Cancéropôle Île-de-France
Présentiel, Institut Curie, Paris 5e
VENDREDI 10 OCTOBRE 2025
18E COLLOQUE DU CANCÉROPÔLE IDF

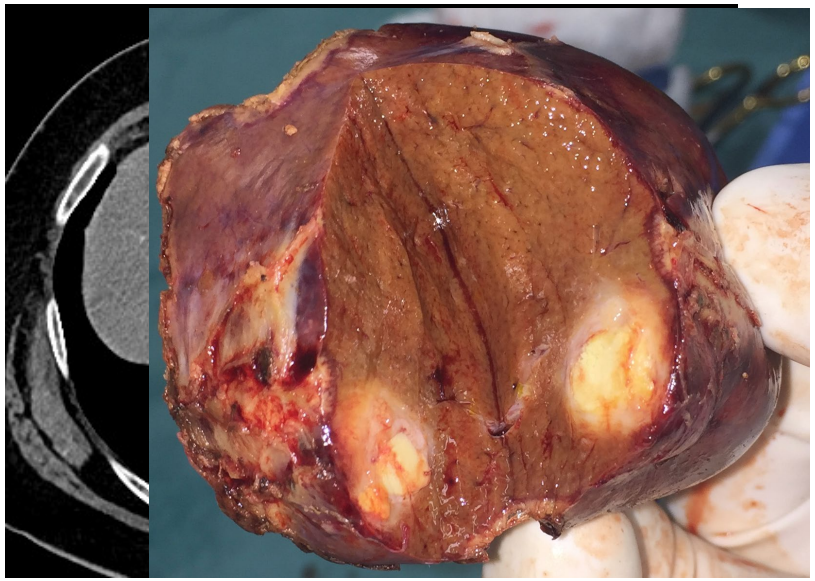
Quels traitements mini-invasifs en cas de détection précoce des cancers hépatiques primitifs et secondaires ?

Nicolas Golse, MD PhD

Hôpital Paul Brousse - Villejuif

Traitements mini invasifs en cas de détection précoce des cancers hépatiques primitifs et secondaires ?

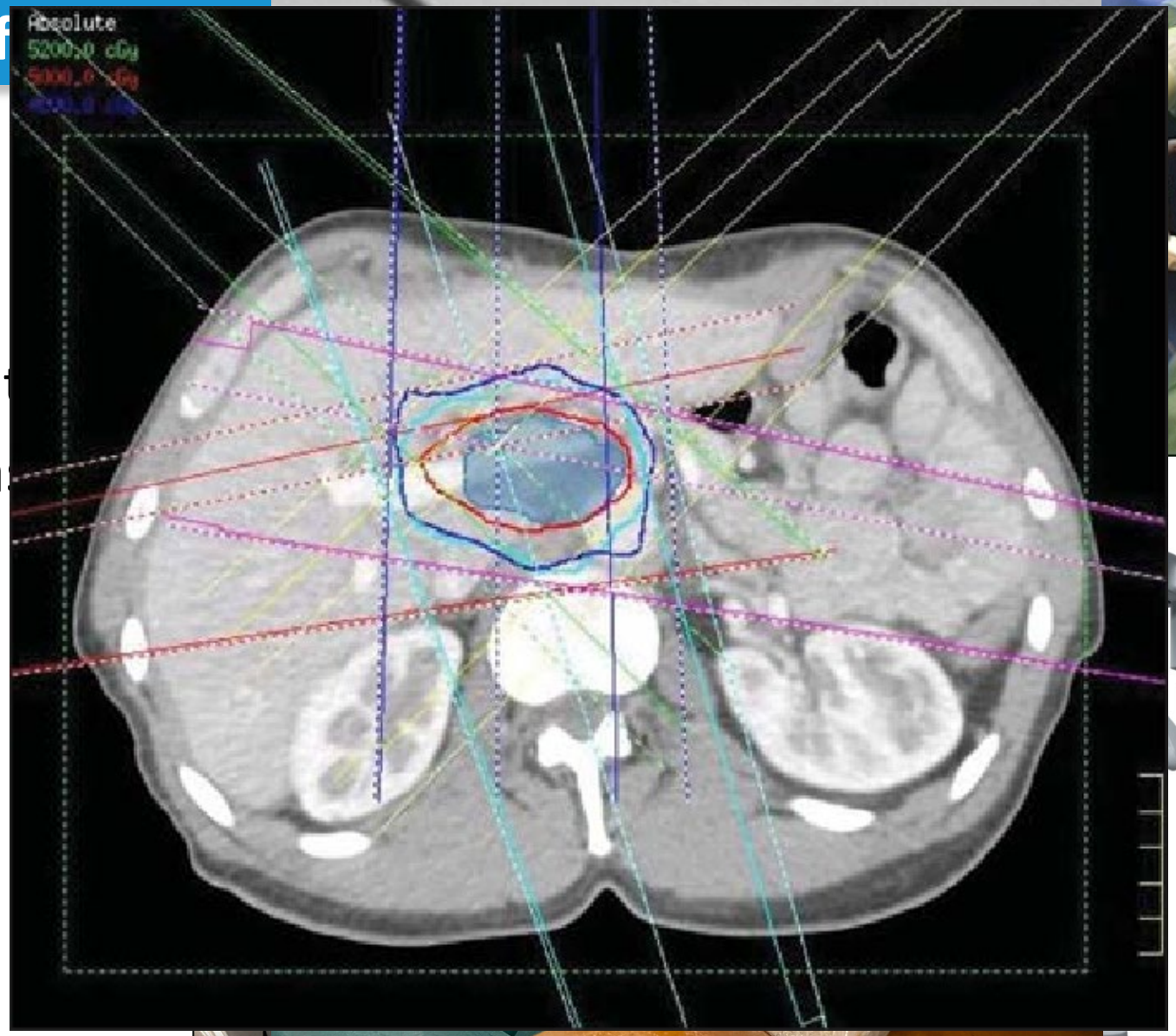
- Cancers primitifs :
  - Carcinome hépato-cellulaire
  - Cholangiocarcinome intra-hépatique / (péri-hilaire)
- Cancers secondaires : métastases colorectales



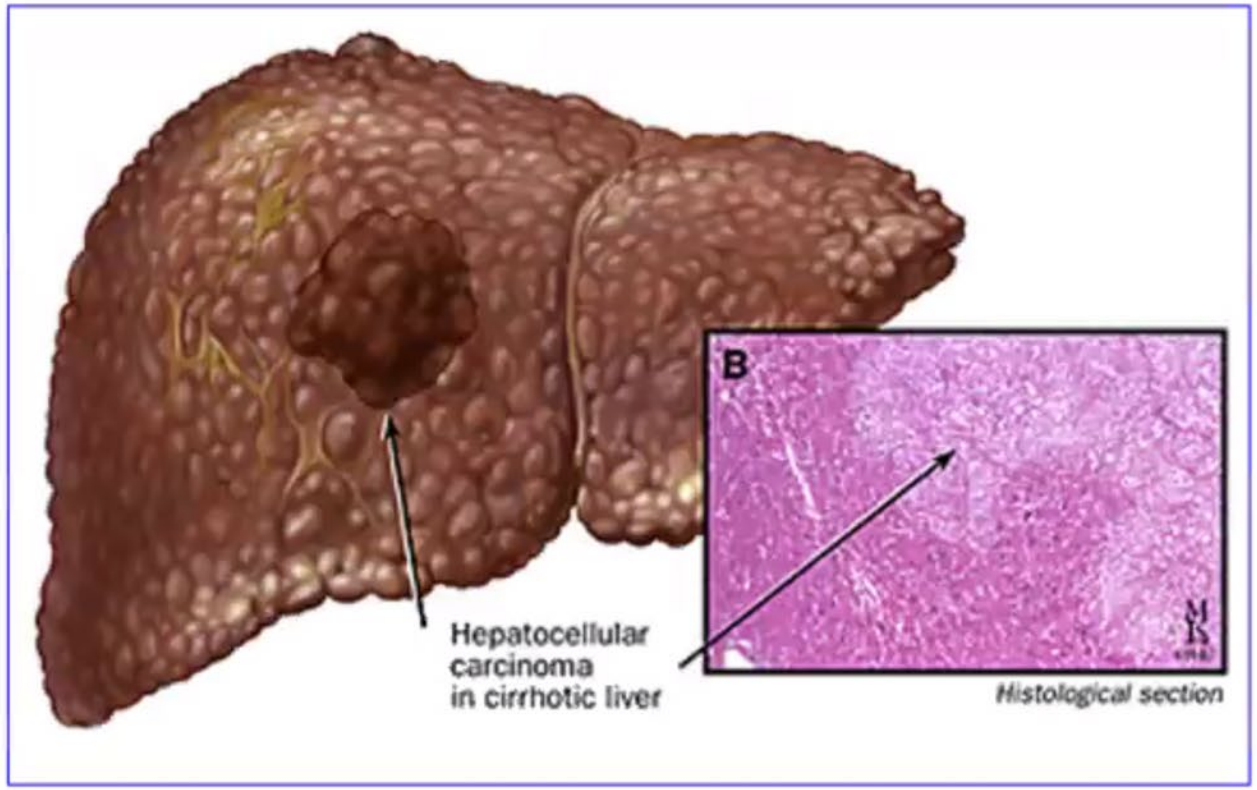
Traitements mini invasifs en cas de détec
des cancers hépatiques primitif

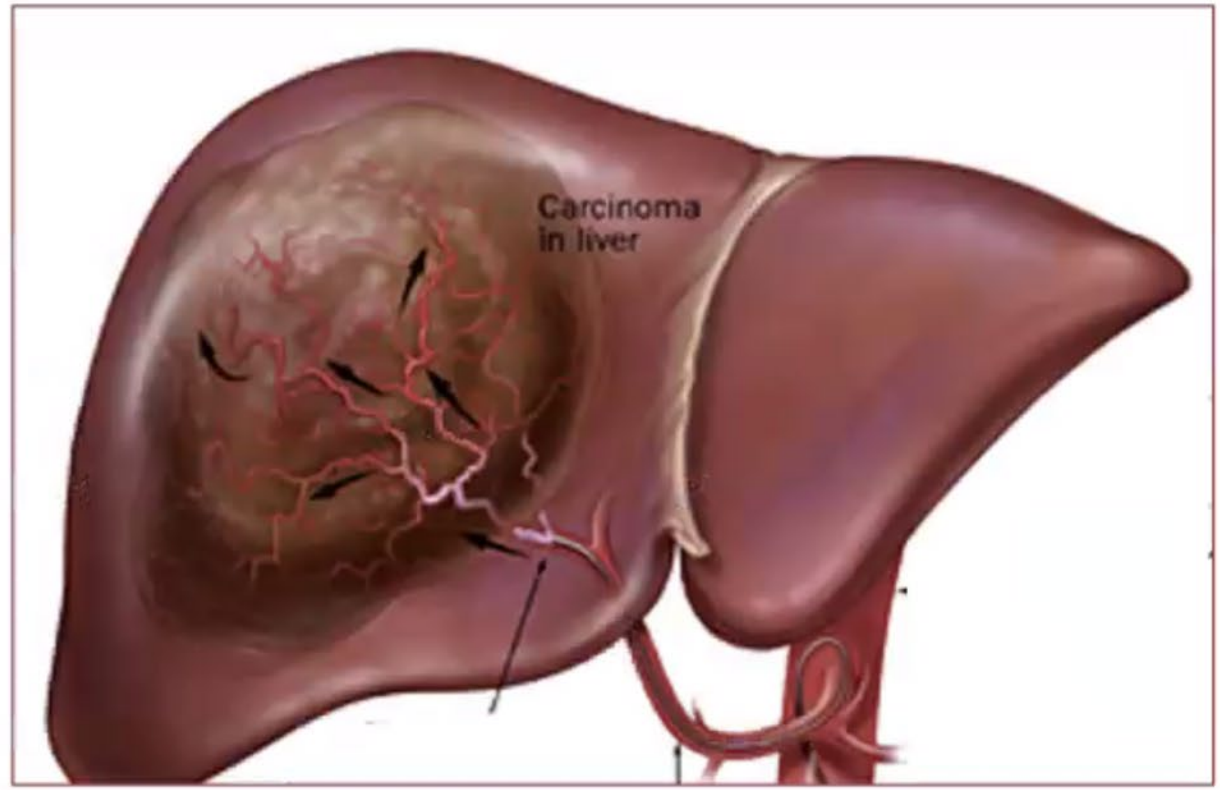
- Cancers primitifs :
  - Carcinome hépato-cellulaire
  - Cholangiocarcinome intra-hépat
- Cancers secondaires : métasta

- Traitements mini-invasifs :
  - Laparoscopie / robot
  - Percutané
  - Radiothérapie



