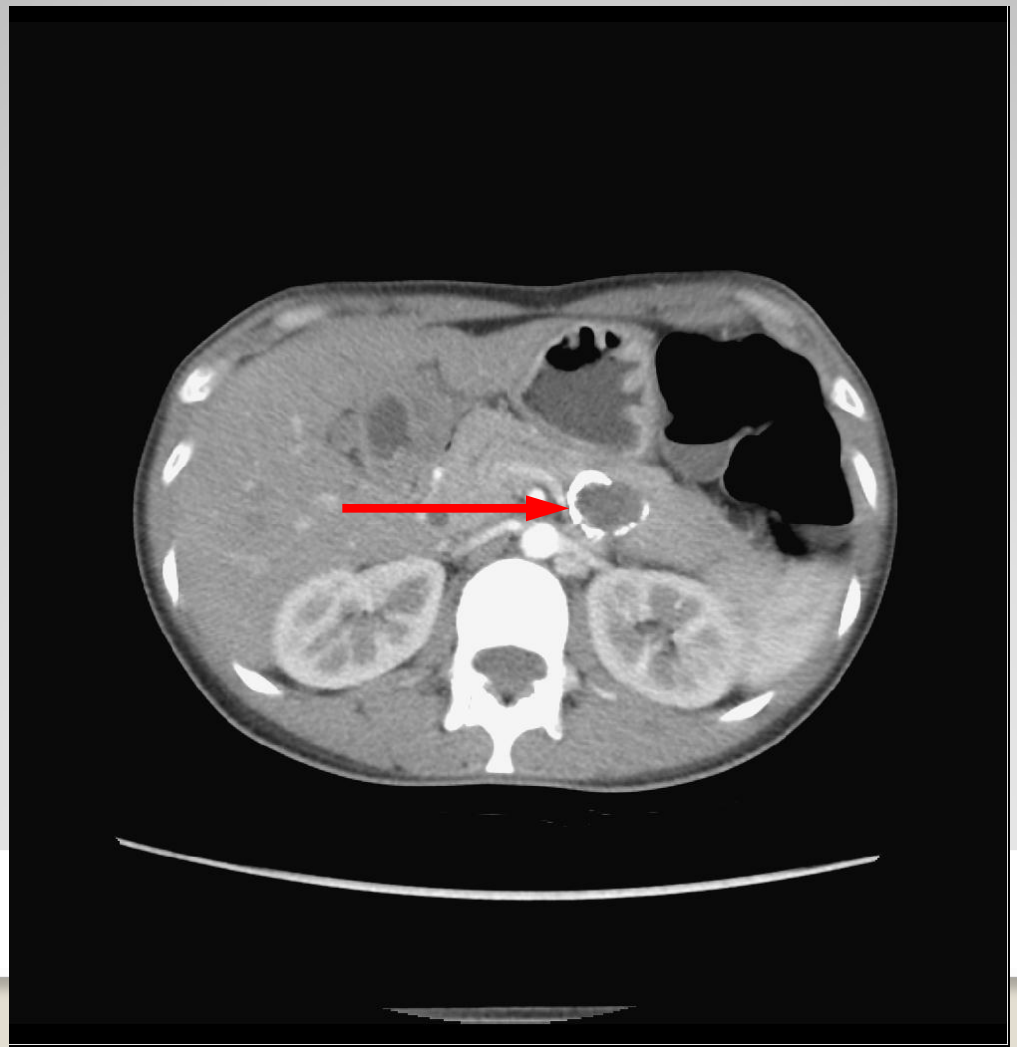
Abdominal sonogram on 2014-09-03:
calcified tumor (2.73x2.17cm) in pancreatic body-tail





Abdominal CT-scan at 耕莘醫院:

2.5 cm **calcified** lesion over pancreatic body



Lab Data

項目名稱	判斷	結果值	單位	參考值範圍
CBC				
WBC		5.0	10^3/uL	4.0 - 10.0
RBC		4.39	10^6/uL	3.70 - 5.50
HGB		13.3	g/dL	11.3 - 15.3
HCT		36.9	%	33.0 - 47.0
MCV		84.1	fL	80.0 - 100.0
MCH		30.3	pg	25.0 - 34.0
MCHC		36.0	g/dL	30.0 - 36.0
PLT		292	10^3/uL	130 - 400
DIFF				
NEUT%		53.6	%	40.0 - 75.0
LYMPH%		39.6	%	20.0 - 45.0
MONO%		5.0	%	2.0 - 10.0
EO%		1.0	%	1.0 - 6.0
BASO%		0.8	%	0 - 1

