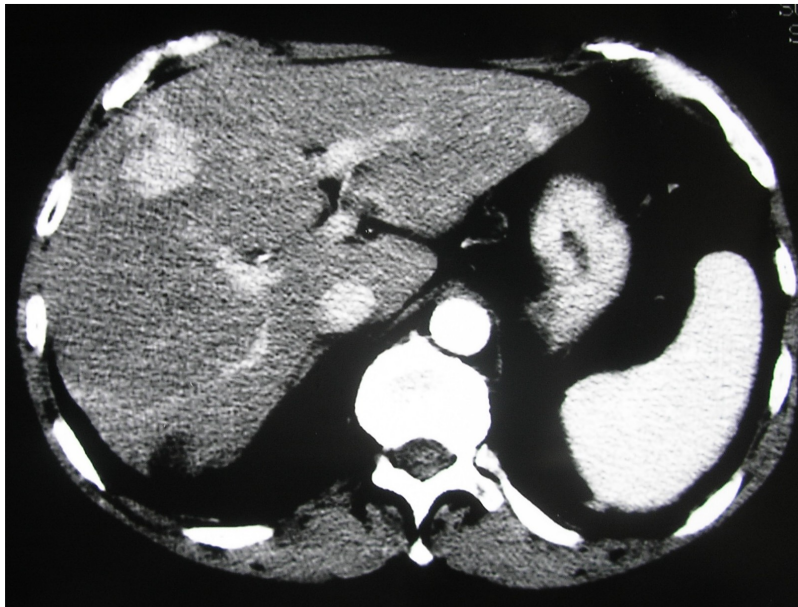


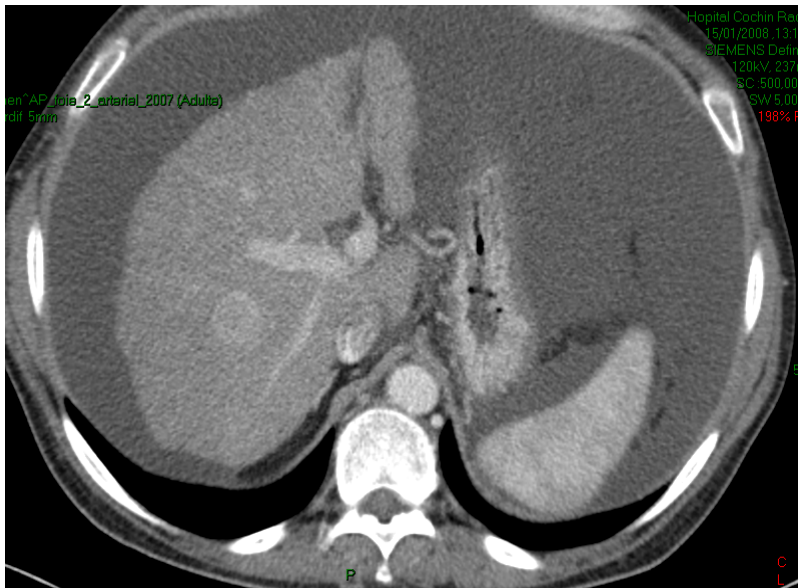
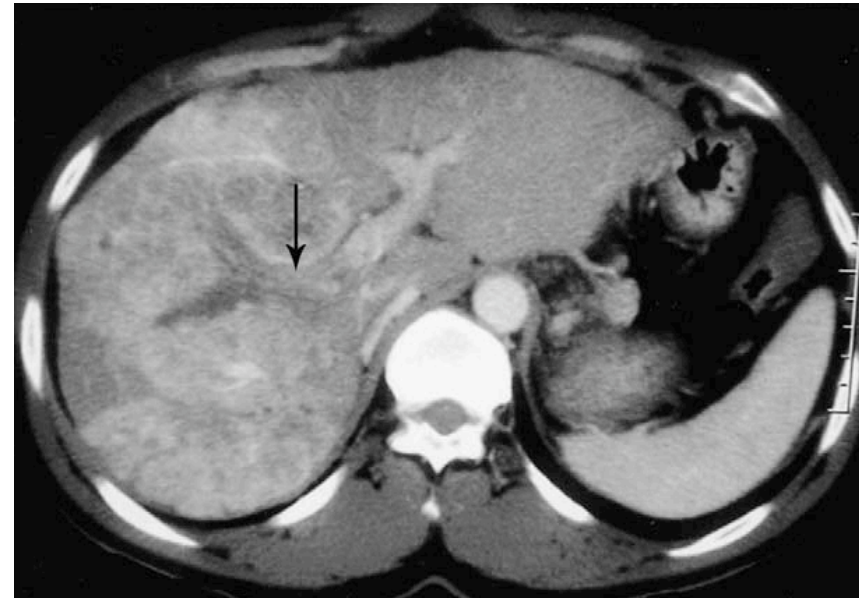
Traitement chirurgical du CHC

Olivier Scatton
Université Paris Descartes
Chirurgie hépato-biliaire et transplantation
Hôpital Cochin - Paris

Petit CHC ou TNM1-2



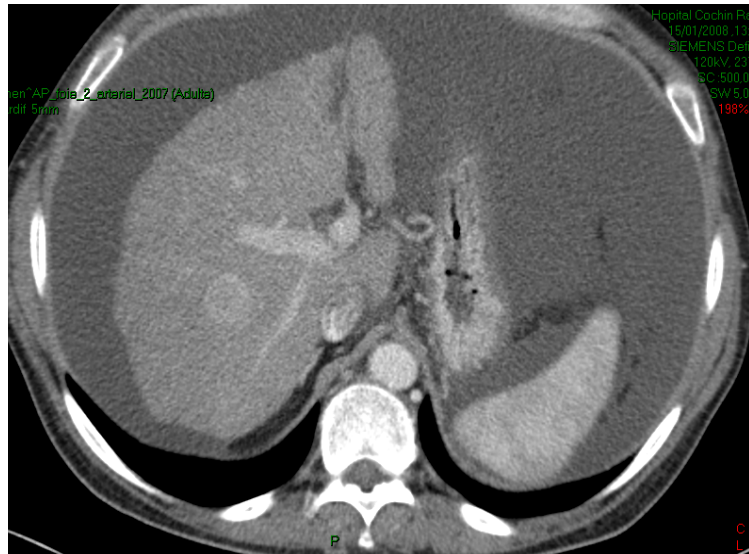
Large CHC ou stade IV



RESECTION



TACE



RFA

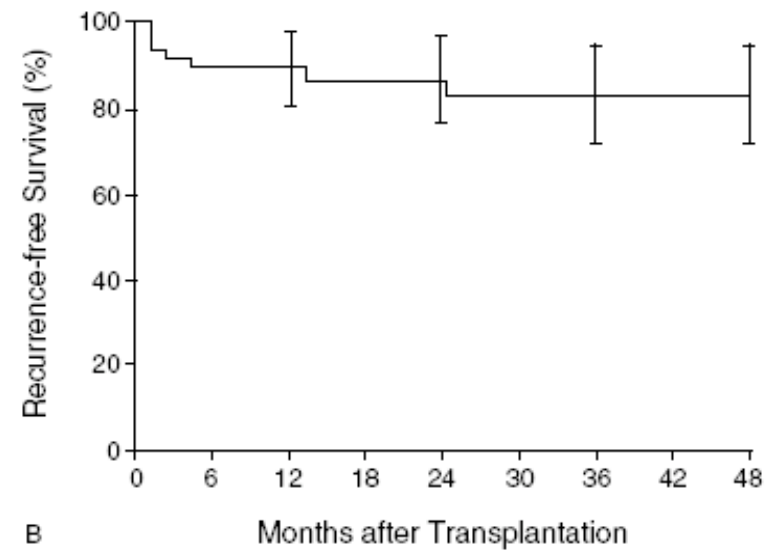
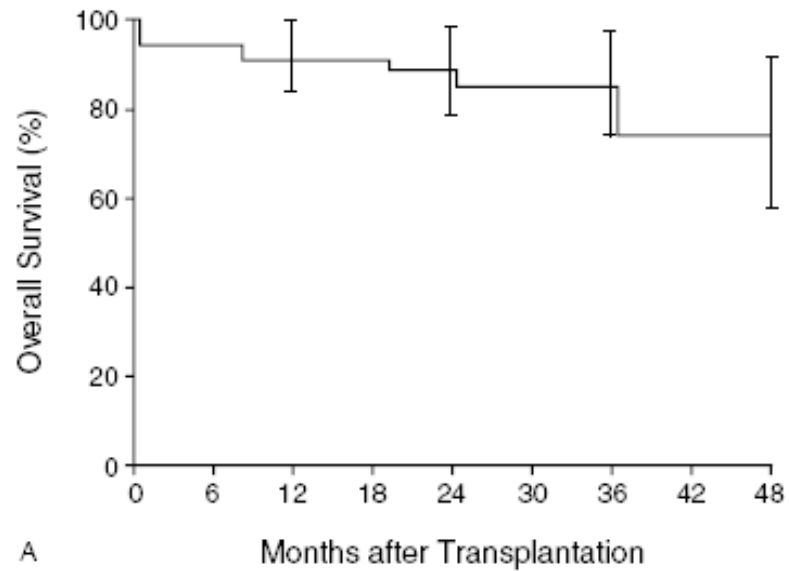