CHC

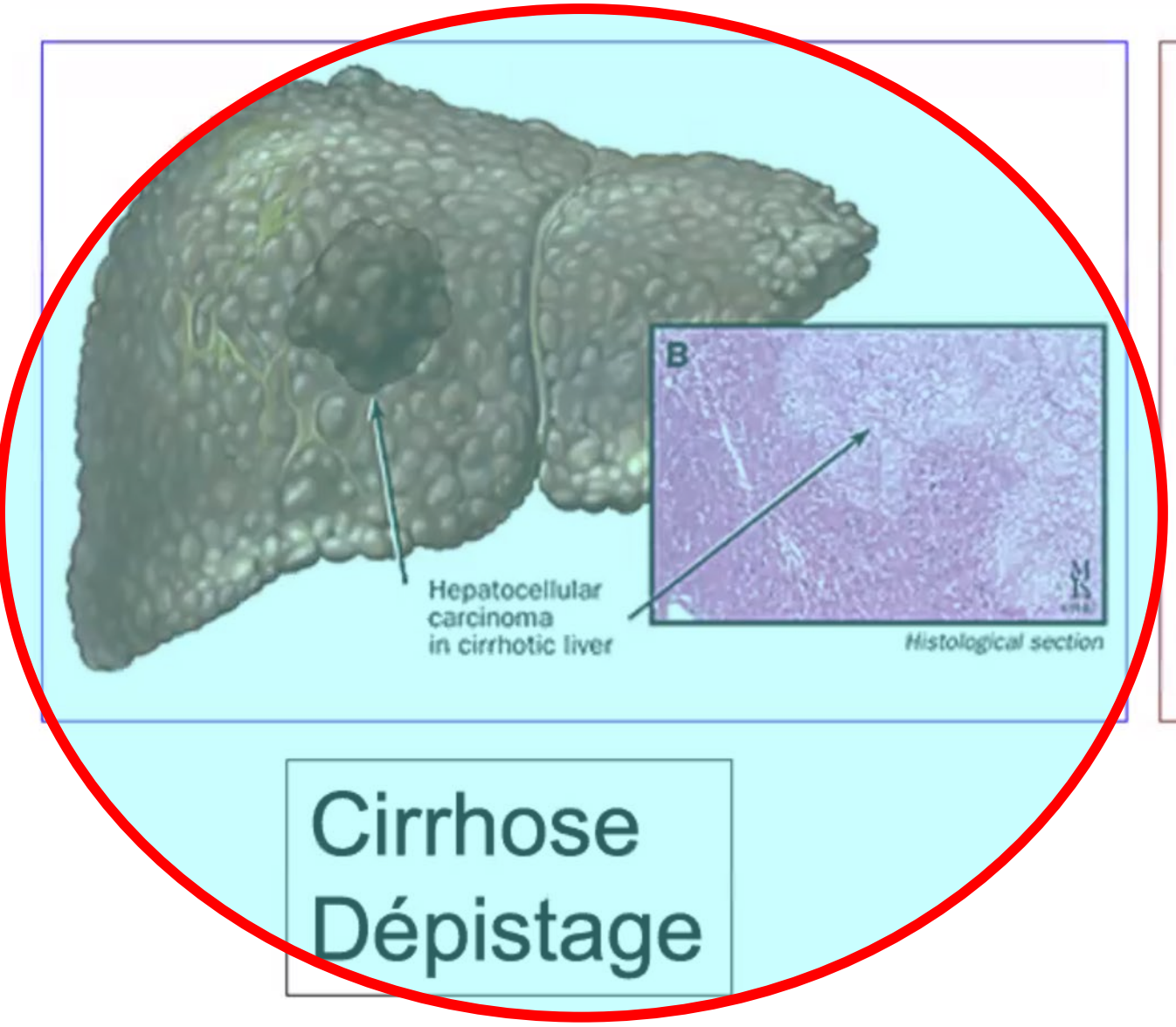




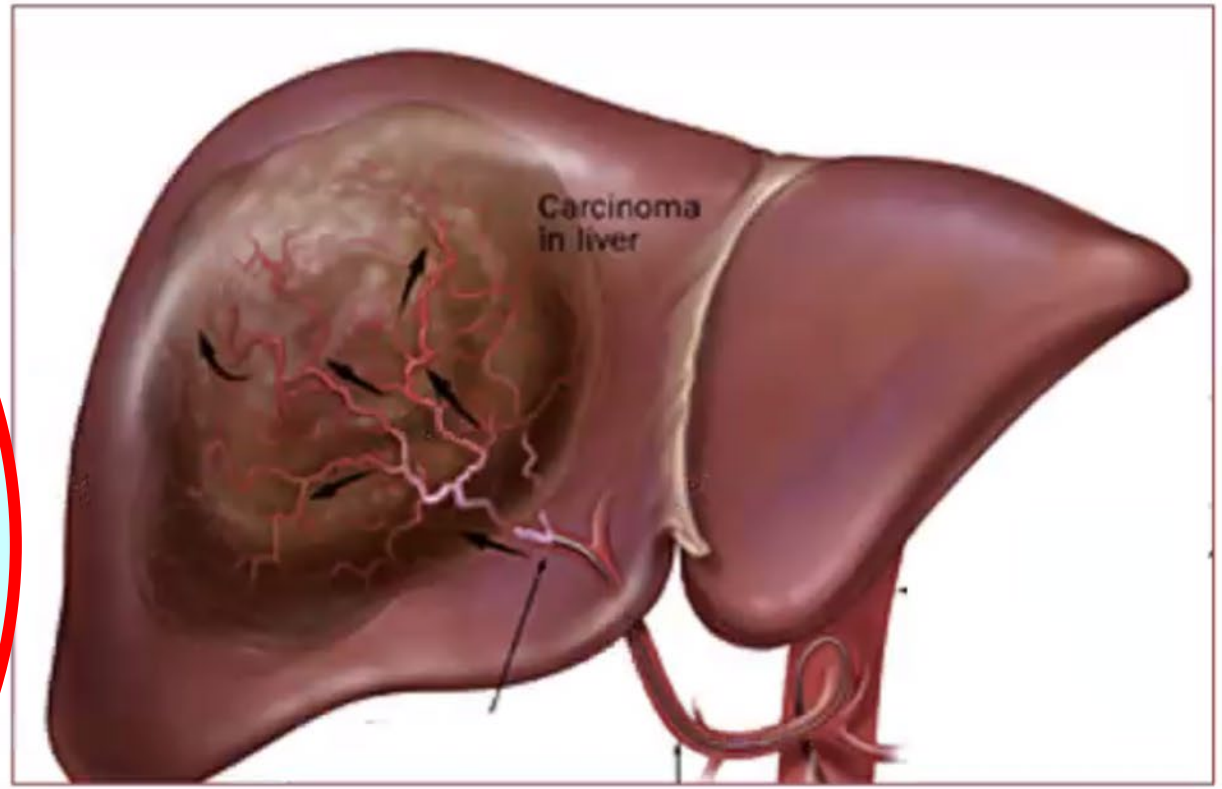
Cirrhose
Dépistage

Foie sain
Symptômes

95%



Cirrhose
Dépistage



Foie sain
Symptômes

Petit(s) CHC vs Grosse lésion, pas de dépistage précoce

Plusieurs ttt possibles vs Chirurgie « uniquement »

Hépatopathie sous-jacente vs Pas hépatopathie sous-jacente

Une population à risque bien définie

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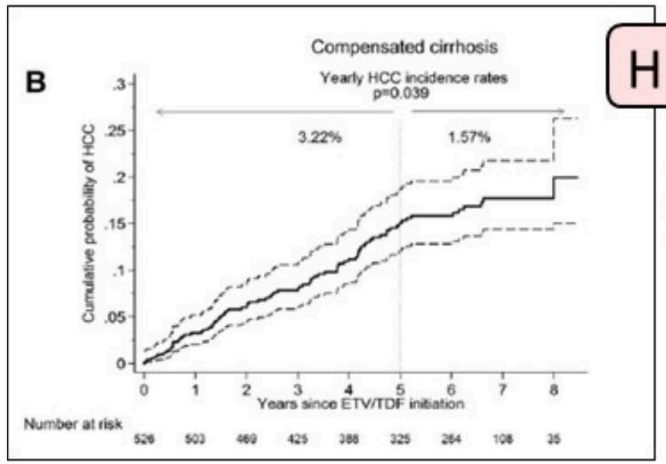
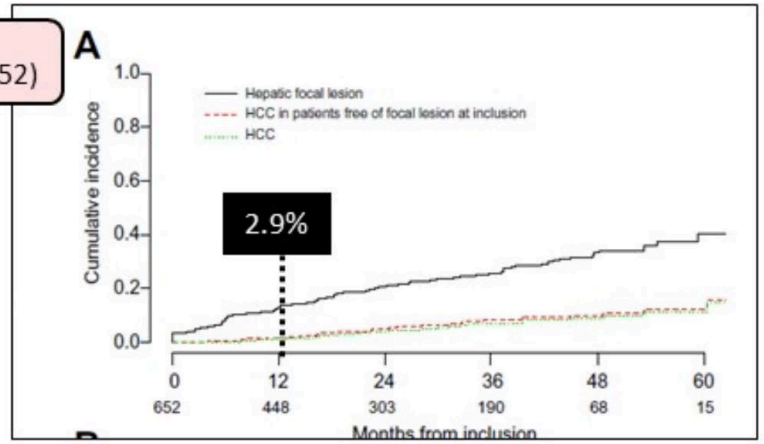
Incidence annuelle entre 1,5% et 3%

HBV (n=528)



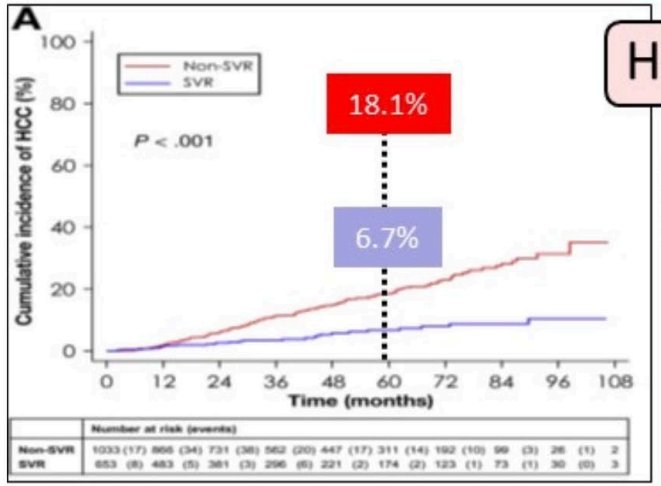
Papatheodiris,
Hepatology 2017

Alcohol (n=652)



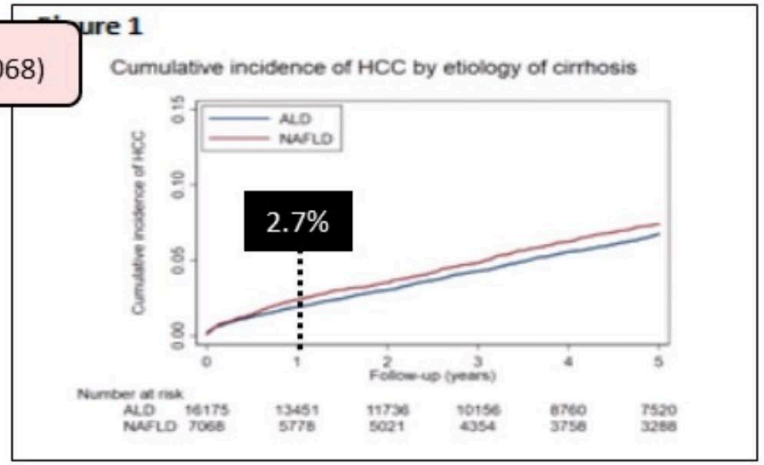
Ganne-Carrié,
J Hepatology 2018

HCV (n=1372)



Nahon,
Gastroenterology 2017

NASH (n=7068)



Ioannou,
J Hepatology 2019

**Based on European multicentre prospective cohorts of patients included in surveillance programs*

CHC: un diagnostic souvent précoce

Centre Hépato-Biliaire
HOPITAL PAUL BROUSSE

Clinical Practice Guidelines

JOURNAL
OF HEPATOLOGY

EASL
The Home of Hepatology

EASL Clinical Practice Guidelines on the management of hepatocellular carcinoma☆

European Association for the Study of the Liver*

Journal of Hepatology, **July 2024**.

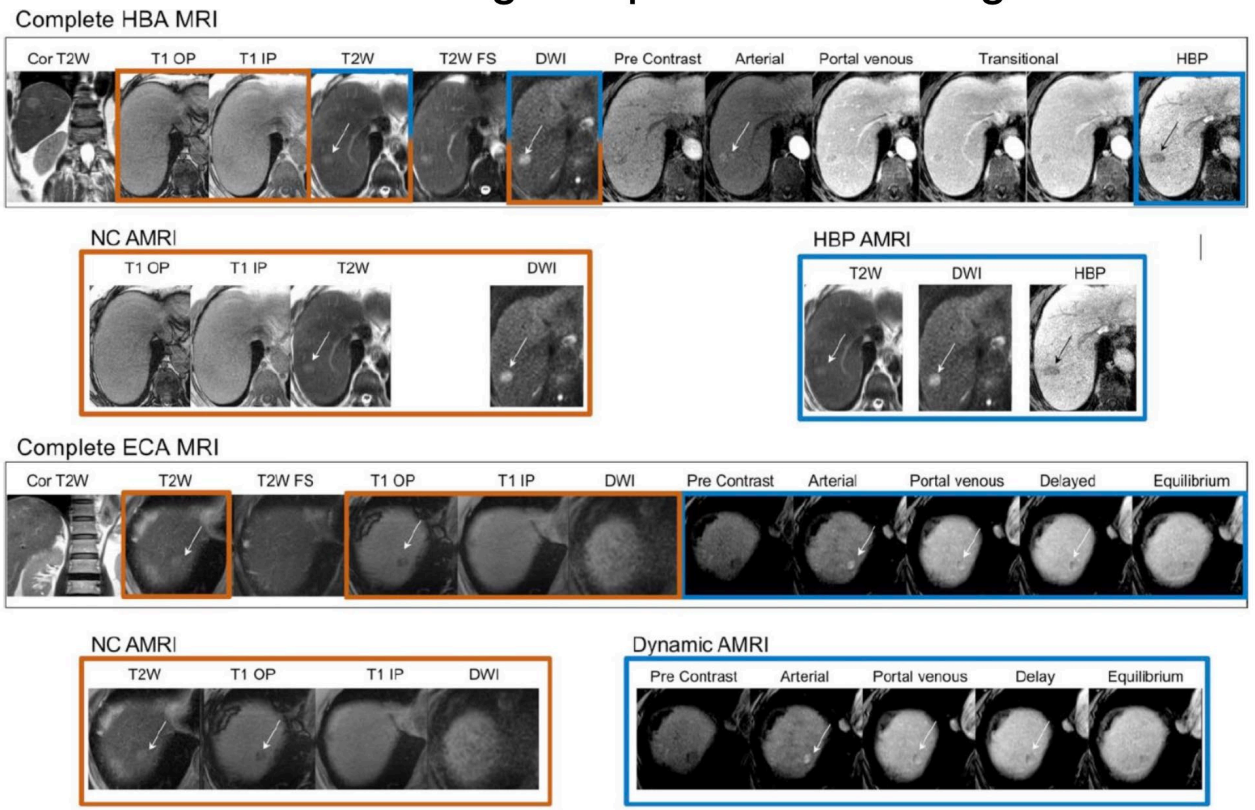
Recommendation

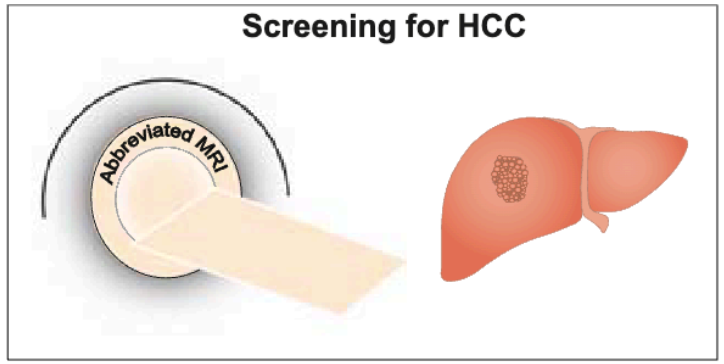
- An ultrasound examination of the liver every 6 months is recommended for screening of HCC. The combined use of ultrasound with AFP increases sensitivity while decreasing specificity and is a reasonable option. There is limited data to support the use of other promising imaging modalities such as abbreviated MR or serum biomarkers **(LoE 3, strong recommendation, consensus).**

CHC: IRM abrégée pour le dépistage ?