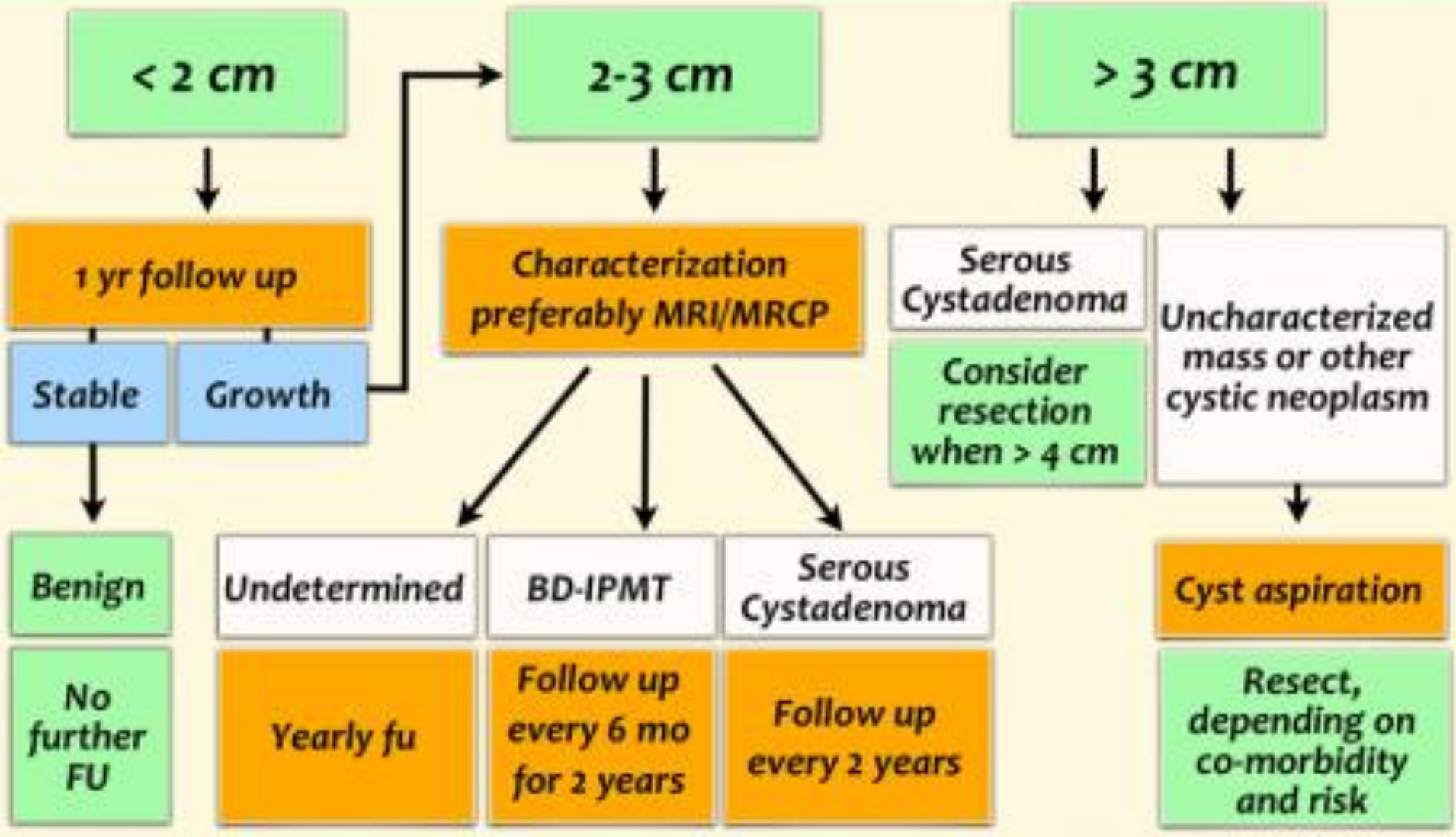
項目名稱	判斷	結果值	單位	參考值範圍
Glucose AC		90	mg/dL	70 - 110
BUN		9.4	mg/dL	8.0 - 20.0
Creatinine		0.59	mg/dL	0.44 - 1.27
eGFR		117		> 60
	備註：此公式估算GFR,對GFR<=60的病人較準確,當>60時易高估病患腎功能,須同時參考其他工具評估.			
Na		138	mmol/L	136 - 144
K	L	3.2	mmol/L	3.6 - 5.1
Cl		109	mmol/L	101 - 111

Lab Data

項目名稱	判斷	結果值	單位	參考值範圍
Glucose AC		96	mg/dL	70 - 110
Total Bilirubin		1.54	mg/dL	0.4 - 2.0
Direct Bilirubin		0.15	mg/dL	0.10 - 0.50
AST		19	IU/L	5 - 50
ALT		13	IU/L	5-50
γ-GT	L	6	IU/L	7.0 - 50.0
Alkalinphosohatase	L	36	IU/L	38-126

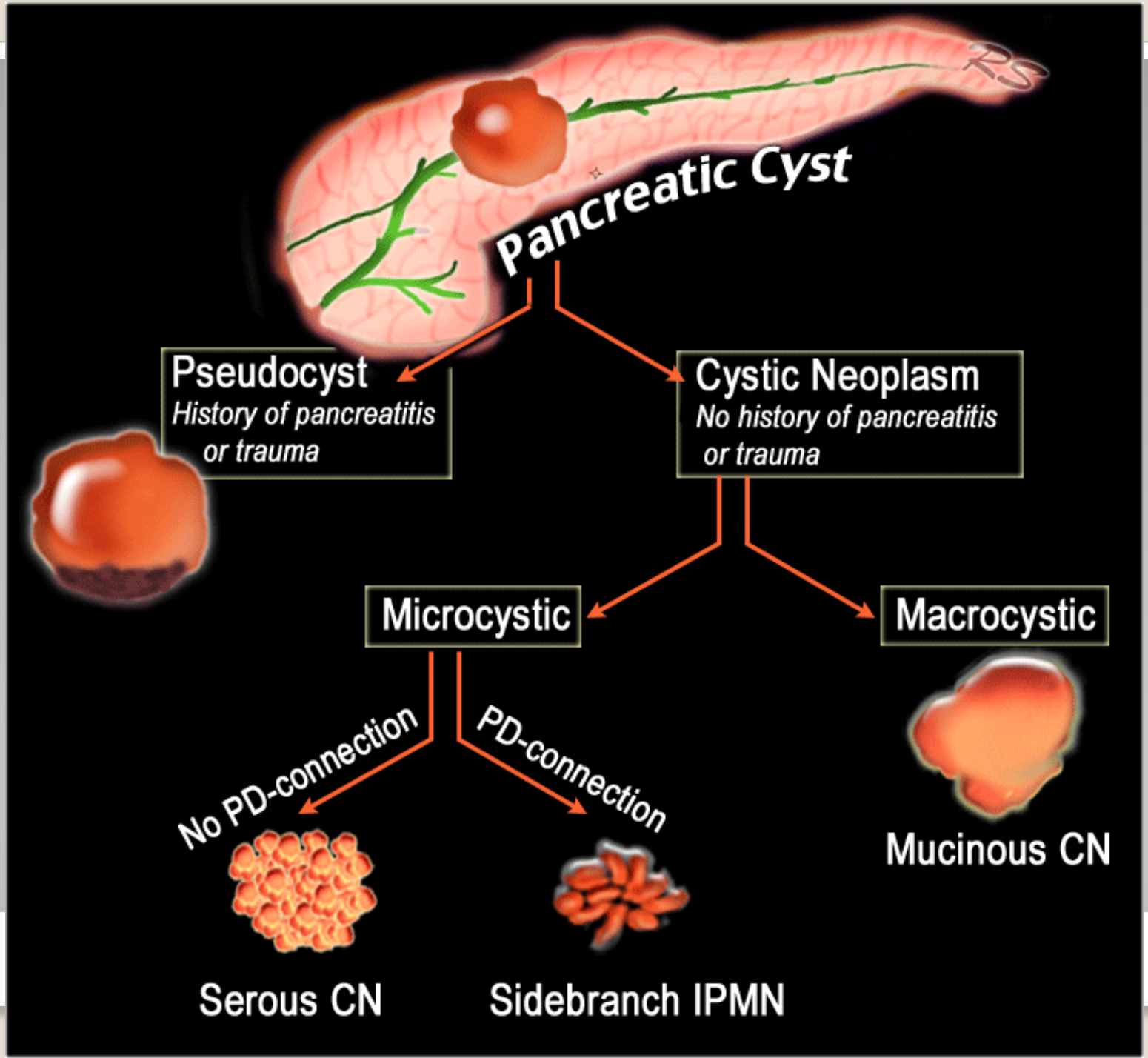
項目名稱	判斷	結果值	單位	參考值範圍
CEA		1.5	ng/mL	MRR
	備註：Non-smokers(20-69歲)≦3.8 Non-smokers(40-69歲)≦5.0 Smokers(20-69歲)≦5.5 Smokers(40-69歲)≦6.5			
CA153		4.4	U/mL	≦25
CA199		20.0	U/mL	≦27

