

SAMEDI
4 DÉCEMBRE
2021

PALAIS DES CONGRÈS
DE DIGNE-LES-BAINS

2021 : ÉVOLUTION DE LA CANCÉROLOGIE

15^E FORUM
DE LA FÉDÉRATION
DE CANCÉROLOGIE
DES PAYS D'AIX, MANOSQUE
& SALON

Endoscopie interventionnelle en cancérologie

Dr Erwan BORIES

Endoscopie et échoendoscopie en cancérologie

Diagnostic

- Dépistage
- Diagnostic histologique
- Localisation tumorale / Staging
- Evaluation de la réponse

Thérapeutique

- Anti-tumoral
 - Résection endoscopique tumeur superficielles
 - Destruction tumorale
- Palliatif
 - Drainage biliaire
 - Stenting digestif
 - Douleur

Endoscopie et échoendoscopie interventionnelles

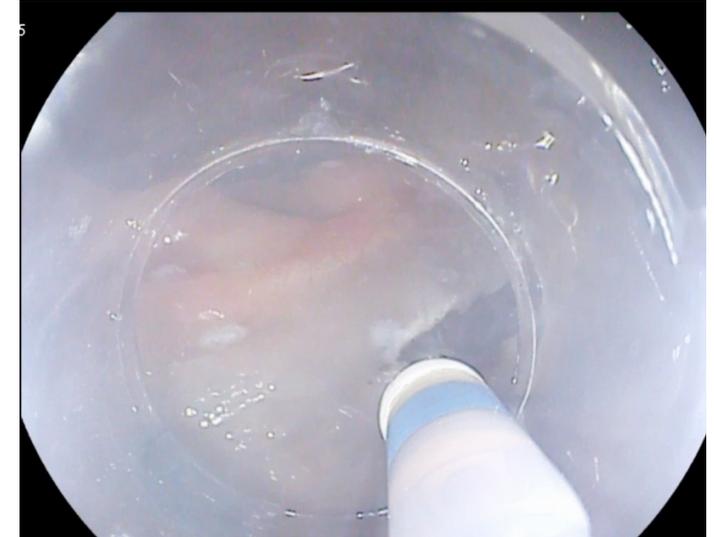
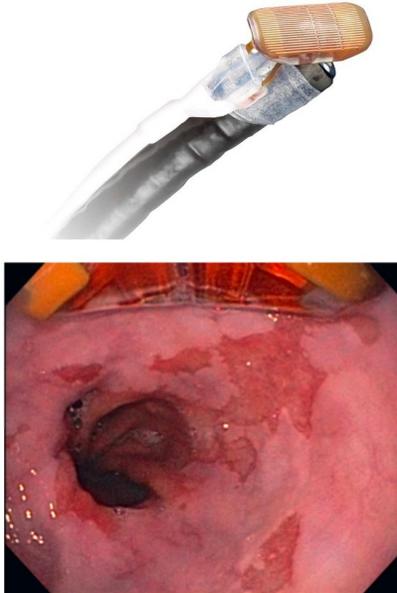
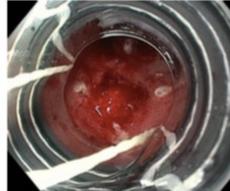
Diagnostic

- Dépistage
- Diagnostic histologique : échoendoscopie
- Localisation tumorale / Staging
- Evaluation de la réponse

Thérapeutique

- Anti-tumoral
 - Résection endoscopique tumeur superficielles
 - Destruction tumorale : radiofréquence
- Palliatif
 - Drainage biliaire : plus performant
 - Stenting digestif : Nouvelles possibilités?
- Douleur

Résection cancer superficiel : adénocarcinome sur EBO, Colorectal TNE digestive,...



Biopsie sous échographie

Original Article

171

Fine-Needle Aspiration Cytology Guided by Endoscopic Ultrasonography: Results in 141 Patients

M. Giovannini, J.-F. Seitz, G. Monges, H. Perrier, I. Rabbia

Departments of Gastroenterology and Gastrointestinal Oncology, Institut Paoli-Calmettes, Marseilles, France



Figure 4: Second type of needle: 25 gauges/50 mm.

Table 3: Results of EUS-guided fine-needle aspiration according to the characteristic lesion.

Type of lesion	Patients (n)	Sensitivity (%)	Specificity (%)	Accuracy (%)
Mediastinal masses	18	88.8	100	88.8
Mediastinal lymph nodes	24	81.4	100	83.3
Celiac lymph nodes	26	80.0	–	80.7
Pancreatic tumors	43	75.0	100	79.1
Large gastric folds	13	53.8	–	53.8
Submucosal tumors	7	60.0	100	71.5
Other lesions	10	80.0	–	80.0
All lesions	141	77.3	100	78.7

RESEARCH ARTICLE

Open Access



Endoscopic ultrasonography with fine-needle aspiration for histological diagnosis of solid pancreatic masses: a meta-analysis of diagnostic accuracy studies

Omar Banafea¹, Fabian Pius Mghanga², Jinfang Zhao¹, Ruifeng Zhao¹ and Liangru Zhu^{1*}



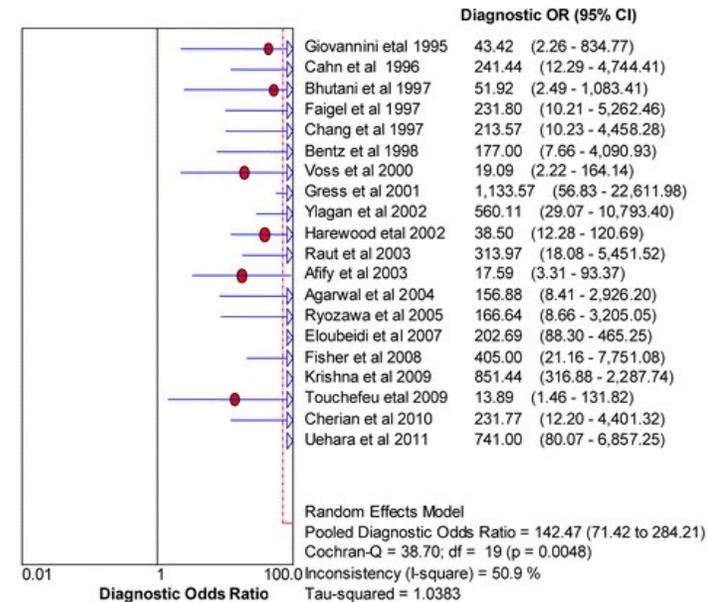
Meta-analyse : Eus-FNA

2,761 patients

Sens 90.8 % (89.4 – 92 %)

Spe 96.5 % (94.8 – 97.7 %)

Acc 91.0 %



RESEARCH ARTICLE

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Endoscopic ultrasonography with fine-needle aspiration for histological diagnosis of solid pancreatic masses: a meta-analysis of diagnostic accuracy studies

Omar Banafea¹, Fabian Pius Mghanga², Jinfang Zhao¹, Ruifeng Zhao¹ and Liangru Zhu^{1*}

Comprehensive search of major references databases

20 studies – 2761 patients

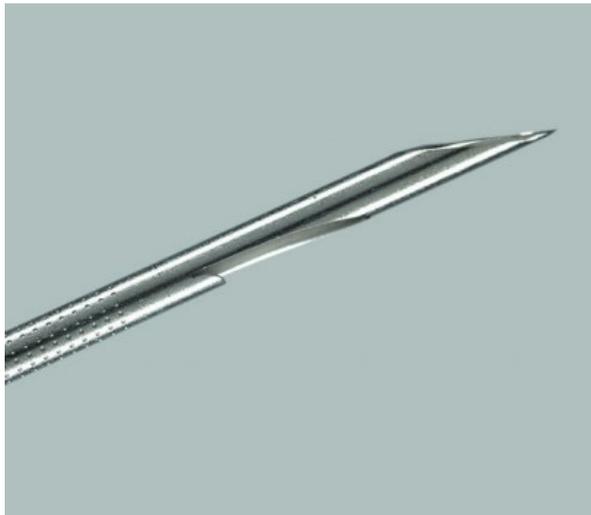
- 13 prospectives – 7 retrospectives

Outcome mesure	Pooled rate% (95% CI)
Sensitivity	90.8 % (89.4–92 %)
Specificity	96.5 % (94.8–97.7 %),
Positive likelihood ratios	14.8 (8.0–27.3%)
Negative likelihood ratios	0.12 (0.09–0.16)
Overall diagnostic accuracy	91.0 %

EUS FNA : Low morbidity rate

First author, year	Patients, n	Follow-up, days	Lost to follow-up, %	Morbidity, %	Complications after EUS-FNA of:		Procedure-related mortality, %
					Fluid collections	Solid masses	
Al-Haddad, 2008 [114]	483	30	14	1.4	3/83 ¹	4/400	0
Bournet, 2006 [115]	213 ²	1	0	2.2	1/74 ¹	4/139	0
Eloubeidi, 2006 [117]	355	3	1	2.5	0/0	9/355	0
Mortensen, 2005 [113]	567 ²	No data	No data	0.4	0/33 ¹	2/534	0.2
Williams, 1999 [57]	333	No data	No data	0.3	1/20 ¹	0/313	0
Bentz, 1998 [116]	60	No data	No data	0	No data	No data	0
Wiersema, 1997 [59]	457	30	0	1.1	3/22	2/435	0

**EUS guided Tissue acquisition
Gold standard for pancreatic mass**



Aiguilles « histologiques »



EUS-FNB : Conflicting results (for pancreas)

RCT 22G vs Procore 22g

Table 2. Technical characteristics and outcomes of EUS-FNA/FNB.