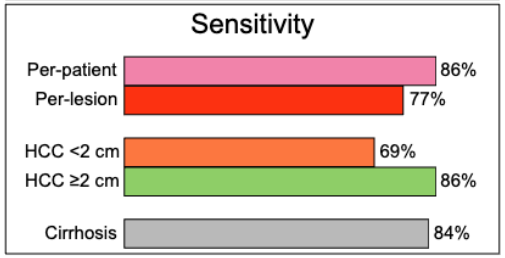
Centre Hépato-Biliaire

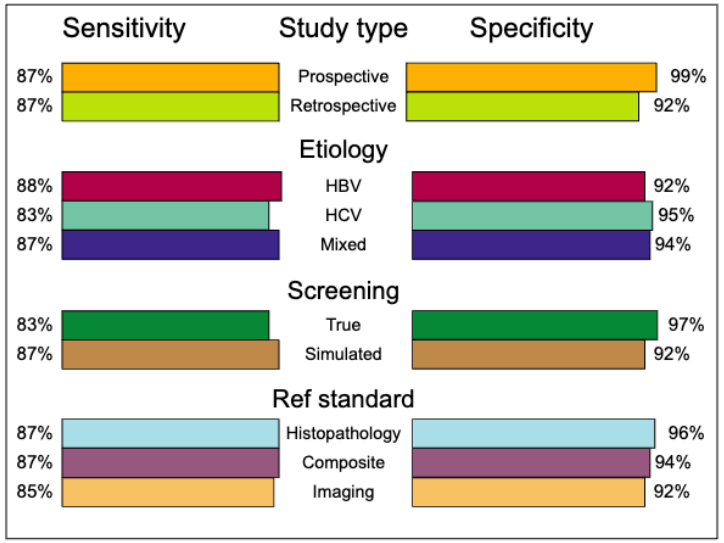
IRM abrégée = protocoles d'imagerie <10min

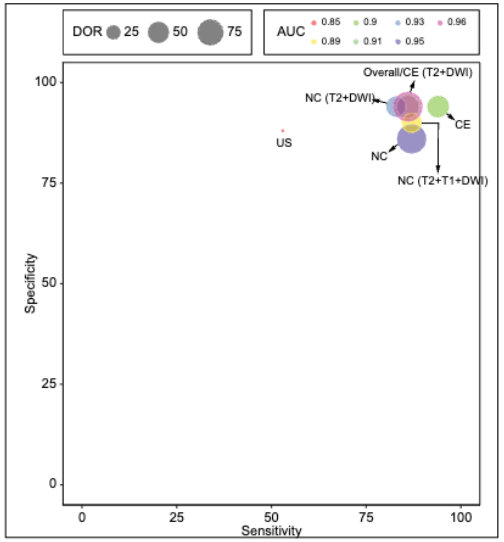




Systematic review and metaanalysis
15 studies, 2,807 screened patients,
917 patients with HCCs







Brunsing RL et al. Hepatoma Res 2022

Gupta P et al. J Hepatol 2021 (méta-analyse)

Petit CHC

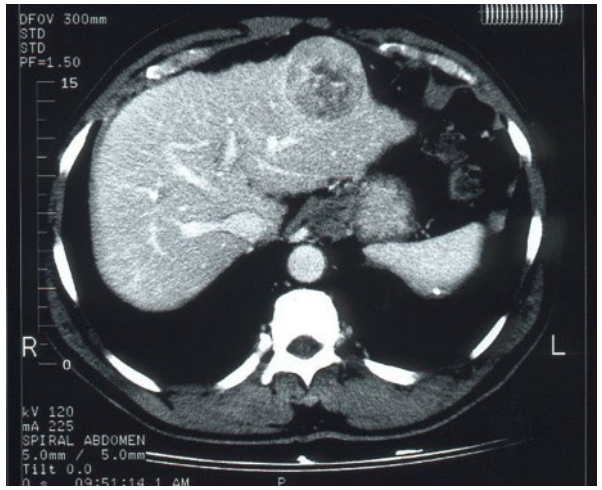
Quel traitement proposer ?

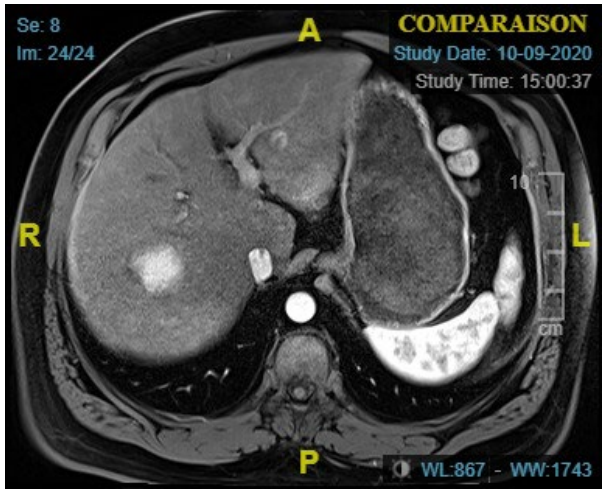
Traitement du CHC

Dépend de 3 critères

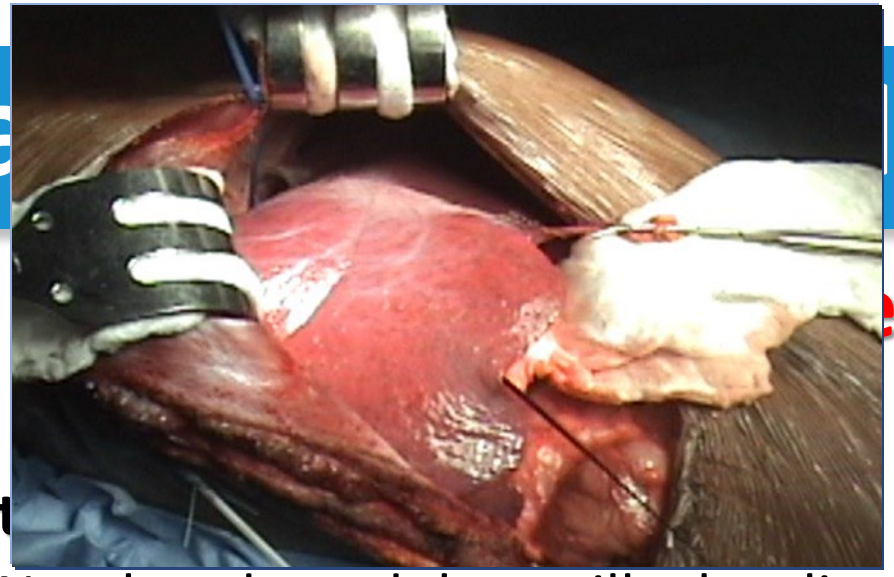
1) critères liés au CHC

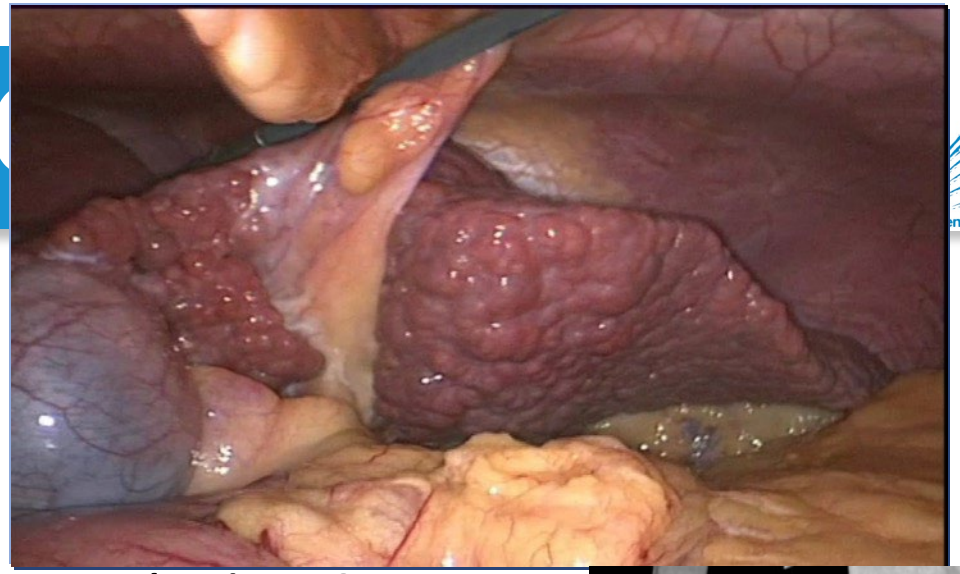
- Nombre de nodules, taille, localisation, récidive ?
- Extension loco-régionale (vasculaire – thrombose porte/VCI/VSH, adénopathies)
- Métastases à distance
- Alpha Fœtoprotéine





Tra





1) crit

- Nombre de nodules, taille, localisation, récidive ?
- Extension loco-régionale (vasculaire – thrombose porte, adénopa
- Métastases à distance
- Alpha Fœtoprotéine

2) critères liés à la cirrhose

- Réserve fonctionnelle hépatique / fonction hépatique
- Hypertension portale, ascite

Traitement du CHC

Dépend de 3 critères

1) critères liés au CHC

- Nomb
- Exte
- Méta
- Alph

2) critères

- Réser
- Hypertension portale, ascite

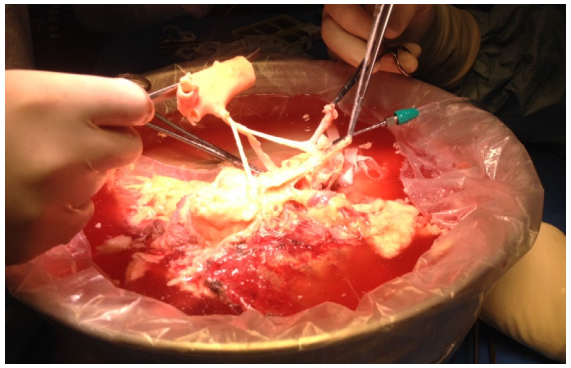
Bilan de ces trois critères avant décision thérapeutique

