

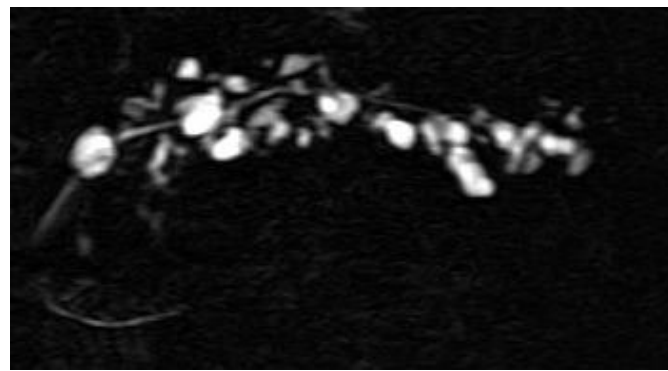
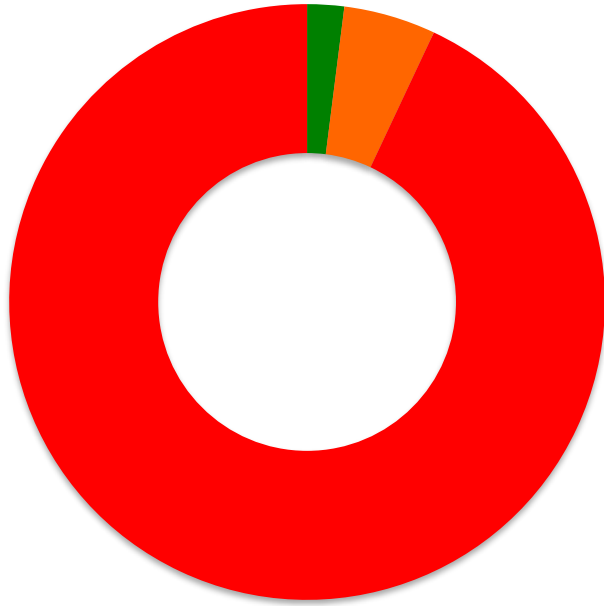
Tumeurs kystiques du pancréas

Quoi de neuf en 2019?

Histoire naturelle des différentes lésions kystiques pancréatiques

Club Français du Pancréas – Lyon - 2019
Vinciane Rebours
Service de Pancréatologie - Hôpital Beaujon
INSERM UMR 1149
vinciane.rebours@aphp.fr





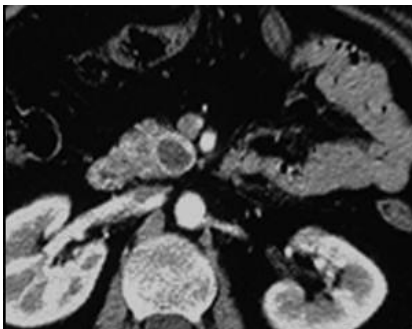
TIPMP



Cystadénome Mucineux



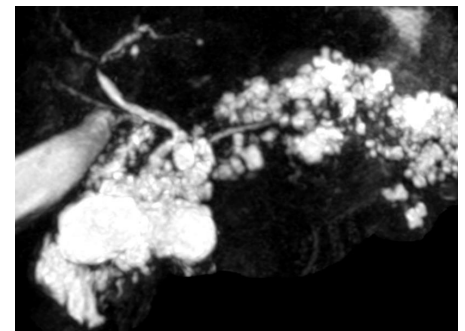
Cystadénome Séreux



**Tumeur neuroendocrine
kystique**



**Tumeur Solide et
Pseudopapillaire**



**Transformation kystique
des acini**

Gut 2018;67:138–145.

Baseline

5 ans de suivi

SHIP-0
1997-2001

SHIP-1
2002-2006

SHIP-2
2008-2012

SHIP-3
2014-2016

1681 LKP > 2 mm

chez 494 / 1077 pts = 46%

1,718

686

1077

676

included
(WB-MR+MRCP)

loss to follow-up (n=391)

- deaths (n=21)
- other reasons (n=370)

excluded (n=10)

- missing data sets (n=10)

non-diagnostic image quality (n=6)

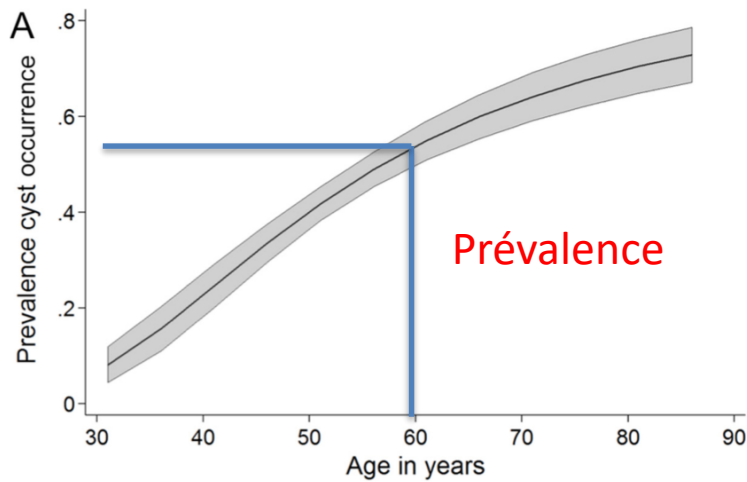
Prospective study on the incidence, prevalence and 5-year pancreatic-related mortality of pancreatic cysts in a population-based study

Gut 2018;67:138–145.

Marie-Luise Kromrey,¹ Robin Bülow,¹ Jenny Hübner,¹ Christin Paperlein,¹
Markus M Lerch,² Till Ittermann,³ Henry Völzke,³ Julia Mayerle,^{2,4} Jens-Peter Kühn^{1,5}

Cyst number		Cyst size (mm)	
Mean (CI)	3.9 (3.2 to 4.5)	Mean (CI)	5.20 (4.85 to 5.56)
Frequencies		Frequencies	
1–5	416 (81.1%)	2.00 to 5.00	335 (63.6%)
6–10	55 (13.0%)	5.01 to 10.00	113 (30.6%)
11–20	18 (3.8%)	10.01 to 20.00	23 (5.1%)
>20	5 (2.2%)	>20.00	3 (0.7%)

<10mm: 93%



Facteur de risque de LKP

Risk factor	Unadjusted			Adjusted for age and BMI		
	RR	95% CI	p	RR	95% CI	p
BMI	1.028	1.013 to 1.043	<0.001	1.017	1.003 to 1.030	0.013
Alcohol	0.993	0.987 to 1.000	0.033	0.998	0.992 to 1.004	0.548
Smoking						
Former	0.947	0.816 to 1.100	0.478	0.894	0.776 to 1.029	0.118
Current	0.740	0.590 to 0.928	0.009	0.882	0.714 to 1.088	0.241
Lipase	1.053	1.011 to 1.095	0.012	1.036	0.999 to 1.074	0.055
Haemoglobin A1c	1.076	0.984 to 1.176	0.108	0.988	0.901 to 1.082	0.790
Diabetes	1.467	1.210 to 1.778	<0.001	1.070	0.883 to 1.296	0.490

Lésions kystiques, évolution à 5 ans

Prospective study on the incidence, prevalence and 5-year pancreatic-related mortality of pancreatic cysts in a population-based study

Gut 2018;67:138–145.

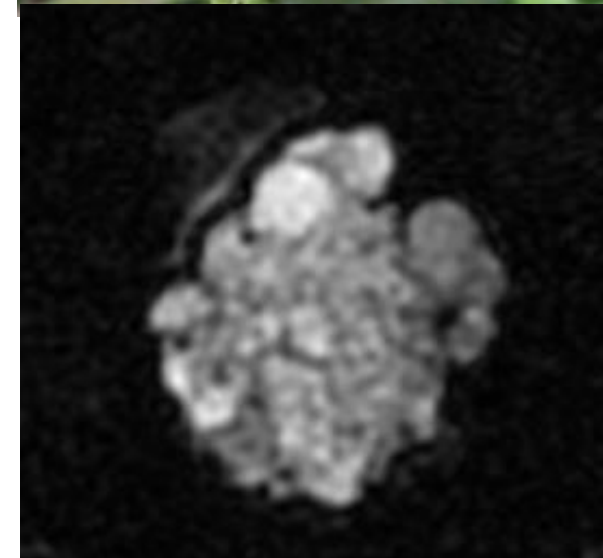
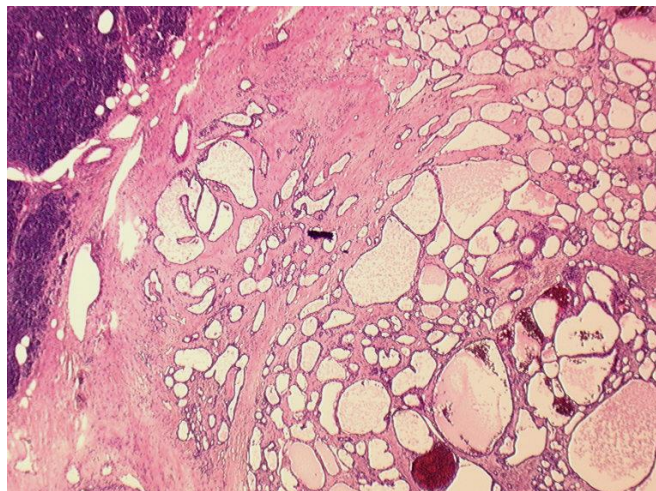
Marie-Luise Kromrey,¹ Robin Bülow,¹ Jenny Hübner,¹ Christin Paperlein,¹
Markus M Lerch,² Till Ittermann,³ Henry Völzke,³ Julia Mayerle,^{2,4} Jens-Peter Kühn^{1,5}

		TAILLE			Total
Mean cyst size		Decrease	Stable	Increase	
Decrease	NOMBRE	1.3% (5)	0% (0)	2.3% (4)	3.6% (9)
Stable		6.5% (25)	30.8% (114)	23.3% (81)	60.6% (220)
Increase		2.1% (7)	9.7%(34)	24.1% (87)	35.9% (128)
Total		9.8% (37)	40.4% (148)	49.8% (172)	100% (357)

- Augmentation de taille: 49,8%
- Augmentation du nombre de lésions : 36%

Cystadénome séreux

- Tumeur microkystique à revêtement cubique
- En nid d'abeille, contenu citrin (glycogène)

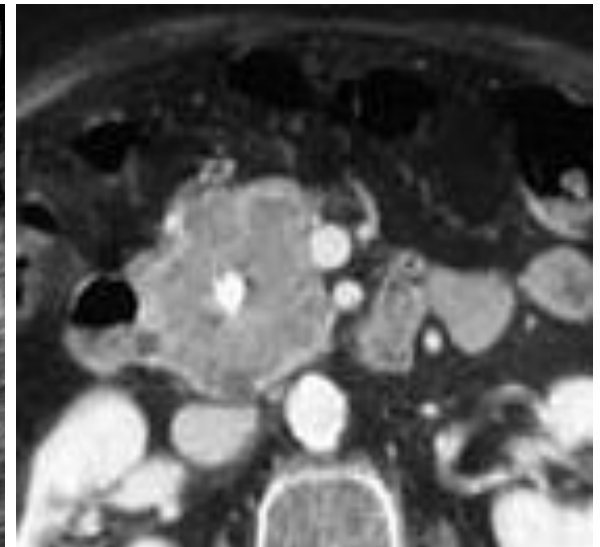


Cystadénome séreux: critères diagnostiques

- **Localisation: tête +++***
- Kystes multiples (n>6), taille <2 cm
- Cloisons internes fines, aspect en nid d'abeille
- **Arrondie, polycyclique***
- Contenu liquidien
- **Paroi fine***

- Si 2 critères : 80 %
- Si 3 critères : 100 %

Cohen-Scali. Radiology 2003

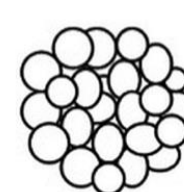
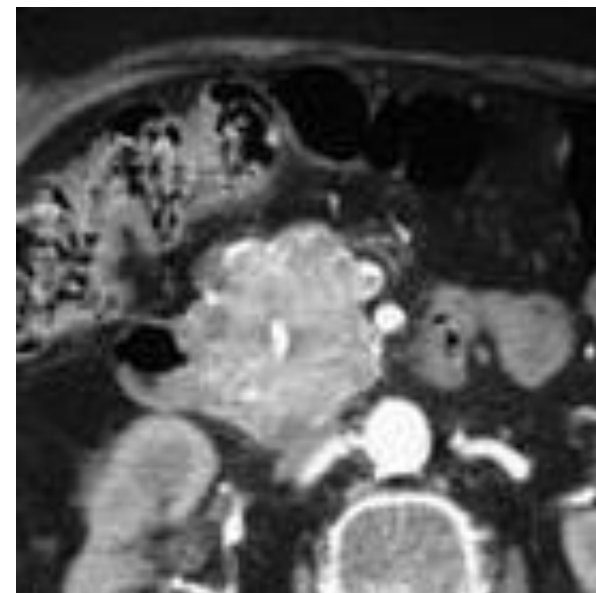


Serous cystic neoplasm of the pancreas: a multinational study of 2622 patients under the auspices of the International Association of Pancreatology and European Pancreatic Club (European Study Group on Cystic Tumors of the Pancreas)