TH



CRITERES MILAN

- 1 nodule, < 5 cm
- < 3 nodules, < 3cm
- Pas d'envahissement vasculaire macroscopique

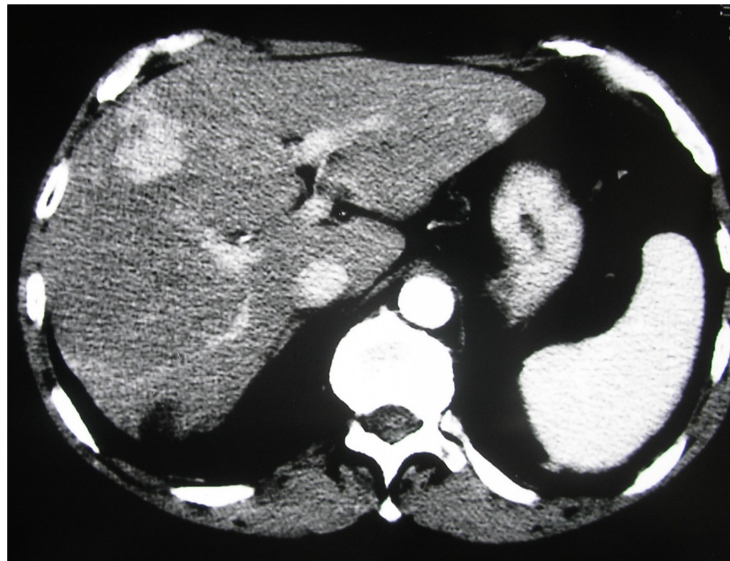


Mazzaferro et al NEJM 1996

RESECTION



TACE

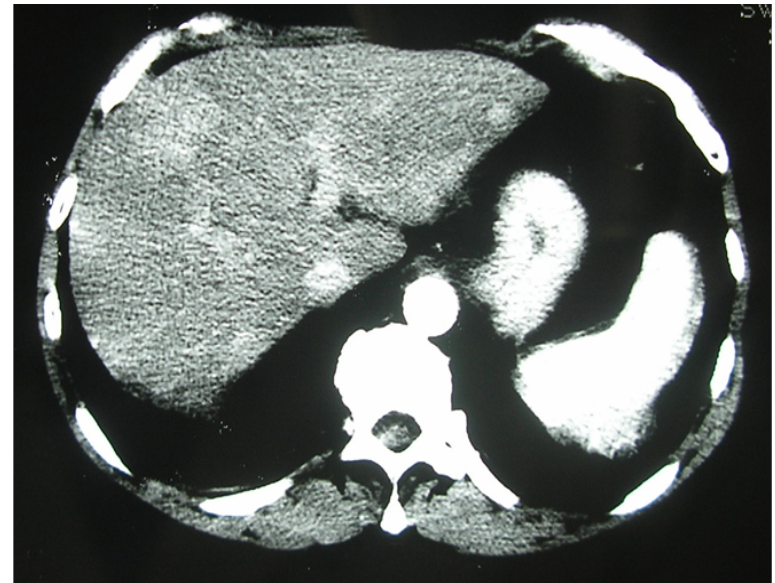
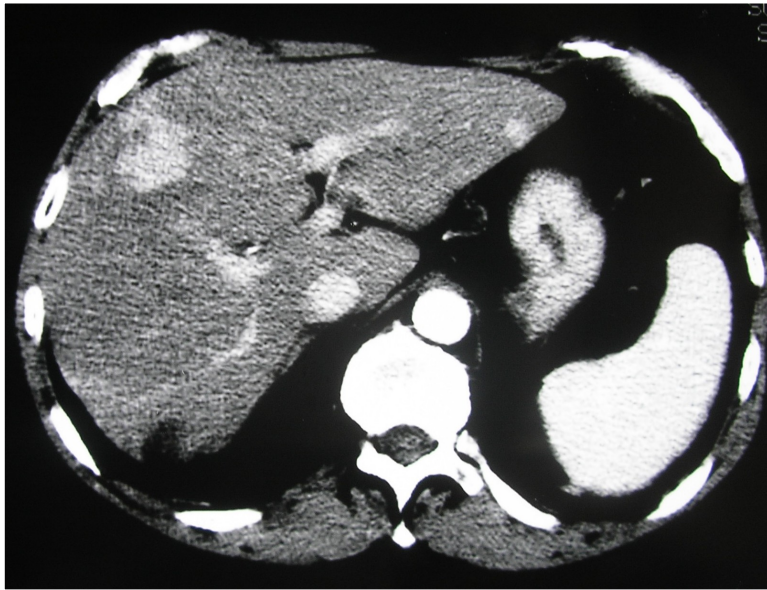