3) critères liés au patient : âge, état général, comorbidités

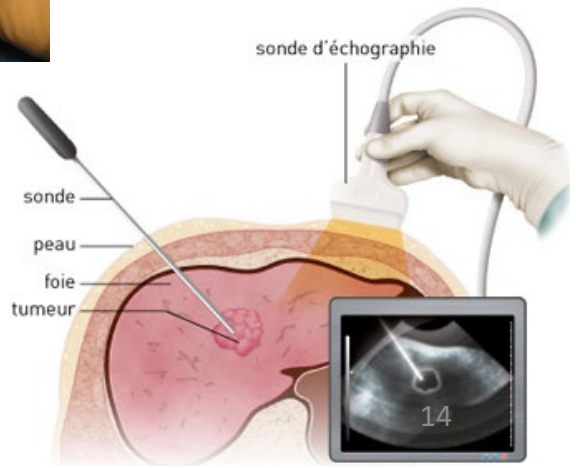
3 traitements à visée curative

- Hépatectomie partielle

- Transplantation hépatique

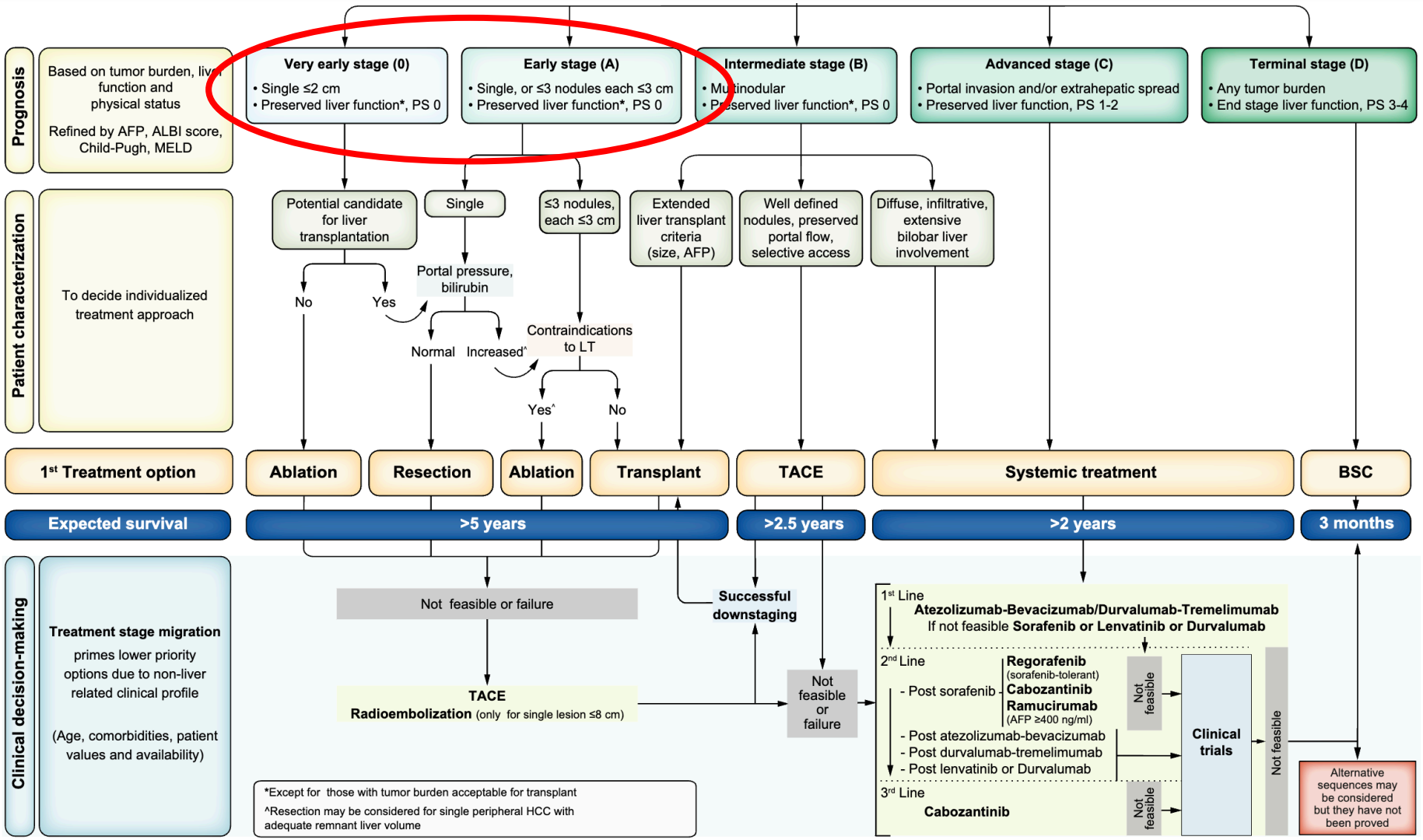


- Destructions percutanées



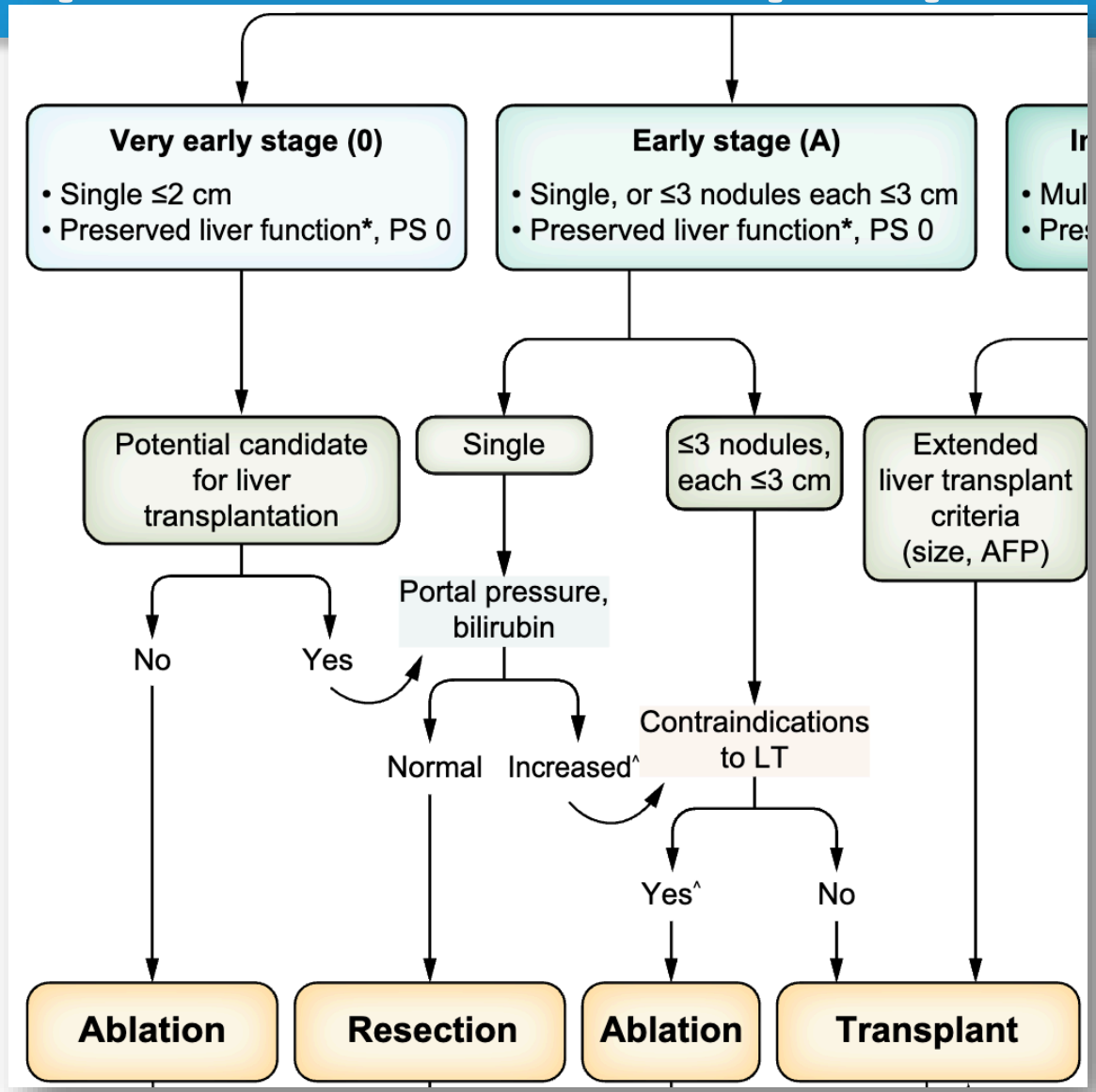
- (PAS de place pour la RT ou CEIA)

CHC: quel traitement proposer ?



Reig et al. J Hepatol 2022 (BCLC)

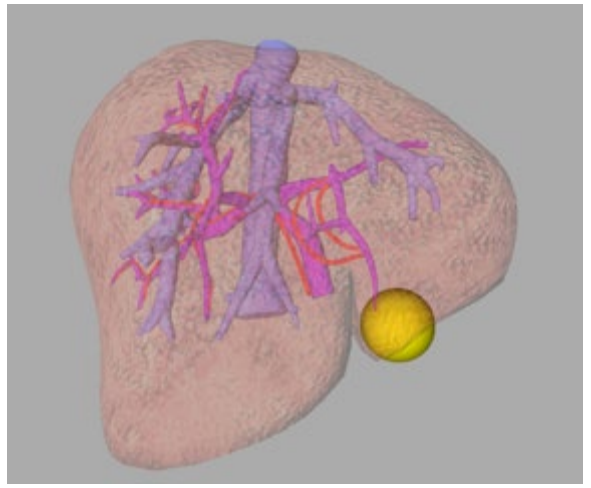
Petit CHC: quel traitement proposer ?

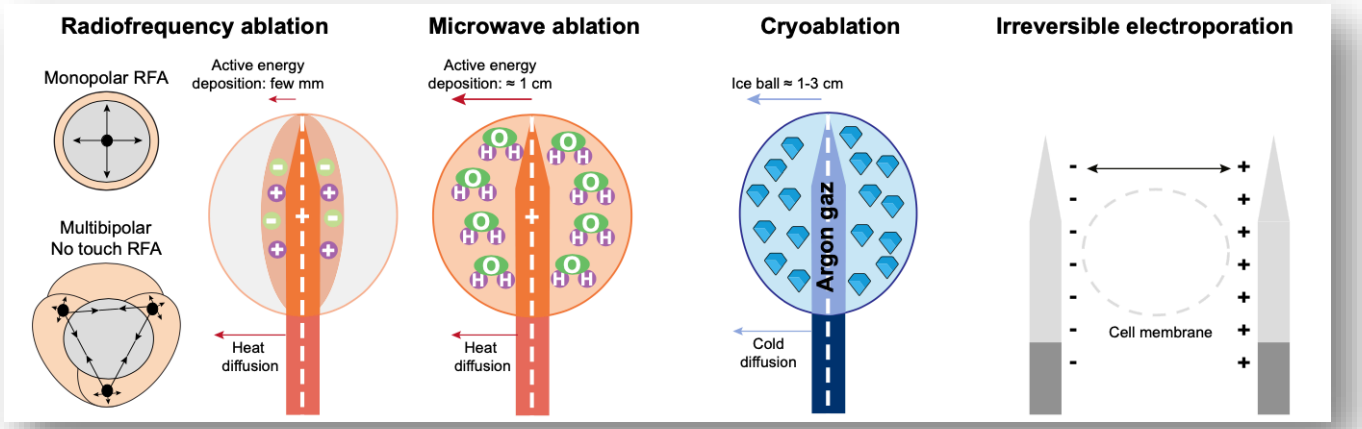


Reig et al. J Hepatol 2022 (BCLC)

Importance de la localisation !

Versus





Destruction percutanée vs chirurgie ?

Tableau 2 : Critères de choix entre destruction percutanée et résection chirurgicale pour les tumeurs de moins de 5 cm

		Destruction percutanée	Résection
Nombre et taille des nodules	Nodule unique	≤ 3 cm	Non limitant
	≥ 2 nodules	2 à 3 nodules, zones éloignées	2 à 3 nodules, dans le même segment
Localisation des nodules		Non limitant hormis convergence biliaire, organe de voisinage	Lésions superficielles et antérieures, et/ou permettant une épargne parenchymateuse
Fonction hépatique		Child A	Child A, meld < 10
Hypertension portale		Non limitant	Limitant
Critère d'aggressivité tumorale en IRM		Non	Oui

AFEF SOCIÉTÉ FRANÇAISE D'HÉPATOLOGIE

Février 2025

Quelle destruction percutanée ?

Techniques d'ablation	Indications/Intérêts	Performances
Radiofréquence monopolaire	- Lésions moins de 3 cm	- Pas de différence de performance (récidive, survie globale) RF monopolaire et micro-onde (Grade 1)
Micro-onde	- Lésions moins de 3 cm - Proximité vaisseaux car moins sensible « heat sink effect » (théorique) - Lésions multiples car temps d'ablation courts	- Pas de différence de performance (récidive, survie globale) RF monopolaire et micro-onde (Grade 1) - Diminution du taux de récidive pour les lésions proches des gros vaisseaux (Grade 2)
Radiofréquence multipolaire multi aiguilles	- Lésions jusqu'à 5 cm - Lésion sous capsulaire - Proximité des vaisseaux (dépose de plus d'énergie)	- Diminution du taux de récidive par rapport à RF monopolaire et micro-onde (Grade 1)
Ablation monopolaire multi aiguilles	- Lésions moins de 3 cm - Lésion sous capsulaire	- Diminution du taux de récidive par rapport à radio fréquence ou micro-onde monopolaire – mono aiguille (Grade 2)
Electroporation irreversible	- Moins de complication - Respect des structures vasculaires et biliaires	A valider

Février 2025

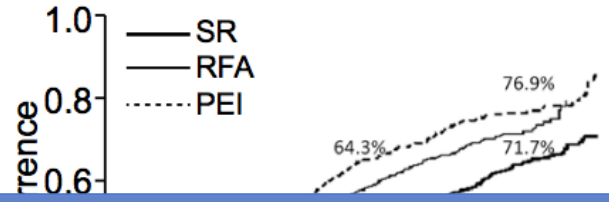
Research Article

EASL EUROPEAN ASSOCIATION FOR THE STUDY OF THE LIVER | JOURNAL OF HEPATOLOGY

Comparison of resection and ablation for hepatocellular carcinoma: A cohort study based on a Japanese nationwide survey

Kiyoshi Hasegawa[1,†], Norihiro Kokudo[1,*,†], Masatoshi Makuuchi[2,†], Namiki Izumi[3,†], Takafumi Ichida[4,†], Masatoshi Kudo[5,†], Yonson Ku[6,†], Michiie Sakamoto[7,†], Osamu Nakashima[8,†],

2013



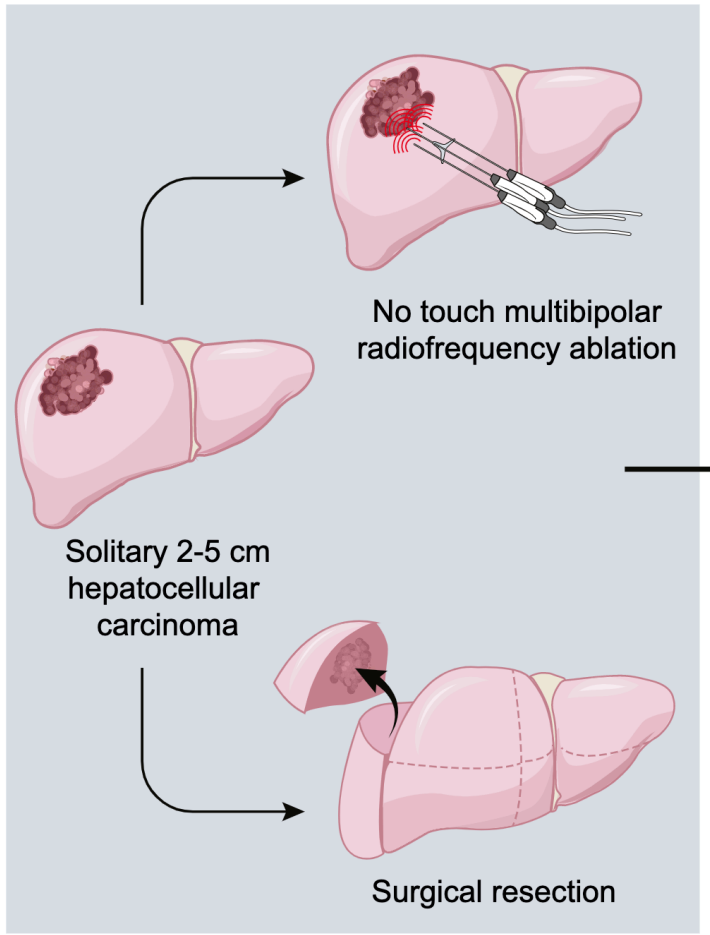
≤3cm

Mêmes conclusions si <2cm, nodule unique !!!

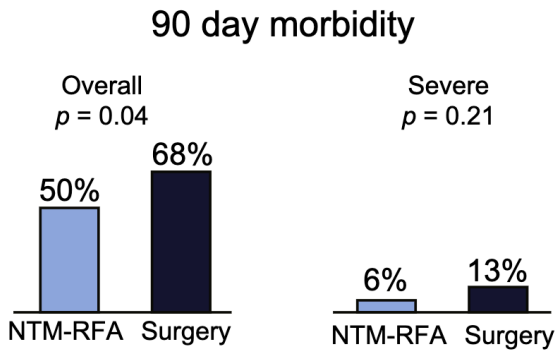
Patients at risk							
SR	5361	3265	1844	1039	451	189	15
RFA	5548	2954	1396	591	225	62	4
PEI	2059	1154	583	304	172	90	15

Fig. 2. Time to recurrence curves after surgical resection (SR), radiofrequency ablation (RFA), and percutaneous ethanol injection (PEI).

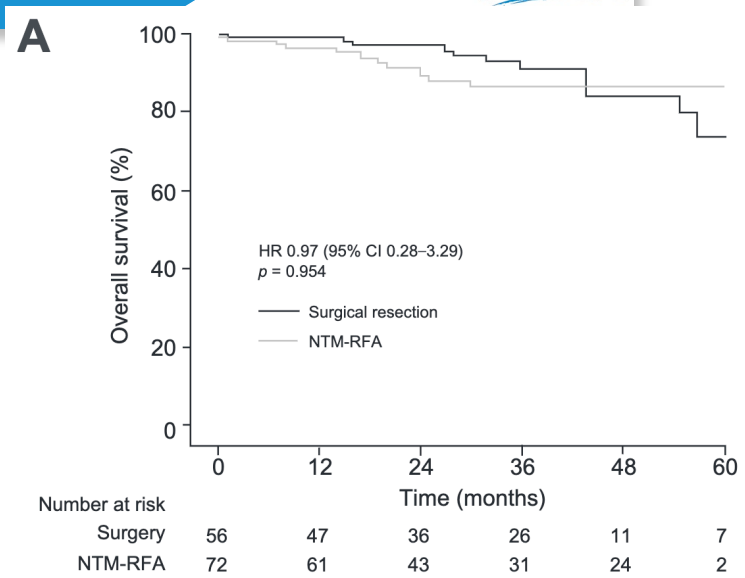
La destruction locale (bien faite…) ne fait pas si mal entre 2 cm et 5 cm…



2012 – 2016 - Lyon



Local recurrence (%)



Mohkam et al. J Hep 2018

RF moins morbide (CHC unique < 5cm)

Table 2. Comparison of short-term outcome after IPTW adjustment.

	NTM–RFA	Surgery	*p* value
Number of patients	72	56	
90-day mortality	1 (1.4)	0 (0.0)	1.000
90-day morbidity			
Total	36 (50.0)	38 (67.9)	0.042
Severe	4 (5.6)	7 (12.5)	0.209
Clavien-Dindo grade			
1	8 (11.0)	1 (1.8)	
2	24 (32.9)	30 (54.5)	
3	3 (4.1)	3 (5.5)	
4	0 (0.0)	4 (7.1)	
5	1 (1.4)	0 (0.0)	
Post procedure ascites	1 (1.4)	18 (32.1)	<0.001
Respiratory complications	6 (8.3)	4 (7.1)	1.000
Wound infection	0 (0.0)	8 (14.3)	0.001
Intra–abdominal abscess	2 (2.8)	3 (5.4)	0.653
Hospital stay, days	7 (5–9)	12 (8–13)	<0.001
Liver transplantation			
Total no. of listed patients	21 (29.2)	15 (26.8)	0.766
Transplanted	15 (20.8)	9 (16.1)	0.494

82% laparotomies !!