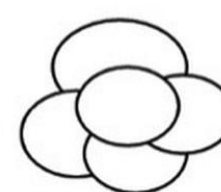
B Jais,¹ V Rebours,¹ G Malleo,² R Salvia,² M Fontana,² L Maggino,² C Bassi,² R Manfredi,² R Moran,^{3,4,5} A M Lennon,^{3,4,5} A Zaheer,^{3,4,5} C Wolfgang,^{3,4,5} R Hruban,^{3,4,5} G Marchegiani,⁶ C Fernández Del Castillo,⁶ W Brugge,⁶ Y Ha,⁷ M H Kim,⁷ D Oh,⁷ I Hirai,⁸ W Kimura,⁸ J Y Jang,⁹ S W Kim,⁹ W Jung,⁹ H Kang,¹⁰ S Y Song,¹⁰ C M Kang,¹¹ W J Lee,¹¹ S Crippa,¹² M Falconi,¹² I Gomatos,¹³ J Neoptolemos,¹³ A C Milanetto,¹⁴ C Sperti,¹⁴ C Ricci,¹⁵ R Casadei,¹⁵ M Bissolati,¹⁶ G Balzano,¹⁶ I Frigerio,¹⁷ R Girelli,¹⁷ M Delhaye,¹⁸ B Bernier,¹⁸ H Wang,¹⁹ K T Jang,²⁰ D H Song,²¹ M T Huggett,²² K W Oppong,²² L Pererva,²³ K V Kopchak,²³ M Del Chiaro,²⁴ R Sægersvård,²⁴ L S Lee,²⁵ D Conwell,²⁵ A Osvaldt,²⁶ V Campos,²⁶ G Agüero Garcete,²⁷ B Napoleon,²⁷ I Matsumoto,²⁸ M Shinzaki,²⁸ F Bolado,²⁹ J M Urman Fernandez,²⁹ M G Keane,³⁰ S P Pereira,³⁰ I Araujo Acuna,³¹ E C Vaquero,³¹ M R Angiolini,³² A Zerbi,³² J Tang,³³ R W Leong,³³ A Faccinotto,³⁴ G Morana,³⁴ M C Petrone,³⁵ P G Arcidiacono,³⁵ J H Moon,³⁶ H J Choi,³⁶ R S Gill,³⁷ D Pavey,³⁷ M Ouassii,³⁸ B Sastre,³⁸ M Spandre,³⁹ C G De Angelis,³⁹ M A Rios-Vives,⁴⁰ M Concepcion-Martin,⁴⁰ T Ikeura,⁴¹ K Okazaki,⁴¹ L Frulloni,⁴² O Messina,⁴² P Lévy¹

Gut. 2016

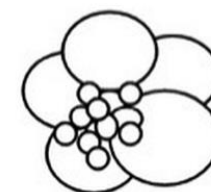
Sex, n (%)	2622 patients
Male	683 (26)
Female	1939 (74)
Median age at diagnosis, years (range)	58 (16–99)
Symptoms, n (%)	
Asymptomatic	1610 (61)
Symptomatic	1012 (39)
Tumour location, n (%)	
n=2491	
Head/uncinate	985 (40)
Body	860 (34)
Tail	646 (26)
Schematic pattern, n (%)	
N=2516	
Microcystic	1127 (45)
Macrocytic	814 (32)
Mixed microcystic/macrocytic	455 (18)
Solid	120 (5)
Initial median tumour diameter, mm (range)	31 (1–238)
Management, n (%)	
Operated <1 year (G1)	1351 (52)
Operated >1 year (G2)	239 (9)
Non-operated (G3)	1032 (39)



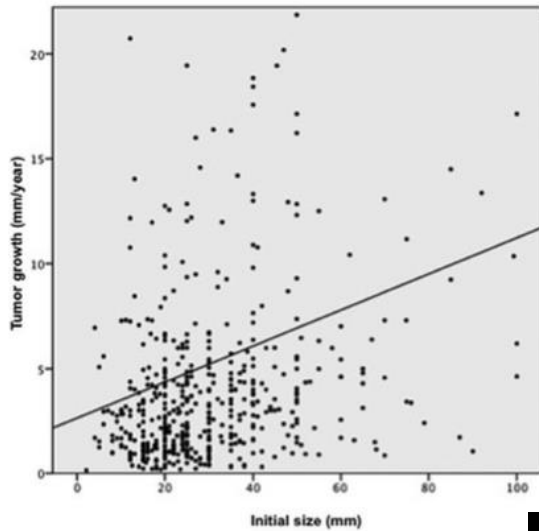
Microcystic type



Macrocytic type



Mixed type



- Taux croissance: 4 mm/ an
- Croissance corrélée à la taille initiale
- 3 cystadenocarcinoma
- Mortalité postopératoire: 0.6% (n=10)
- Mortalité relative CS: 0.1% (n=1)

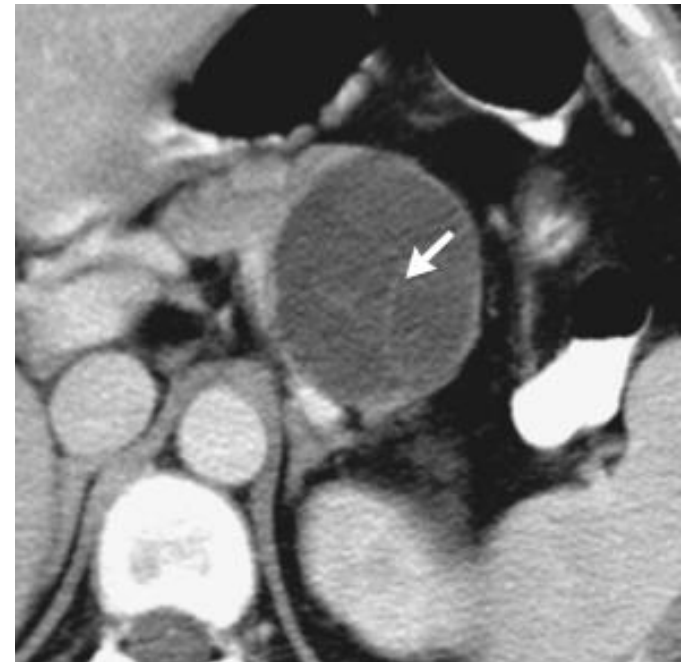
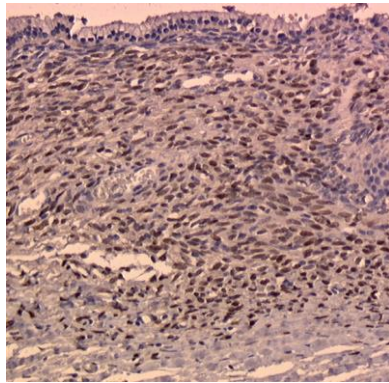
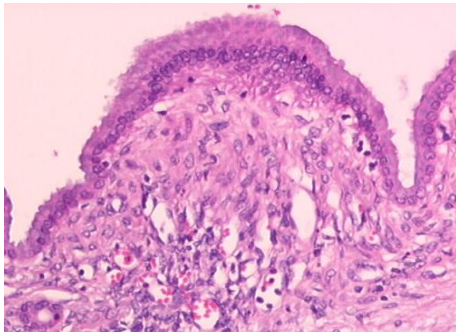
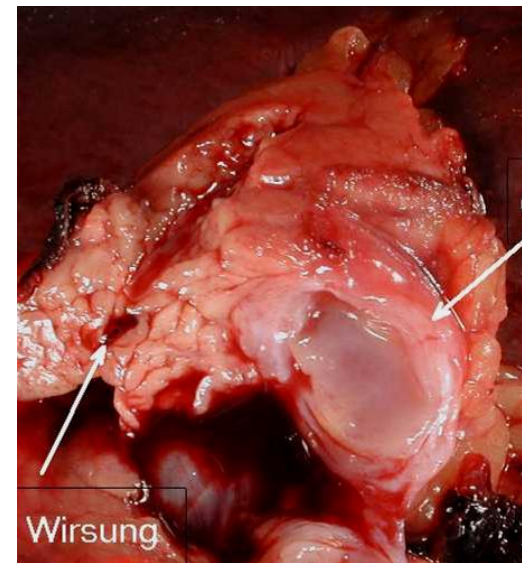


- Aucun traitement
- Risque quasi nul de cancérisation (<10 cas)
- En pratique: IRM tous les 3 ans



Cystadénomes mucineux

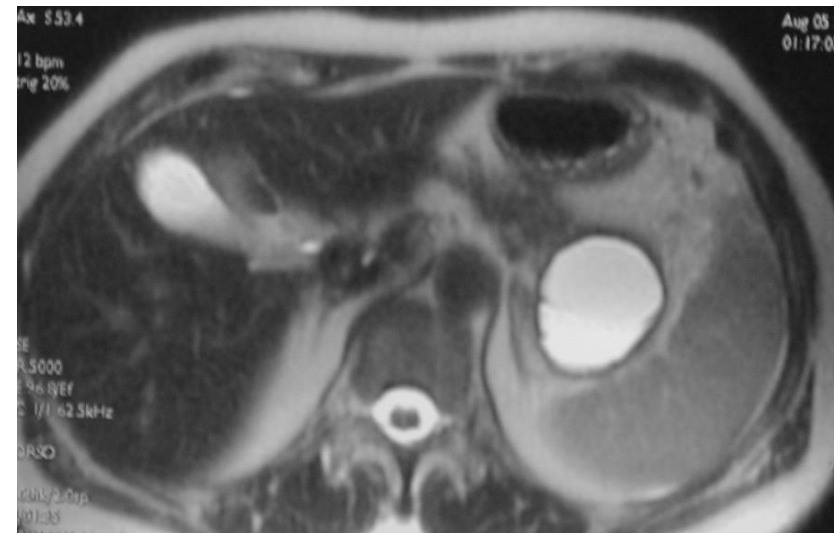
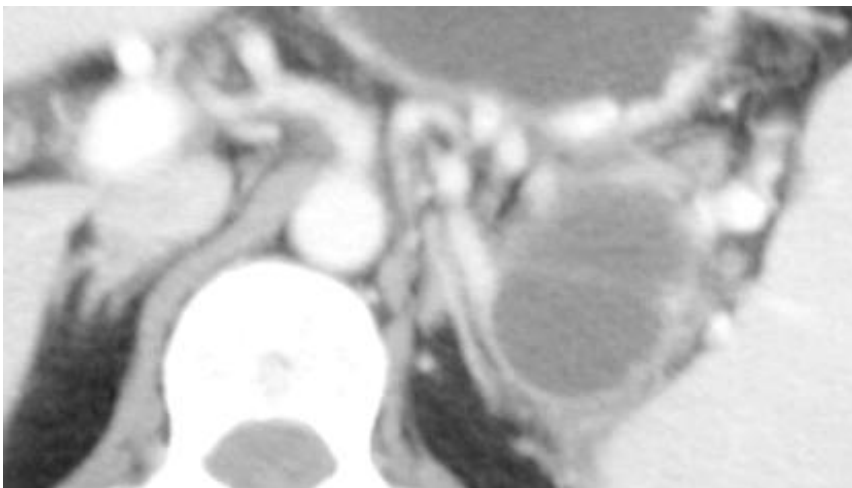
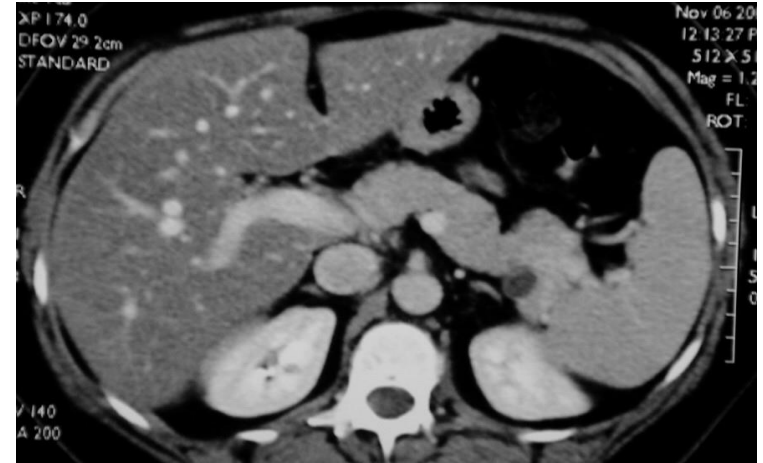
- Revêtement épithélial
- Lésion pré cancéreuse
- Sécrétant de la mucine
- Stroma de type ovarien
- Sex ratio ♀ : 20/1



Fukushima Int J Surg Pathol 2000
Zamboni Am J Surg Pathol 1999
Le Borgne Ann Surg 1999

Cystadénomes mucineux

- **Symptômes**
 - Douleurs aspécifiques (70%) = **Fortuit +++**
 - Pancréatite aiguë (10%)



Cystadénomes mucineux

- Lésion: unique, macrokystique
- Paroi épaisse (>2 mm)
- Diamètre: 10 à 30 mm
- Pas de communication avec les canaux
- Corps et queue: 90%
- Lésion uni- ou multiloculaire, limitée, hypodense, avec rehaussement de la paroi
- Possible nodules muraux, calcifications périphériques ou cloisons internes



Fukushima Int J Surg Pathol 2000
Zamboni Am J Surg Pathol 1999
Le Borgne Ann Surg 1999

Pancreatic mucinous cystadenomas and cystadenocarcinomas: differential diagnosis by means of MRI