RFA



TH



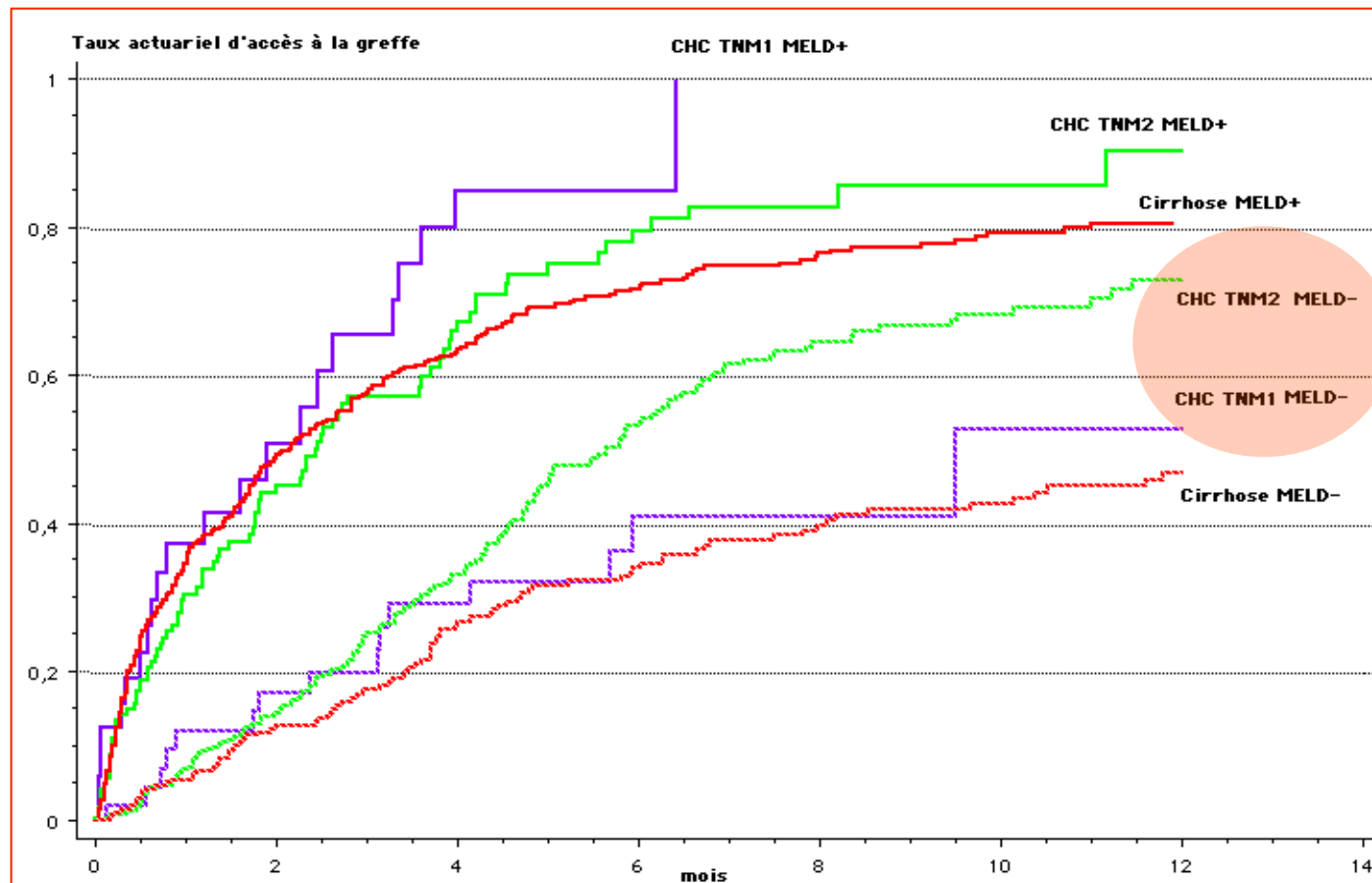


Drop out: 15-33%

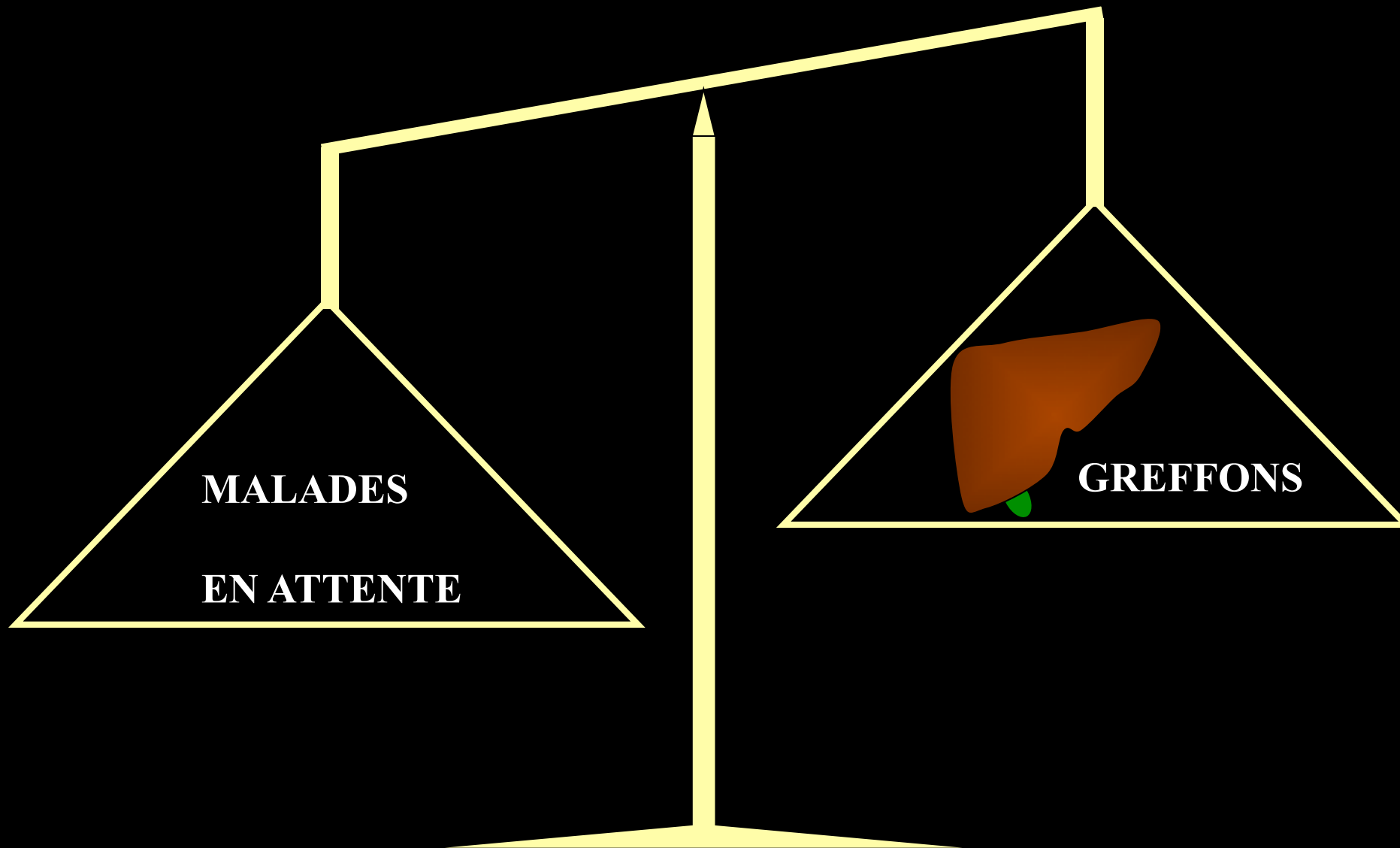
Llovet et al Hepatology 1998

Score Foie: Les CHC

2007-2008



Jacquelinet et al GCIF, Paris, 26 juin 2008



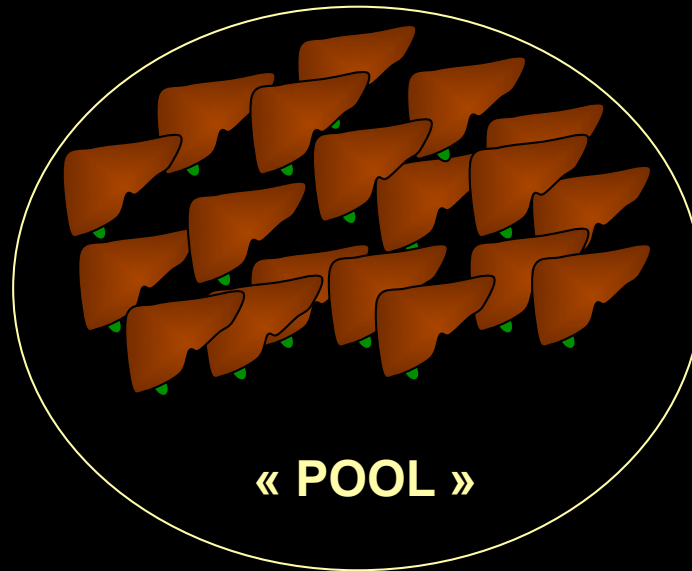
Augmentation « pool »

Economie = Rationalisation

« DOMINO »

« SPLIT »

Azoulay et al 2001
Wilms et al 2006



« POOL »