Incidental Pancreatic Cyst



Pancreatic cysts classification

- *Pseudocysts*
- *Common cystic neoplasms:*
  - IPMN - intraductal papillary mucinous neoplasm
  - SCN - Serous cystic neoplasm
  - MCN - Mucinous cystic neoplasm
- *Uncommon cystic neoplasms:*
  - SPEN (solid pseudopapillary epithelial neoplasm)
  - Tumors with cystic degeneration:
    adenocarcinoma - neuroendocrine tumor

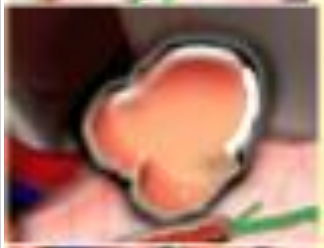

Pancreatic Cyst
Pseudocyst
History of pancreatitis or trauma
Cystic Neoplasm
No history of pancreatitis or trauma
Microcystic
Macrocystic
No PD-connection
PD-connection
Mucinous CN
Serous CN
Sidebranch IPMN

Pseudocyst

- There is a history of pancreatitis, alcohol abuse, stone disease or abdominal trauma.
- Cysts develop in 4-6 weeks - usually decrease in size over time - sometimes enlarge or become infected.
- Unilocular cyst **without solid components**, **central scar** or **wall calcification**.
- Debris within a cystic lesion is a specific MR finding.

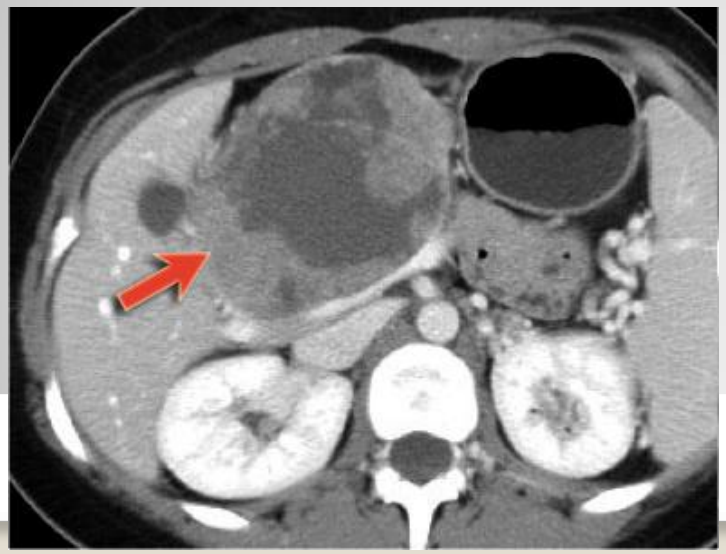
Cystic neoplasms

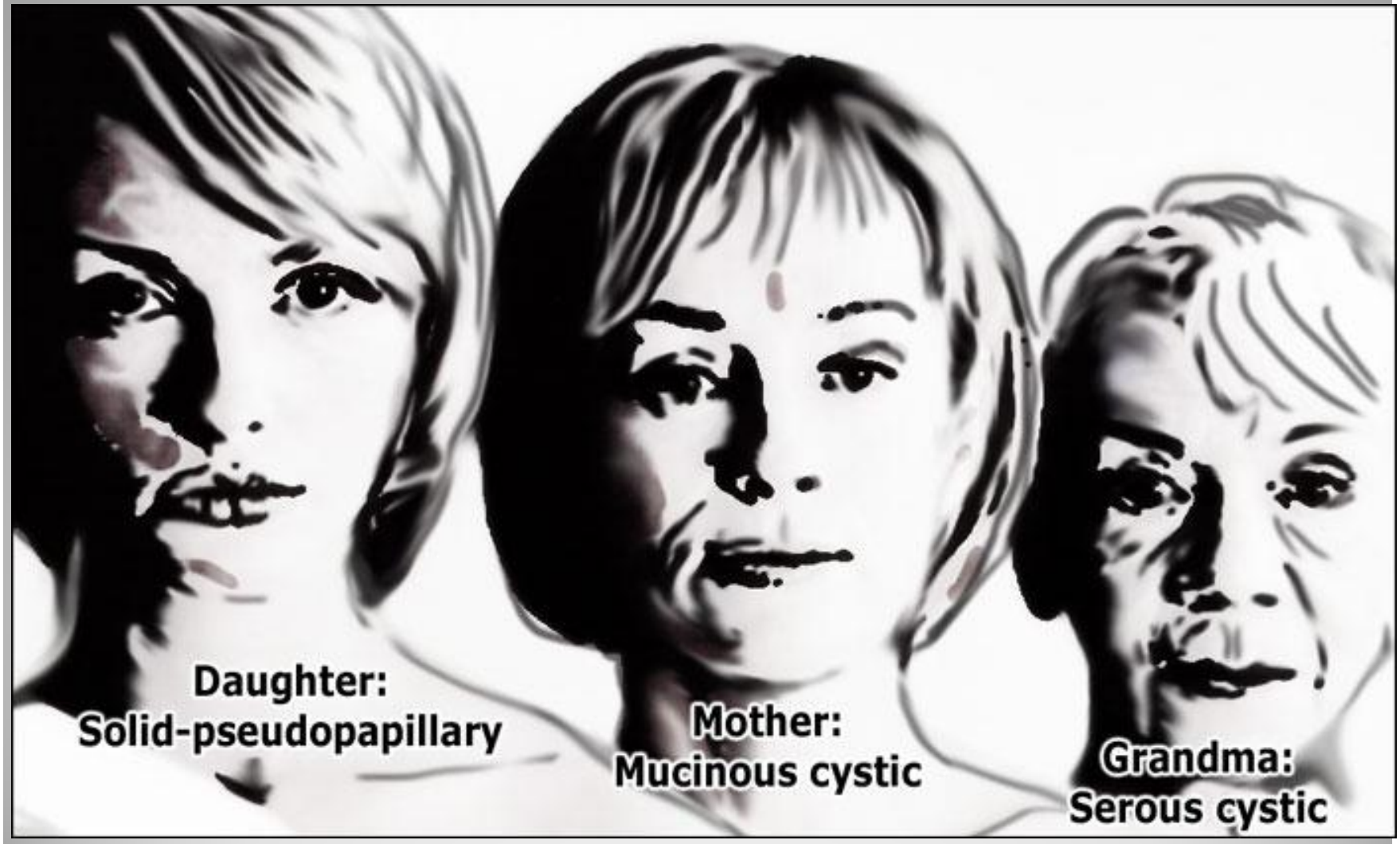
- Morphological characteristics:
  - thick irregular rim
  - septations
  - solid components
  - a dilated pancreatic duct > 3mm
  - calcifications