	Procedure		P value
	FNA (n=190)	FNB (n=187)	
Access route, no. (%)			0.8240
Transesophageal	23 (12.11)	23 (12.30)	
Transgastric	87 (45.79)	91 (48.66)	
Transduodenal	80 (42.11)	73 (39.04)	
Failure to achieve diagnosis, no. (%)			
Technical failure	0	0	1.0000
Diagnostic failure	38 (20.11)	22 (11.83)	0.0288
Pancreatic	19 (15.08)	13 (10.57)	0.2877
Non-pancreatic	19 (30.16)	9 (14.29)	0.0321
Histological diagnostic yield, no. (%)	152 (80.00)	171 (91.44)	0.0015
Pancreatic	103 (81.75)	114 (92.68)	0.0099
Non-pancreatic	49 (76.56)	57 (89.06)	0.0609
Cytological diagnostic yield, no. (%)	150 (78.95)	160 (85.56)	0.0930
Pancreatic	100 (79.37)	109 (88.62)	0.0468
Non-pancreatic	50 (78.13)	51 (79.69)	0.8285
Complications, no. (%)	3 (1.58)	1 (0.53)	0.6230

Cheng, Clin Gastroenterol Hepatol 2018

Systematic review 22G vs Procore 22

Diagnostic Acc

85.8 % vs. 86.2 %, OR 0.88, P = 0.53

Histological core specimen

77.7 % vs. 76.5 %, OR 0.94, P = 0.85

Bang, Endoscopy 2016



Qu'apporte l'étude histopathologique des prélèvements effectués avec des aiguilles coupantes par rapport à la cytologie ?

Jérôme Cros
Dpt de Pathologie – INSERM U1149
Hôpital Beaujon, Paris, France



Conclusion

En théorie... on peut presque tout faire avec une cytologie...

En pratique... tout est un peu plus compliqué en cytologie

- Expertise très spécifique
- Techniques dédiées
- Pas/peu d'analyse de l'architecture, du stroma
- Analyses multiples limitées
- Conservation (études cliniques rétrospectives)

FNB : Improve agreement on tissu specimens Between Academic and non academic centers

Table 3 Diagnostic agreement of FNA and FNB per target lesion

Scored variables	Agreement κ (95% CI)	FNB (n = 74)	FNA (n = 51)	P-value
Bethesda classification				
Pancreas		0.54 (0.51–0.58)	0.47 (0.43–0.52)	<0.001
Lymph node		0.64 (0.61–0.67)	0.43 (0.39–0.47)	<0.001
Presence of malignancy				
Pancreas		0.64 (0.59–0.69)	0.60 (0.54–0.66)	0.114
Lymph node		0.84 (0.79–0.89)	0.58 (0.52–0.63)	<0.001

Table 4 Diagnostic agreement on cytological and histological specimens per needle type

Agreement κ (95% CI)	Cytology	Histology	P-value
Bethesda classification			
All samples (n = 121)	0.51 (0.49–0.52)	0.60 (0.59–0.61)	<0.001
FNA (n = 47)	0.49 (0.46–0.50)	0.52 (0.49–0.55)	0.432
FNB (n = 74)	0.52 (0.49–0.54)	0.62 (0.61–0.63)	<0.001
Presence of malignancy			
All samples (n = 121)	0.76 (0.74–0.78)	0.97 (0.95–0.99)	<0.001
FNA (n = 47)	0.73 (0.71–0.76)	0.89 (0.86–0.92)	0.002
FNB (n = 74)	0.78 (0.75–0.81)	0.99 (0.79–1.00)	<0.001

Van Riet GIE 2019

PDAC : Need for research / Personalized medicine

Successful creation of pancreatic cancer organoids by means of EUS-guided fine-needle biopsy sampling for personalized cancer treatment

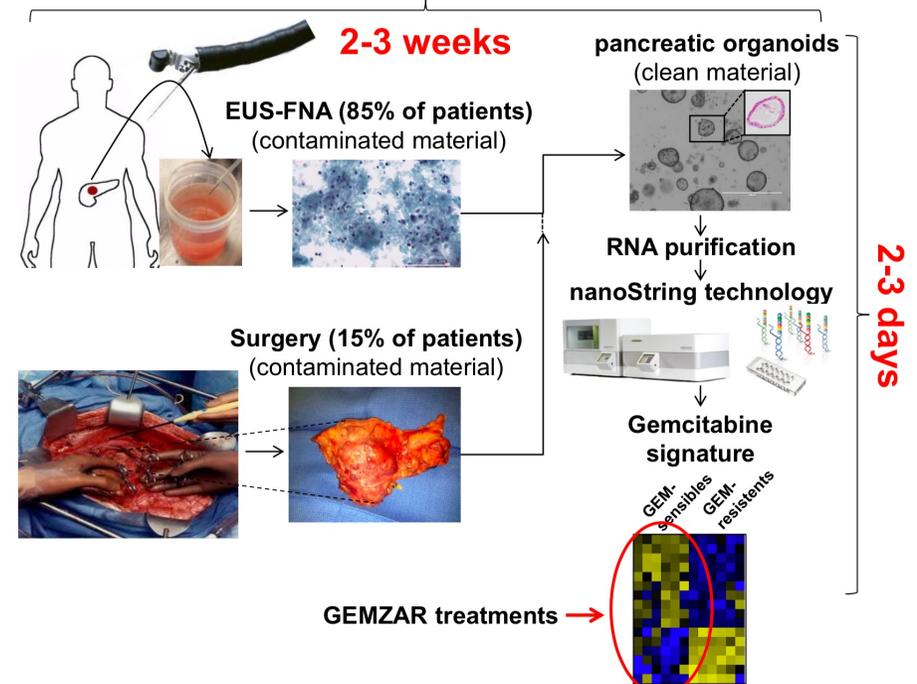
Herve Tiriac, PhD,¹ Juan Carlos Bucobo, MD,² Demetrios Tzimas, MD,² Suman Grewel, PhD,² Joseph F. Lacombe, BS,² Leahana M. Rowehl, MS,² Satish Nagula, MD,² Maoxin Wu, MD, PhD,³ Joseph Kim, MD,⁴ Aaron Sasson, MD,⁴ Shivakumar Vignesh, MD,⁵ Laura Martello, PhD,⁵ Maria Munoz-Sagastibelza, MS,⁵ Jonathan Somma, MD,⁶ David A. Tuveson, MD, PhD,¹ Ellen Li, MD, PhD,² Jonathan M. Buscaglia, MD²

Cold Spring Harbor, Stony Brook, Brooklyn, New York, USA

US-FNA : 12% of material for the theranostic studies
Navina, arch pathol 2014

FNB : Organoids formations successful in 85%
Buscaglia, GIE 2017

Platform of PDAC Prediction



Courtesy of Iovanna J

Echoendoscopie Thérapeutique

Techniques « d'injections »

Injection intra-tumorale

alcool, chimiothérapie

Traitement endovasculaires : colle, coils

Thermoablation

Repérages tumoraux (radiothérapie)