LDLT

- **Mortalité donneur: 0,5-1%!!!**

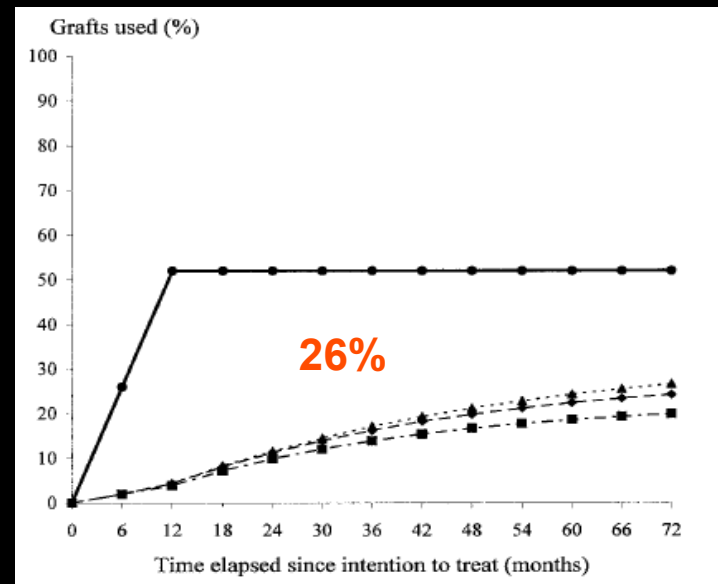
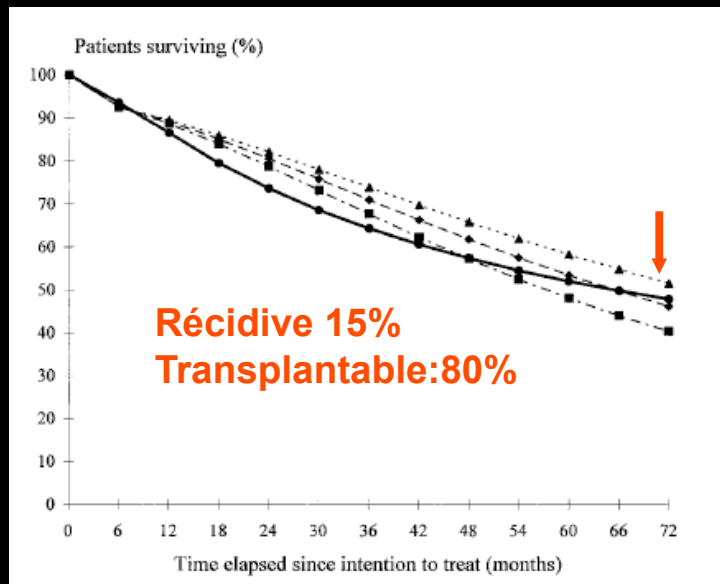
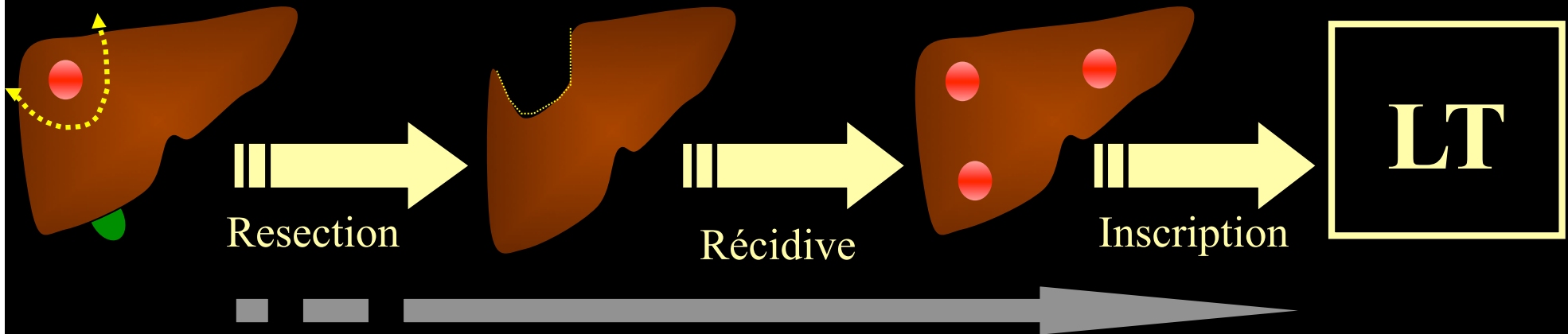
- Efficacité pour CHC?

Fisher et al 2007
Man et al 2008

GREFFONS MARGINAUX

- Steatose (*McCormack et al 2008*)
- Cœur arrêté (*Merion et al 2006*)
- Age (*Nardo et al 2004*)

Salvage et bridge transplantation



Majno P et al Hepatology 2000
Poon RT et al Ann. Surg. 2002

40 y male, HCC on HBV cirrhosis, DNA +

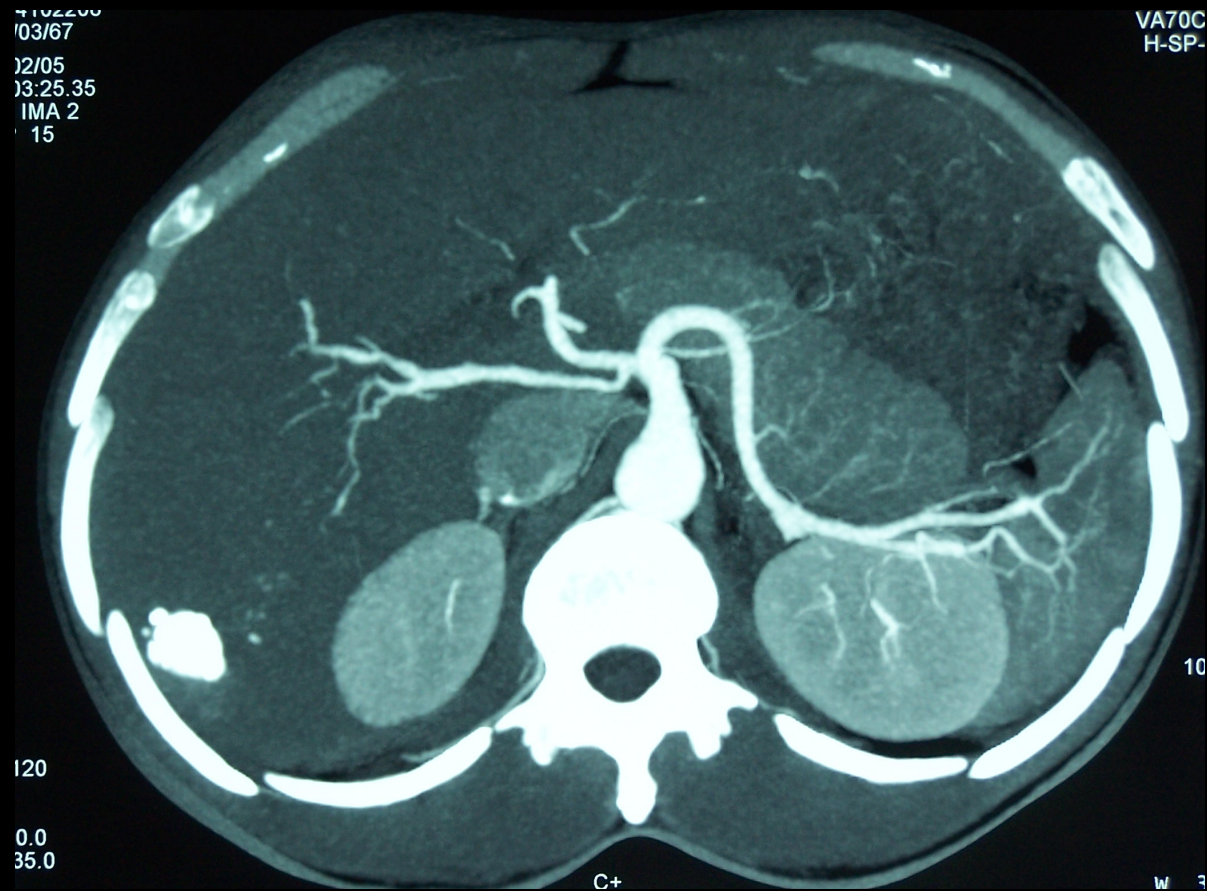
1 tumor, 3 cm diameter

Strategy:

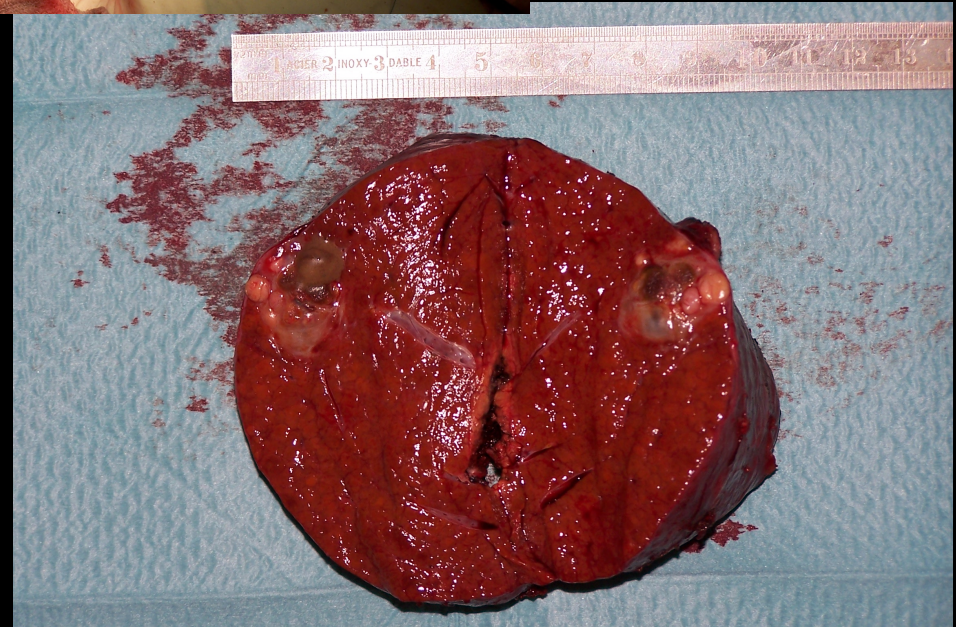
1/ TACE

2/ medical treatment for virus B replication (lamivudine)

