

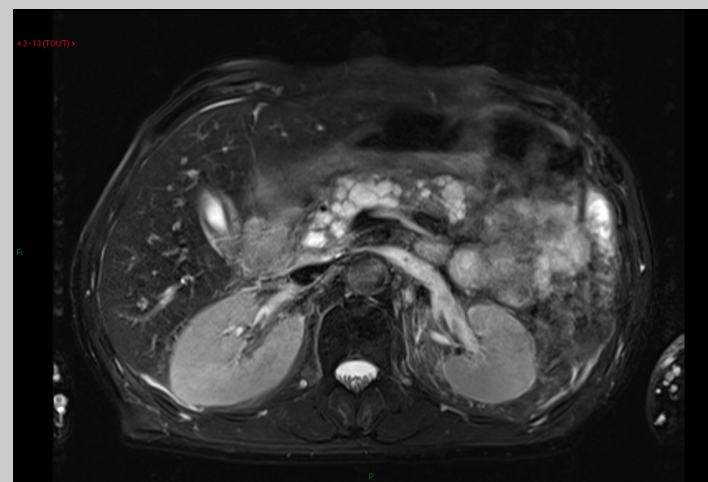
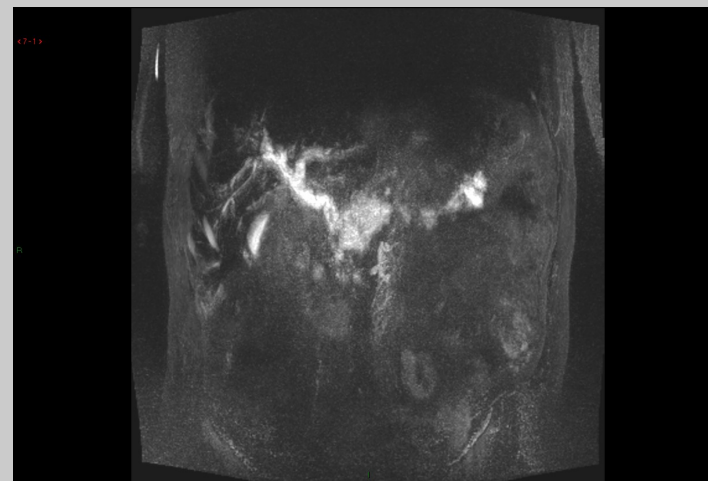
Quelles sont les arguments pour proposer malgré tout un drainage biliaire pré-opératoire?

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# Mr C., 68ans

- Depuis 2 mois: Ictère, ins.rénale, **dénutrition progressive.**
- Ampullome dégénéré (+ TIPMP)
- 22/12: **angiocholite**, biliT: 761 $\mu$ mol, poids 58kg
- 23/12: CPRE: prothèse plastique
- 24/12: HC + à Entérocoque  
**Déglobulisation à 6.5g/dl**  
**Ins. rénale aiguë** (créat 995 $\mu$ mol)
- Réa, dialyse initiale puis amélioration.
- 15/01: biliT 71, créat 200, poids 65kg
- 26/02: récurrence ictère: chgt prothèse
- 10/03: DPC: pT4N1, R0
- Pas de complic post-op



# 1. Angiocholite

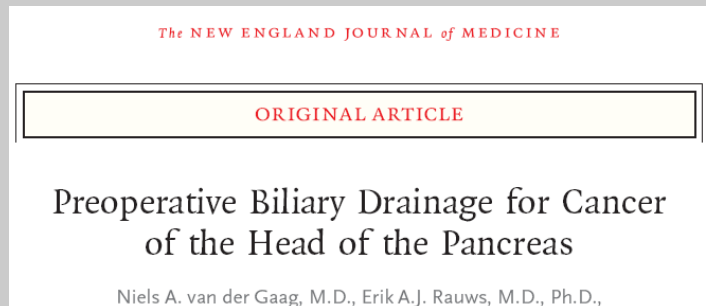
- Risque vital à court terme
- Contre-indication à une chirurgie majeure dans un contexte septique



Indication indiscutable drainage pré-op  
(exclue dans beaucoup d'études)