Neurolyse coeliaque



Injection de Cytotoxiques : Tumeurs Solides

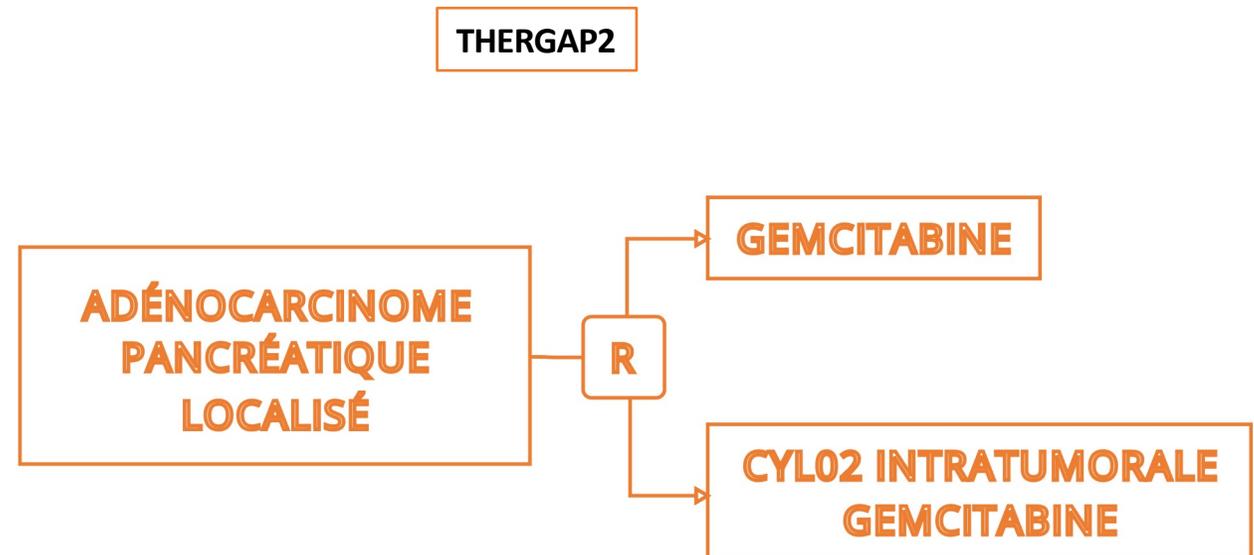
Thérapie génique

Adénocarcinome pancréatique

Phase I/II : cytoimplant, cellules dendritiques,
ONYX

TNFERADE : phase III négative

Herman J Clin Oncol 2013



Injection de Cytotoxiques

Alcoolisation

14 pTNE : réponse complète 61%

**Insulinome : contrôle hypoglycémies
(100%)**

**Métastases hépatiques colorectales (lobe
gauche)**

Levy GIE 2012 ; Park clin endosc 2015; Barclay GIE 2002

Alcool / Paclitaxel / Gemcitabine / sérum salé

Morbidité : Pancréatite aigüe

Réponse « complète » : 35 – 75%

Évaluation de la réponse : disparition de la lésion
Diminution du taux d'ACE

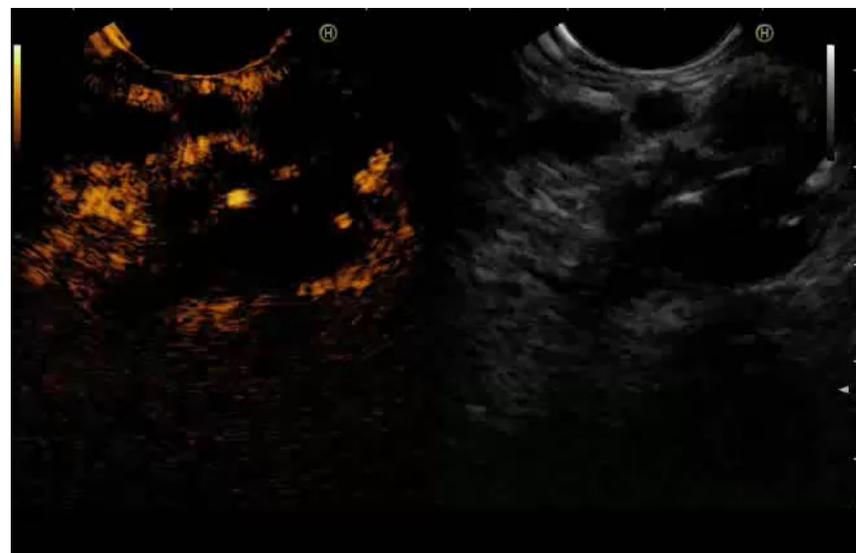
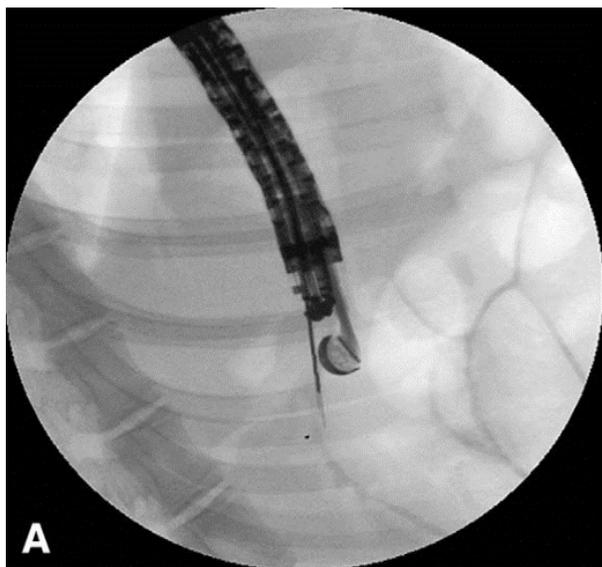
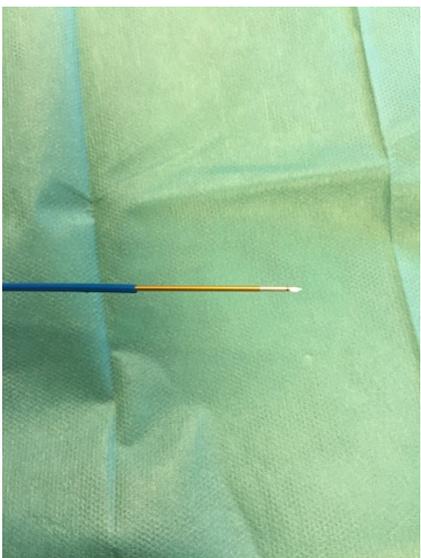
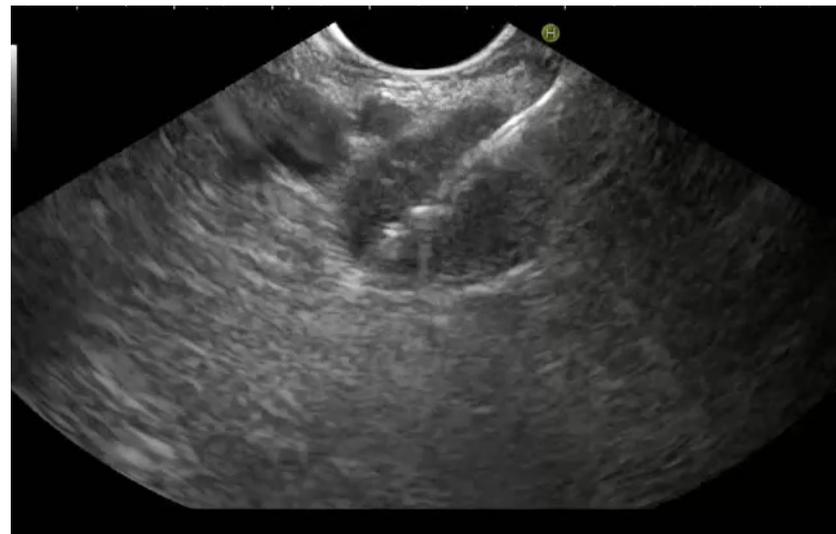
Pièces opératoires : Tissu néoplasique
persistant

**Prévention du risque de
dégénérescence ?**

Suivi insuffisant , histoire naturelle longue

*Moyer Mathew EIO 2016 ; Dewitt Endoscopy 2014 ; Oh
gastroenterol 2011 ; Park et al. Pancreas 2016*

Radiofréquence guidée par échoendoscopie



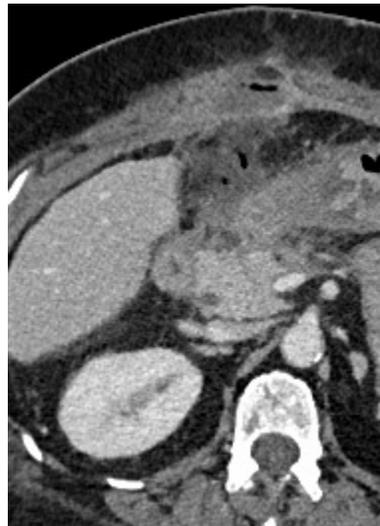
Thermoablation : Faisabilité Études > 1 patients

	système	N	design	indication	Succès technique	morbidité	suivi
Arcidiacono GIE 2012	Hybridtherm	22	Prospectif	Adenoca pancréas LA	72.8%	Douleurs 1 hémorragie 1 pseudoky 1 sténose Duodénale	12 m
Pai WJG 2015	HABIB	8	Prospectif	TNE=2, TK =6	100%	Douleurs	3-6 m
Song GIE 2016	Starmed	6	Prospectif	ADK pancreas LA/M+	100%	douleurs	3-6 m
Lakhtakia 2015	Starmed	3	rétrospectif	Insulinome	100%	Non précisé	12 m
Barthet JFHOD 2018	Starmed	30	prospectif	Tk=17 (16tipmp) TNE=12	100%	10%	12 m

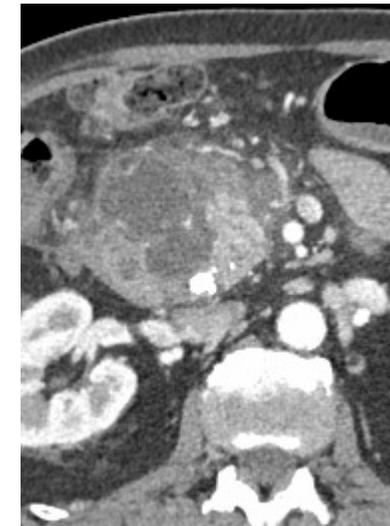
Complications

- 1 perforation digestive (lésion kystique extra-pancréatique)
- 2 fistules pancréatiques (Anti-angiogénique, PCC « drainée »)
- 1 abcès hépatique (Prothèse biliaire)

Métastase Rein



TNE



TNE : Radiofréquence

Auteur année	Patients (Tumeurs)	RFA session N°	NETs Non F/F	Taille extremes' (mm)	Complications	Suivi (mois)	Disparition T/ sd sécrétoire
Choi 2018	10 (10)	16	9/1	8-28	1 AP	13 (8-30)	70%/ 100%
Oleinikov 2019	18 (27)		20/7	5-30	-	9 (2-21)	96%/ 100%
Barthet 2019	12 (14)	14	14/0	10-20	1 AP, 1 sténose W	> 24	93%
Total	40 (51)		43/8	8-30	2 AP (4%) 1 sténose W		70-93%/ 100%

Choi Endoscopy 2018, Oleinikov J Clin Endocrinol Metab 2019, Barthet Endoscopy 2019

► **Table 2** NET follow-up

Inclusion	1-year follow-up	>3-year follow-up	Final results
14 NETS 12 patients	12 disappearance	11 successes 1 late recurrence	Success 85.7%
	2 failures	1 late success 1 metastatic evolution	Failure 14.3%

Barthet et coll EIO 2021

pNET : reste à définir les bonnes indications.
Quel devenir à très long terme ????

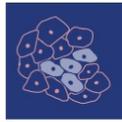


Annales d'Endocrinologie
Volume 81, Issue 6, December 2020, Pages 567-571



Original article

Endoscopic ultrasound-guided radiofrequency
ablation: An effective and safe alternative for the
treatment of benign insulinoma

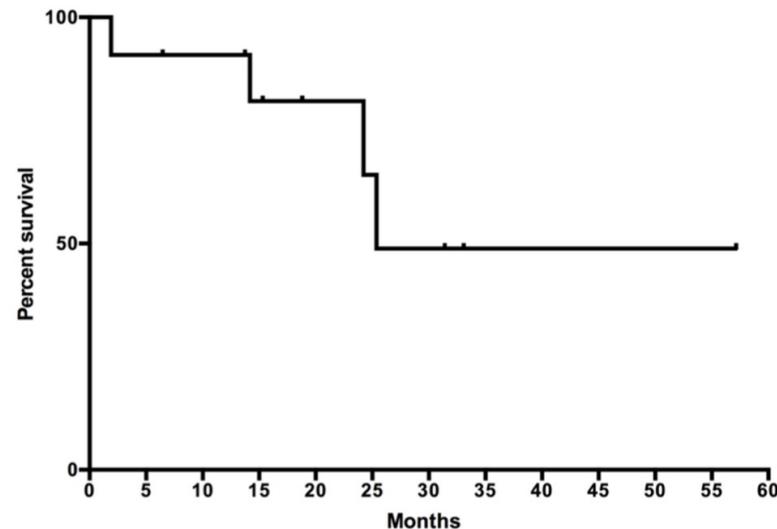


Article

Endoscopic Ultrasound-Guided Radiofrequency Ablation as an Future Alternative to Pancreatectomy for Pancreatic Metastases from Renal Cell Carcinoma: A Prospective Study

Time Point (Evaluable Lesion)	CR (%)	PR (%)	SD (%)	PD (%)	Focal Control Rate (%)	N/E
2-months (<i>n</i> = 21)	33.3	14.3	42.9	9.5	90.5	0
6-months (<i>n</i> = 19)	26.3	31.6	26.3	15.8	84.2	9.5
12-months (<i>n</i> = 15)	40	33.3	0	26.7	73.3	28.6

PM: pancreatic metastasis CR: complete response, PR: partial response, SD: stable disease PD: progression disease; N/E Not evaluable lesion (that have progressed or follow up is < to the evaluation time point); Focal Control Rate = CR + PR + SD.