Mohkam K et al. J Hepatol 2018

Laparoscopie > Laparotomie

OXFORD

BJS, 2021, **108**, 196–204

DOI: 10.1093/bjs/znaa041

Advance Access Publication Date: 6 January 2021

Original Article

Laparoscopic and open liver resection for hepatocellular carcinoma with Child–Pugh B cirrhosis: multicentre propensity score-matched study

R. I. Troisi [1,2,*], G. Berardi [1,2,3], Z. Morise[4], F. Cipriani [5], S. Ariizumi[6], C. Sposito[7], V. Panetta[8], I. Simonelli[8], S. Kim[9], B. K. P. Goh[10], S. Kubo[11], S. Tanaka [11], Y. Takeda[12], G. M. Ettorre[13], N. Russolillo [14], G. C. Wilson[15], M. Cimino[16], R. Montalti[17], M. C. Giglio [1], K. Igarashi[3], C.-Y. Chan[10], G. Torzilli[16], T. T. Cheung [18], V. Mazzaferro [7], H. Kaneko[19], A. Ferrero[14], D. A. Geller[15], H.-S. Han [9], A. Kanazawa[20], G. Wakabayashi[3], L. Aldrighetti [5] and M. Yamamoto[6]

Laparoscopie > Laparotomie

Centre Hépato-Biliaire

Table 3 Postoperative outcomes

	Open ($n = 100$)	Laparoscopic ($n = 100$)	$P^{\dagger}$
90-day mortality	4 (4.0)	2 (2.0)	0.687
90-day morbidity	51 (50)	38 (38.0)	0.041
Major morbidity (Clavien–Dindo grade > II)	21 (21.0)	7 (7.0)	0.010
Comprehensive Complication Index*	26 (9–100)	21 (9–100)	0.326‡
Type of complication			0.032
Ascites	38 (38.0)	26 (26.0)	
Liver failure	5 (5.0)	2 (2.0)	
Bile leak	1 (1.0)	1 (1.0)	
Abdominal collection	2 (2.0)	1 (1.0)	
Bleeding	1 (1.0)	0 (0)	
Pleural effusion	2 (2.0)	1 (1.0)	
Wound infection	2 (2.0)	2 (2.0)	
Other	0 (0)	5 (5.0)	
Hospital stay (days)*	18 (3–104)	7.5 (2–243)	0.058‡
Readmission within 90 days	8 (8.0)	11 (11.0)	0.362
R0 resection	96 (96.0)	95 (95.0)	0.502
Margin width (mm)*	5 (0–100)	4 (0–68)	0.768‡
Macrovascular invasion	7 (7.0)	10 (10.0)	0.214
Microvascular invasion	23 (23.0)	28 (28.0)	0.432
Capsular invasion	23 (23.0)	22 (22.0)	0.499
Necrosis	23 (23.0)	16 (16.0)	0.434
Satellite nodules	10 (10.0)	15 (15.0)	0.391

Values in parentheses are percentages unless indicated otherwise; *values are median (range). †χ^2 test, except. ‡Mann–Whitney *U* test.

Troisi R et al. BJS 2021

Moins d'insuffisance hépatique

An ordinal model to predict the risk of symptomatic liver failure in patients with cirrhosis undergoing hepatectomy

Mathieu Prodeau[1], Elodie Drumez[2], Alain Duhamel[2], Eric Vibert[3], Olivier Farges[4], Guillaume Lassailly[5], Jean-Yves Mabrut[6,7], Jean Hardwigsen[8,9], Jean-Marc Régimbeau[10,11], Olivier Soubrane[12], René Adam[13], François-René Pruvot[1], Emmanuel Boleslawski[1,14,*]

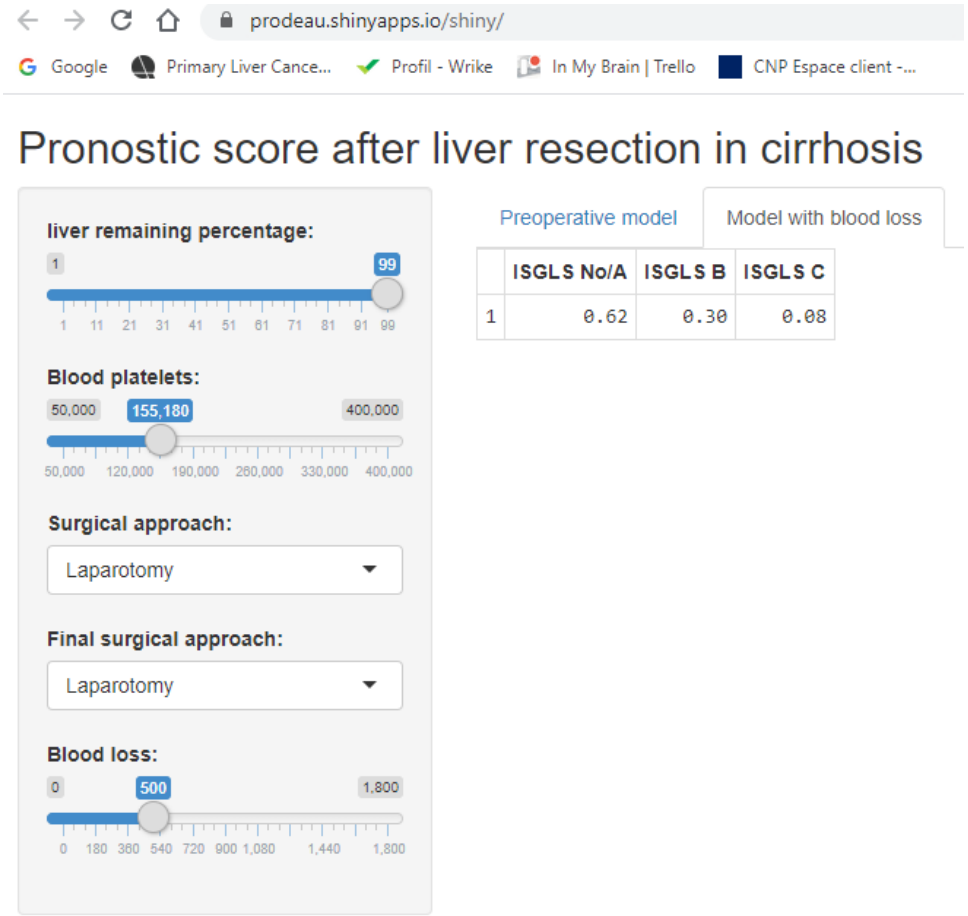
Journal of Hepatology 2019

2012 – 2016 / 6 Centres HPB / 343 pts Foie F4 dont 112 par coelioscopie
Décès postop : 5.25% - PostOp Liver Failure (Gd A 61% / Gb B 28% / Gd C 11%)

Table 3. Predictors of ISGLS grades[1] after multivariate imputed analysis.

Variables	Odds ratio (95% CI)	p value
Preoperative model		
Intended laparoscopic liver resection	0.31 (0.18–0.53)	<0.001
RTLV[†]	1.45 (1.43–1.47)	<0.001
Platelet count[&]	0.70 (0.56–0.89)	0.003
Postoperative model		
Non converted laparoscopic liver resection	0.25 (0.12–0.51)	<0.001
RTLV[†]	1.47 (1.44–1.49)	<0.001
Platelet count[&]	0.75 (0.59–0.95)	0.012
Blood loss		
Linear term	$1.2*10^{3}$ ($6.8*10^{1}$–$2.3*10^{3}$)	
Quadratic term	$6.7*10^{-2}$ ($3.9*10^{-3}$–1.2)	<0.001

ISGLS, International Study Group of Liver Surgery; RTLV, remnant to total liver volume.
Multivariate analyses were performed using an ordinal logistic regression model with proportional odds ratio after handling missing data by multiple imputations.
[1] Post-hepatectomy liver failure was classified according to the International Study Group of Liver Surgery (Rahbari, Surgery 2011).
[†] Odds ratio per 25 units decrease.
[&] Odds ratio per 10,000 units increase.



Démonstration du bénéfice de la coelioscopie sur foie pathologique

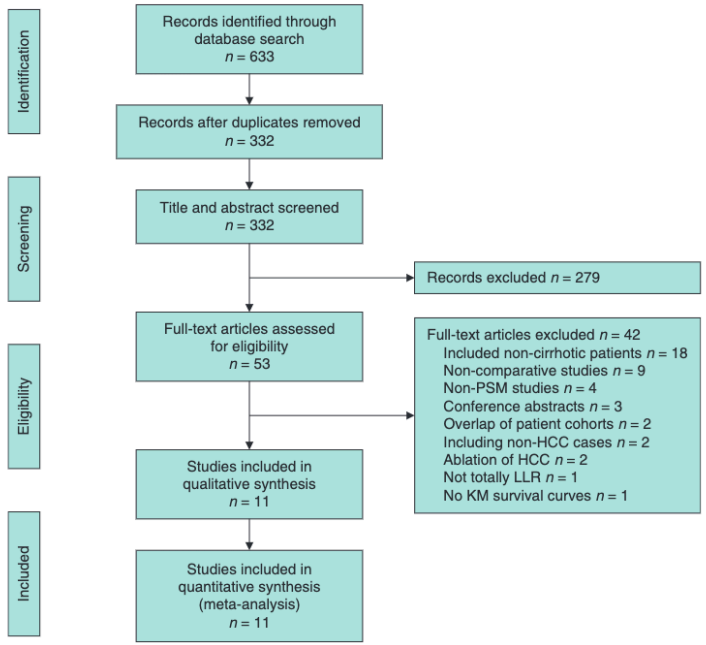
Laparoscopie > Laparotomie

OXFORD

BJS, 2022, 109, 21–29
https://doi.org/10.1093/bjs/znab376
Advance Access Publication Date: 10 November 2021
Systematic Review

Laparoscopic *versus* open resection of hepatocellular carcinoma in patients with cirrhosis: meta-analysis

Tousif Kabir [1,2], Zoe Z. Tan[2], Nicholas L. Syn [3], Eric Wu [3], J. Daryl Lin [3], Joseph J. Zhao [3], Alvin Y.H. Tan[1], Yong
Juinn H. Kam[1,2] and Brian K. P. Goh [2,4,*]



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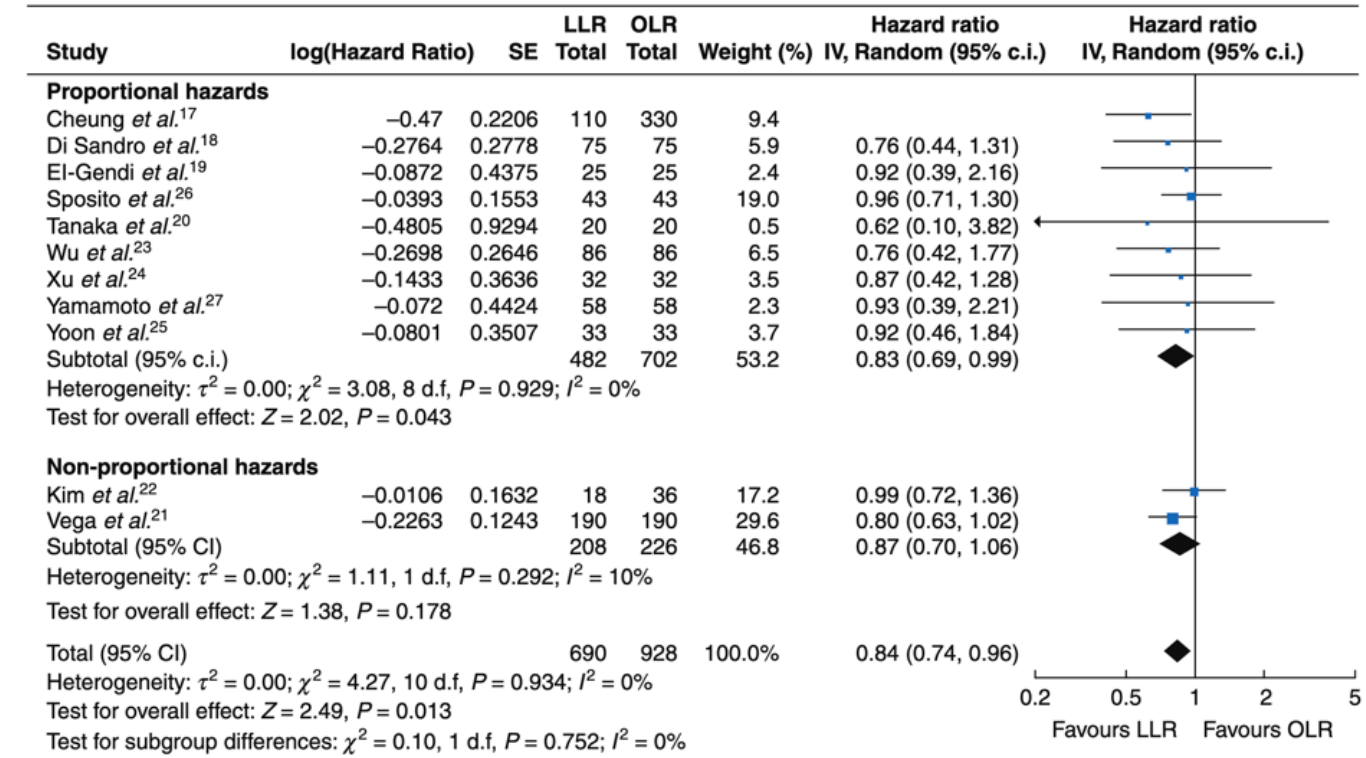

Fig. 2 Overall survival analysis

Résection coelioscopique

Centre Hépato-Biliaire

Au moment de la TH …

https://doi.org/10.1016/j.hpb.2024.06.001

HPB

2024

ORIGINAL ARTICLE

Initial laparoscopic liver resection is associated with reduced adhesions and transfusions at the time of salvage liver transplantation

Prisca Combari-Ancellin[1], Shinichiro Nakada[2], Éric Savier[1], Nicolas Golse[2], Matthieu Faron[3], Chetana Lim[1], Éric Vibert[2], Daniel Cherqui[2], Olivier Scatton[1] & Claire Goumard[1]

3. Durée opératoire diminuée

LapHCC (randomisation)

Centre Hépato-Biliaire — HOPITAL PAUL BROUSSE

NIH U.S. National Library of Medicine
ClinicalTrials.gov

Find Studies | About Studies | Submit Studies | Resources | About Site | PRS Login

Home > Search Results > Study Record Detail

Save this study

Trial record **1 of 41** for: lap hcc

Previous Study | Return to List | Next Study

Value of the Laparoscopic Approach in the Surgical Management of Resectable Hepatocellular Carcinoma (LapCHC)

The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been evaluated by the U.S. Federal Government. Know the risks and potential benefits of clinical studies and talk to your health care provider before participating. Read our disclaimer for details.