## 2. Ictère majeur (BiliT > 300µmol/L)

### Situation mal représentée dans les études:



**Table 1.** Demographic and Clinical Characteristics of the Patients at Baseline.\*

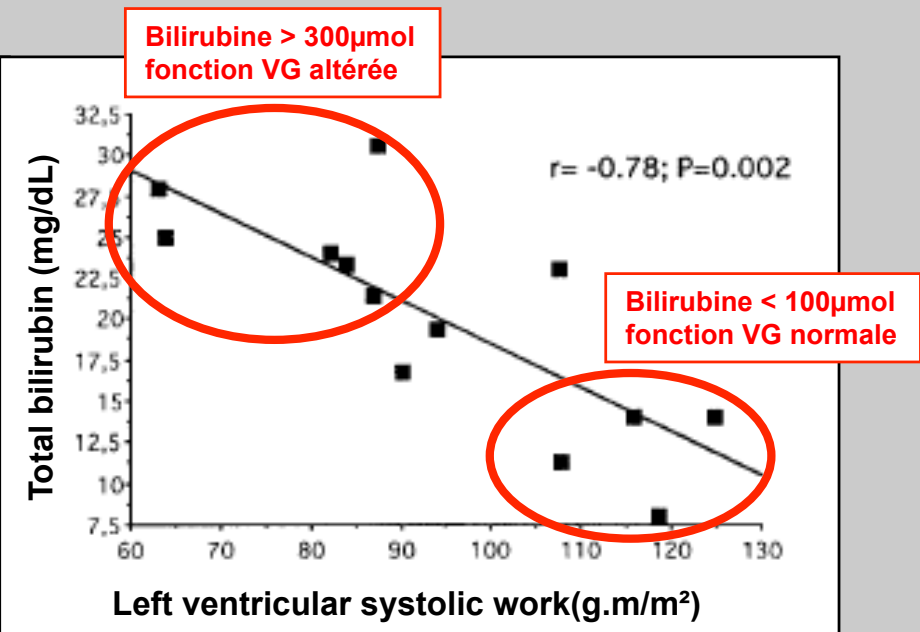
Characteristic	Early Surgery (N=94)	Preoperative Biliary Drainage (N=102)	P Value
Bilirubin level — µmol/liter			
Total	151±58.7	154±59.5	0.27
Direct	107±49.8	118±57.1	0.23

Bilirubine > 250µmol = critère d'exclusion

### Corrélation intensité ictère – défaillance d'organe:



**Improved Cardiac Function in Patients With Obstructive Jaundice After Internal Biliary Drainage**  
Hemodynamic and Hormonal Assessment  
Javier Padillo, MD,\* Jesús Puente, MD,† Manuel Gómez, MD,\* Francisco Díez, MD,† Antonio Naranjo, MD,† Juan A. Vallejo, MD,§ Gonzalo Miño, MD,† Carlos Pera, MD,\* and Antonio Sílges-Serra, MD, FRCSEd



- Variables prédictives d'une défaillance VG:
  - ⇒ BiliT, Durée ictère, BNP
- Drainage biliaire endoscopique:
  - ⇒ Amélioration fonction VG

## 2. Ictère majeur (BiliT > 300µmol/L)

J Gastrointestin Liver Dis  
June 2007 Vol.16 No 2, 177-186

REVIEW

### Haemostasis Impairment in Patients with Obstructive Jaundice

*Vassilios Papadopoulos<sup>1</sup>, Dimitrios Filippou<sup>2,3</sup>, Evangelos Manolis<sup>2</sup>, Konstantinos Mimidis<sup>1</sup>*

- Altération production facteurs pro et anticoagulants par le foie
- Carence en vitamine K
- Translocation bactérienne: activation cascade coagulation TF: thromboses et CIVD

### Acute renal failure in obstructive jaundice in cholangiocarcinoma.

Mairiang P, Bhudhisawasdi V, Borirakchanyavat V, Sitprija V.



- Ins rénale: dans les ictères sévères et prolongés
- Durée moyenne ins rénale: 15j, non oligurique 80%
- 77% normalisation fonction rénale après drainage

## 2. Ictère majeur (BiliT > 300µmol/L)



### Pancreaticoduodenectomy With Preoperative Obstructive Jaundice Drainage or Not

Zhenjun Li, MD, Zhaoda Zhang, MD, Weiming Hu, MD, Yong Zeng, MD, Xubao Liu, MD, Gang Mai, MD, Yi Zhang, PhD, Huimin Lu, MD, and Bole Tian, MD