Chanez et coll. Cancers 2021

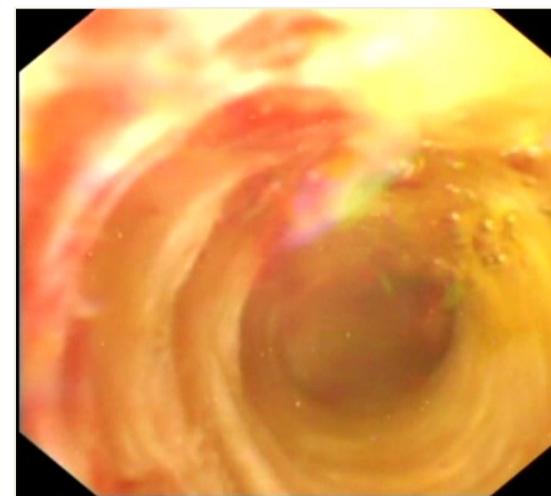
Radiofréquence endobiliaire

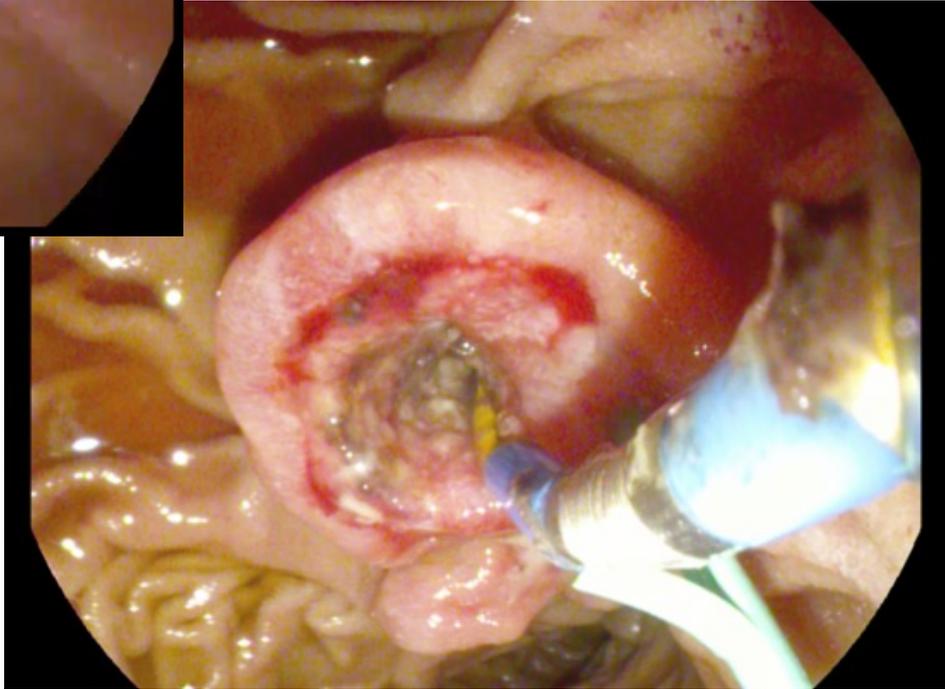
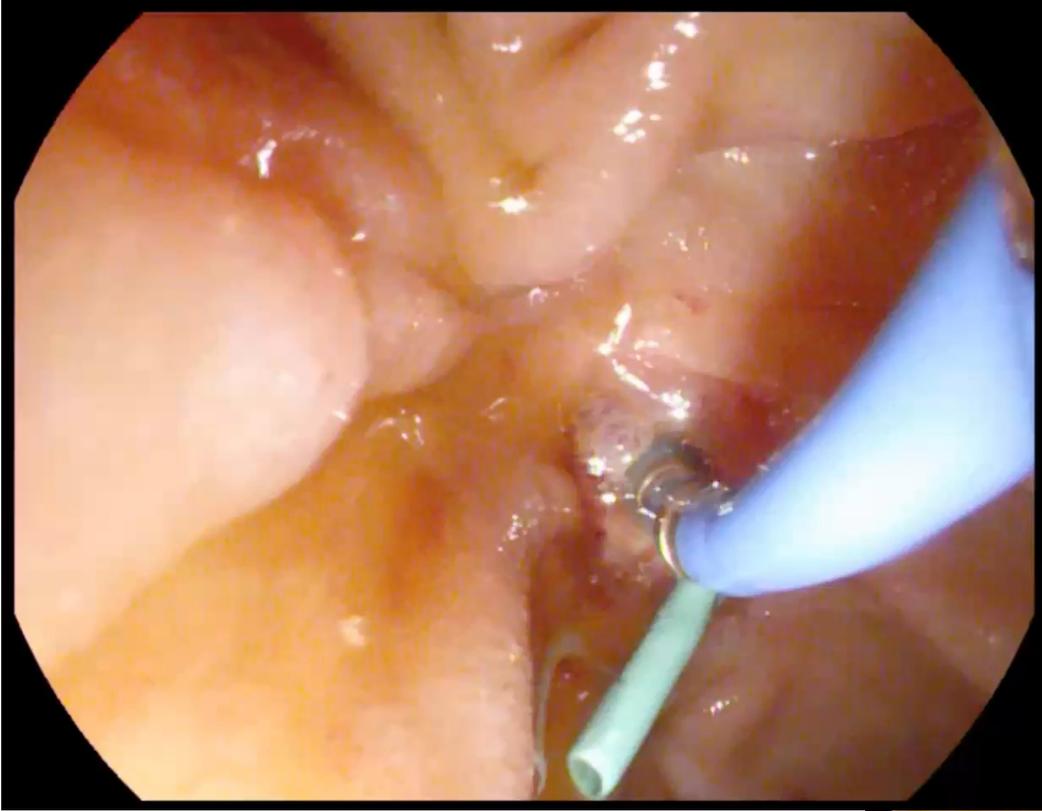


Pre RFA



Post RFA





Kallis et al: Analysis of endoscopic RF ablation of biliary malignant strictures suggests potential survival benefit. Dig Dis Sci,2015,60(11),3449-55

Etude cas-témoin

	NB Patients	Median Survival	Stent Patency	Cholangitis
SEMS ALONE	46	123.5 days	124 days	1/46
SEMS + RF	23	226 days * S	172 days *NS	1/23

Radiofrequency ablation combined with biliary stent placement versus stent placement alone for malignant biliary strictures: a systematic review and meta-analysis

Aijaz Ahmed Sofi, MD,¹ Muhammad Ali Khan, MD,² Ananya Das, MD,¹ Mankanwal Sachdev, MD,¹ Sadik Khuder, PhD,³ Ali Nawras, MD, FACC,³ Wade Lee, MLS, BS³

Gilbert, Arizona; Memphis, Tennessee; Toledo, Ohio, USA

References	Country	Design	No. of patients	Mean age (y)		Male (%)	
				RFA	Stent	RFA	Stent
Li et al, ¹¹ 2015	China	OS	26	53	60	58	57
Kallis et al, ⁹ 2015	UK	OS	69	68	69	52	52
Liang et al, ¹⁴ 2015	China	OS	76	67	63	64	62
Wang et al, ⁹ 2016	China	OS	36	56	58	78	67
Wu et al, ¹⁰ 2017	China	OS	71	58	57	74	70
Kadayifci et al, ¹⁵ 2016	USA	OS	50	25	25	32	56
Hu et al, ⁸ 2016	China	RCT	63	72	71	47	52
Sampath et al, ¹² 2016	USA	OS	25	73	67	60	60
Cui et al, ¹³ 2017	China	OS	89	50	39	72	56

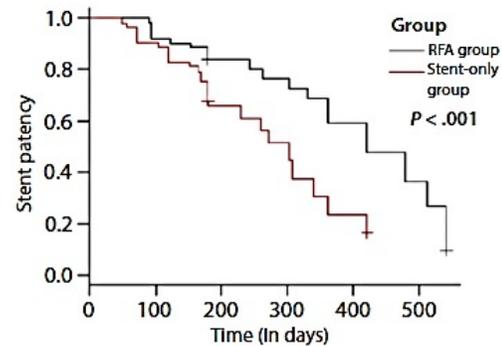


Figure 3. Pooled Kaplan-Meier analysis of stent patency in radiofrequency ablation (RFA) treatment and control groups.