ClinicalTrials.gov Identifier: NCT04791735

Recruitment Status : Recruiting
First Posted : March 10, 2021
Last Update Posted : March 22, 2022

See Contacts and Locations

Sponsor:
Assistance Publique - Hôpitaux de Paris

Information provided by (Responsible Party):
Assistance Publique - Hôpitaux de Paris

Study Details | Tabular View | No Results Posted | Disclaimer | How to Read a Study Record

Study Description Go to

Brief Summary:

Hepatocellular carcinoma treated by laparotomy or **laparoscopic** Multicenter prospective, open, superiority, controlled, randomized, clinical trial The primary objective of the study will be to demonstrate the superiority of the **laparoscopic** approach over the open approach in reducing postoperative morbidity in **HCC** patients.

Postoperative morbidity will be assessed using the Comprehensive Complication Index (CCI) within 90 days postoperatively or at any time during hospitalization

Condition or disease	Intervention/treatment	Phase
Hepatocellular Carcinoma	Procedure: **Laparoscopy** Procedure: Laparotomy	Not Applicable

Coelio ou robot ?

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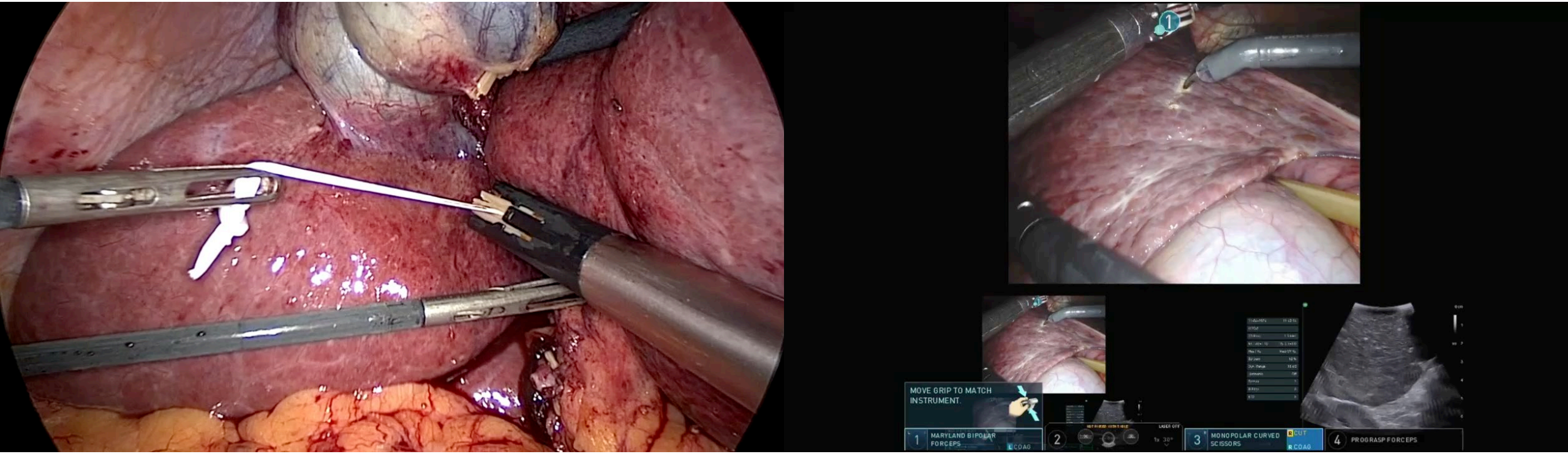
Résection S8 pour CHC / Cirrhose



Coelio ou robot ?

ORIGINAL ARTICLE

OPEN

Robotic Versus Laparoscopic Liver Resection in Various Settings

An International Multicenter Propensity Score Matched Study of 10.075 Patients

Ann Surg 2024

TABLE 2. Intra and Postoperative Outcomes of Minor Resections in the Anterolateral Segments Stratified by the Used Surgical Approach, After PSM

	Robotic (n = 743)	Laparoscopic (n = 743)	*P*
Intraoperative			
Pringle maneuver	196 (26.5)	247 (34.2)	<0.001
Pringle duration	25 (18.3, 37.8)	33.5 (20, 50)	0.023
Operative time	165 (120, 225)	160 (110, 235)	0.394
Intraoperative blood loss	100 (30, 200)	150 (50, 300)	<0.001
Transfusion of packed cells	19 (2.6)	36 (5.5)	0.010
No. of transfusions	2 (1, 3)	2 (1, 3)	NA
Intraoperative incidents			0.439
Grade 1	64 (8.8)	26 (3.9)	—
Grade 2	9 (1.2)	15 (2.2)	—
Grade 3	1 (0.1)	3 (0.4)	—
Conversion	9 (1.2)	35 (4.8)	<0.001
Postoperative			
Length of stay (d)	3.9 (2, 5)	4 (2, 6)	0.362
Overall morbidity	144 (19.4)	153 (20.8)	0.558
Severe morbidity	39 (5.3)	42 (5.7)	0.822
Readmission	39 (5.3)	28 (4.1)	0.314
90 d or in-hospital mortality	14 (1.9)	9 (1.2)	0.383
Resection margin status			0.124
Microscopically radical (R0)	536 (89.8)	549 (87.6)	—
Microscopically irradical (R1)	60 (10.1)	77 (12.3)	—
Macroscopically irradical (R2)	1 (0.2)	1 (0.2)	—
Prolonged length of stay*	227 (30.7)	250 (34.4)	0.130
Textbook outcome	564 (82)	508 (79.1)	0.452
Textbook outcome +	410 (58.5)	358 (53.5)	0.069

Coelio ou robot ?

Centre Hépato-Biliaire
HOPITAL PAUL BROUSSE

Systematic Review/Meta-analysis

INTERNATIONAL JOURNAL OF SURGERY

OPEN

Robotic versus laparoscopic liver resection: a systematic review and meta-analysis of comparative studies

Gabriela Pilz da Cunha, MD[a,b], Tijs J. Hoogteijling, MD[a,b], Marc G. Besselink, MD, PhD[a,b], Mohammad N. Alzoubi, MD, PhD[c], Rutger-Jan Swijnenburg, MD, PhD[a,b], Mohammad Abu Hilal, MD, PhD[c,d,*]

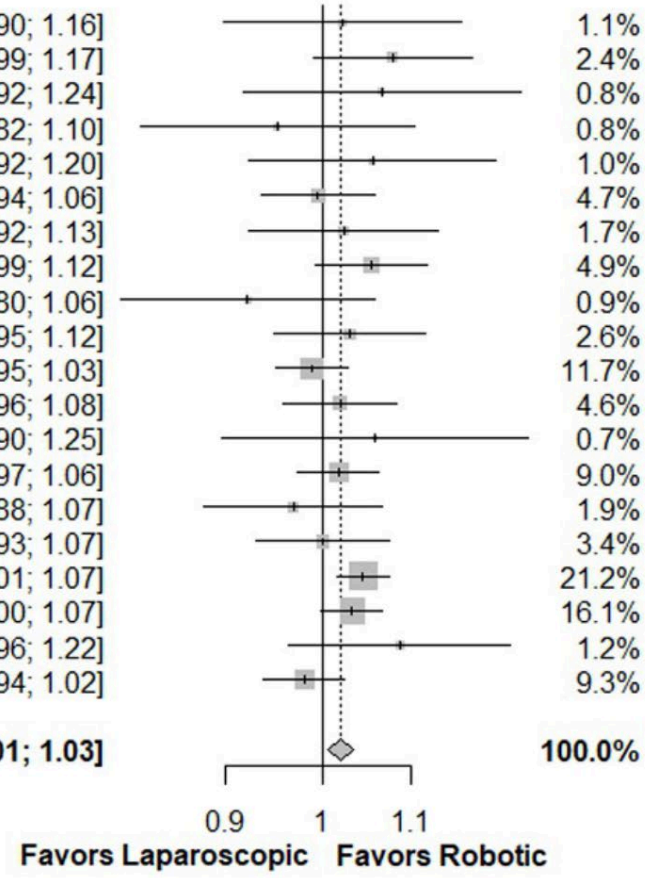
International Journal of Surgery (2025)

Coelio ou robot ?

Robot = Plus de résections R0

Study	Events RLR	Total RLR	Events LLR	Total LLR	RR	95%CI	Weight
Tsung et al. 2014, Minor	26	28	60	66	1.02	[0.90; 1.16]	1.1%
Tsung et al. 2014, Major	14	14	38	41	1.08	[0.99; 1.17]	2.4%
Lim et al. 2019	49	55	46	55	1.07	[0.92; 1.24]	0.8%
Beard et al. 2020	84	114	89	115	0.95	[0.82; 1.10]	0.8%
Chiow et al. 2021	70	81	68	83	1.05	[0.92; 1.20]	1.0%
Kamel et al. 2022	161	175	160	173	0.99	[0.94; 1.06]	4.7%
D'Silva et al. 2022	87	105	261	322	1.02	[0.92; 1.13]	1.7%
Kadam et al. 2022	186	210	513	610	1.05	[0.99; 1.12]	4.9%
Schmelzle et al. 2022	81	106	87	105	0.92	[0.80; 1.06]	0.9%
Sucandy et al. 2022	119	131	120	136	1.03	[0.95; 1.12]	2.6%
Kato et al. 2023	86	88	89	90	0.99	[0.95; 1.03]	11.7%
Zhu et al. 2023	55	56	54	56	1.02	[0.96; 1.08]	4.6%
Cheung et al. 2023	34	41	109	139	1.06	[0.90; 1.25]	0.7%
Chong et al. 2023	144	148	134	140	1.02	[0.97; 1.06]	9.0%
Kwak et al. 2023	61	67	63	67	0.97	[0.88; 1.07]	1.9%
Birgin et al. 2024	38	39	38	39	1.00	[0.93; 1.07]	3.4%
Sijberden et al. 2024	1129	1257	1126	1309	1.04	[1.01; 1.07]	21.2%
Li et al. 2024	96	97	234	244	1.03	[1.00; 1.07]	16.1%
Ielpo et al. 2024	88	100	81	100	1.09	[0.96; 1.22]	1.2%
Pilz da Cunha et al. 2024	539	628	544	621	0.98	[0.94; 1.02]	9.3%
Random effects model		**3540**		**4511**	**1.02**	**[1.01; 1.03]**	**100.0%**

Heterogeneity: $I^2 = 0.0\%$, $\tau^2 = 0$, $p = 0.4880$
Test for overall effect: $t_{19} = 2.91$ ($p = 0.0089$)



Cunha et al. Int J Surgery 2025

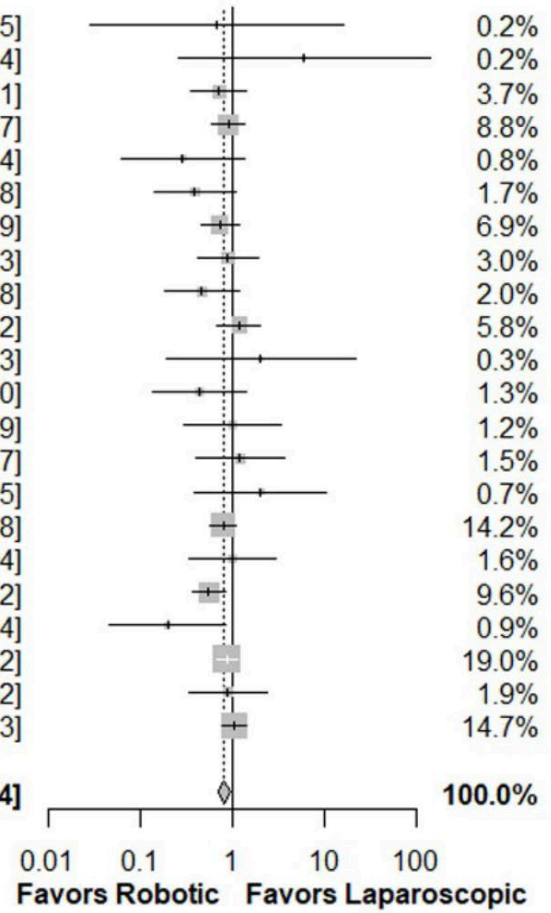
Coelio ou robot ?

Robot = Moindre morbidité sévère

H

Study	Events RLR	Total RLR	Events LLR	Total LLR	RR	95%CI	Weight
Tsung et al. 2014, Minor	0	36	1	72	0.66	[0.03; 15.85]	0.2%
Tsung et al. 2014, Major	1	21	0	42	5.93	[0.25; 139.54]	0.2%
Beard et al. 2020	12	115	17	115	0.71	[0.35; 1.41]	3.7%
Fagenson et al. 2021	34	240	38	240	0.89	[0.58; 1.37]	8.8%
Chiow et al. 2021	2	88	7	88	0.29	[0.06; 1.34]	0.8%
D'Silva et al. 2022	4	127	31	381	0.39	[0.14; 1.08]	1.7%
Chong et al. 2022	24	220	33	220	0.73	[0.44; 1.19]	6.9%
Kadam et al. 2022	8	261	27	783	0.89	[0.41; 1.93]	3.0%
Sucandy et al. 2022	6	164	13	164	0.46	[0.18; 1.18]	2.0%
Krenzien et al. 2023	27	449	23	449	1.17	[0.68; 2.02]	5.8%
Zhu et al. 2023	2	56	1	56	2.00	[0.19; 21.43]	0.3%
Cheung et al. 2023	3	73	21	219	0.43	[0.13; 1.40]	1.3%
Chong et al. 2023	5	179	5	179	1.00	[0.29; 3.39]	1.2%
Kwak et al. 2023	6	48	5	48	1.20	[0.39; 3.67]	1.5%
Chen et al. 2023	4	67	2	67	2.00	[0.38; 10.55]	0.7%
Liu et al. 2023	62	841	79	841	0.78	[0.57; 1.08]	14.2%
Lopez-Lopez et al. 2024	6	64	6	64	1.00	[0.34; 2.94]	1.6%
Hu et al. 2024	35	1401	64	1401	0.55	[0.36; 0.82]	9.6%
Huang et al. 2024	2	43	10	42	0.20	[0.05; 0.84]	0.9%
Sijberden et al. 2024	97	1492	113	1497	0.86	[0.66; 1.12]	19.0%
Ielpo et al. 2024	7	100	8	100	0.88	[0.33; 2.32]	1.9%
Pilz da Cunha et al. 2024	73	777	70	778	1.04	[0.76; 1.43]	14.7%
Random effects model		**6862**		**7846**	**0.81**	**[0.70; 0.94]**	**100.0%**

Heterogeneity: $I^2 = 7.4\%$, $\tau^2 = 0.0078$, $p = 0.3610$
Test for overall effect: $t_{21} = -3.02$ ($p = 0.0065$)



Cunha et al. Int J Surgery 2025

Coelio ou robot ?