	Group 1, n = 77		Group 2, n = 104		Group 3, n = 92		Group 4, n = 30	
Bilirubine T (µmol/L)	< 35		35 – 171		171 - 342		> 342	
Albumin, g/L*	40.3 (19.4–48.0)		38.9 (21.9–47.7)		37.4 (25.6–49.4) <sup>†</sup>		36.2 (26.2–42.6) <sup>†</sup>	
Blood loss*, mL	1050 (600–2600)		1200 (650–1850)		1100 (550–2650)		1450 (850–2500) <sup>†</sup>	
Red blood cell transfusion*	41 (53.2)		48 (46.2)		53 (57.6)		27 (90.0) <sup>†</sup>	
Complications	n	%	n	%	n	%	n	%
Pancreatic fistula	11	14.3	12	11.5	9	9.8	3	10.0
Biliary fistula	4	5.2	3	2.9	1	1.1	2	6.7
Delayed gastric emptying	4	5.2	9	8.7	5	5.4	2	6.7
Infection*	9	11.7	11	10.6	19	20.7	10	33.3 <sup>†</sup>
Bleeding	4	5.2	6	5.8	8	8.7	3	10.0

\* $P < 0.05$ , Kruskal-Wallis  $H$  test.

<sup>†</sup> $P < 0.05$ , group 4 versus group 1.

# 3. Dénutrition sévère



Journal of the  
American College  
of Surgeons

## Anorexia and the effect of internal biliary drainage on food intake in patients with obstructive jaundice.

Padillo FJ, Andicoberry B, Naranjo A, Miño G, Pera C, Sitges-Serra A.

**STUDY DESIGN:** Sixty-two patients with biliary obstruction (BO) were prospectively investigated. Caloric intake was quantified by a controlled diet. In a subset of 27 patients, studies were repeated after internal biliary drainage.

**RESULTS:** Sixty-six percent of patients had spontaneous food intakes below the estimated caloric requirements. Serum bilirubin, alkaline phosphatase, and cholecystokinin plasma levels were independent predictor factors for calorie intake ( $p = 0.0001$ ). After internal biliary drainage, cholestasis parameters and cholecystokinin concentrations decreased significantly; this was associated with an improvement of spontaneous food intake in both benign and malignant biliary obstruction ( $p < 0.01$  and  $p < 0.05$ , respectively).

**CONCLUSIONS:** Decreased food intake in BO was associated with the degree of obstruction and with increased cholecystokinin plasma levels. Biliary drainage improved biochemical and food intake derangements.



## Effect of Preoperative Biliary Decompression on Pancreaticoduodenectomy-Associated Morbidity in 300 Consecutive Patients

Peter W. T. Pisters, MD, Wayne A. Hudec, MD, Kenneth R. Hess, PhD, Jeffrey E. Lee, MD, Jean-Nicolas Vauthey, MD, Sandeep Lahoti, MD, Isaac Rallman, MD, and Douglas B. Evans, MD

Table 2. DEMOGRAPHIC, COMORBID, AND TREATMENT FACTORS BY GROUP: DRAINAGE, NO DRAINAGE, AND BILIARY BYPASS GROUPS

Factor	No. (%)			PBD vs. No Drainage Odds Ratio (95% CI), P Value
	PBD (n = 172)	No Drainage (n = 93)	BBP (n = 35)	
Demographic factors				
Male	102 (59)	45 (48)	17 (49)	1.6 (0.9-2.6), $P = .09$
Age > 45 years	158 (92)	75 (81)	32 (91)	2.7 (1.3-5.7), $P = .0008$
Comorbid conditions				
Diabetes mellitus	34 (20)	17 (18)	4 (11)	1.1 (0.6-2.1), $P = .77$
Hypertension	61 (35)	25 (27)	11 (31)	1.5 (0.9-2.6), $P = .16$
Coronary artery disease	11 (6)	8 (9)	4 (11)	0.7 (0.3-1.9), $P = .51$
Preoperative albumin < 4.0 g/dL	144 (84)	64 (69)	25 (71)	2.5 (1.25-5.0), $P = .0051$
Preoperative bilirubin > 3.2 mg/dL	26 (15)	12 (13)	1 (3)	1.2 (0.6-2.5), $P = .66$
Disease and treatment				
Adenocarcinoma	156 (91)	59 (63)	29 (83)	5.6 (2.9-10.9), $P < .001$
Preoperative chemoradiation	92 (53)	25 (27)	27 (77)	3.1 (1.8-5.4), $P = .001$
Biliary instrumentation	127 (74)	36 (39)	20 (57)	4.5 (2.6-7.7), $P < .0001$
Prior tumor-related laparotomy	13 (8)	10 (11)	35 (100)	0.7 (0.3-1.6), $P = .38$
PD only (no vascular or organ resection)	120 (70)	71 (76)	17 (49)	0.7 (0.4-1.3), $P = .26$

PBD, preoperative biliary drainage; BBP, preoperative biliary bypass procedure; CI, confidence interval; PD, pancreaticoduodenectomy.