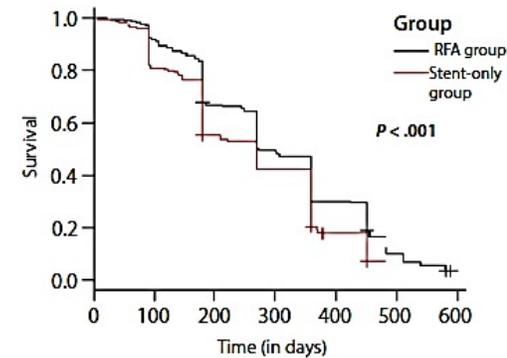
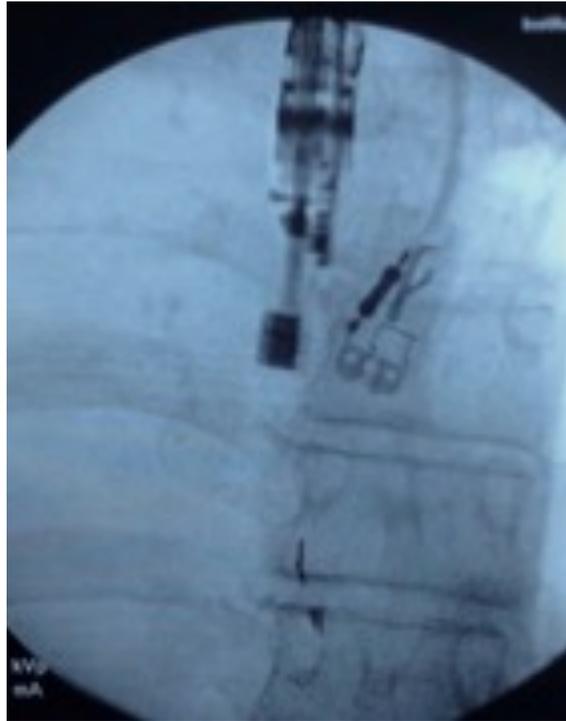
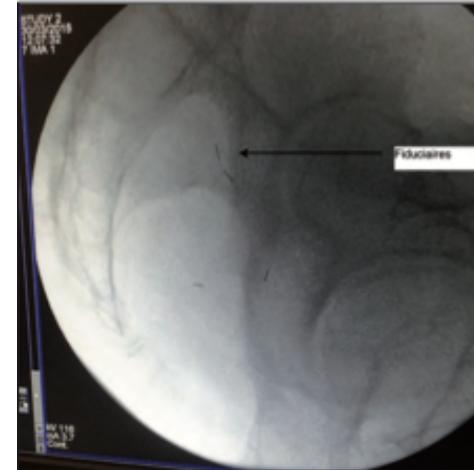


Figure 2. Pooled Kaplan-Meier survival analysis of radiofrequency ablation (RFA) treatment and control groups.

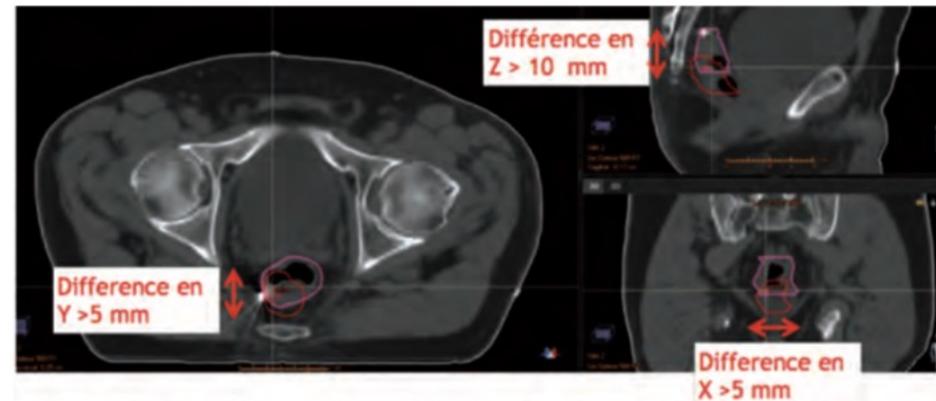
Insertion de fiduciaire



Moureau, Caillol JFHOD 2018



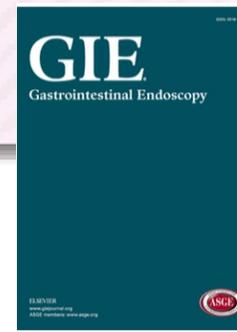
Avant et après fiduciaires.



Ou encore : Différence de volume de 20% du GTV Global?
Ou encore : Décalage de l'isocentre > 1 cm

EUS-guided fiducial placement for GI malignancies: a systematic review and meta-analysis

Emmanuel Coronel, MD, Irina Mihaela Cazacu, MD, Atsushi Sakuraba, MD, PhD, Adriana Alexandra Luzuriaga Chavez, MD, Angad Uberoi, MD, Yimin Geng, MDLIS, MS, MD, Yutaka Tomizawa, MD, Adrian Saftoiu, MD, PhD, MSc FASGE, Eun Ji Shin, MD, Cullen M. Taniguchi, MD, PhD, Albert C. Koong, MD, PhD, Joseph M. Herman, MD, Manoop S. Bhutani, MD



**15 articles - 1155 patients, (49%
Dhadham et al)**

Succès technique = 98% (95%CI,96-99)

1 à 3 insérés

Morbidité = 4% (95% CI, 3-7)

Migration = 3 % (95% CI, 1.0-8.0)

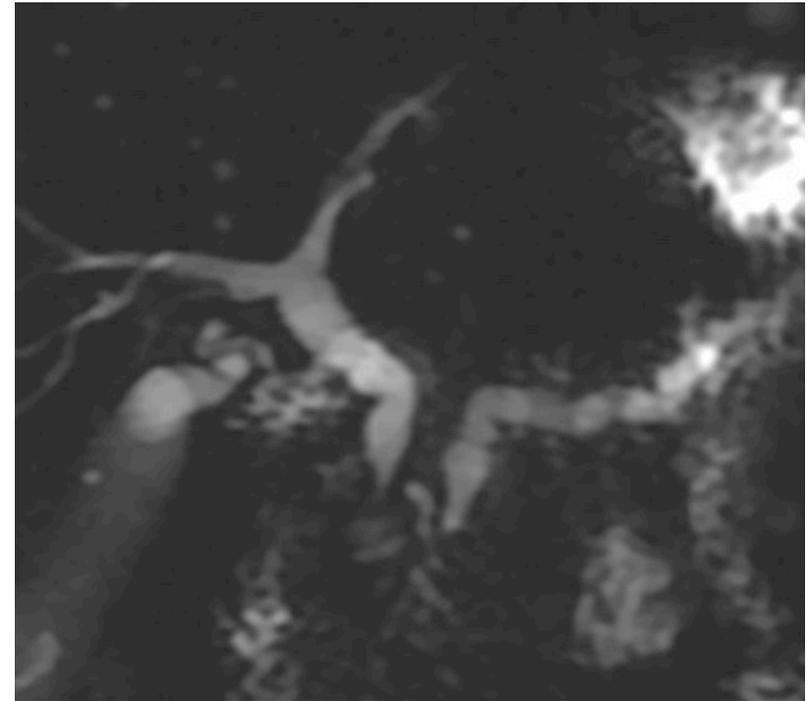
Author, year, reference no.	Study design	Country	NOS	Patients (n)	Type of gastrointestinal malignancy (number of patients)	Total fiducials placed (n)
Choi, 2014	Prospective	South Korea	5 (3,0,2)	32	Pancreatic (29), regional lymph nodes 3)	94
Dhadham ,2016	Retrospective	USA	6 (3,0,3)	514	Esophageal (240), pancreatic (188), rectal (54), other (32)*	1093
DiMaio, 2017	Retrospective	USA	5 (3,0,2)	30	Esophageal (18), pancreatic (9), other (3)*	69
Fernandez, 2013	Retrospective	USA	6 (3,0,3)	60	Esophageal (60)	105
Khashab, 2012	Retrospective	USA	6 (3,0,3)	39	Pancreatic (39)	103
Machiels, 2015	Prospective	Netherlands	6 (3,0,3)	30	Esophageal (30)	101
Majumder, 2013	Retrospective	USA	4 (2,0,2)	39	Pancreatic (39)	ND
Park, 2010	Prospective	USA	5 (3,0,2)	57	Pancreatic (57)	ND
Sanders, 2010	Prospective	USA	5 (3,0,2)	51	Pancreatic (51)	ND
Al-Haddad, 2014	Prospective	Netherlands, USA	4 (3,0,1)	44	Esophageal (4), pancreatic (23), rectal (17)	ND
Caillol, 2016	Prospective	France	3 (2,0,1)	29	Esophageal (12) , rectal (15)	ND
Gupta, 2009	Retrospective	USA	2 (1,0,1)	55	Pancreatic, esophageal, colon	314
Jennings, 2014	Retrospective	USA	2 (1,0,1)	93	Pancreatic (93)	90
Ryou, 2014	Retrospective	Netherlands, USA	4 (2,0,2)	40	Esophageal (27), pancreatic (4), rectal (8), liver (1)	ND
Song, 2013	Retrospective	South Korea	3 (2,0,1)	42	Pancreatic (42)	ND

Neurolyse coeliaque



Drainage biliaire : Indications

- 1. En situation Palliative**
- 2. Avant chimiothérapie néoadjuvante**
- 3. En pré-opératoire**



Drainage biliaire : Patient résécable

Qui faut-il drainer ?