3/ primary resection



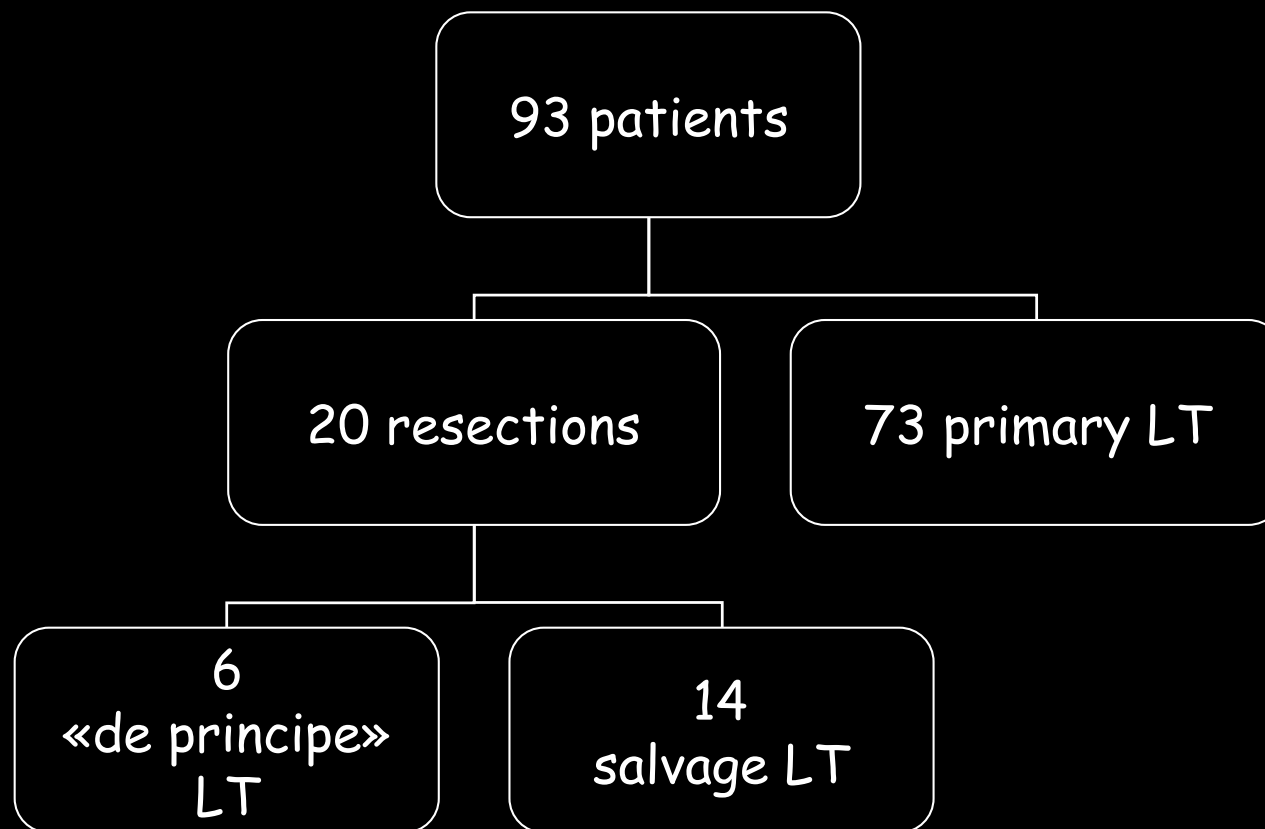
Segmentectomy VII



*Specimen: HCC 2.5 cm, Edm3, 4 satellite nodules, 80 % necrosis
bridge transplantation “de principe”*

Uneventful post operative course, no transfusion

Specimen: 1 nodule of 1 cm in segment V (same findings than resected tumor)

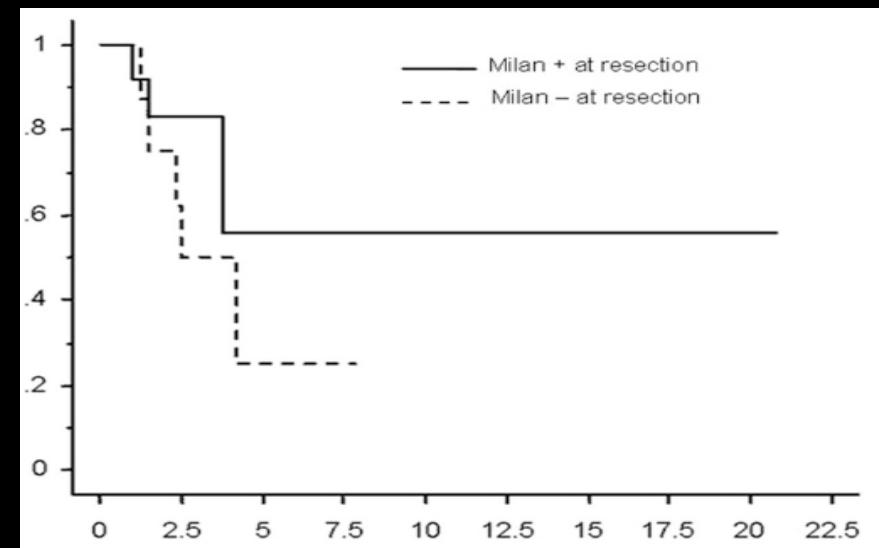
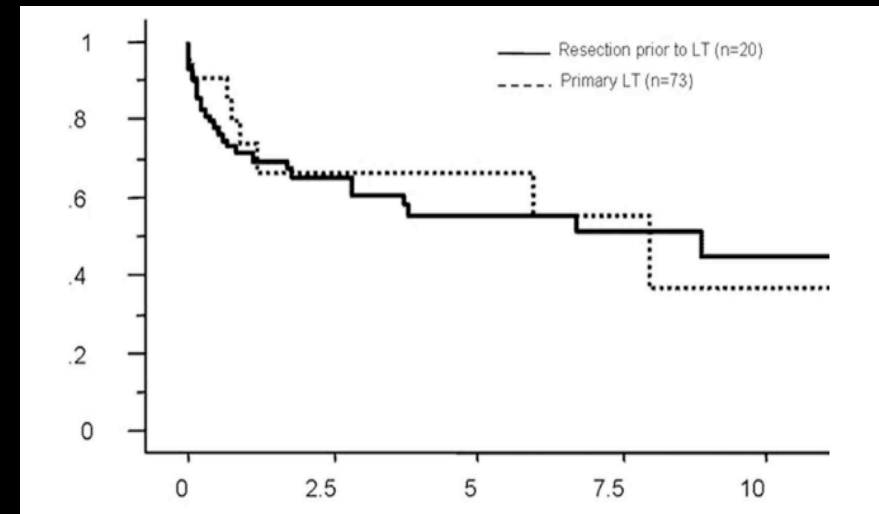


RESULTS



- Long term prognosis is not impaired in patients undergoing primary resection....
- Assuming that they fulfill the Milan criteria at resection.

Follow up (yrs)	Mean $\pm$ SD	Median (range)
From resection	3.8 $\pm$ 4.4	2.6 (1-20)
From OLT	2.7 $\pm$ 4.5	1.25 (0.1-19.7)



RESULTS

- 14/20 (70%) of the patients had a recurrence on the explant.
 - In two patients tumor necrosis was complete (1 RFA & 1 TACE)
 - In 12 patients histology of primary and recurrent tumor were compared
- In 9/12 patients (75%), histological features of the resected tumor and its recurrence were exactly similar.
- None of the recurrences was histologically downstaged when compared to the primary tumour.