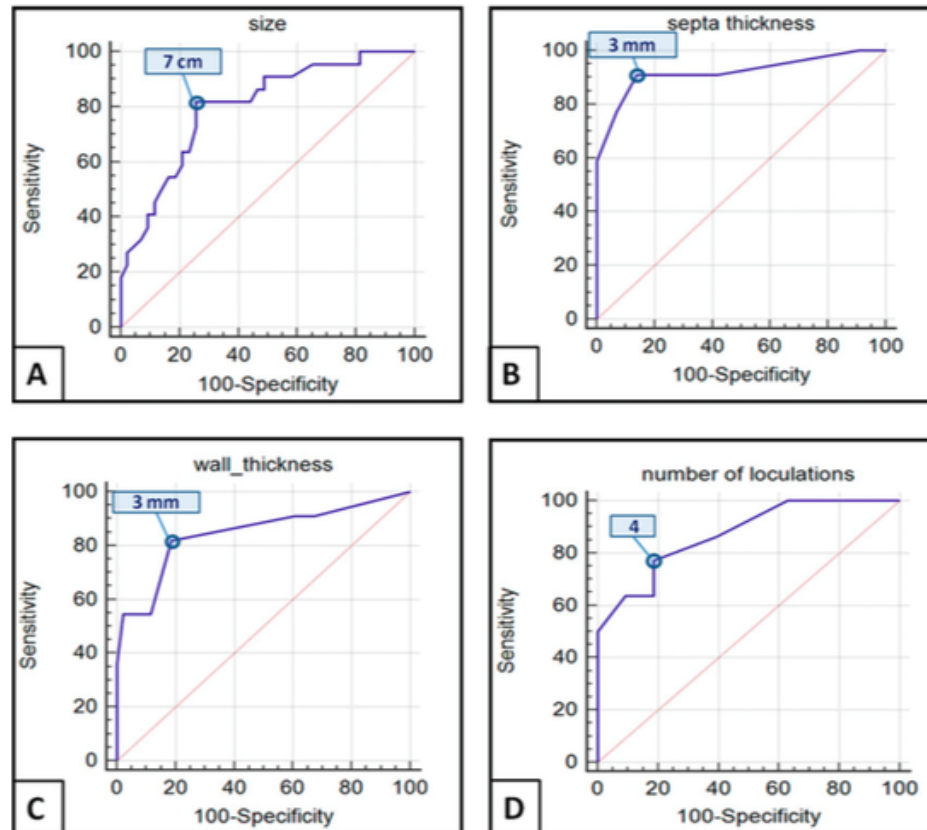
Br J Radiol. 2016

VALERIO DI PAOLA, MD, RICCARDO MANFREDI, MD, SARA MEHRABI, MD, NICOLÒ CARDOI, MD, EMANUELE DEMOZZI, MD, SALVATORE BELLUARDO, MD and ROBERTO POZZI MUCELLI, MD

Department of Radiology, University of Verona, Verona, Italy



- 43 CM et 22 Cystadénocarcinoma



- Taille > 7 cm
- Epaisseur septa et paroi > 3 mm
- Nb de kyste > 4
- Nodules
- Contenu hyper T1
- Compression ou infiltration
- Métastases

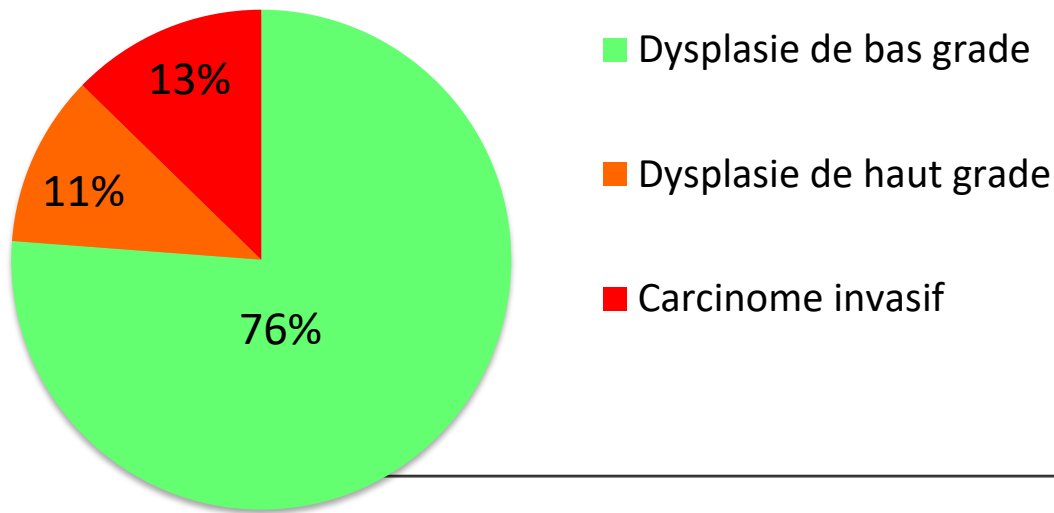
Présence de 3 critères
Spécificité : 91%

Mucinous Cystic Neoplasm of the Pancreas is Not an Aggressive Entity

Lessons From 163 Resected Patients

Ann Surg 2008;247: 571–579

Stefano Crippa, MD, Roberto Salvia, MD, PhD,* Andrew L. Warshaw, MD,†
Ismael Domínguez, MD,† Claudio Bassi, MD,* Massimo Falconi, MD,* Sarah P. Thayer, MD, PhD,†
Giuseppe Zamboni, MD,‡ Gregory Y. Lauwers, MD,§ Mari Mino-Kenudson, MD,§
Paola Capelli, MD,‡ Paolo Pederzoli, MD,* and Carlos Fernández-del Castillo, MD†*



Rétrospectivement, les $\frac{3}{4}$ des patients auraient pu être l'objet d'une surveillance

	Benign (n = 135)	<i>P</i> (Benign vs. Malignant)
Size >60 mm (%)*	41 (30)	0.0001
Presence of denudation >50% [†] (%)	55 (40.7)	NS
Presence of nodules/papillae (%)	6 (4.4)	0.0001
Presence of macroscopic septae (%)	50 (37)	NS
Single lesions (%)	135 (100)	
Median size (mm)*	45 (8–150)	0.0001

Est il temps de changer de paradigme?

Peut on surveiller un cystadénome mucineux?

European evidence-based guidelines on pancreatic cystic neoplasms

The European Study Group on Cystic Tumours of the Pancreas

Gut 2018

Surveillance si

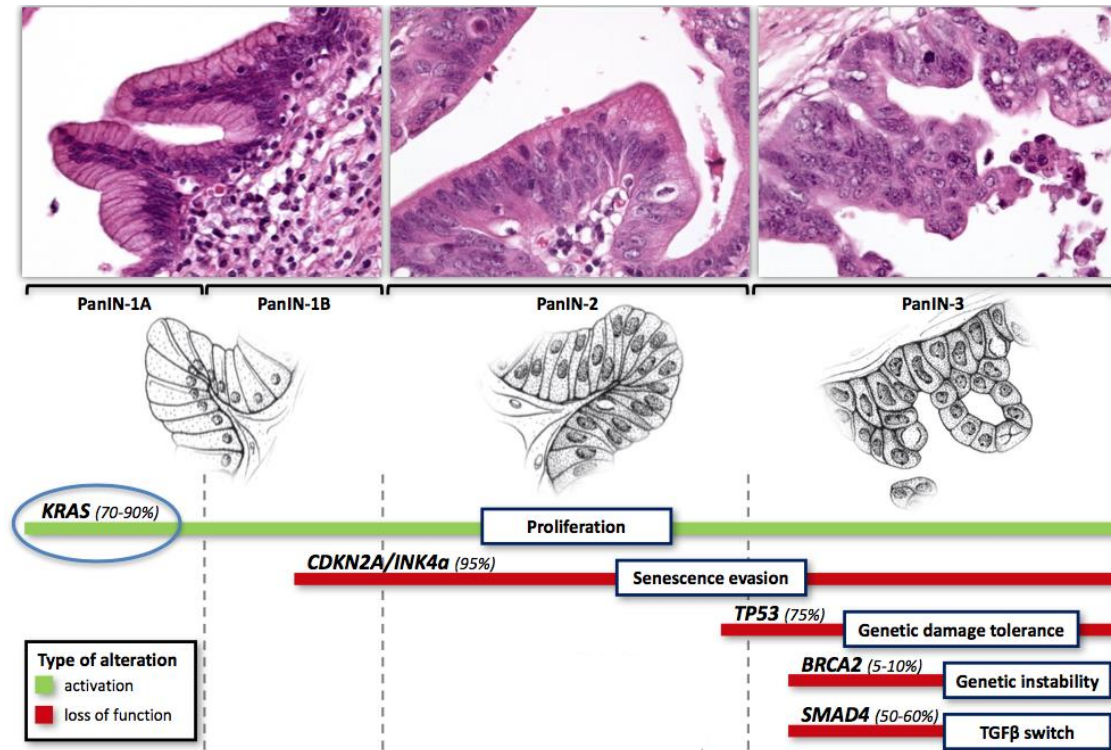
- Taille <40 mm,
- Pas de nodules **ET** pas de symptômes

Pour les lésions de 30 à 40mm, prise en compte de l'âge et des co-morbidités

Modalités de surveillance

IRM ou EUS , ou la combinaison des deux
Tous les 6 mois pendant 1 an puis tous les ans

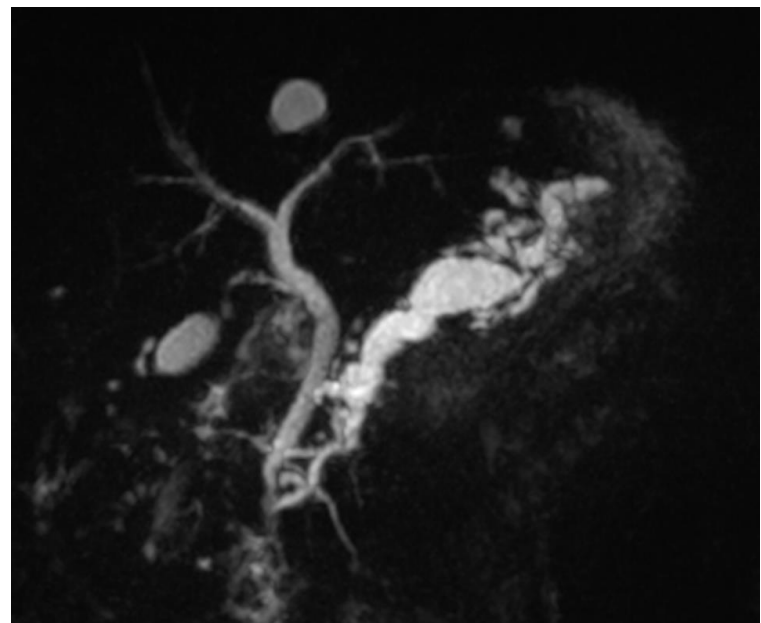
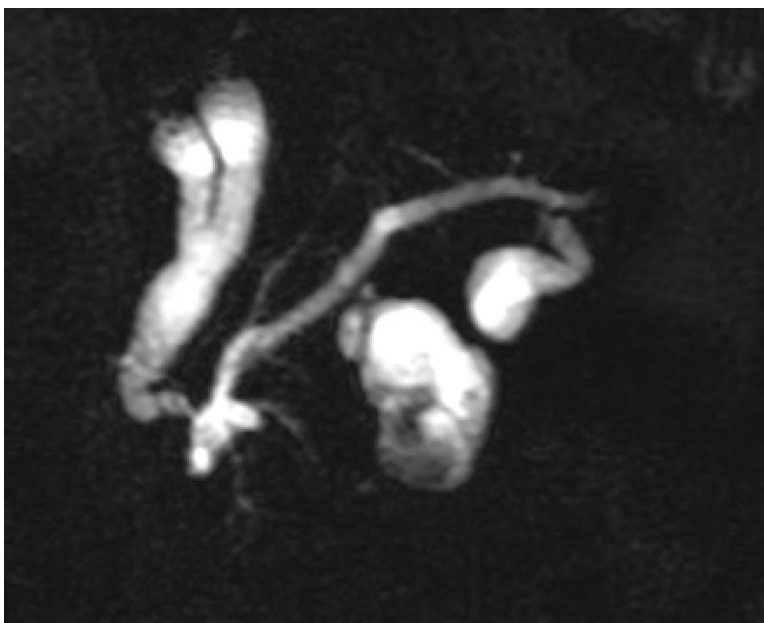
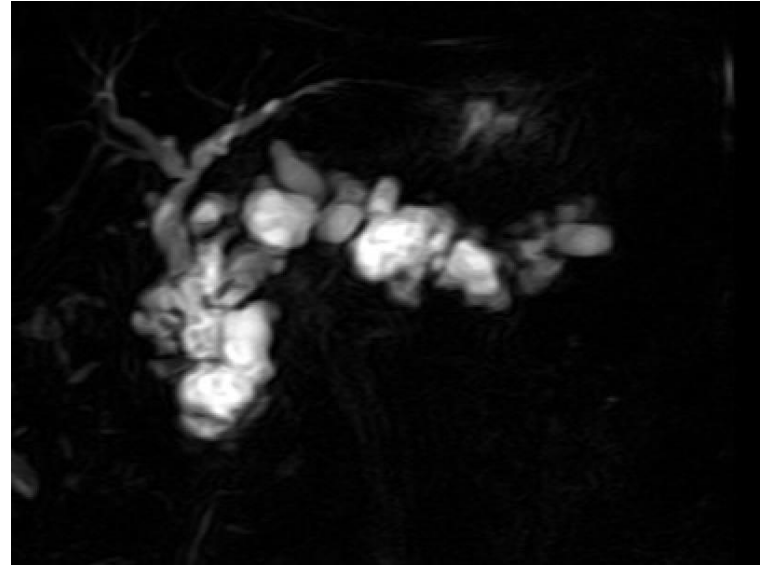
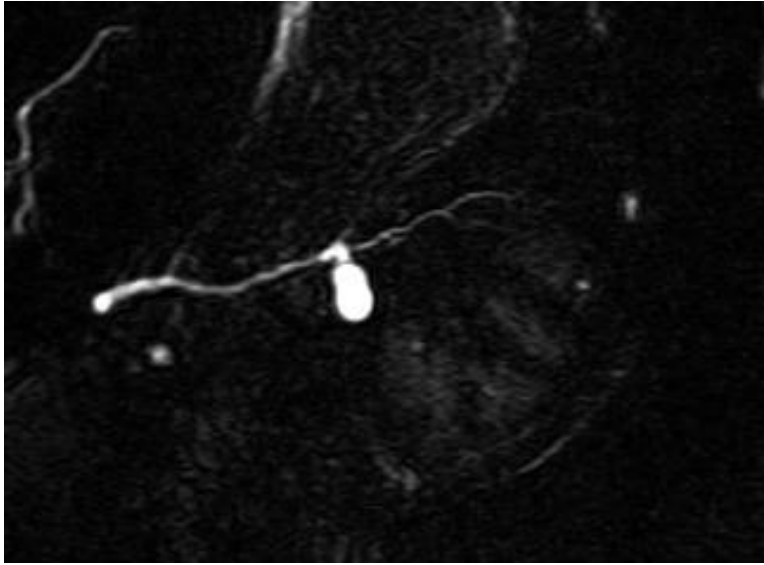
Les lésions multiples: TIPMP