Impact faible de l'hyperbilirubinémie en post-opératoire

- Risque majoré de transfusion perop $> 250\mu\text{mol/l}$ (OR=2.00))
- Clavien-dindo III-IV si bilirubine $> 300\mu\text{mol/l}$ (OR=1.61)

Comparaison patient stenté vs non stenté vs non ictérique

Bilirubine $> 128\mu\text{mol/L}$

- Complications postopératoires (OR 11.3)
- Reprises chirurgicales (17.6% vs. 8.7%, $p=0.004$)
- Risque hémorragique hémorragies (20.4% vs. 12.3%, $p=0.032$)

Drainage biliaire

Avant traitement d'induction

Prothèse métallique biliaire avant chimiothérapie (Folfirinox) ou RTCT

Bilirubine < 1.5N

Stenting : Traitement néoadjuvant possible 100% des cas

Taux d'obstruction :10% (70j), 12% (104j)

Aadam et coll GIE 2012 , Gardner et coll. GIE 2016

Characteristic	fcSEMS (n=16)	uSEMS (n=17)	Plastic (n=21)	P value
Age – yr.	67.2	64.8	65.9	0.27
Female Sex – no. (%)	7 (43)	6 (35)	10 (48)	0.34
Tumor Size – mm	30.1	37.0	34.2	0.27
Resectability Status – no. (%)				
Resectable	5 (31)	2 (12)	3 (14)	0.30
Borderline	6 (38)	4 (25)	4 (19)	0.43
Locally Advanced	5 (31)	11 (65)	14 (67)	0.07
Procedural adverse event requiring hospitalization – no. (%)	4 (25)	3 (18)	0 (0)	0.06
Monitored Anesthesia Care – no. (%)	9 (56)	14 (82)	14 (66)	0.27

Drainage biliaire : Techniques

Chirurgie ? Radiologique ? Endoscopique ?

Privilégier l'abord rétrograde par CPRE

- Efficacité équivalentes*
- Dérivation chirurgicale plus pérenne, plus morbide, durée d'hospitalisation plus longue
- Drainage radiologique :
 - Plus de complication** (Cancer pancréas : 2,9 vs 6,3%)
 - Plus de carcinose péritonéale***

**Glazer J et coll. Pain Symptom Manage 2014*

***Inamdar et coll. JAMA oncol 2016, ***uemura et coll. Ann surg Oncol 2015*

Drainage biliaire

Prothèse plastique ou métallique autoexpandible ?

MOOLE et coll. Medecine2017

Perméabilité : 167,7 jours (159.2–176.3) vs 73.3 j (69.8–76.9)

Moins de de réintervention 1.1 (0.9–1.3) vs 1.7 (1.5–1.9)

Taux global de complications, d'angiocholite et de migration

ALMADI et coll. Am J gastro 2017

Médiane : 4.45 mois (0.31, 8.59) en faveur des PM

Pas d'impact sur la survie globale ou la mortalité à 30 jours

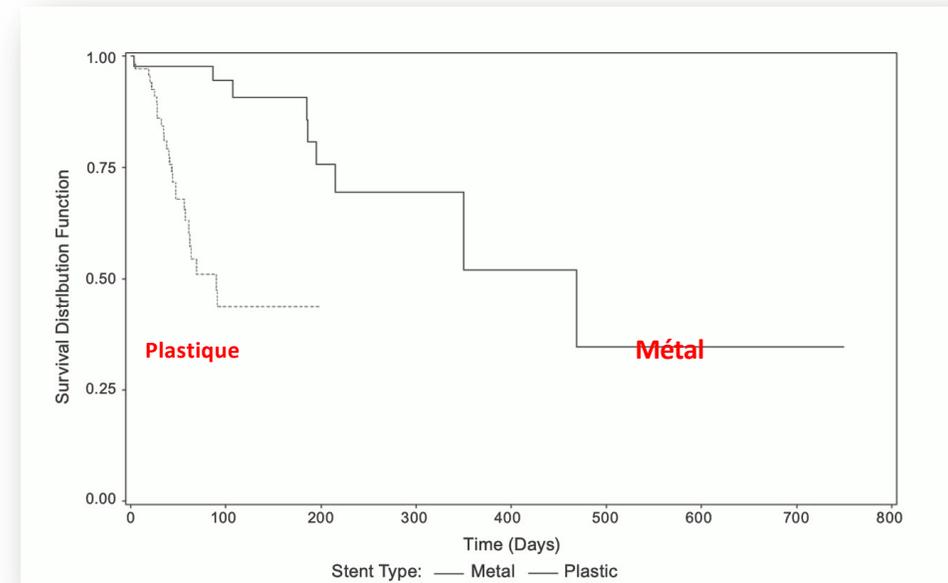
La survie sans symptômes à 6 mois (OR=5.96 (1.71, 20.81))

Cout efficace ?

Coût global (Procédures + hospitalisations) comparables

PM pc=4282\$ vs PM nc =5076\$ vs PP=4599\$; P= .44

Survie inférieure à 3 mois (6555\$ vs 5719\$; P= .4)



Adams et coll. J gastrointest 2012

Que faire en cas d'échec de CPRE ?

Drainage guidé par échocendoscopie ou percutané

EE : Succès technique élevé (>90%)

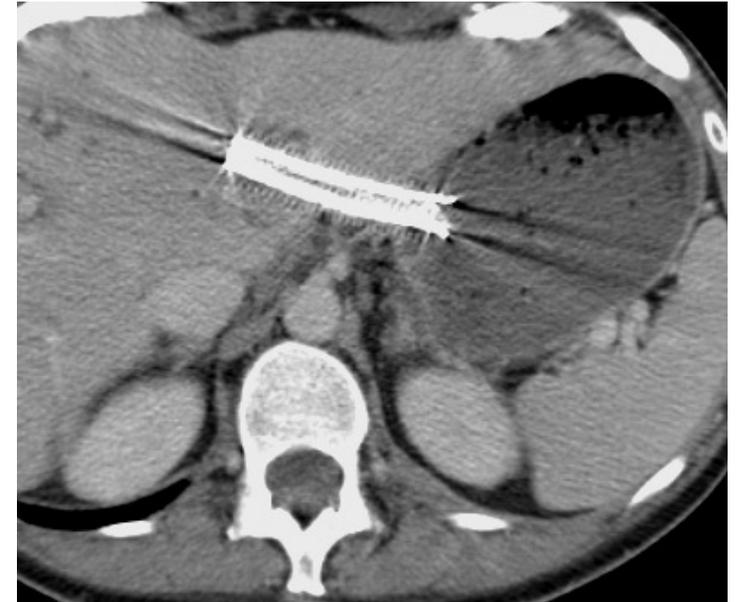
Moins de complication que drainage percutané (drain)

Technique de rendez-vous (IH, EH)

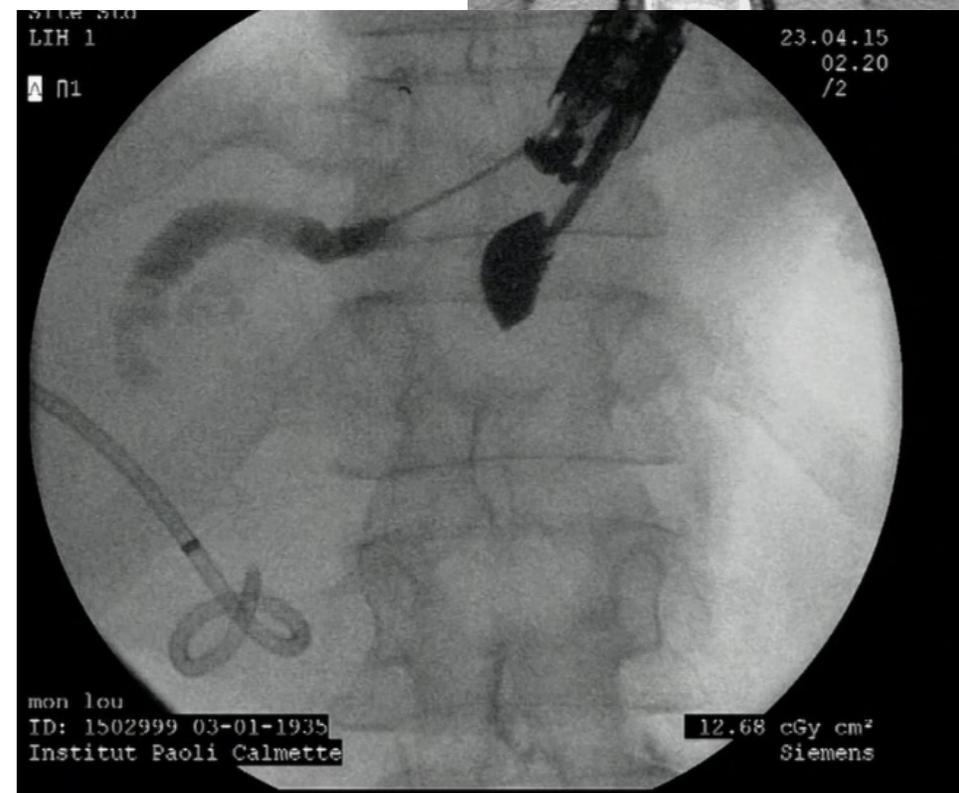
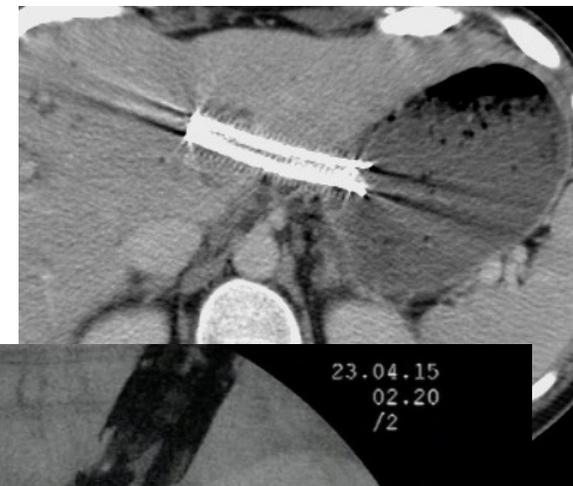
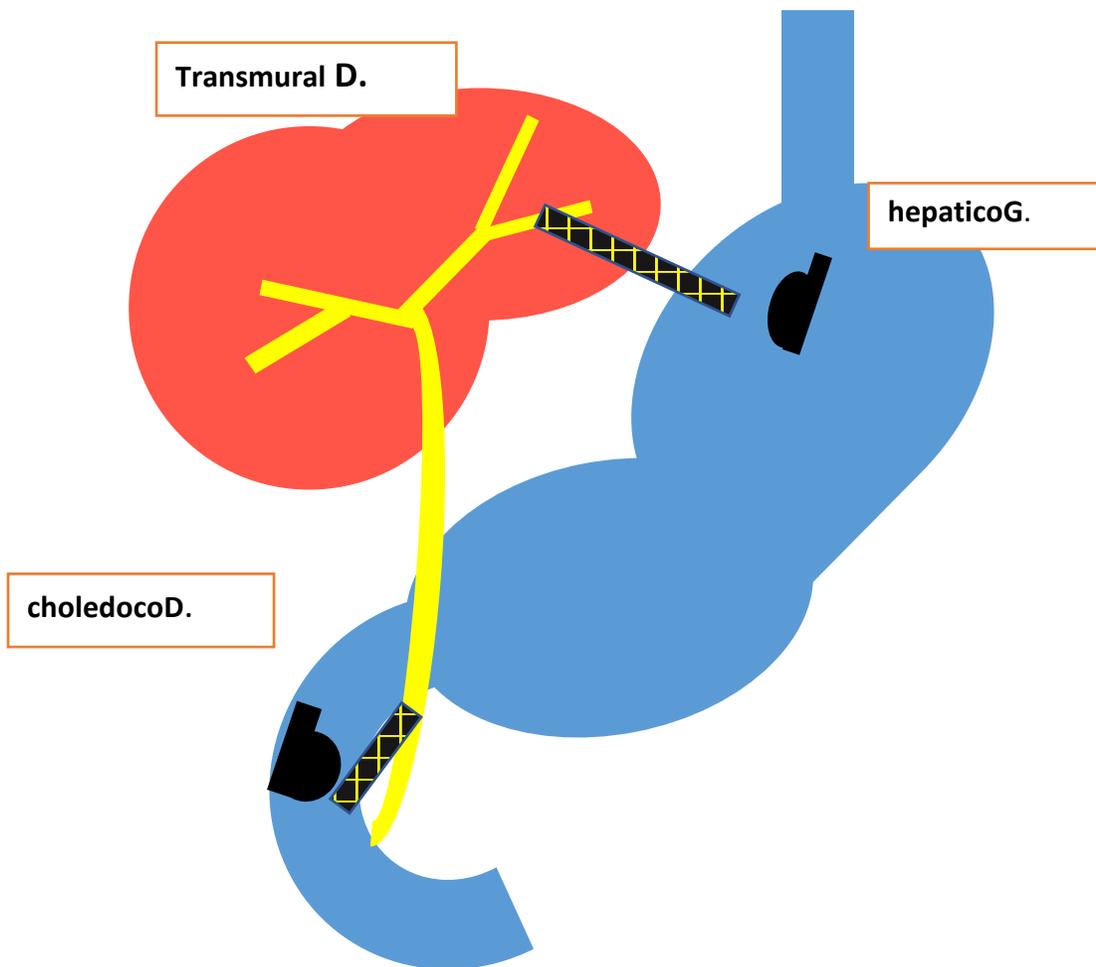
Placement de stent antérograde