		Age - Gender	Imaging
	**SCN** Benign	75% women 60-70 y **Grandma**	Lobulated microcystic 18% central scar with Ca^{++}
	**MCN** Malignant potential	99% women 40-50 y **Mother**	Macrocystic Usually 1 cyst 25% peripheral Ca^{++} 95% in tail and body
	**Main-duct IPMN** Malignant potential	M=W 60-80 y	Dilated Pancreatic duct Protruding papil of Vater
	**Side-branch IPMN** Malignant potential	M=W 60-80 y	Bunch of grapes connection to PD

Uncommon Neoplasms with specific findings

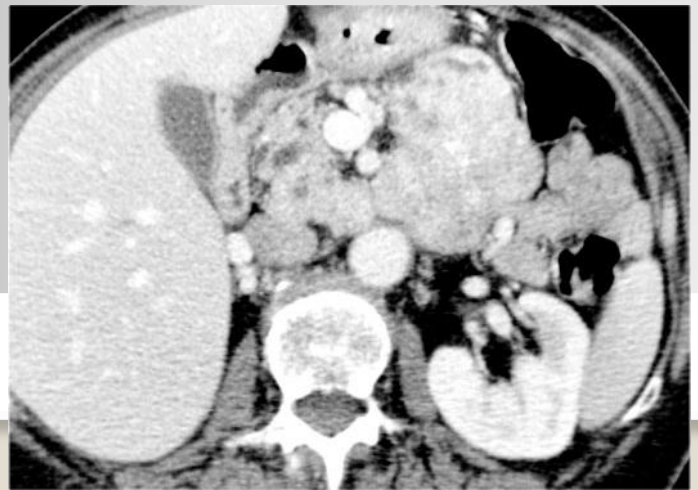
- **Solid Pseudopapillary Neoplasm**
  - Very uncommon neoplasm seen in women 20-30 years (Daughter).
  - Solid and cystic neoplasm with capsule and with early 'hemangioma-like' enhancement. Sometimes intratumoral hemorrhage




Daughter:
Solid-pseudopapillary
Mother:
Mucinous cystic
Grandma:
Serous cystic

Uncommon Neoplasms with specific findings

- **Neuroendocrine tumor with cystic degeneration**
  - Non-functioning endocrine neoplasm
  - Also called **islet cell tumor**
  - Hypervascular with ring-enhancement.
    - This is unlike serous cystic neoplasms that enhance from the center and more solid