RESULTS

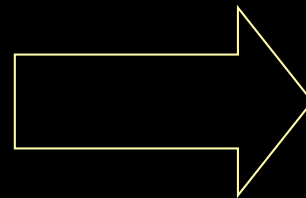
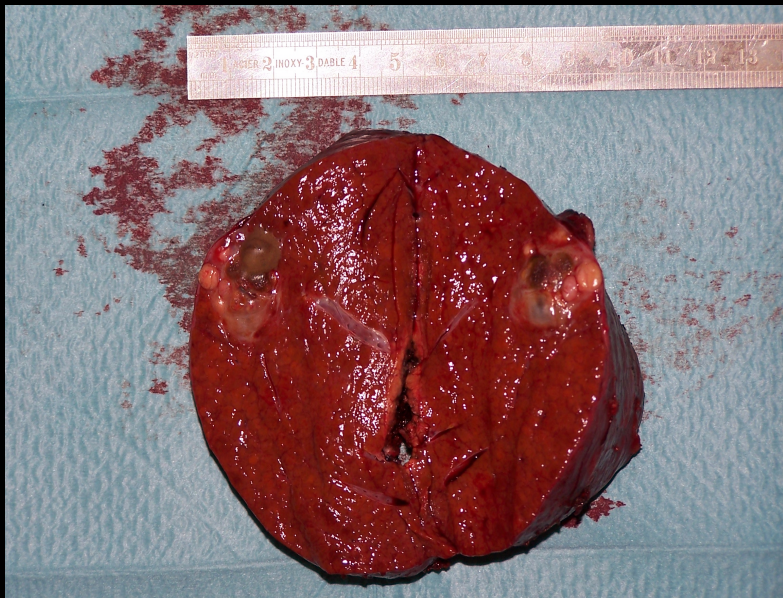
Patient Number	Edmondson	Vascular Invasion	Nuclear Grade*	Architectural Growth Pattern	Follow-Up (Months)	Alive Without Recurrence
1	2	1	1	MA	97.8	Yes
2	3	1	2	MacroT	95.4	Yes
3	3	1	2	MacroT	45	Yes
4	2	1	1	MicroT	39	Yes
5	2	1	2	MicroT	34.2	Yes
6	1	1	2	MicroT	21	Yes

- 6 patients with poor prognosis histological features on the resected specimen were proposed a "de principe transplantation"
- They are alive without recurrence after a mean follow up of 55 month.

Hepatocellular Carcinoma Developed on Compensated Cirrhosis: **Resection as a Selection Tool for Liver Transplantation**

Olivier Scatton,^{1,3} Stéphane Zalinski,^{1,3} Benoit Terris,^{2,3} Jérémie H. Lefevre,^{1,3} Alessandra Casali,^{1,3} Pierre-Philippe Massault,^{1,3} Filomena Conti,^{1,3} Yvon Calmus,^{1,3} and Olivier Soubrane^{1,3}

Departments of ¹Hepatobiliary Surgery and Liver Transplantation and ²Pathology and ³Assistance Publique-Hôpitaux de Paris, Hôpital Cochin, Université Paris Descartes, 27 Rue du Faubourg Saint Jacques, 75014 Paris, France



- Architecture tumorale
- Invasion microvasculaire
- Nodules satellites
- Différentiation

HISTOLOGIE TUMORALE

BON PRONOSTIC

MAUVAIS PRONOSTIC

MILAN +

MILAN -

« SALVAGE »

TH

TH

MILAN +

MILAN -

« DE PRINCIPE »

TH

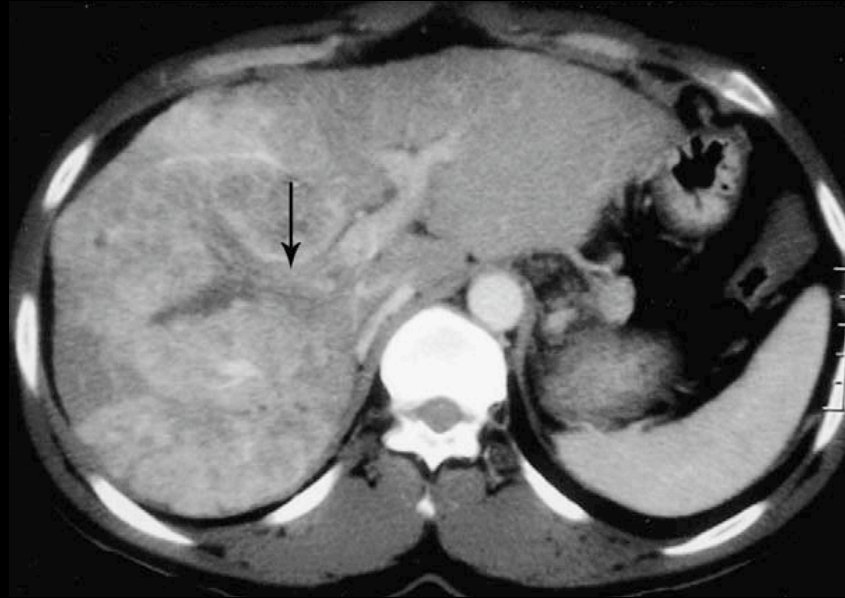
TH

*Sala et al 2004
Scatton et al 2008*

Traitement du petit CHC

- TH reste le meilleur traitement
- Résection chirurgicale permet la survie la plus prolongée sans TH
- Résection permet la sélection des malades pour la TH et permet la rationalisation de la répartition des greffons

Large CHC ou stade IV



TNM	
T1	Solitary, $\leq 2\text{cm}$, no vascular invasion
T2	Solitary, $\leq 2\text{cm}$, vascular invasion Multiple/unilobar, $\leq 2\text{cm}$, no vascular invasion Solitary, $>2\text{cm}$, no vascular invasion
T3	Solitary, $>2\text{cm}$, vascular invasion Multiple/unilobar, $\leq 2\text{cm}$, vascular invasion Multiple /unilobar, $>2\text{cm}$, irrespective of vascular invasion
T4	Multiple/bilobar Invasion of major portal or hepatic vein branch Invasion of adjacent organs Perforation of visceral peritoneum
STADE	
I	T1N0M0
II	T2N0M0
III A	T3N0M0
III B	T1-3N1M0
IV A	T4N0/1M0
IV B	Any T/NM1

Prospective Cohort Study of Transarterial Chemoembolization for Unresectable Hepatocellular Carcinoma in 8510 Patients

KENICHI TAKAYASU,* SHIGEKI ARII,[†] IWAO IKAI,[§] MASAO OMATA,^{||} KIWAMU OKITA,[¶]
TAKAFUMI ICHIDA,[#] YUTAKA MATSUYAMA,^{**} YASUNI NAKANUMA,^{††} MASAMICHI KOJIRO,^{§§}
MASATOSHI MAKUUCHI,^{||} and YOSHIO YAMAOKA^{¶¶} for the Liver Cancer Study Group of Japan