Drainages extra-anatomiques

Hepatico-G, Cholédoco-E



Drainages biliaires guidés par échographie



Drainages biliaires guidés par échoendoscopie Quelles indications ?

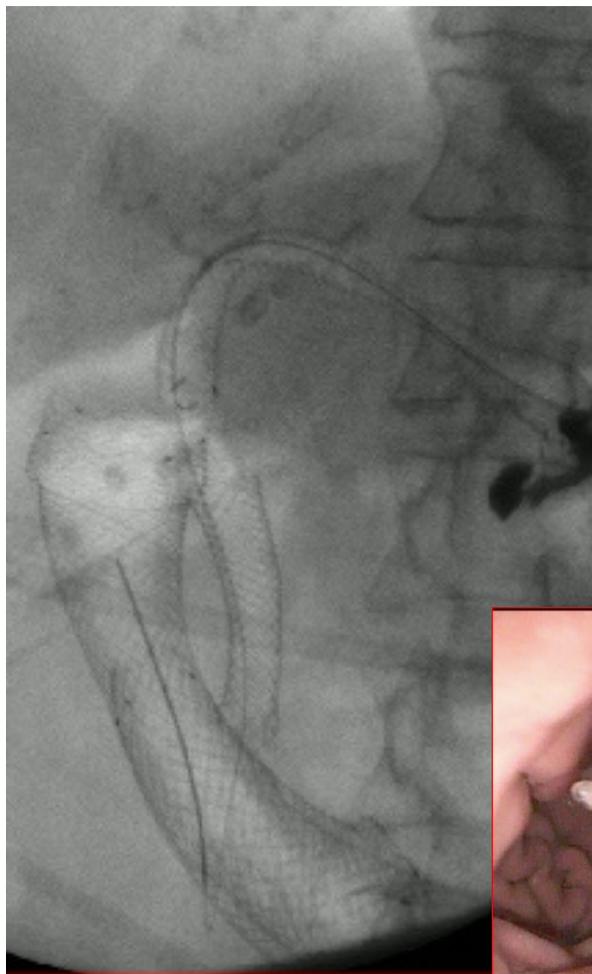
Echec / impossibilité de CPRE

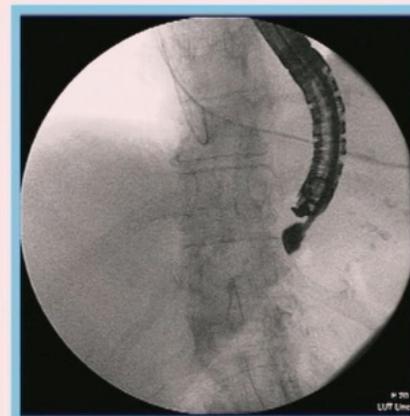
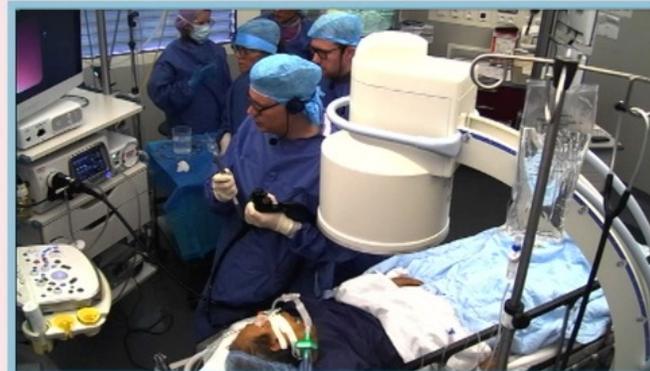
Envahissement duodénal

Montage chirurgical

Drainage sélectif du lobe gauche







Drainages biliaires guidés par échocendoscopie

Résultats

2 Meta-analyses

Wang GIE 2016 - Khan dig dis sci 2016

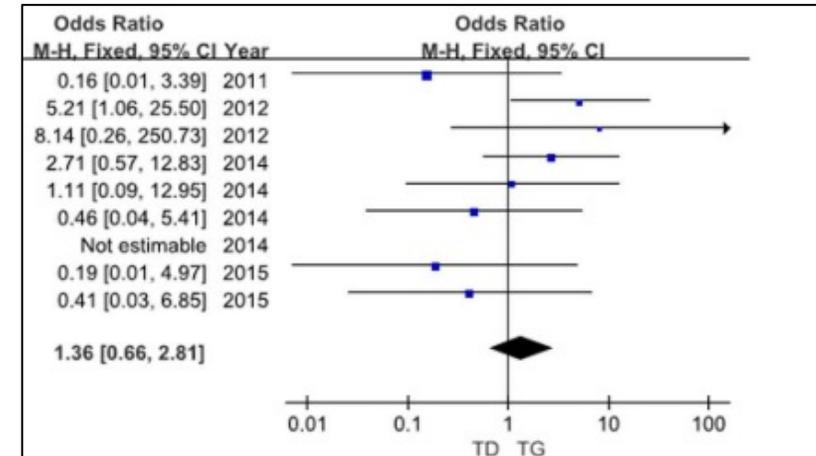
1200 patients - 14 prospectives

Taux de succès technique 94%

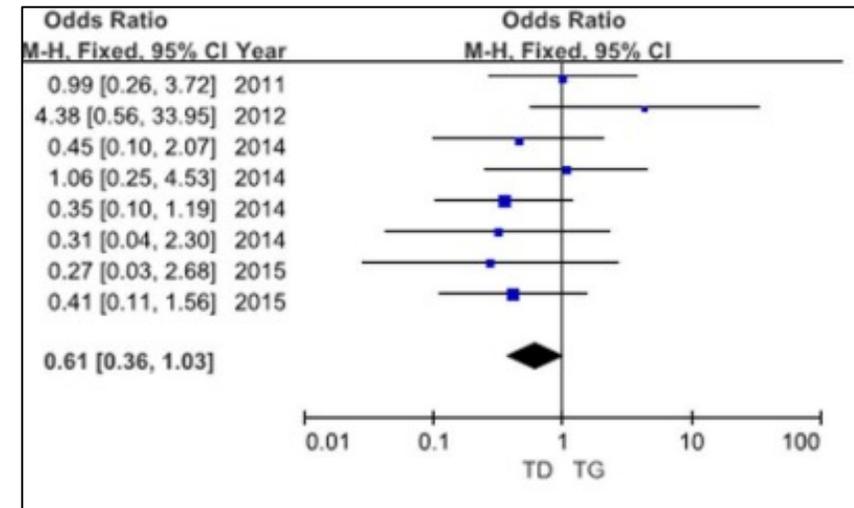
Morbidité 16-23%

Abord intra- ou extra- hépatique

Pas de différence



Succès
technique



Morbidité

Drainages biliaires guidés par échoendoscopie à la place de la technique rétrograde de référence ????