Thompson Am J Surg Pathol 1999
Hruban Am J Surg Pathol 2004
Adsay Am J Surg Pathol 2004
Neuzillet-Pharmacology & Therapeutics 2015

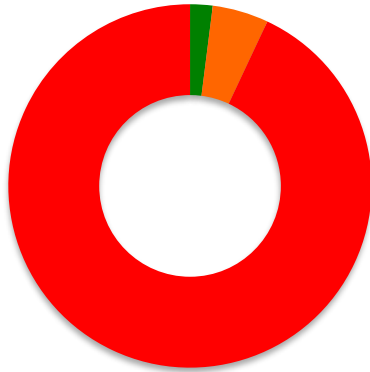
- Néoplasie intra-épithéliale
- Canaux secondaires et/ou CPP
- Production de mucine

Quelle est l'histoire naturelle des TIPMP?



Prospective study on the incidence, prevalence and 5-year pancreatic-related mortality of pancreatic cysts in a population-based study **Gut 2018;67:138–145.**

Marie-Luise Kromrey,¹ Robin Bülow,¹ Jenny Hübner,¹ Christin Paperlein,¹ Markus M Lerch,² Till Ittermann,³ Henry Völzke,³ Julia Mayerle,^{2,4} Jens-Peter Kühn^{1,5}



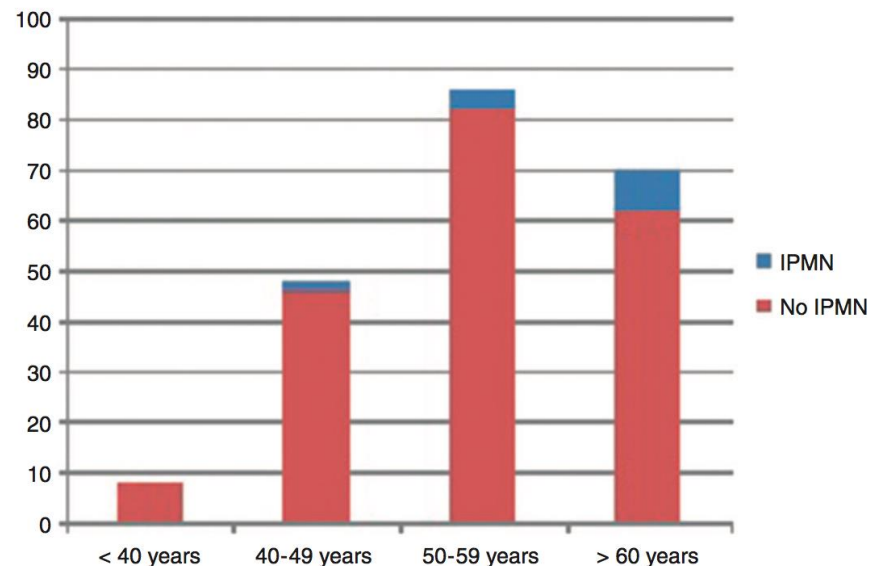
Estimation of the prevalence of intraductal papillary mucinous neoplasm of the pancreas in the French population through patients waiting for liver transplantation **UEGJ. 2016**

Lucie Laurent¹, Marie-Pierre Vullierme², Vinciane Rebours¹, Frédérique Maire¹, Olivia Hentic¹, Claire Francoz³, François Durand³, Philippe Ruszniewski¹ and Philippe Lévy¹

Prévalence : 6,6%

**1681 LKP>2 mm
chez 494 / 1077 pts = 46%**

**90% des consultations pour LKP:
TIPMP**



Quelle est l'histoire naturelle des TIPMP?

Population > 65 ans: 11 700 000 habitants en 2014 en France

- si taux de 7% de TIPMP = 819 000 personnes
- Si taux de 15% de TIPMP = 1 755 000 personnes
- Incidence Cancer du pancréas: 13 000 cas
- # 10% des cancers du pancréas se développent sur TIPMP: 1300 cas?

**Le risque de cancer est il négligeable?
Pour tous les patients?**

Revisions of international consensus Fukuoka guidelines for the management of IPMN of the pancreas

Masao Tanaka ^{a,*}, Carlos Fernández-del Castillo ^b, Terumi Kamisawa ^c, Jin Young Jang ^d, Philippe Levy ^e, Takao Ohtsuka ^f, Roberto Salvia ^g, Yasuhiro Shimizu ^h, Minoru Tada ⁱ, Christopher L. Wolfgang ^j



Fukuoka 2017

► High-risk stigmata de malignité

- Ictère avec un kyste dans la tête
- Composante tissulaire solide
- Nodule mural prenant le contraste >5mm
- CPP>10 mm

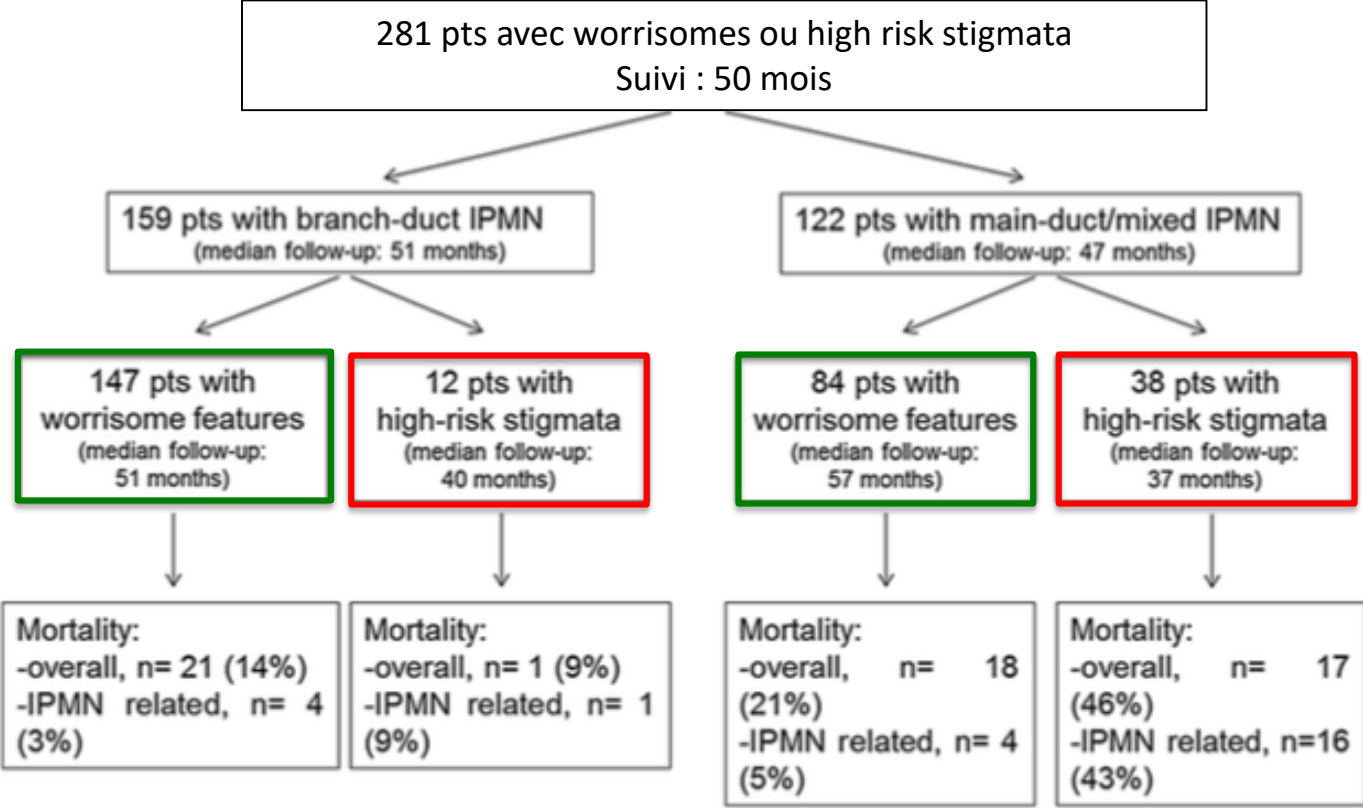
► Worrisome

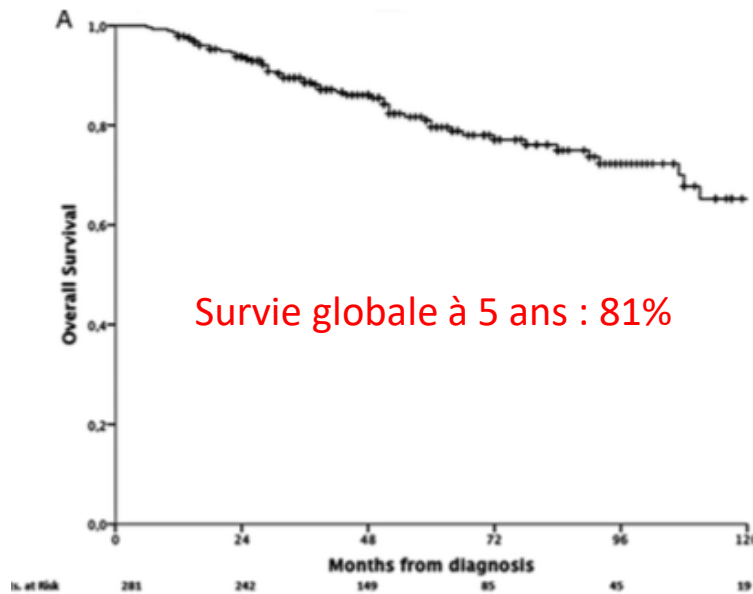
- Pancréatite
- Taille>3 cm
- Epaissement paroi
- CPP: 5-9 mm
- Dilatation de la VBP sans ictère
- Nodule mural prenant le contraste <5mm
- Elévation du Ca19-9
- Changement abrupt de calibre du CPP avec atrophie d'amont
- Adénopathie
- Croissance > 5mm/ 2 ans

Low progression of intraductal papillary mucinous neoplasms with worrisome features and high-risk stigmata undergoing non-operative management: a mid-term follow-up analysis

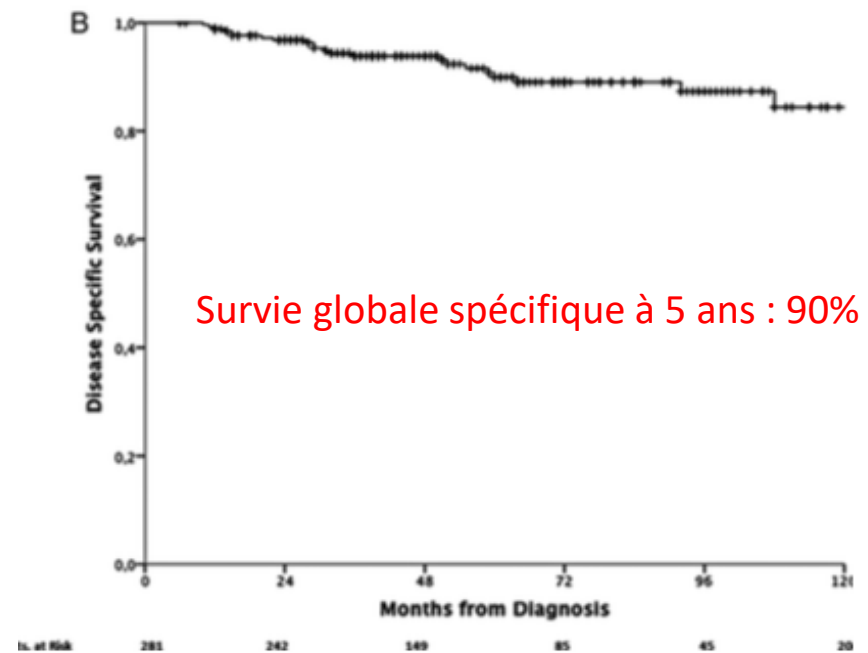
Gut 2016

Stefano Crippa,^{1,2} Claudio Bassi,³ Roberto Salvia,³ Giuseppe Malleo,³
Giovanni Marchegiani,^{3,4} Vinciane Rebours,⁵ Philippe Levy,⁵ Stefano Partelli,^{1,2}
Shadeah L Suleiman,⁶ Peter A Banks,⁶ Nazir Ahmed,⁷ Suresh T Chari,⁷
Carlos Fernández-del Castillo,⁴ Massimo Falconi^{1,2}