Cutoffs for continuous variables were determined by recursive partitioning using intraabdominal abscess or pancreaticojejunal anastomotic leak as the end point.

## 4. Chirurgie précoce non réalisable

N ENGL J MED 362;2 NEJM.ORG JANUARY 14, 2010

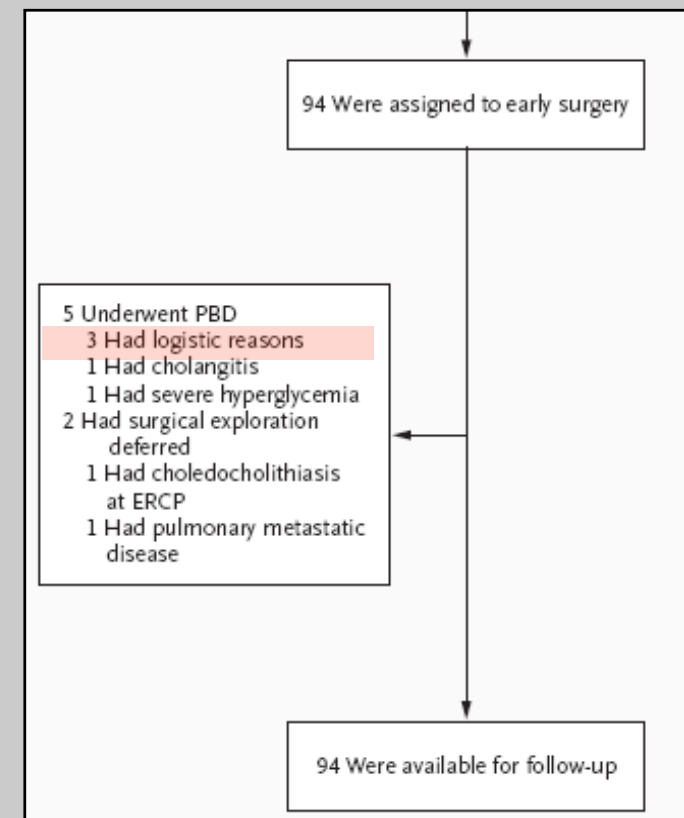
The NEW ENGLAND JOURNAL of MEDICINE

### ORIGINAL ARTICLE

## Preoperative Biliary Drainage for Cancer of the Head of the Pancreas

The mean time to surgery was 1.2 weeks (95% confidence interval [CI], 0.9 to 1.4) for the early-surgery group and 5.2 weeks (95% CI, 4.8 to 5.5) for the biliary-drainage group. Surgical explora-

- Contraintes des programmes opératoires:  
Parfois délai > 15j





## 5. Traitement néo-adjuvant



### Preoperative chemoradiation in potentially resectable pancreatic adenocarcinoma: feasibility, treatment effect evaluation and prognostic factors, analysis of the SFRO-FFCD 9704 trial and literature review

R. Le Scodan<sup>1</sup>, F. Mornex<sup>1\*</sup>, N. Girard<sup>1</sup>, C. Mercier<sup>2</sup>, P.-J. Valette<sup>3</sup>, M. Ychou<sup>4</sup>, F. Bibeau<sup>5</sup>, P. Roy<sup>2</sup>, J.-Y. Scoazec<sup>6</sup> & C. Partensky<sup>7</sup>

- 50Gy + 5FU-Cisplatine 5 semaines
- 63% résection curative dont 80% R01
- Mais délai moy pré-op: 8 à 12 semaines

### Digestive and Liver Disease

[www.elsevier.com/locate/dld](http://www.elsevier.com/locate/dld)

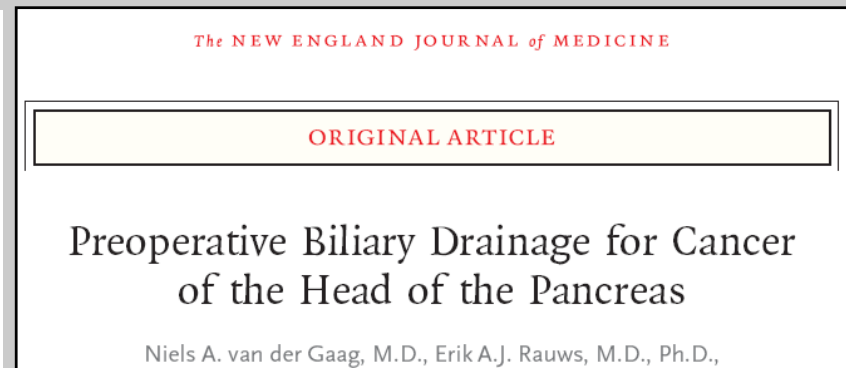
### Complications of pancreaticoduodenectomy after neoadjuvant chemoradiation in patients with and without preoperative biliary drainage