Tentative Diagnosis

1. Calcified cystic lesion over pancreatic body-tail
   R/O **mucinous cystic neoplasm**

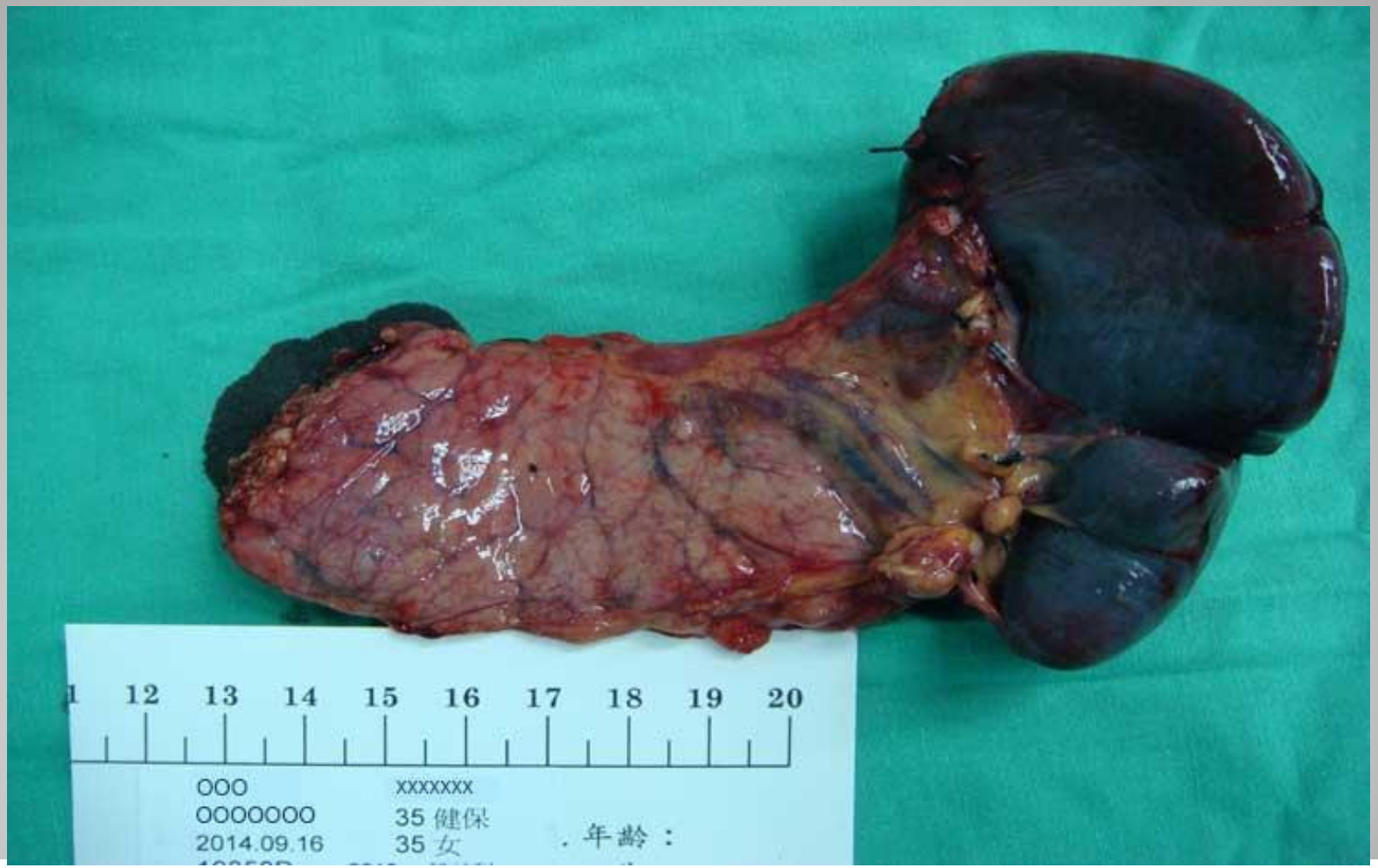
Surgery and Finding

2014-09-18 Hemipancreatectomy and splenectomy

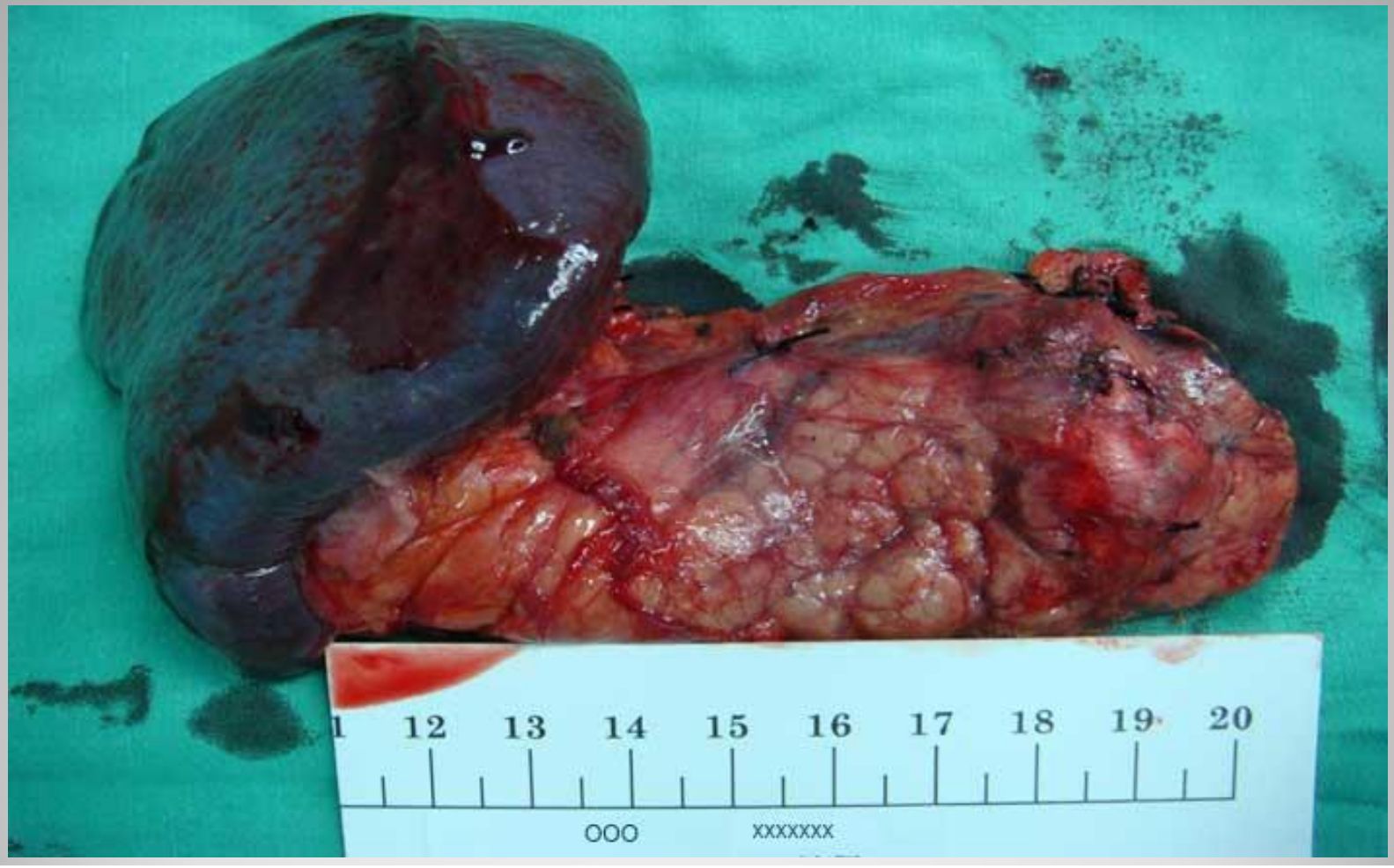
OP finding:

1. A **2.5x2.5x1.5 cm** calcified cystic lesion noticed at pancreatic body, on section after distal pancreatectomy small lobulated cystic lesion was noticed
2. No peritoneal seeding, no ascites, no obvious liver metastasis