Survie globale à 5 ans : 81%

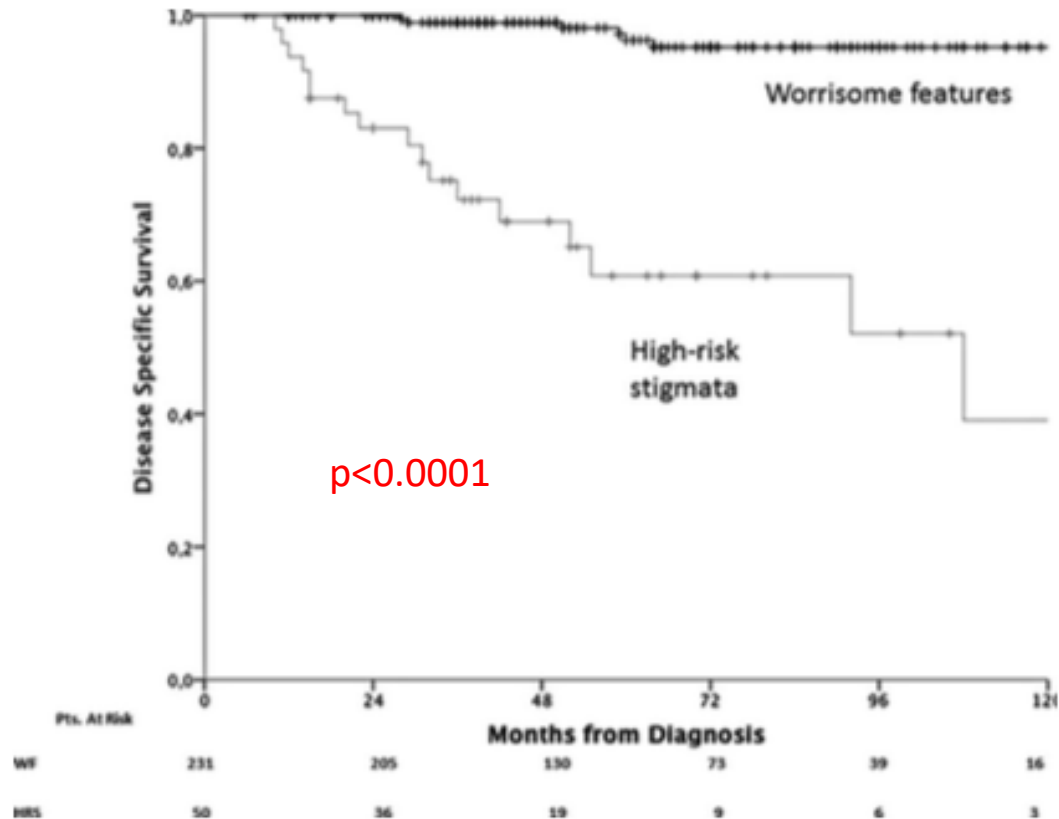


Survie globale spécifique à 5 ans : 90%

- Cancer du pancréas : 34 patients (12%)
- Facteurs prédictifs d'une faible survie spécifique
 - âge >70 ans
 - Cytologie positive, atypique
 - Ictère
 - CPP>15 mm

Survie spécifique à 5 ans

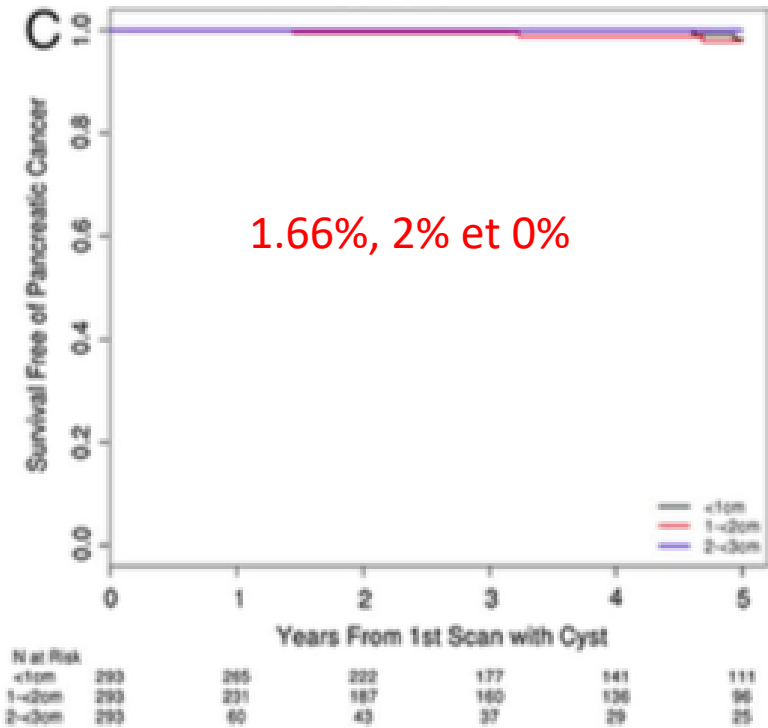
- worrisome features: 96.2%
- high-risk stigmata: 60.2%



Fukuoka criteria accurately predict risk for adverse outcomes during follow-up of pancreatic cysts presumed to be intraductal papillary mucinous neoplasms
 Gut. 2016 Jul 7

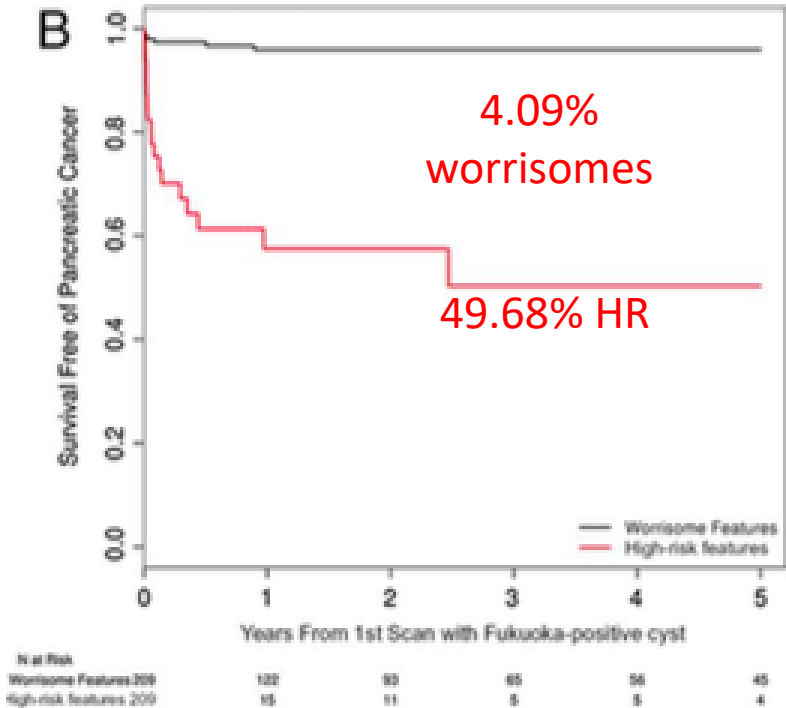
Saurabh Mukewar,¹ Nicolo de Pretis,¹ Anupama Aryal-Khanal,¹ Nazir Ahmed,¹ Raghuwansh Sah,¹ Felicity Enders,² Joseph J Larson,² Michael J Levy,¹ Naoki Takahashi,³ Mark Topazian,¹ Randall Pearson,¹ Santhi S Vege,¹ Suresh T Chari¹

802 pts
 PAS de worrisomes pas de HR



Quel est le risque de cancer?

358 pts
 Worrisomes ou HR



Et à long terme?

American Gastroenterological Association Institute Guideline on the Diagnosis and Management of Asymptomatic Neoplastic Pancreatic Cysts



Santhi Swaroop Vege,¹ Barry Ziring,² Rajeev Jain,³ Paul Moayyedi,⁴ and the Clinical Guidelines Committee

Gastroenterology 2015;148:819–822

When Can Pancreatic Cyst Surveillance Be Discontinued?

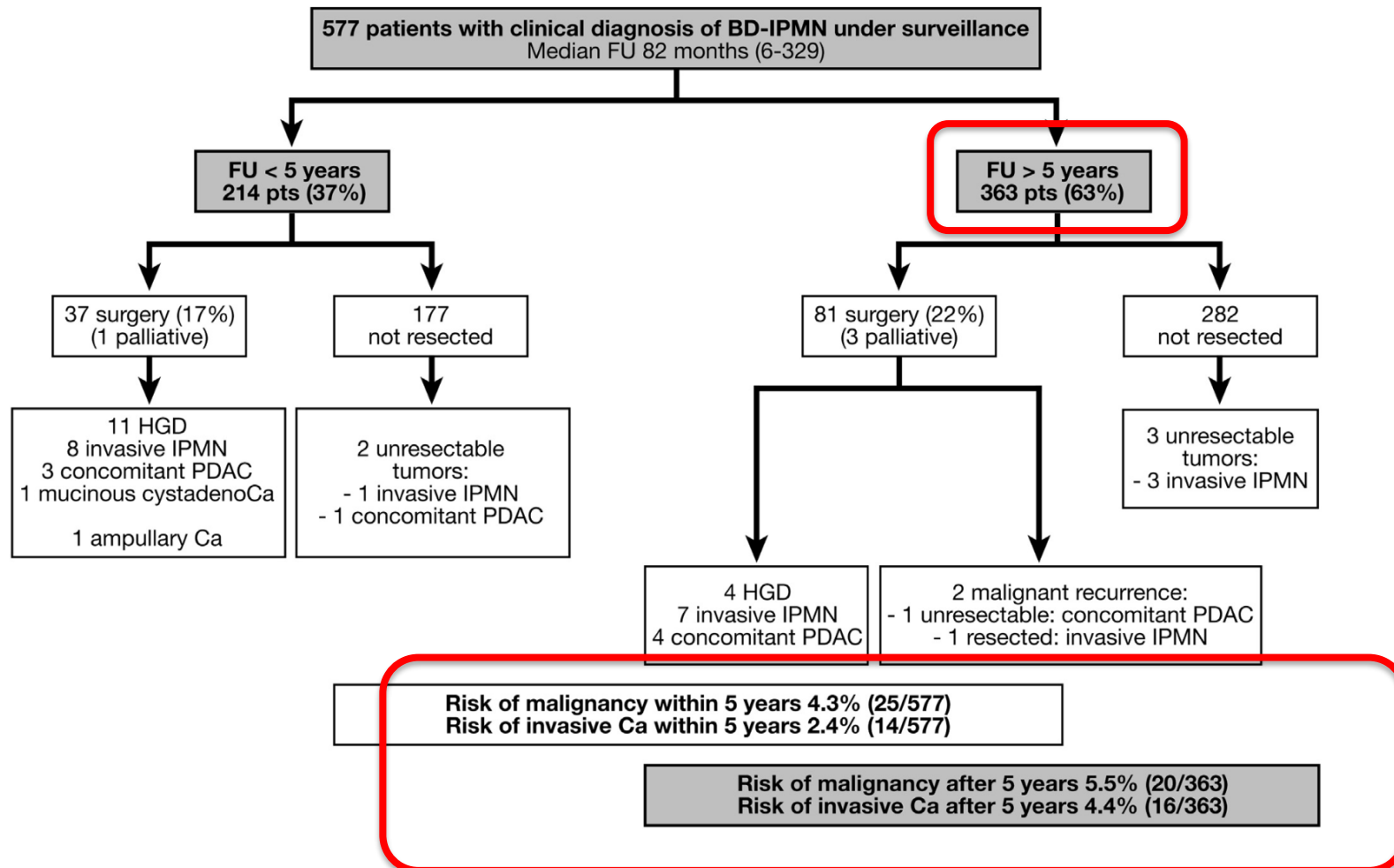
6. The AGA suggests against continued surveillance of pancreatic cysts if there has been no significant change in the characteristics of the cyst after 5 years of surveillance or if the patient is no longer a surgical candidate.