H. Gerke<sup>a,\*</sup>, R. White<sup>c</sup>, M.F. Byrne<sup>a</sup>, H. Stiffler<sup>a</sup>, R.M. Mitchell<sup>a</sup>, H.I. Hurwitz<sup>b</sup>,

**Results.** Data were completed in 168 patients. One hundred and nineteen patients were treated with endoscopic biliary stents, 18 patients had a percutaneous biliary drain and 31 patients did not require biliary drainage. Hospitalisation for stent-related complications was necessary in 15% of the patients with endoscopic biliary stents. Seventy-two patients underwent pancreaticoduodenectomy. There was no significant difference in the rate of wound infections, intra-abdominal abscesses and overall complications between the groups with and without preoperative biliary drainage.

# 5. Optimiser le drainage biliaire

## Drainage endoscopique sous-optimal:



**Table 2. Serious Complications within 120 Days after Randomization.\***

Complication	Early Surgery (N=94)	Preoperative Biliary Drainage (N=102)
	no. (%)	
Related to preoperative biliary drainage		
Any	2 (2)	47 (46)
Pancreatitis	0	7 (7)
Cholangitis†	2 (2)	27 (26)
Perforation	0	2 (2)
Hemorrhage after ERCP‡	0	2 (2)
Related to stent		
Occlusion	1 (1)	Of the 102 patients in the preoperative biliary drainage group 56 (55%) underwent stent exchange after preoperative biliary drainage
Need for exchange	2 (2)	

Of the 102 patients in the biliary-drainage group 56 (55%) underwent a first attempt at preoperative biliary drainage in a community hospital, and 46 (45%) underwent a first attempt in an academic hospital. Adequate drainage was achieved in 77 patients (75%) on the first attempt. The rates

# Comment améliorer les résultats du drainage?

Réaliser un drainage complet d'emblée: Centres de référence?

Sur-risque de complications lié à l'infection de la bile:  
Antibiothérapie prolongée après le drainage  
Prélèvement de bile pré-opératoire et antibiothérapie adaptée

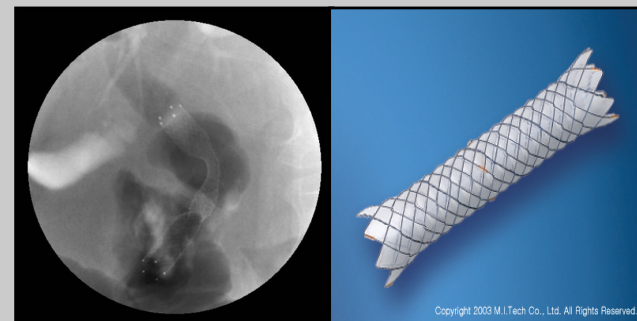


## Delayed pancreaticoduodenectomy for cancer patients with prior ERCP-placed, nonforeshortening, self-expanding metal stents: a positive outcome

Christopher Lawrence, MD, Douglas A. Howell, MD, Donald E. Conklin, MD, Andreas M. Stefan, MD, Ronald F. Martin, MD

### Prothèses métalliques courtes:

- Ne gênent pas l'anastomose biliaire
- Durée de vie plus longue que prothèses plastiques
- Intérêt dans les drainages prolongés: TTT néo-adjuvants +++



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# CONCLUSION: Que faut-il faire?

**PAS d'indication au drainage biliaire systématique mais plutôt chirurgie d'emblée**

## Indications retenues du drainage pré-op:

- Angiocholite
- Ictère majeur ( $> 250\mu\text{mol/L}$ )
- Traitement néo-adjuvant
- Dénutrition sévère associée à l'ictère
- Délai opératoire  $> 15\text{j}$

# En cas de drainage pré opératoire il faut:

- **Une endoprothèse**
  - Métallique
  - Courte (intrapancréatique)
  - Mise en place dans un centre expert
- **Connaître l'infection des voies biliaires**
  - Adapter l'antibioprophylaxie per-opératoire
  - Faire des prélèvements de bile per-opératoire
  - Adapter l'antibiothérapie post-opératoire à ces prélèvements