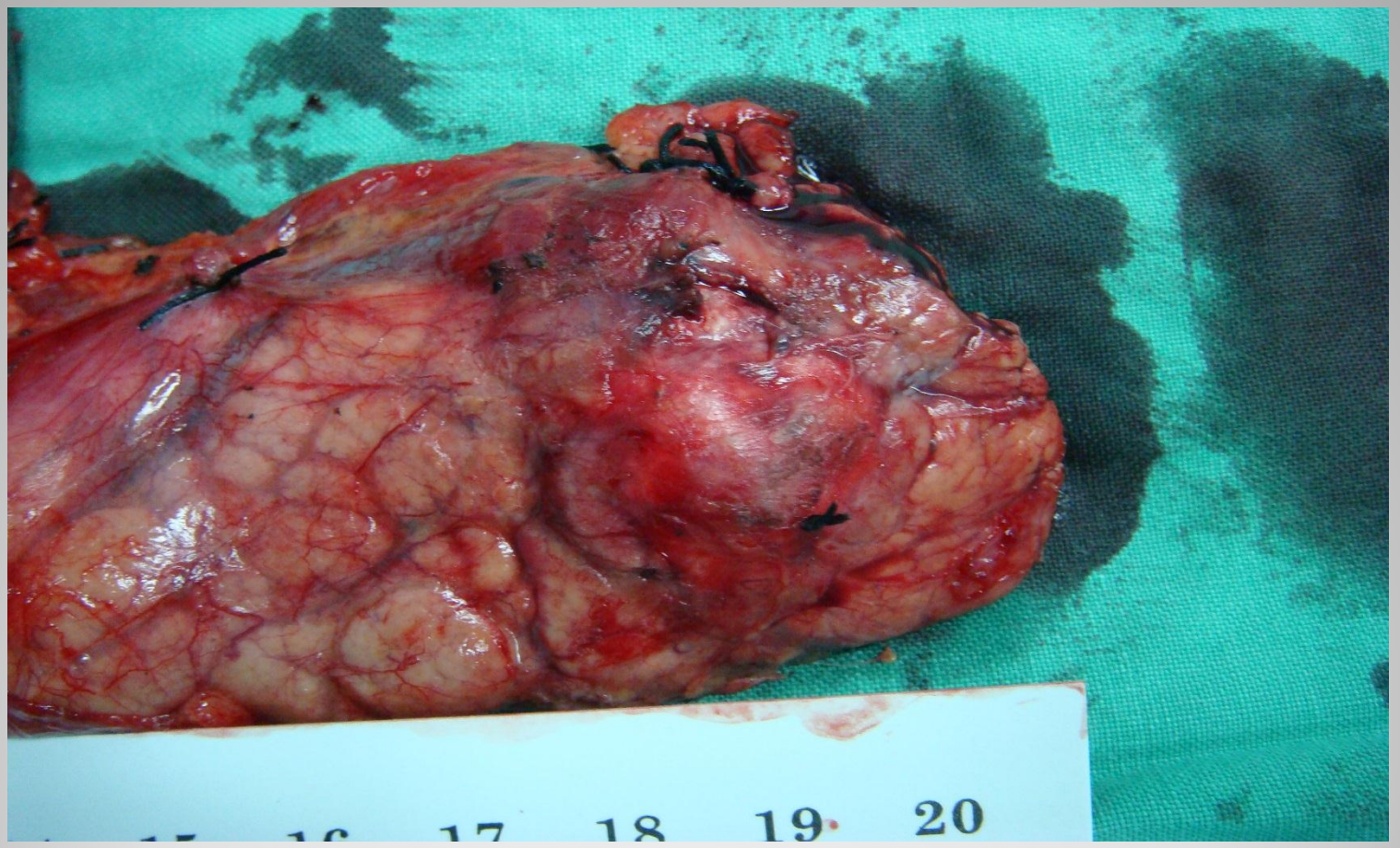
Gross picture



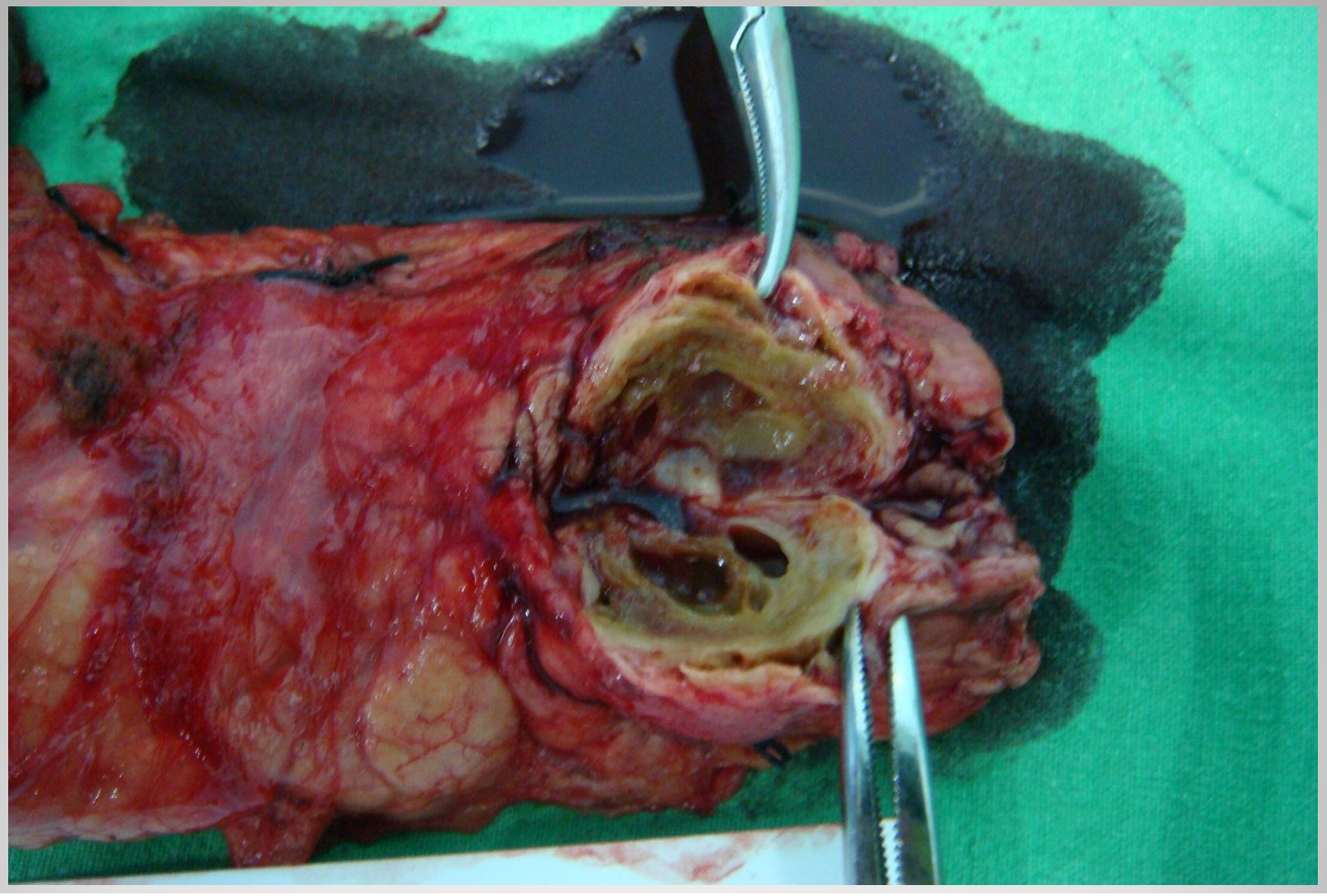
Gross picture



Gross picture



Gross picture



Pathology Report

- Pancreas: distal pancreatectomy, **solid-pseudopapillary neoplasm**
- LN, peripancreatic (1) and splenic hilar (3), no tumor involvement
- Spleen: no pathological diagnosis