(Conditional recommendation, Very low quality evidence)

Long-term Risk of Pancreatic Malignancy in Patients With Branch Duct Intraductal Papillary Mucinous Neoplasm in a Referral Center

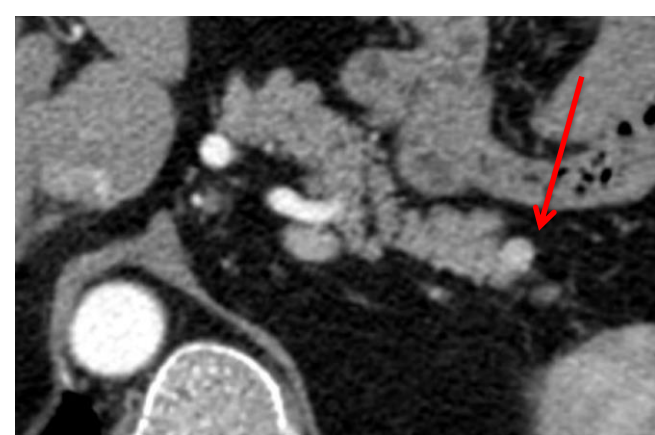
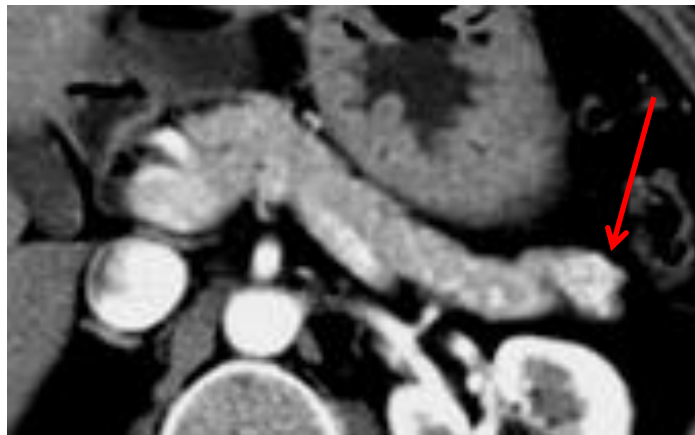
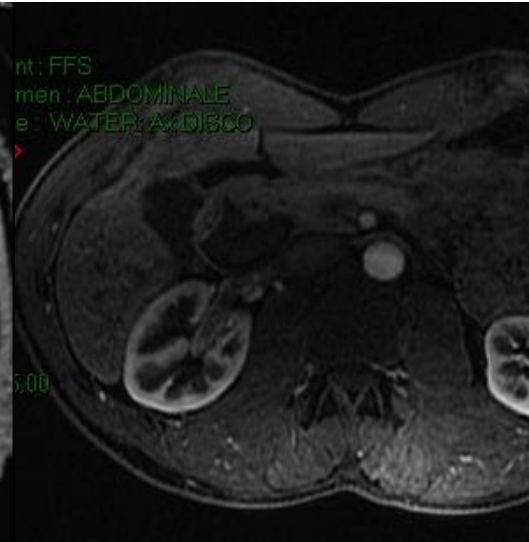
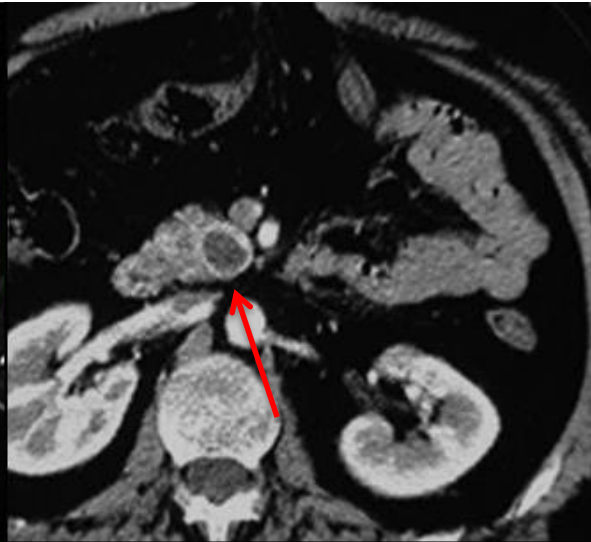
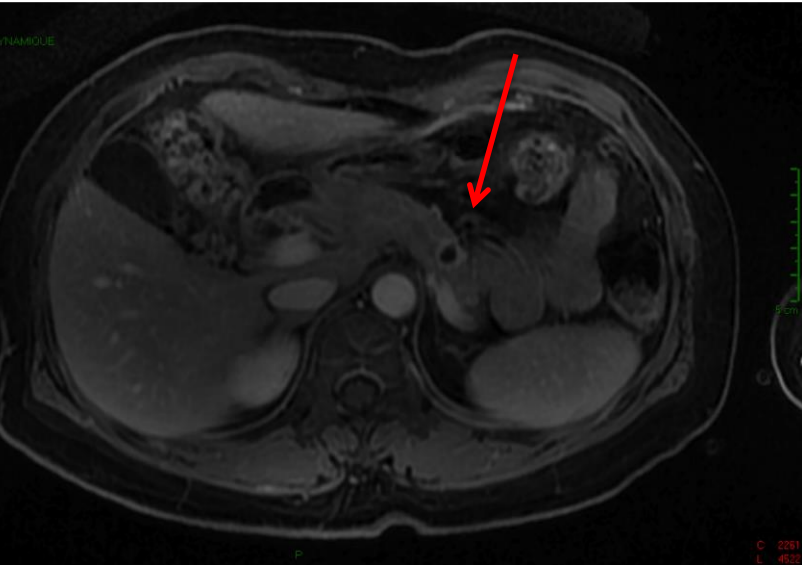
Gastroenterology 2017

Ilaria Pergolini,^{1,2} Klaus Sahora,¹ Cristina R. Ferrone,¹ Vicente Morales-Oyarvide,^{1,3} Brian M. Wolpin,³ Lorelei A. Mucci,⁴ William R. Brugge,⁵ Mari Mino-Kenudson,⁶ Manuel Patino,⁷ Dushyant V. Sahani,⁷ Andrew L. Warshaw,¹ Keith D. Lillemoe,¹ and Carlos Fernández-del Castillo¹



Tumeur neuroendocrine kystique

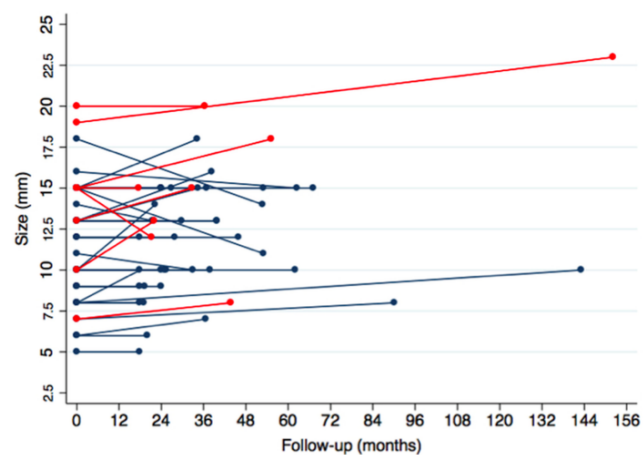
- ≈ 20% des TNE pancréatiques
- En général, bien différenciée
- Ki-67 bas



Observational Study of Natural History of Small Sporadic Nonfunctioning Pancreatic Neuroendocrine Tumors

J Clin Endocrinol Metab, December 2013

Sébastien Gaujoux, Stefano Partelli, Frédérique Maire, Mirko D’Onofrio, Béatrice Larroque,[‡] Domenico Tamburrino, Alain Sauvanet,^{*} Massimo Falconi,^{*} and Philippe Ruszniewski^{*}



- 46 patients
- Suivi médian : 34 mois
- Taille médiane : 13mm
- Taux de croissance annuel: 0.12 mm
- Progression >20% : 13%
- Pas de FDR de progression

Table 2. Linear Regression for Prediction of Tumor Growth (mm/mo)

			Number of Patients	Mean	SD	P Value
Gender	Male		30 (65%)	0.011	0.056	.89
	Female		16 (35%)	0.009	0.044	
Localization	Head		24 (52%)	0.018	0.046	.30
	Body/tail		22 (48%)	0.02	0.057	
Cystic lesion	Yes		12 (29%)	0.013	0.054	.64
	No		34 (74%)	0.004	0.046	
Age at diagnosis, y	Years			0.049 ^a		.75
Lesion size	mm			0.229 ^a		.13

Reappraisal of a 2-Cm Cut-Off Size for the Management of Cystic Pancreatic Neuroendocrine Neoplasms

A Multicenter International Study

Ann Surg. 2019 Jul 24.

Laura Maggino, MD,✉ Andrea Schmidt, MD,† André Käding, MD,‡ Sofia Westermarck, MD,§
Eugene P. Ceppa, MD,¶ Massimo Falconi, MD,|| Ammar A. Javed, MD,** Luca Landoni, MD,*
Ilaria Pergolini, MD,†† Julie Perinel, MD,‡‡ Charles M. Vollmer Jr, MD,§§ Malin Sund, MD, PhD,§
and Sebastien Gaujoux, MD, PhD¶¶|||, on the behalf on the Pancreas 2000 research group*

TNE kystiques opérées, n=263

TNE>2 cm, n=177 (63.5%)

Variable	%	N
R0	96.2%	253
G1	76.8%	202
G2	17.5%	46
G3	1.5%	4
N+	11%	29
M+	2.3%	6
“Malignité”	15.6%	41

Facteur de risque de « malignité »

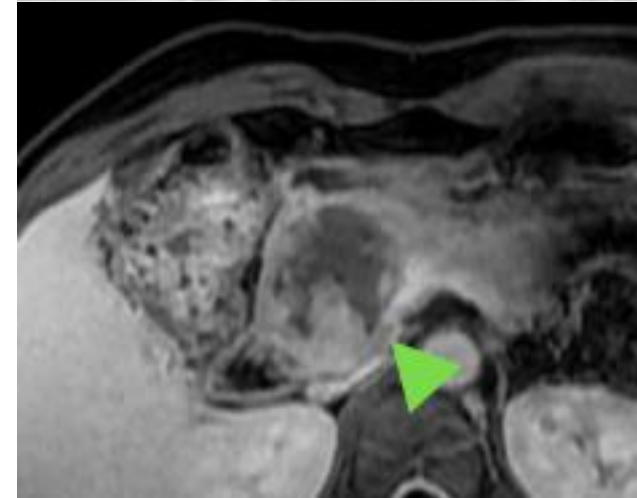
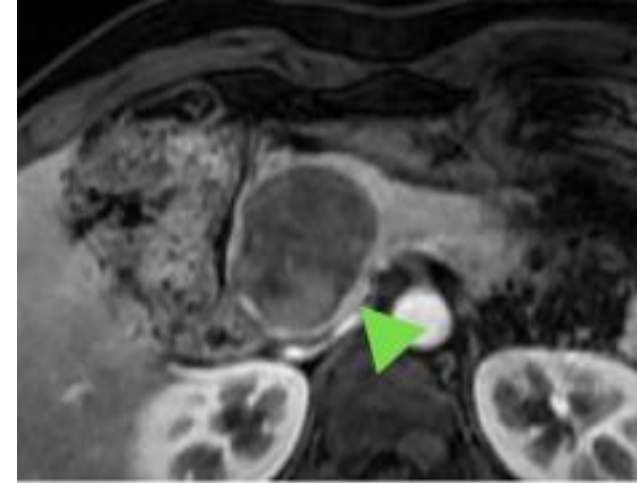
	Analyse multivariée
Age > 65 ans	2.5 (1.03-6.15) p=0.042
Taille > 2 cm	14.2 (2.9-67.96) p=0.001
Dilatation CPP	4.3(1.2-15.39) p=0.014
Suspicion radiologique de N+	19.755 (2.944-132.616) 0.002

19/174 TNE kystiques asymptomatiques étaient agressives (10.9%)

1/61 TNE NF asymptomatique ≤ 2 cm était considérée comme maligne

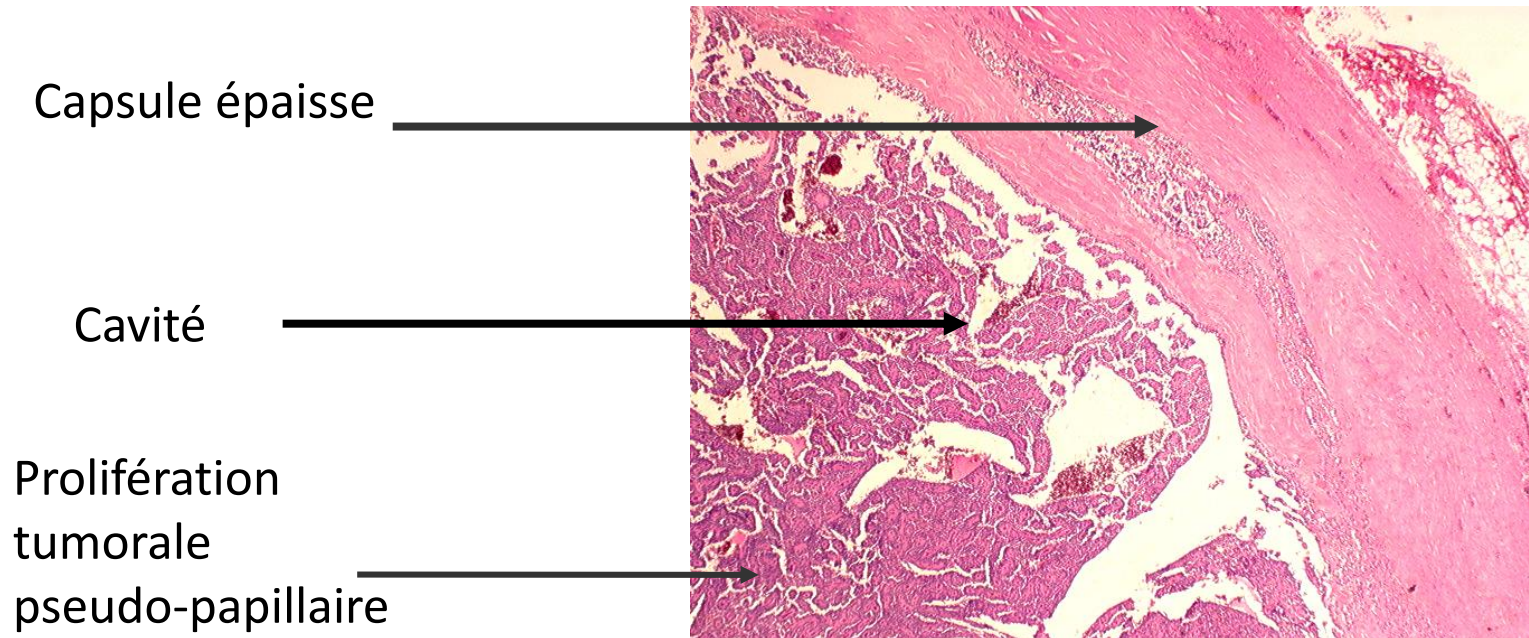
Tumeur solide et pseudo papillaire Tumeur de Frantz