ORIGINAL ARTICLE

Recommendations on Robotic Hepato-Pancreato-Biliary Surgery. The Paris Jury-Based Consensus Conference

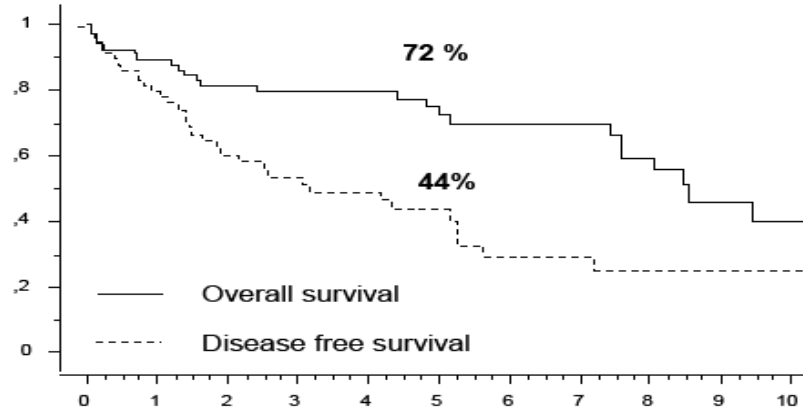
Christian Hobeika, MD, PhD, Matthias Pfister, MD,†‡ David Geller, MD,§ Allan Tsung, MD,‖ Albert Chan, MD,¶ Roberto Ivan Troisi, MD, PhD,# Mohamed Rela, MD,** Fabrizio Di Benedetto, MD, PhD,†† Iswanto Sucandy, MD,‡‡ Yuichi Nagakawa, MD, PhD,§§ R. Matthew Walsh, MD,‖‖ David Kooby, MD,¶¶ Jeffrey Barkun, MD,##✉ Olivier Soubrane, MD, PhD,***✉ Pierre-Alain Clavien, MD, PhD,†‡✉ and on behalf of the ROBOT4HPB consensus group*

Annals of Surgery • Volume 281, Number 1, January 2025

17. Compared with laparoscopy, robotic major liver resection performed with expertise is associated with a lower conversion rate, shorter learning curve, and similar postoperative outcomes.

Statement: Conditional, [Level of Evidence: Low]

Récidive après hépatectomie pour CHC



Cherqui et al. Ann Surg 2009

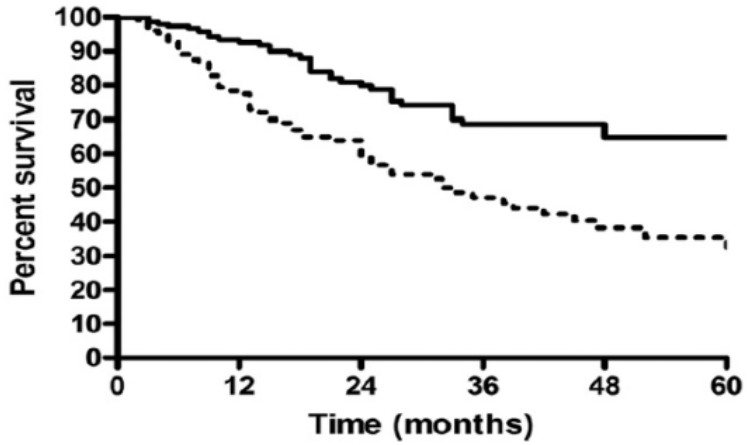
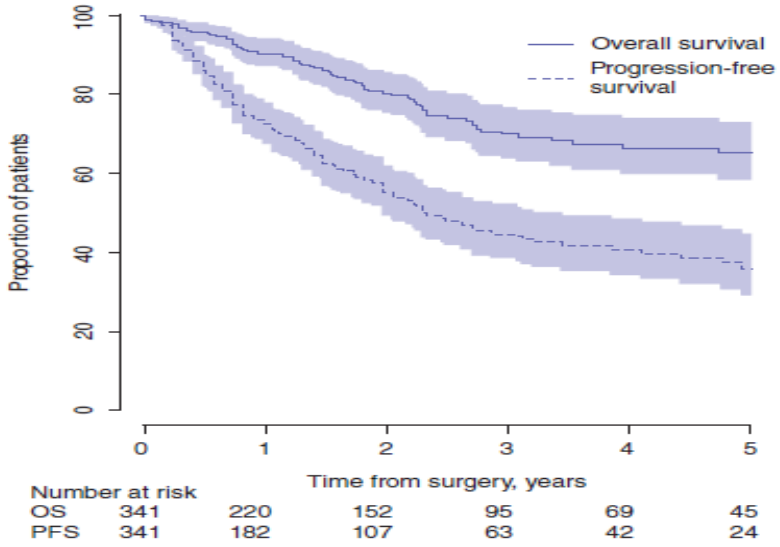


Figure 1. Overall (continuous line) and disease-free (dotted line) survival curves.

Dagher et al. Ann Surg 2009



Soubrane et al. HPB 2013

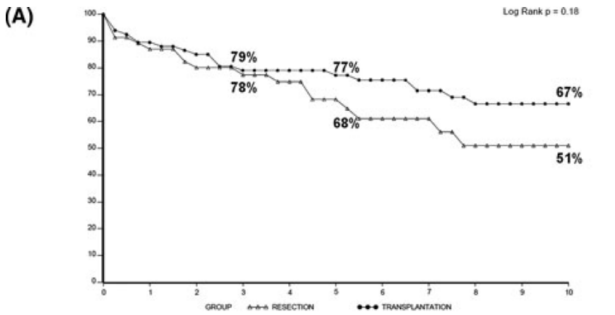
TH = Meilleur traitement…

Resection or Transplantation for Early Hepatocellular Carcinoma in a Cirrhotic Liver

Does Size Define the Best Oncological Strategy?

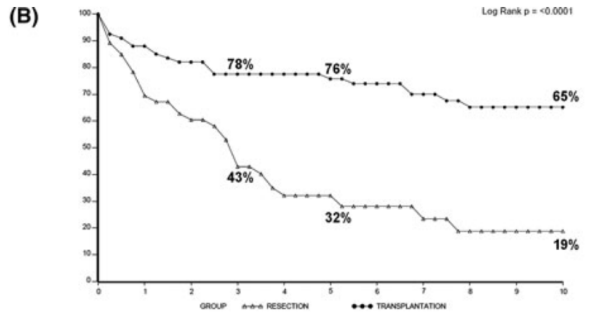
Rene Adam, MD, PhD,†‡ Prashant Bhangui, MS,* Eric Vibert, MD,*†‡ Daniel Azoulay, MD, PhD,*†§ Gilles Pelletier, MD, PhD,* Jean-Charles Duclos-Vallée, MD, PhD,*†‡ Didier Samuel, MD, PhD,*†‡ Catherine Guettier, MD,* and Denis Castaing, MD*†‡*

OS



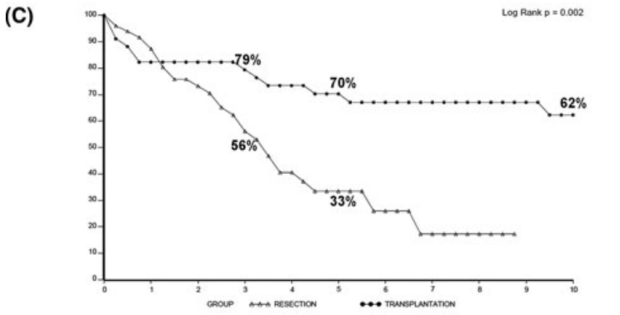
	Total	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs
RESECTION	47	39	33	30	25	20	14	13	10	9	6
TRANSPLANTATION	67	60	57	52	50	44	42	31	27	25	22

DFS

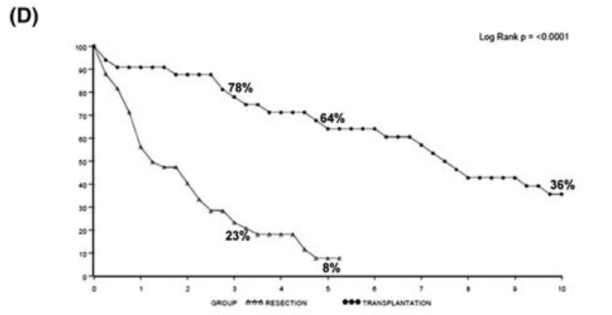


	Total	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs
RESECTION	47	31	26	17	11	8	6	5	4	3	2
TRANSPLANTATION	67	59	55	51	49	43	41	31	27	25	22

CHC ≤3cm



	Total	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs
RESECTION	50	39	28	18	12	7	3	2	1	0	0
TRANSPLANTATION	34	28	28	27	24	22	21	19	17	14	12



	Total	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs
RESECTION	49	26	17	9	6	2	0	0	0	0	0
TRANSPLANTATION	34	28	27	24	21	18	18	16	12	12	10

CHC 3-5cm

FIGURE 2. A, OS for small HCC-cirr (<3 cm) resection versus transplantation. B, RFS for small HCC-cirr (<3 cm) resection versus transplantation. C, OS for HCC-cirr (3–5 cm), resection versus transplantation. D, RFS for HCC-cirr (3–5 cm), resection versus transplantation.

Futur = TH mini-invasive ?!?!

SURGICAL PERSPECTIVE

Full Robotic Whole Graft Liver Transplantation

A Step Into The Future

Hugo Pinto-Marques, MD, PhD,✉ Mafalda Sobral, MD,*
Paolo Magistri, MD,† Sílvia Gomes da Silva, MD, Gian Piero Guerrini, MD,†*
Raquel Mega, MD, Cristiano Guidetti, MD,† João Santos Coelho, MD,**
Stefano Di Sandro, MD,† and Fabrizio Di Benedetto, MD, PhD†✉

Ann Surg • Volume 281, Number 1, January 2025

Traitements mini-invasifs du CHC

- **Pénurie d'organes, pas de TH pour tous les patients…**

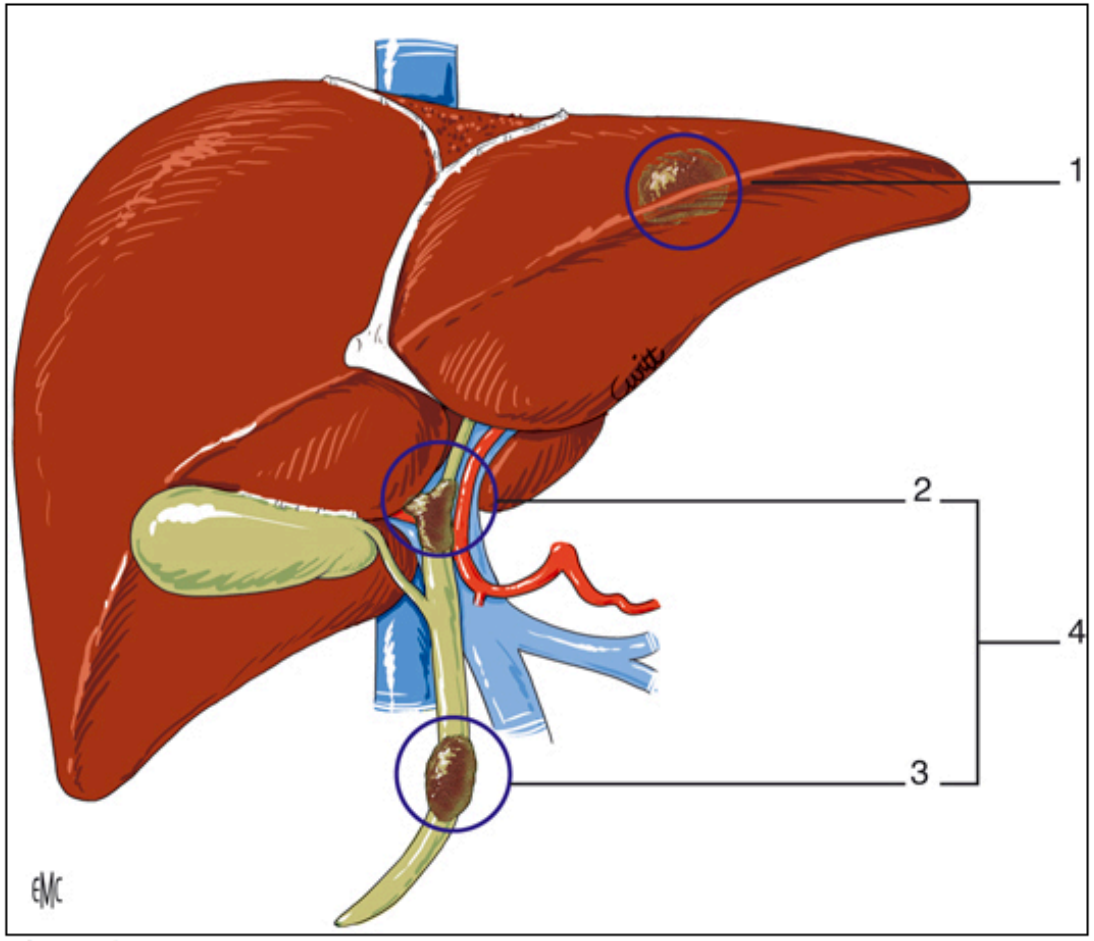
- **Destruction percutanée:**
  - **ok si T<2-3 cm, risque de dissémination si sous-capsulaire, plaies biliaires (nécrose)**

- **Chir mini-invasive:**
  - **Moindre risque de décompensation (*versus* open)**
  - **Suites opératoires améliorées (*versus* open)**
  - **Réopérations (TH) plus simples si récidive (*versus* open)**

(Petit) CCK intra-hépatique

Quel traitement proposer ?