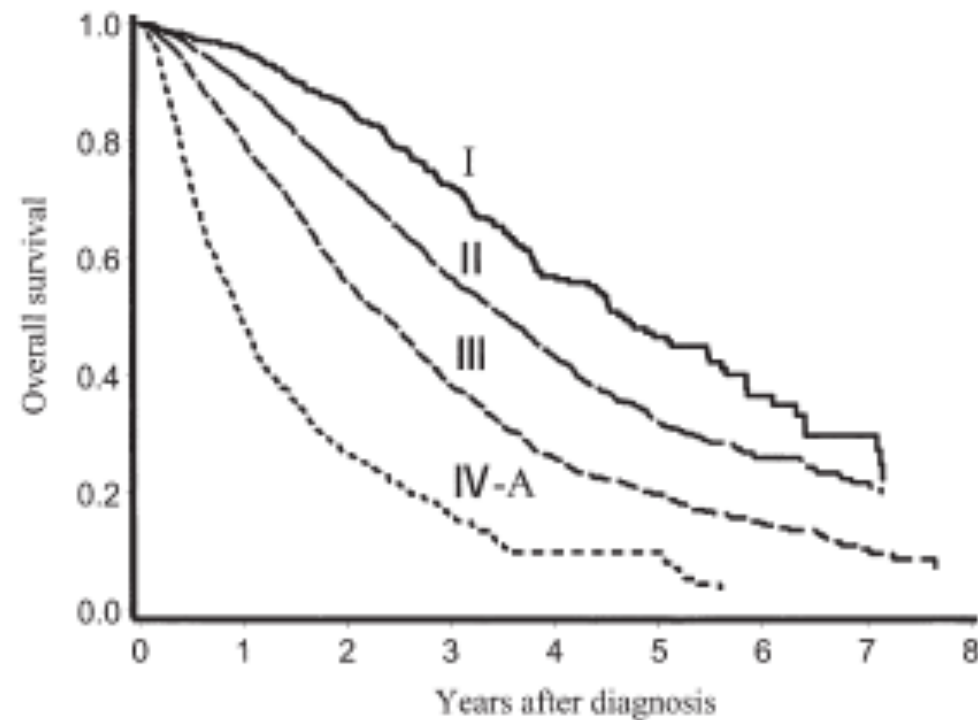
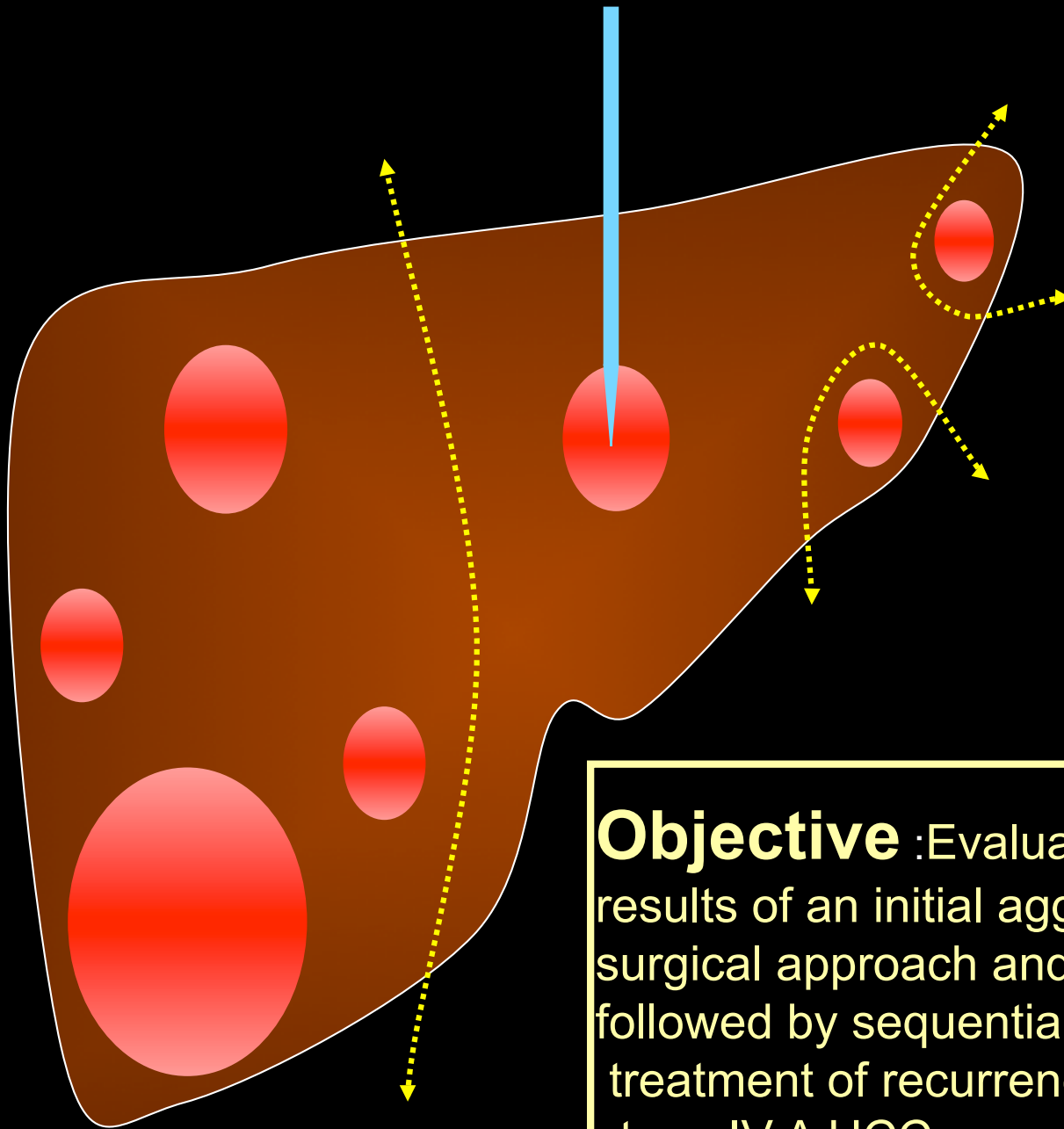


Figure 3. Comparison of survival rates stratified by TNM stages I, II, III, and IV-A with statistical significance ($P = .0001$).



Objective :Evaluate the long term results of an initial aggressive surgical approach and local destruction followed by sequential combined treatment of recurrence in patients with stage IV A HCC

Patients and methods

1998-2004:128 patients had resection of HCC

20 patients had stage IV A HCC(TNM)

- **Bilobar** :17 patients (85%)
- **Portal vein invasion** :5 patients (25%)
- *Hepatic vein invasion +IVC* : 2 patients
- **Invasion of adjacent organs** : 3 patients (15%)

Patients and methods

Men/women:19/1

Mean age 61 years (range 31-76 years)

α -FP > 400 ng/ml : 10 patients (50%)

Etiology:

- Hepatitis B: 6 patients (30%)
- Hepatitis C: 6 patients (30%)
- Alcohol : 8 patients (40%)
- Hemochromatosis : 2 patients (10%)

Technical aspects

Major hepatic resection : 7 patients (35%)

Peroperative destruction : 6 patients (30%)

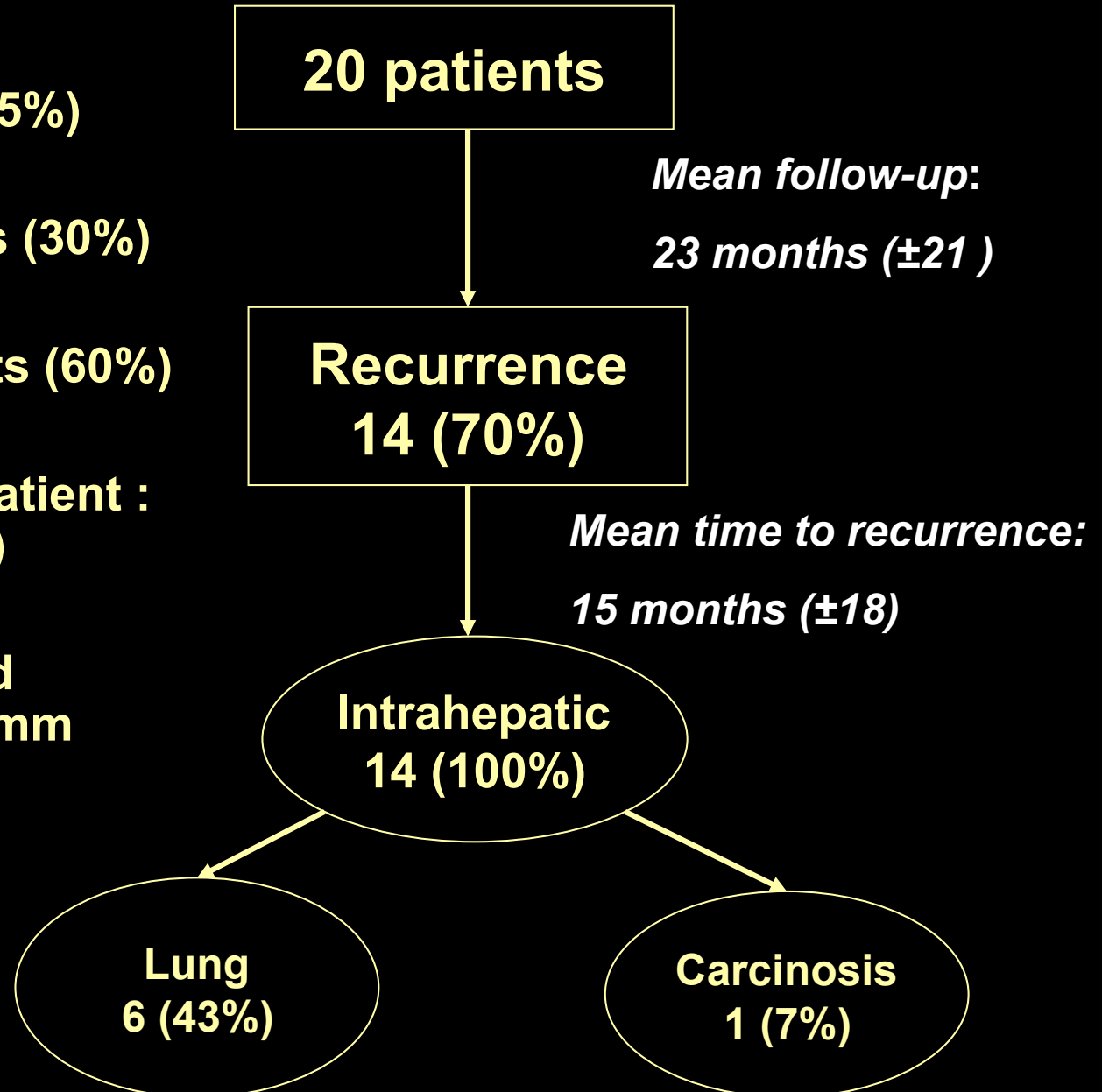
- RFA : 4 patients
- Ethanol injection: 2 patients