- Prévalence non connue
- Sex ratio H/F : 1/10
- # 2000 cas décrits dans la littérature, rare
- Plus fréquent dans la population noire (>50%)
- Touche essentiellement la femme jeune
- Découverte fortuite
- Symptômes: hémorragie, douleur
- Localisation
 - Corporéocaudale 68%
 - Céphaliques: 32%



Histologie

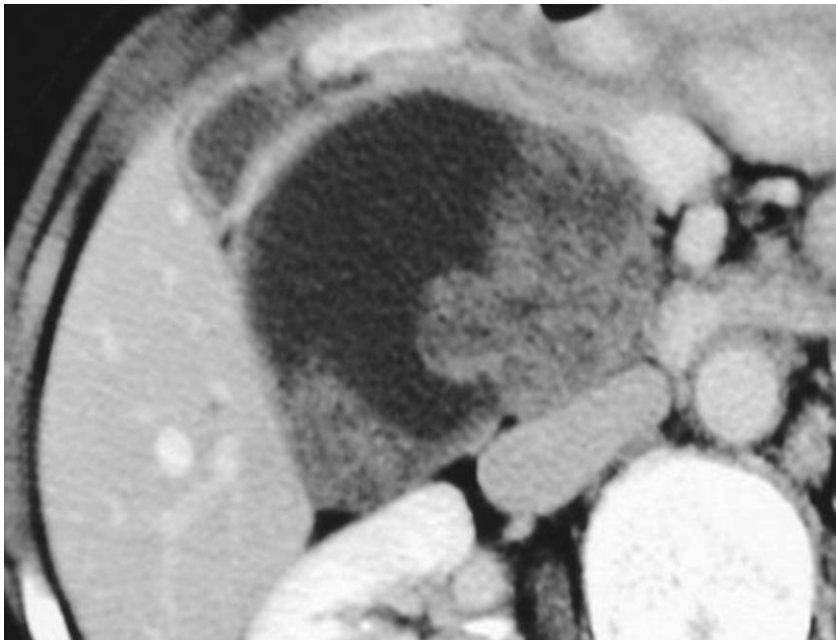
- Pauvreté des signes cytologiques de malignité mais métastases possibles
- Zones solides composées de cellules monomorphes et zones pseudo-papillaires où les cellules s'organisent autour d'un axe fibrovasculaire
- Cellules éosinophiles à noyau arrondi, granules PAS+.
- Index mitotique faible
- Pas d'embolies vasculaires ou lymphatiques



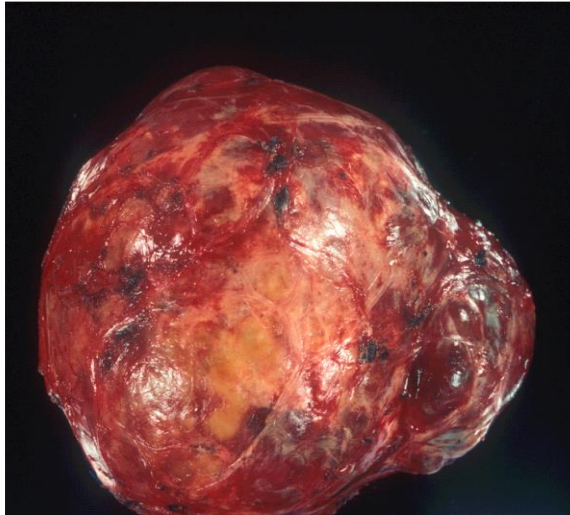
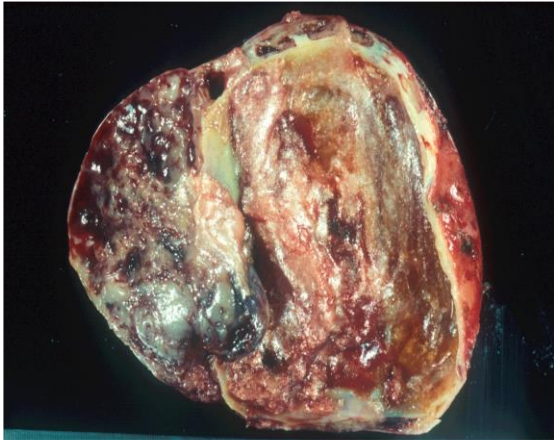
Lésion bien limitée par une capsule épaisse

Composantes solide et kystique:

- Avant injection: capsule hypodense
- Après injection: la capsule se réhausse
- Hémorragies intra-kystiques: densité intermédiaire entre le liquide et le parenchyme pancréatique
- Calcifications périphériques: 1/3 des cas



Dhakshina Moorthy Ganeshan,
Abdom Imaging (2013)



- 48,5 % solide et kystique
- Solide pure : 48,5%

Traitement et pronostic

- Exclusivement chirurgical
- Pancréatectomie focale: permet l'ablation de la capsule périphérique (zone d'activité tumorale, un reliquat peut exposer à une récurrence)
- En cas de métastases synchrones hépatiques et/ou péritonéales, l'exérèse de la totalité des lésions est préconisée
- Tumeur d'évolution lente, à malignité atténuée
- **Pronostic excellent:** Exérèse complète assure une guérison définitive dans > 85% des cas.
- Taux de mortalité directement imputable à la tumeur faible: <10%
- Survenue de récurrences tardives ou de métastases hépatiques métachrones rare (jusqu' à 20 ans). **Suivi prolongé**

Predicting Recurrence of Pancreatic Solid Pseudopapillary Tumors After Surgical Resection

A Multicenter Analysis in Korea

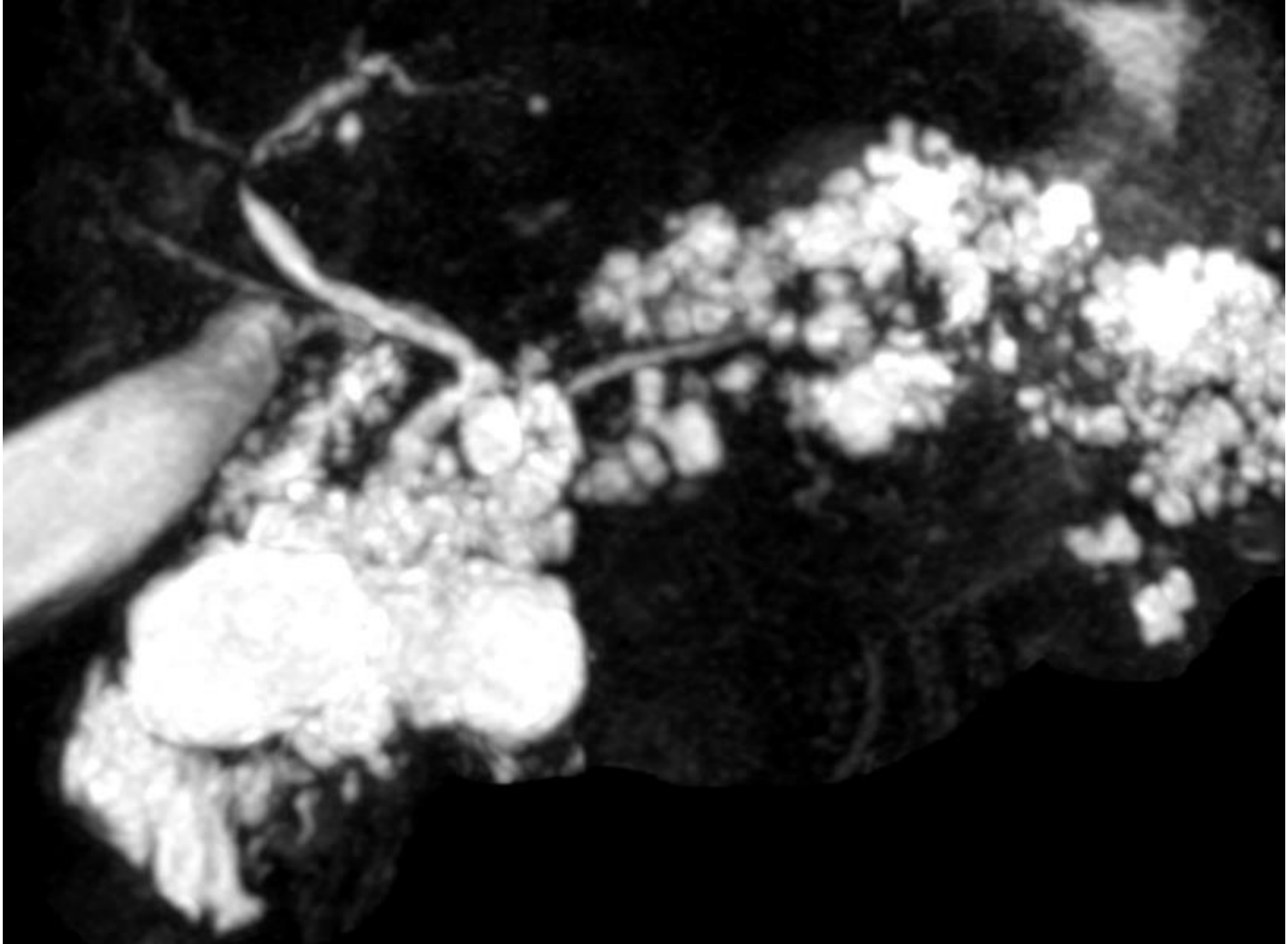
Ann Surg 2014;260:348–355

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

	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			

Acinar Cell Cystadenoma

Transformation kystique des acini



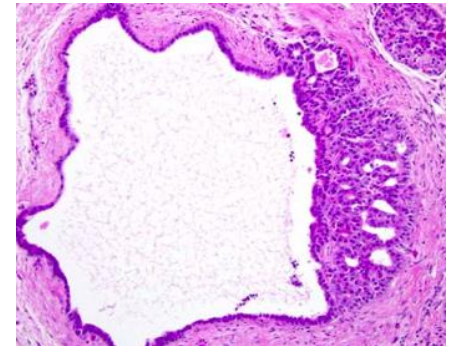
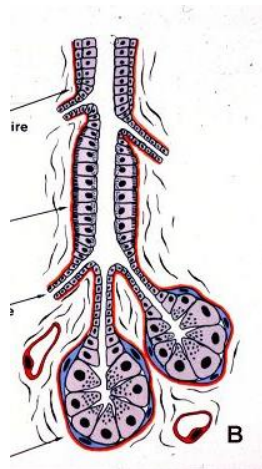
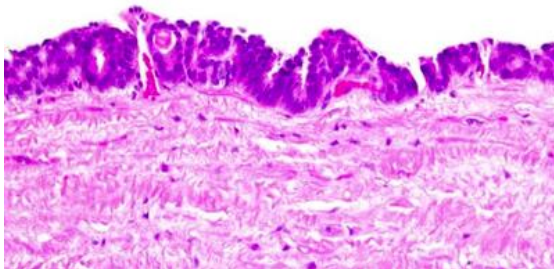
Acinar Cell Cystadenoma of the Pancreas

A Benign Neoplasm or Non-Neoplastic Ballooning of Acinar and Ductal Epithelium?