Tumor site: pancreatic body

Tumor size: 2.4x2.4x1.3cm

Histologic type: solid-pseudopapillary neoplasm

Histologic grade: low grade

Lymph-vascular invasion: suspected

Perineural invasion: suspected

Staging: pT2N0M0 stage IB (AJCC 7th)

Revised Diagnosis

- Solid-pseudopapillary neoplasm of pancreatic body s/p hemipancreatectomy and splenectomy on 2014-09-18
  pT2N0M0, stage IB (AJCC 7th)

Discussion

Solid pseudopapillary neoplasms

Introduction

Solid pseudopapillary neoplasms (SPNs) (3%)

Typically occur in young women less than 35, most commonly found in **pancreatic body or tail**, may contain both solid and cystic component and occasional calcification

Malignant potential, Malignant solid pseudopapillary neoplasms (SPNs) can be cured when **completely excised**

Predicting Recurrence of Pancreatic Solid Pseudopapillary Tumors After Surgical Resection

A Multicenter Analysis in Korea

Chang Moo Kang, MD, Sung Hoon Choi, MD,* Song Cheol Kim, MD, PhD,† Woo Jung Lee, MD, PhD,* Dong Wook Choi, MD, PhD,‡ and Sun Whe Kim, MD, PhD§; for the Korean Pancreatic Surgery Club*

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Background, material and method

Background: Many clinical trial failed to identified **prognostic factors** that predict malignant behaviors of solid pseudopapillary tumors

Retrospective multicenter study, totally 17 medical institutions

351 patients underwent surgical resection

From Jan 1990 to Dec 2008

General characteristics

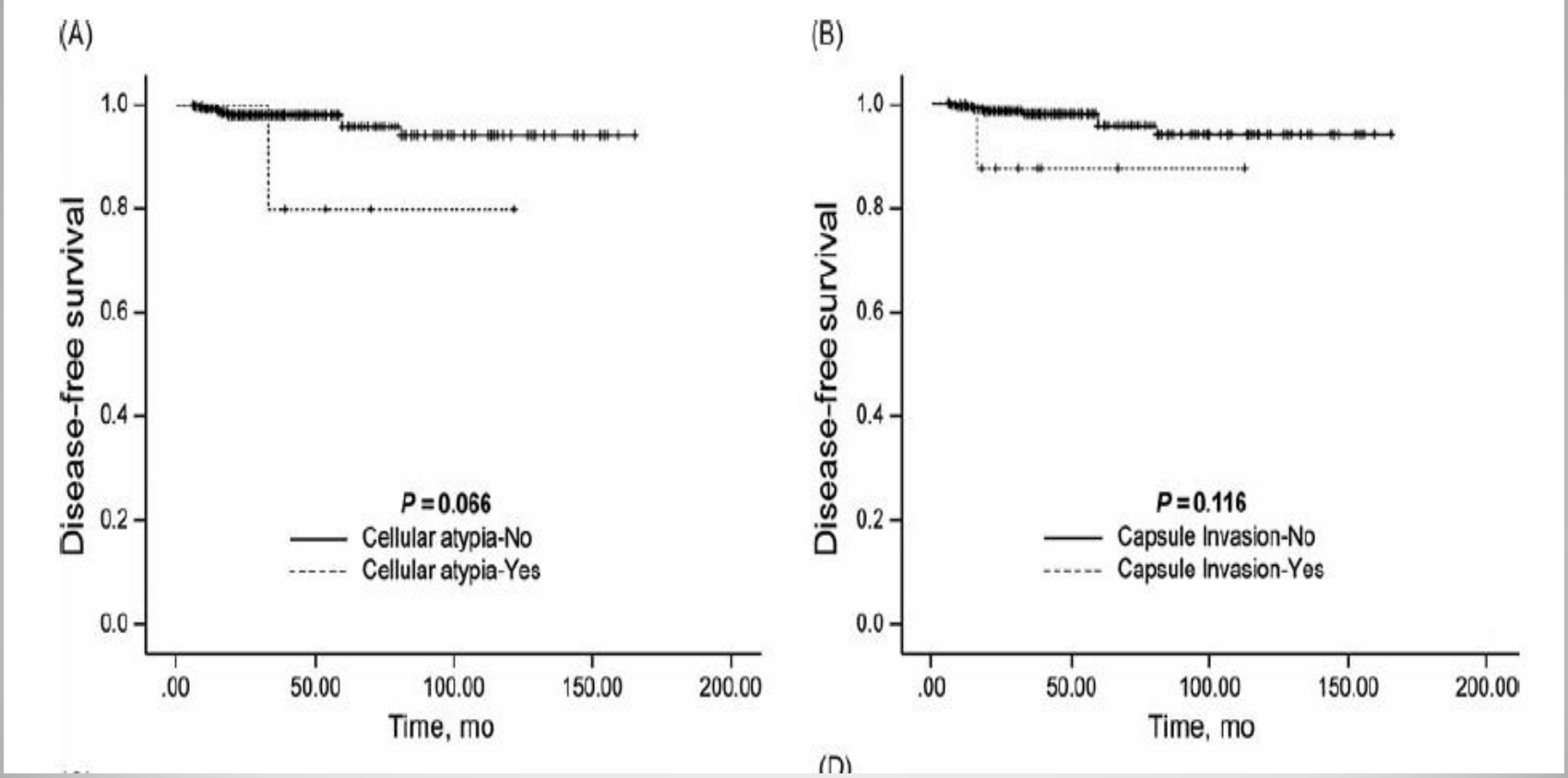
TABLE 1. General Characteristics of Resected SPTs of the Pancreas

Clinical Features	Frequency, Mean ± SD, %
Sex	
Male	34 (9.7)
Female	317 (90.3)
Age, yr	36.8± 12.4
Symptoms	
No	154 (43.9)
Yes	197 (56.1)
Tumor location	
Head	92 (26.2)
Body + tail	259 (73.8)
Tumor size, cm	5.7 ± 3.3
Surgery mode I	
Enucleation	18 (5.1)
DPS	162 (46.2)
SpDP	52 (14.8)
PD (conventional)	26 (7.4)
PPPD	53 (15.1)
CP	31 (8.8)
DPPHR	2 (0.6)
TP	7 (2)
Surgery mode II	
Limited surgery	103 (29.3)
Conventional surgery	248 (70.7)