3 études randomisées

Paik et al. Am J Gastroenterol 2018

n= 125 ; Succès = 93 vs 90 (s); Morbidité / RI = 6% vs 19% (s)

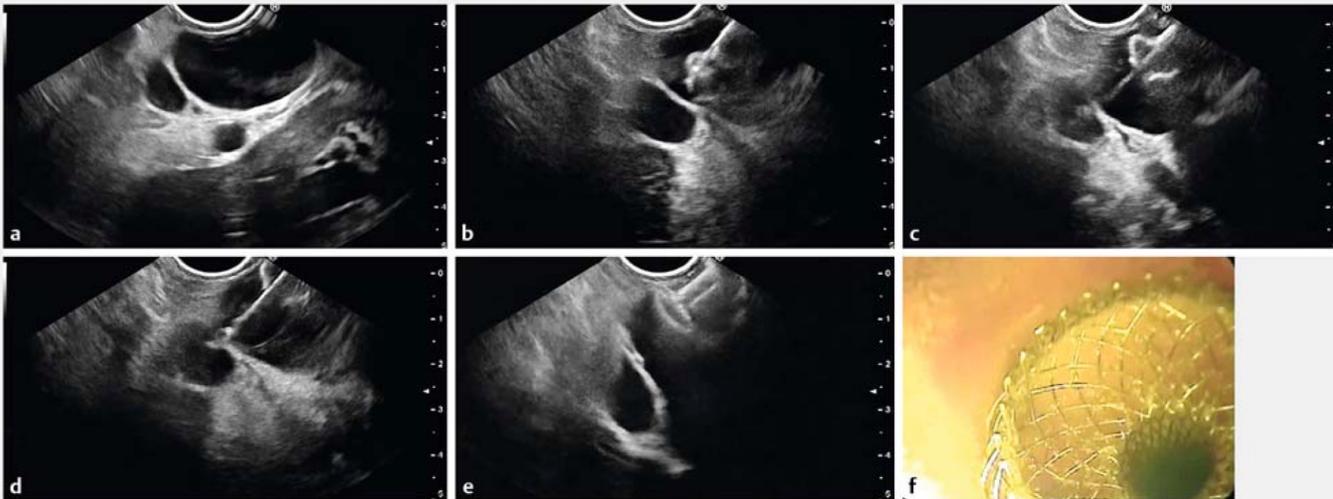
Park et al. GIE 2018

n= 30 ; Succès = 93 vs 100% ; complications procédurales = 0

Bang et al. GIE 2018

n= 67; Succès =91% vs 94%; Morbidité = 21% vs 14% (ns)

Temps de procédure : 10min



Stenting Digestif

Œsophage, pyloro-duodéal, colon

Uniquement en palliatif

~~Préopératoire, « bridge to surgery »~~

~~Avant Radiothérapie~~

Taux d'obstruction

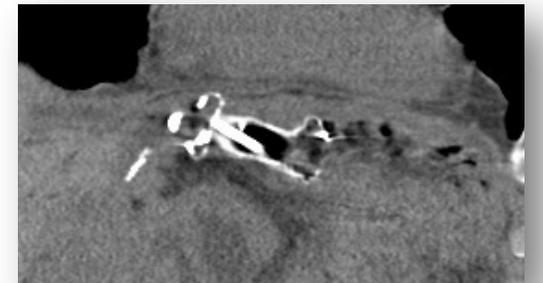
Anastomoses digestives guidées par échoendoscopies

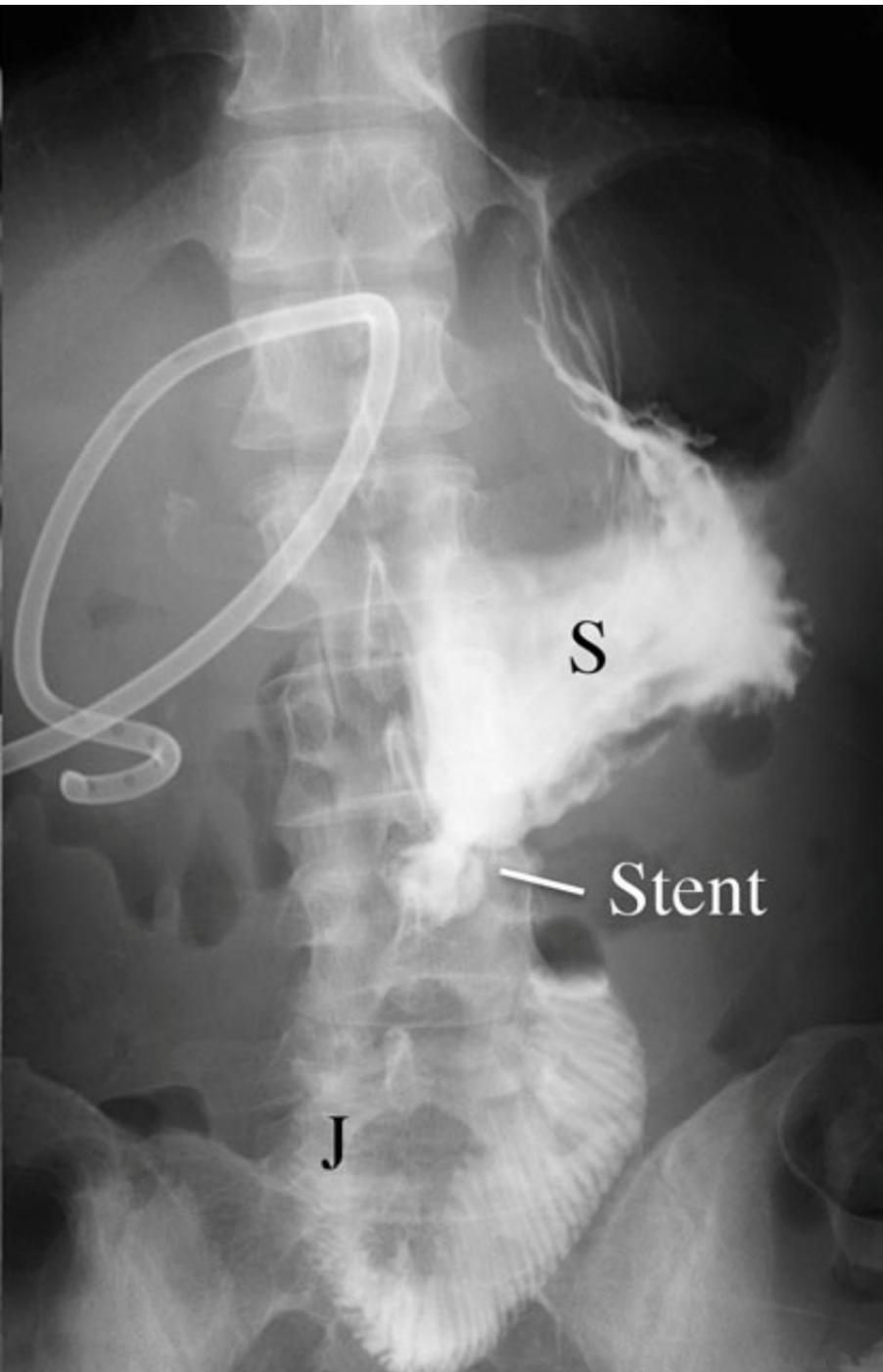
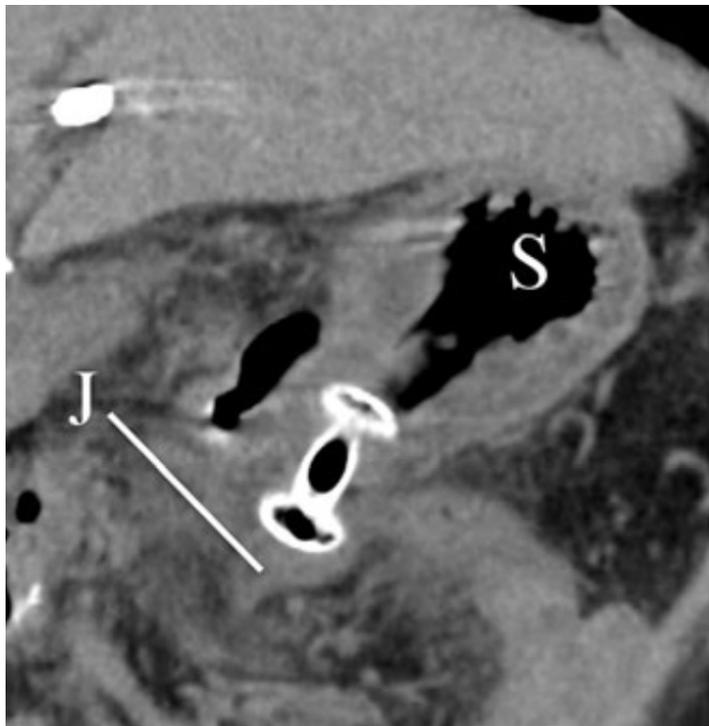
Gastroentéroanastomoses

Syndrome de l'anse afférente

CPRE assistée – Bypass gastrique

Anastomose temporaire





Gastroentéro-anastomoses

Etudes Prospectives

Succès Technique > 90%

Succès Clinique > 90%

Complication grave = 0 - 11.5%

Perforation, Péritonite, Hémorragie

Migration stent

Vs Chirurgie

EE-GJ (25) vs GJ-Laparoscopie (29)

Succès technique 100% vs 88% ; p=0.11

Morbidité :EUS-GE 12% vs Lap 41%;
p=0.0386

EE-GJ (30) vs GJ-Laparotomie (63)

Succès technique 87% vs 100% p=0.009

Succès Clinique 90 % vs. 87 %; p=0.18

Que restera t'il demain ?

Diagnostic

- Dépistage/prevention
- Diagnostic histologique : échoendoscopie
- ↔ ~~Localisation tumorale / Staging~~
- ↔ ~~Evaluation de la réponse~~

Thérapeutique

- Anti-tumoral
 - Résection endoscopique tumeur superficielles
 - Destruction tumorale : radiofréquence
- Palliatif
 - Drainage biliaire
 - Dérivation digestive ?
- ↔ ~~Douleur~~