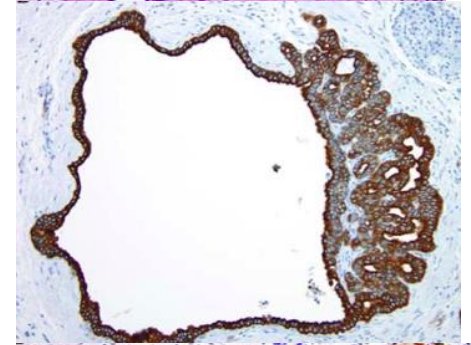
Am J Surg Pathol 2013

Aatur D. Singhi, MD, PhD, Stephanie Norwood, MD,† Ta-Chiang Liu, MD, PhD,†
Rajni Sharma, PhD,† Christopher L. Wolfgang, MD, PhD,‡§ Richard D. Schulick, MD,‡§
Herbert J. Zeh, MD,|| and Ralph H. Hruban, MD†‡*

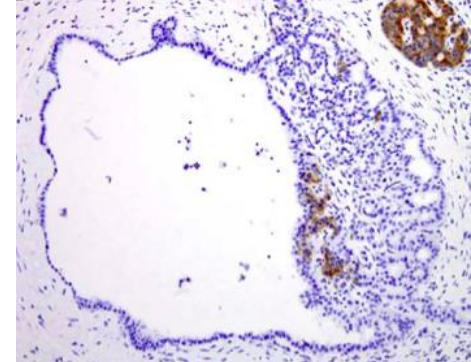
- Kystisation des acini
- Pas d'atypie nucléaires, pas de nécrose
- Différentiation canalaire
- Kyste bénin épithélial



CK7

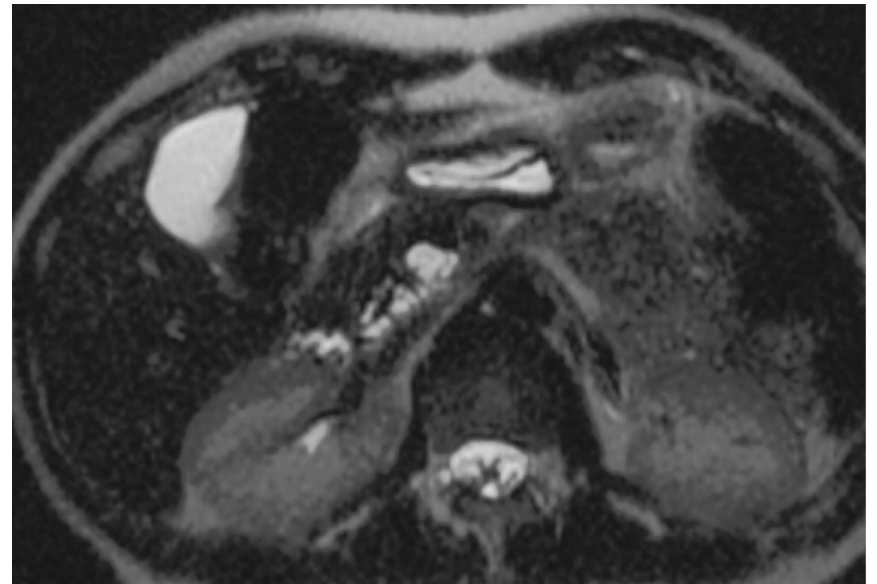
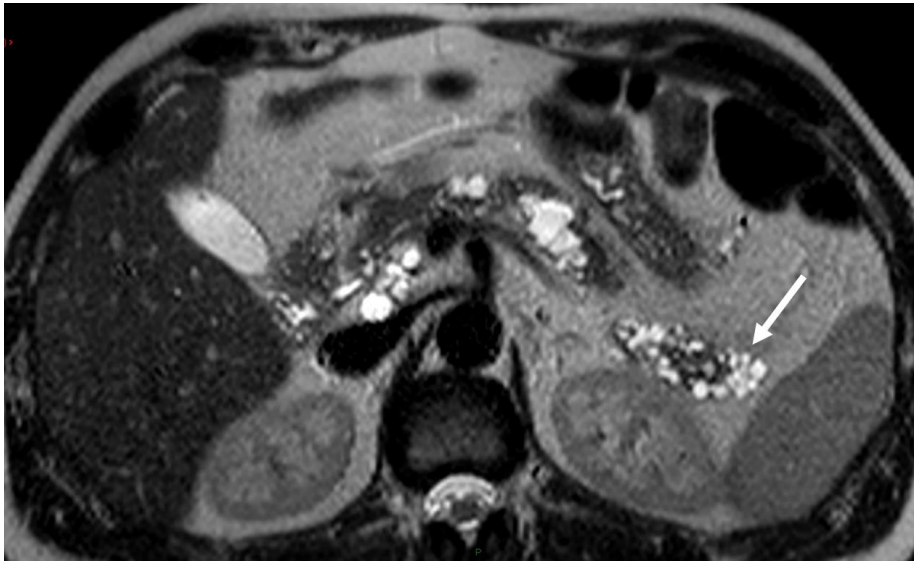
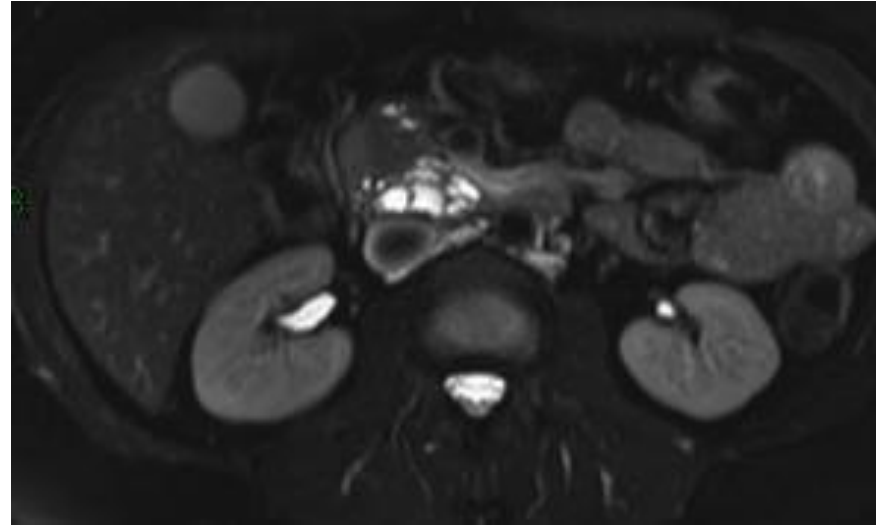


CK19



Acinar Cell Cystadenoma Transformation kystique des acini

- Kystes multiples
- Pas de communication
- Petits, regroupés et périphériques



CT and MR imaging of multilocular acinar cell cystadenoma: comparison with branch duct intraductal papillary mucinous neoplasia (IPMNs)

Eur Radiol 2014

Christophe Delavaud • Gaspard d'Assignies • Jérôme Cros • Philippe Ruszniewski • Pascal Hammel • Philippe Levy • Anne Couvelard • Alain Sauvanet • Safi Dokmak • Valérie Vilgrain • Marie-Pierre Vullierme

	Patients with ACC (<i>n</i> =5)	Patients with BD-IPMN (<i>n</i> =20)	Odds ratio [95 % CI] ^b	<i>P</i> value ^c
≥5 cysts	5 (100)	4 (20)	20.4 [2.3–∞]	0.004
Mean size of the largest cyst in mm (SD)	19.8 (13.5)	18.3 (9.5)	1.01 [0.9–1.12]	0.95
Predominant shape				
Elongated	2 (40)	12 (60)	0.4 [0.06–3.3]	0.42

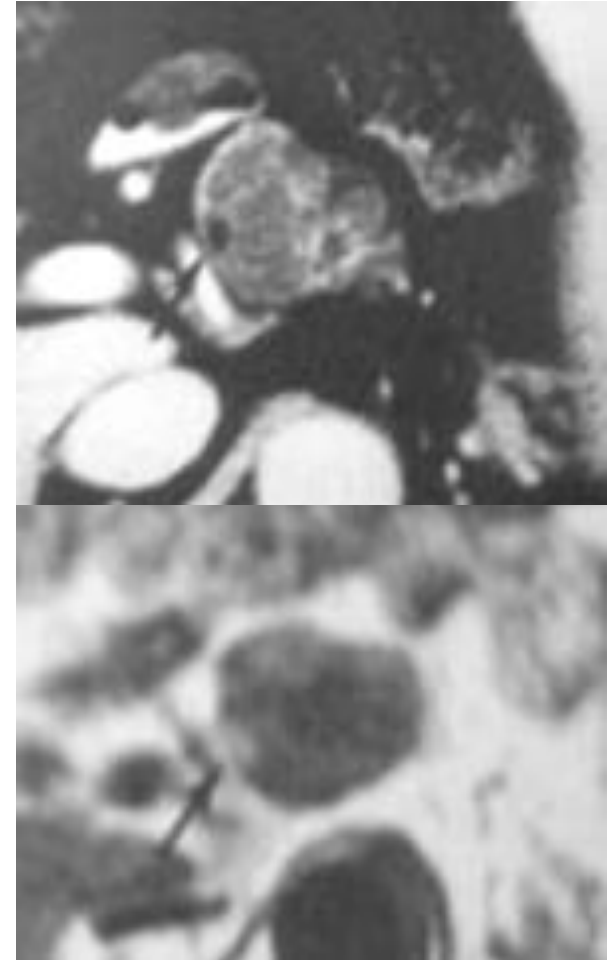
	Sensitivity (%)	Specificity (%)
At least 1 finding	100	60
At least 2 findings	100	85
At least 3 findings	80	100
4 findings	60	100
Absence of main pancreatic duct enlargement	5 (100)	14 (70)

2.5 [0.3–∞]

0.29

Kyste lympho-épithélial

- Rare
 - Homme
 - Rond, uni ou multi-loculaire, polylobé
 - 75 % exo-pancréatiques
 - Taille : 34 ± 11 mm
 - Pas de calcification, pas de dilatation canalaire
 - Graisse : 18% IN/OUT
-
- Bénin
 - Pas d'exérèse recommandée



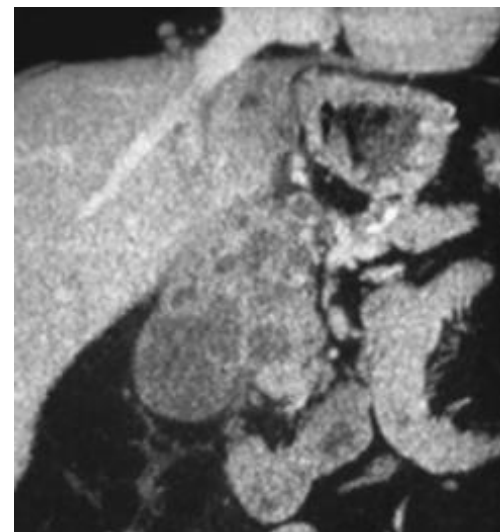
Lymphoepithelial Cyst of the Pancreas

An Analysis of 117 Patients

Pancreas 2014

Diane Mege, MD,† Emilie Grégoire, MD,*† Louise Barbier, MD,*†
Jean Del Grande, MD,*‡ and Yves Patrice Le Treut, MD*†*

	n	%*
Sex, male/female	91/26	78/22
Age (median), y	55	20–82
Medical and surgical history		
• None	20	36
• Diabetes	4	7
• Biliary lithiasis	1	2
• Pancreatitis	3	5
• Tabac	6	11
• Alcohol	12	21
• Abdominal trauma	1	2
• Upper surgery	1	2
• Cancer	6	11
• Familial pancreatic cancer	1	2
• Others	9	16
• NA	61	52 (/117)
Clinical presentation		
• Incidental	49	43
• Abdominal pain	47	42
• Back pain	6	5
• Impaired general condition	5	4
• Jaundice	2	2
• Chronic pancreatitis	1	1
• Diarrhea	1	1
• Thoracic basal pain	1	1
• Respiratory distress	1	1
• NA	4	3 (/117)



Conclusion

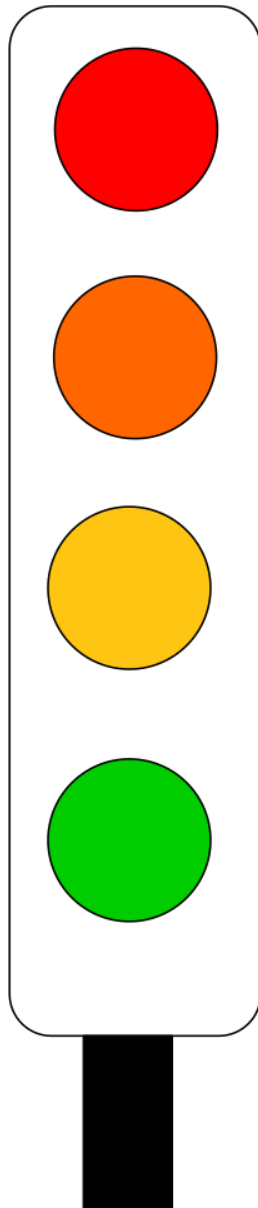
- Le diagnostic nécessite un bilan morphologique de qualité
- Scanographie pancréatique
- IRM avec wirsung IRM
- Echoendoscopie

Intérêt complémentaire des 3 examens

Des situations parfois complexes

- distinction entre cystadénomes séreux macrokystique et cystadénome mucineux
- l'atteinte du canal pancréatique principal en cas de TIPMP: vraie ou dilatation passive ?
- différencier une pancréatite chronique et une TIPMP mixte
- diagnostic de tumeurs neuroendocrines kystiques si la portion tissulaire est de très petite taille
- distinction entre TIPMP des canaux secondaires et TKA

Risque de Malignité



TIPMP avec signes à haut risque de malignité
TPPS

TIPMP avec signes d'inquiétude
Cystadénome mucineux
Tumeur neuroendocrine kystique <2cm

TIPMP sans signe d'inquiétude ou signe de malignité

Cystadénome séreux
Transformation kystique des acini
Kyste lympho-épithélial
Lymphangiome kystique