Resection of the diaphragm : 3 patients (15%)

Resection of tumoral thrombus of the IVC: 2 patients (10%)

Results

- **Mortality: 1 patient (5%)**
- **Morbidity: 6 patients (30%)**
- **Cirrhosis: 12 patients (60%)**
- **Resected nodules/patient : median 3 (range 1-7)**
- **Diameter of resected nodules: median 60mm (range 25-150mm)**



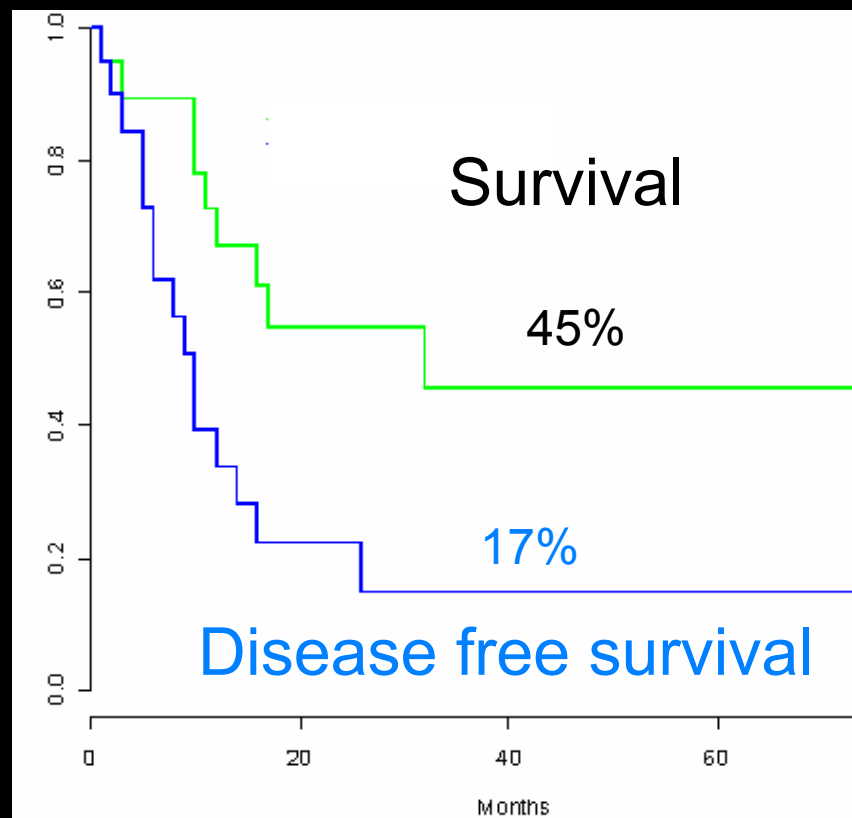
**Recurrence
14 patients**

**Treatment
10 (71%)**

**TACE
7 (50%)**

**RFA
2 (14%)**

**Systemic
chemotherapy
3 (21%)**



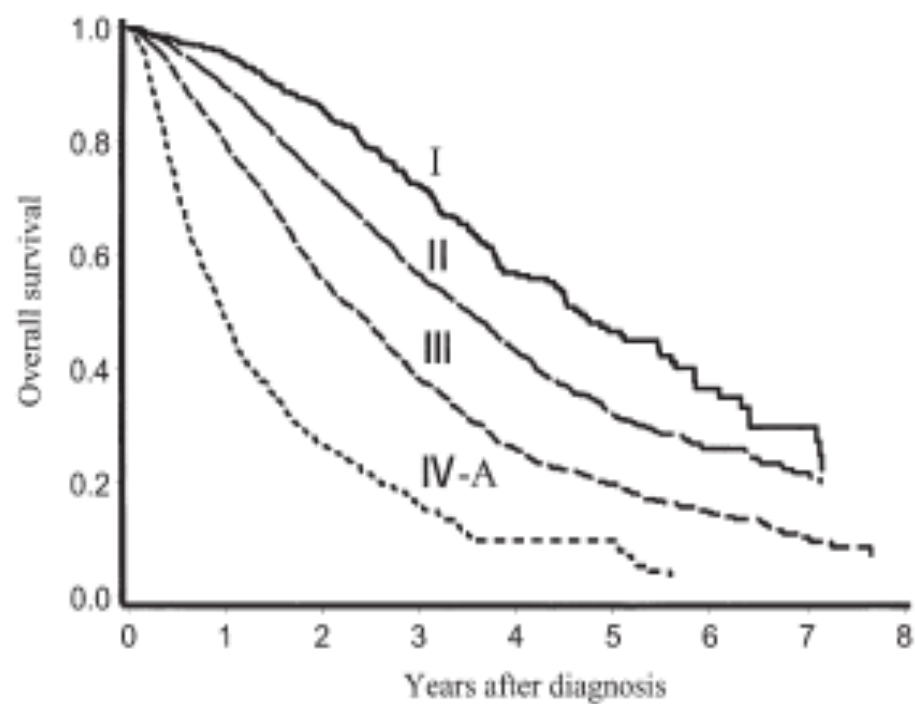
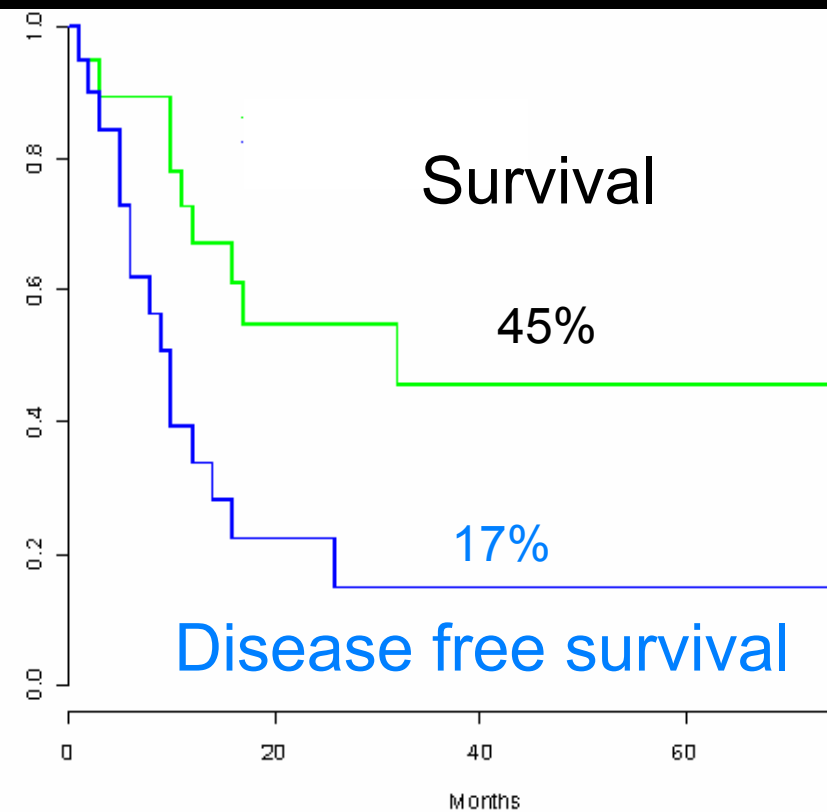


Figure 3. Comparison of survival rates stratified by TNM stages I, II, III, and IV-A with statistical significance ($P = .0001$).



Conclusion

- Traitement chirurgical du CHC avancé doit être systématiquement discuté
- Permet une survie de l'ordre de 50% à 5 ans
- La chimiothérapie ou la biothérapie doit probablement être évaluée comme traitement complémentaire voire même comme traitement d'induction (stratégie oncologique)