R status	
R0	341 (97.2)
R1	10 (2.8)
Microscopic features	
Benign features	253 (72.1)
Malignant features (including stage IV)	98 (27.9)
Microscopic malignant features (excluding stage IV)	
Cellular atypia/pleomorphism	9 (2.6)
Capsule invasion	10 (2.8)
Peripancreatic fat invasion	61 (17.4)
Perineural invasion	15 (4.3)
Lymphovascular invasion	11 (3.1)
LN metastasis	1 (0.3)
2010 WHO definition of SPC	
Perineural invasion	15 (4.3)
Angioinvasion (lymphovascular invasion)	11 (3.1)
Adjacent organ invasion	9 (2.6)
Adjacent organ invasion	
Spleen	1 (0.3)
Splenic vein/portal vein	1 (0.3)
Duodenum	4 (1.1)
Common bile duct	2 (0.6)
Kidney (Gerota's fascia)	1 (0.3)
Stage V	
Hepatic metastasis	4
Peritoneal seeding	1 (0.3)

CP indicates central pancreatectomy; DPPHR, duodenum-preserving pancreatic head resection; MIS, minimally invasive surgery; PD, pancreaticoduodenectomy; PPPD, pylorus-preserving pancreaticoduodenectomy; SD, standard deviation; TP, total pancreatectomy.

Disease-free survival according to histologic component , Microscopic malignant features



Microscopic malignant features, such as cellular atypia, capsular invasion and peripancreatic fat invasion were not statistically significant in predicting recurrence of SPT

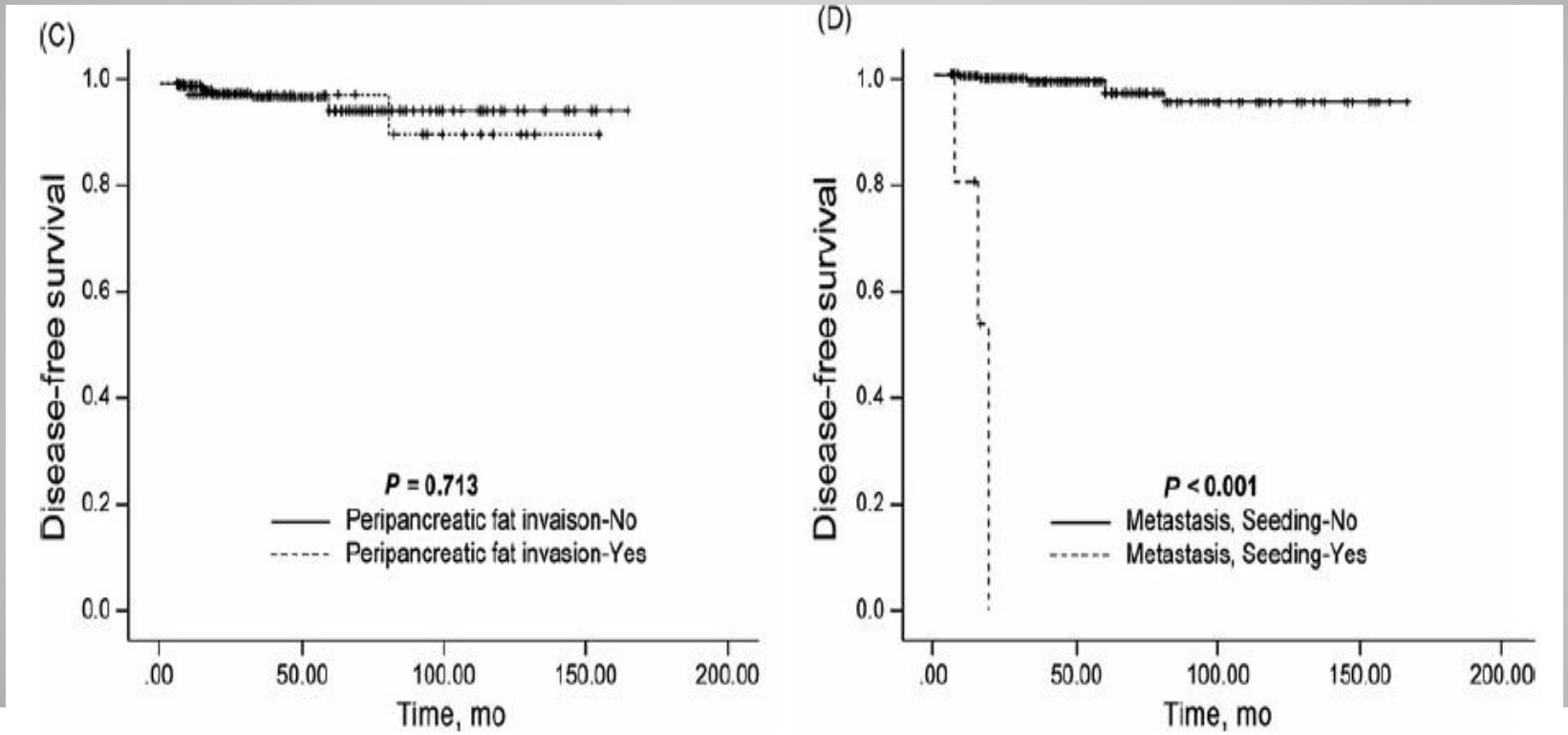


TABLE 4. Differences Between Disease-Free and Recurrent SPTs of the Pancreas

	Univariate Analysis			Multivariate Analysis	
	Disease Free (N = 308)	Recurrence (N = 9)	*P*	Exp (β)	*P*
Age, yr	37.1 ± 12.0	37.3 ± 20.9	0.950		
Sex					
Male	31	1	0.918		
Female	277	8			
Symptoms					
No	142	—	0.005		
Yes	166	9			
Tumor size, cm	5.5 ± 3.1	9.8 ± 4.5	0.023		
Tumor size, cm					
≤8	251	3	0.002	7.385	0.018
>8	56	6			
Tumor location					
Head	95	3	1.000		
Body + Tail	213	6			
Surgery mode II					
Limited surgery	85	0	0.119		
Conventional surgery	223	9			
Surgery mode III					
Open surgery	262	9	0.367		
MIS surgery	46	0			
R status					
R0	328	8	0.184		
R1	9	1			
Microscopic malignant features (excluding stage IV)					
No	227	3	0.015	10.009	0.011
Yes	81	6			
2010 WHO definition of PSC					
Benign	282	6	0.040		
Malignant	26	3			
Stage IV					
No	306	6	<0.001	42.003	0.002
Yes	2	3			

MIS indicates minimally invasive surgery.

Among 317 patients with pancreatic SPT, only 9 patients (2.8%) recurred during follow-up period.

Tumor size (>=8cm), microscopic malignant features (excluding stage IV) and **stage IV condition**, were predictive factors for recurrence of resected pancreatic SPTs.