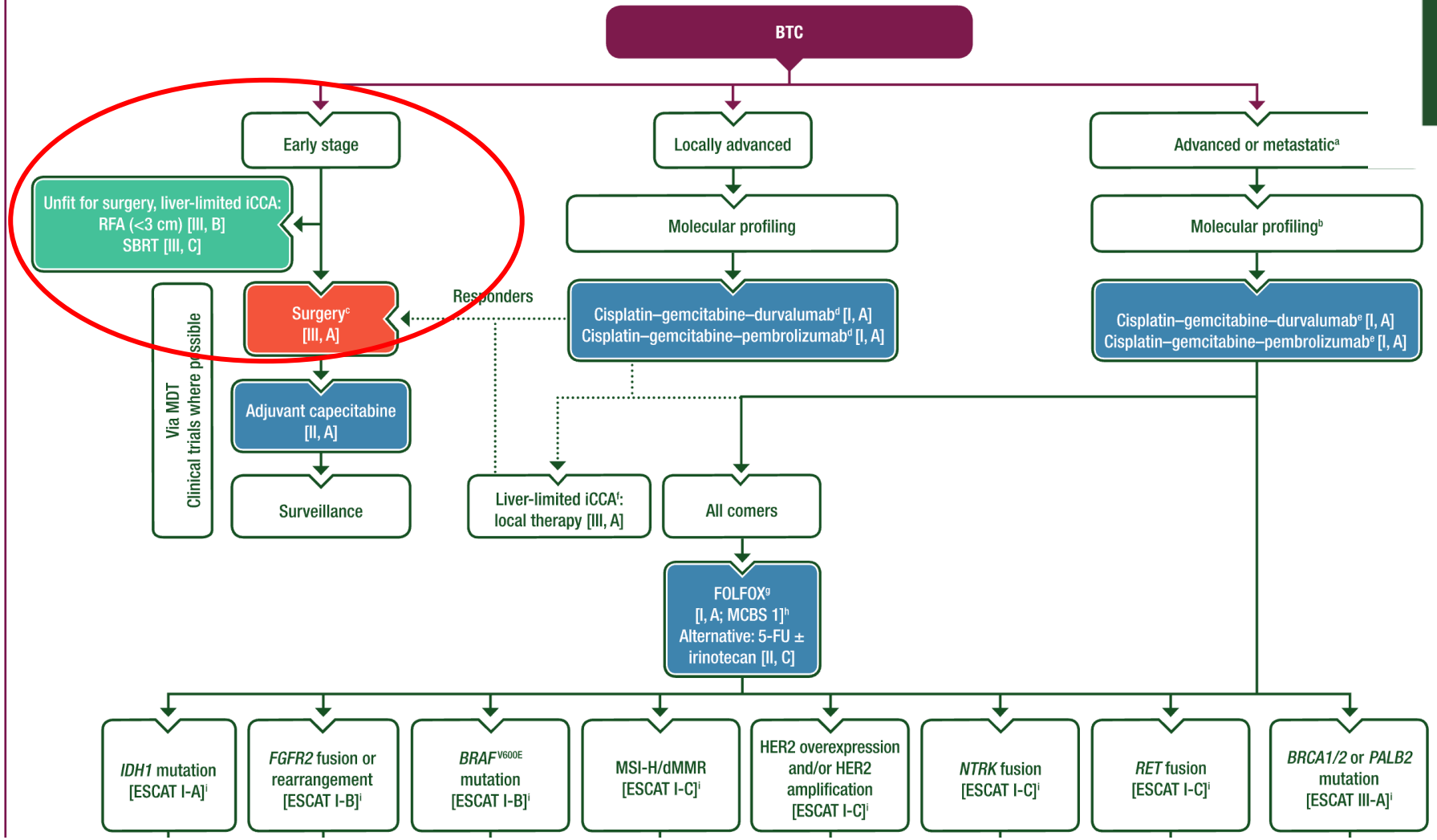
Rappel cholangiocarcinomeS



Golse N, Vibert E. *EMC 2018*

1. CCK intrahépatique (anciennement périphérique) ; 2. CCK périhilaire (anciennement Kltaskin); 3. CCK distal ; 4. CCK anciennement nommés extrahépatiques.

CCK IH : pas de traitement percutané

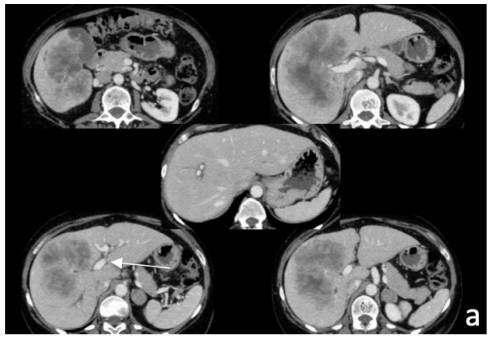


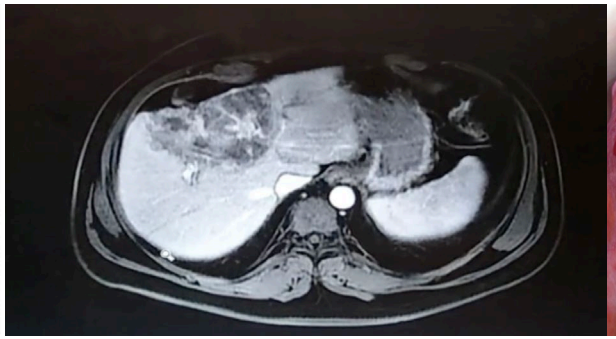
ESMO GOOD SCIENCE BETTER MEDICINE BEST PRACTICE

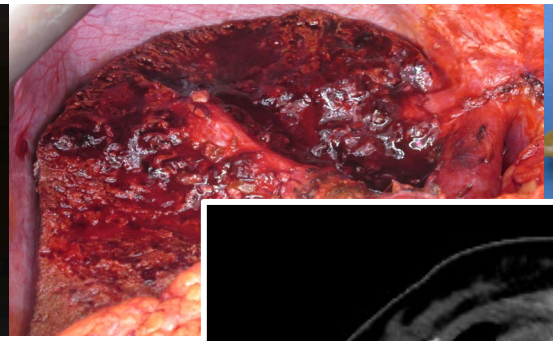
ANNALS OF ONCOLOGY driving innovation in oncology

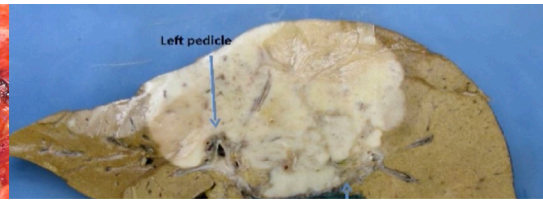
2025

Quelle voie d'abord ?







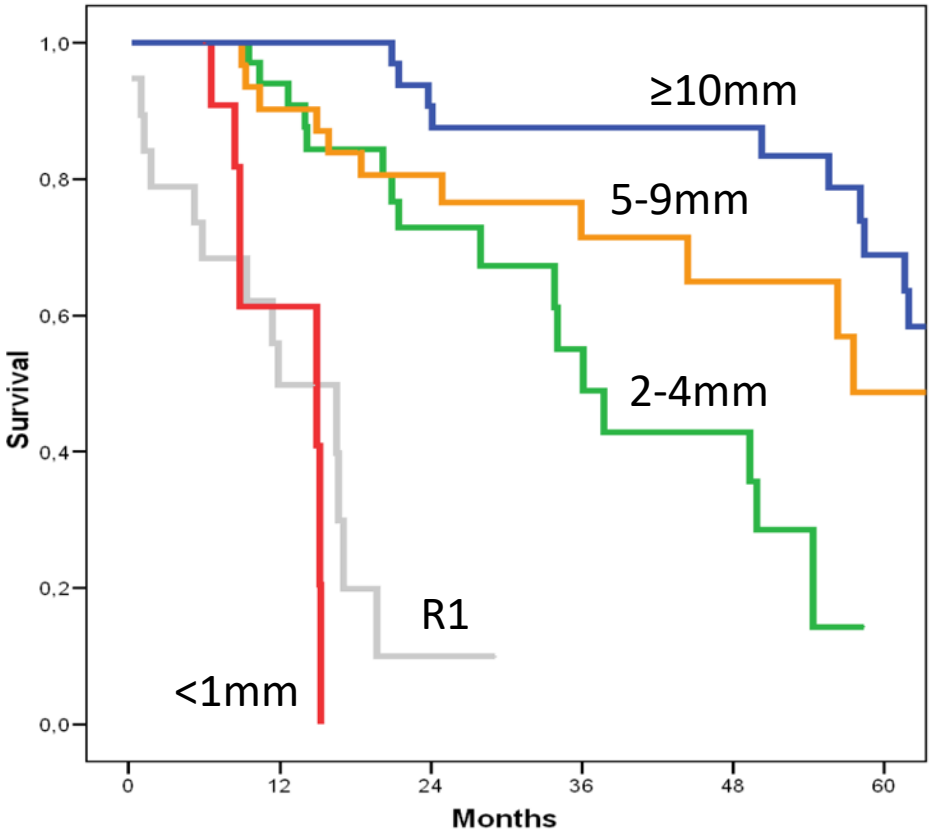


- Souvent de larges tumeurs = larges résections
- Pronostic dépend des marges de résection
- Curage ganglionnaire nécessaire

- Donc voie mini-invasive très rare, sauf exceptionnelles petites lésions < 5cm *(politique P. Brousse)*

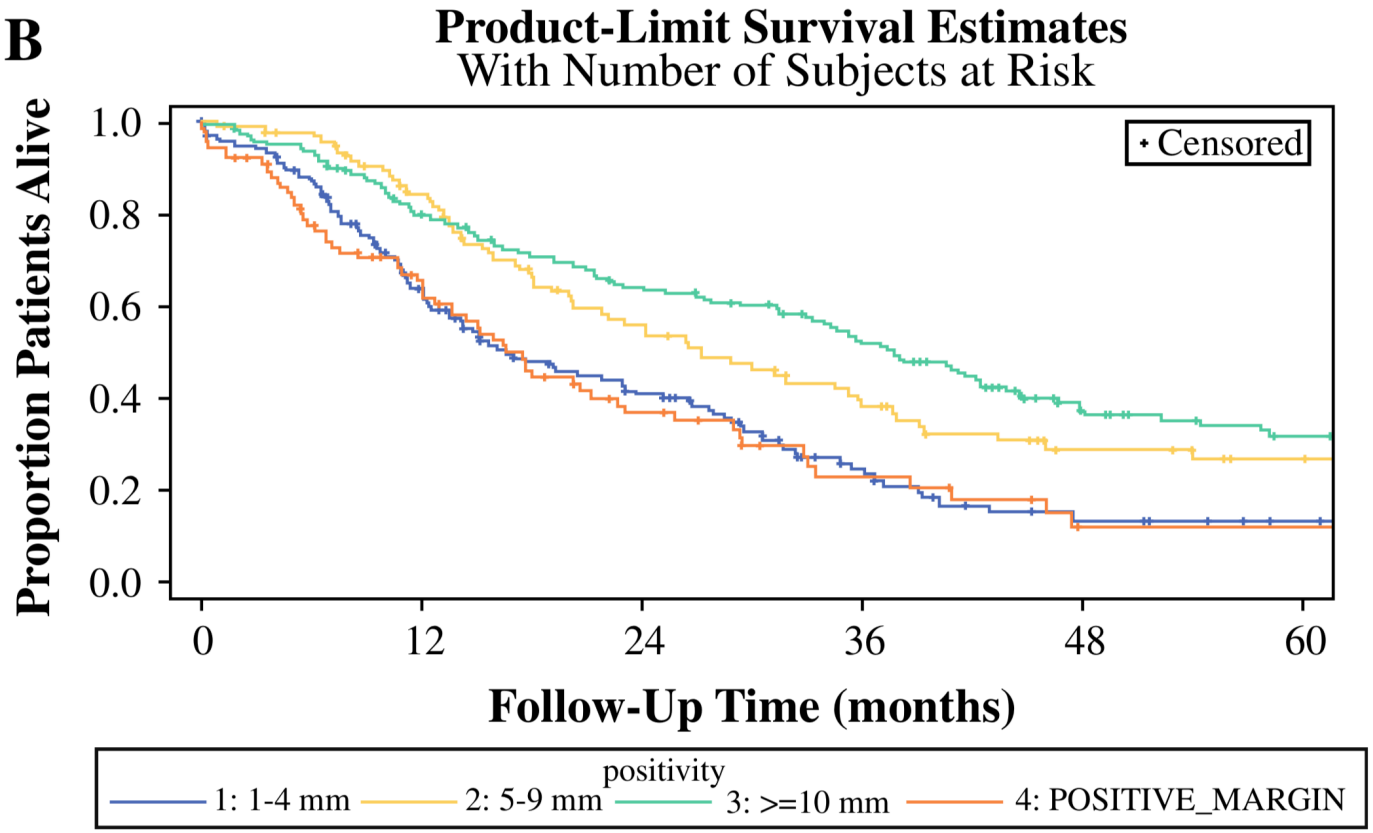
Importance des marges de résection

134 patients N0



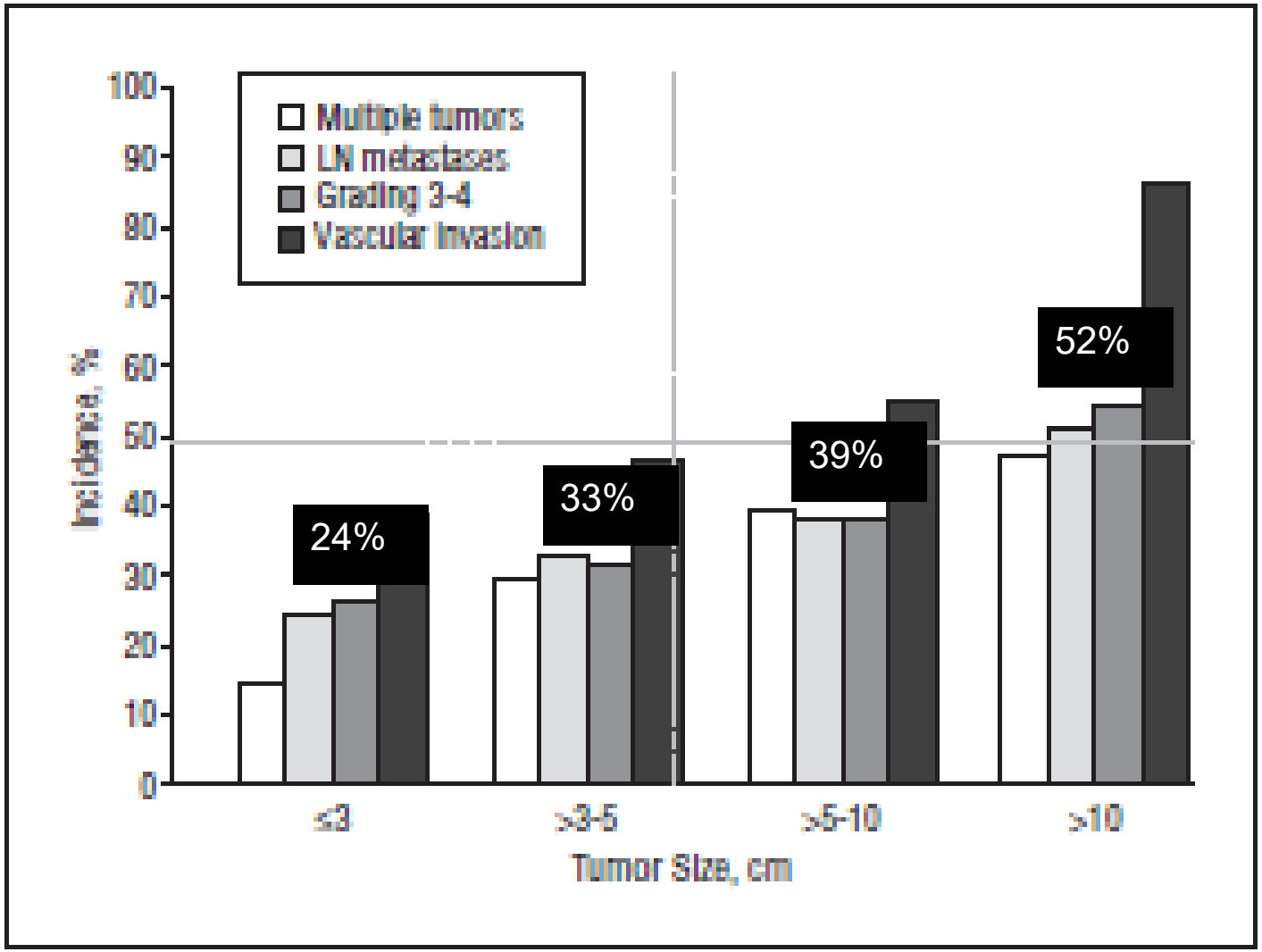
Farges O. et al. *Ann Surg 2011*

583 patients



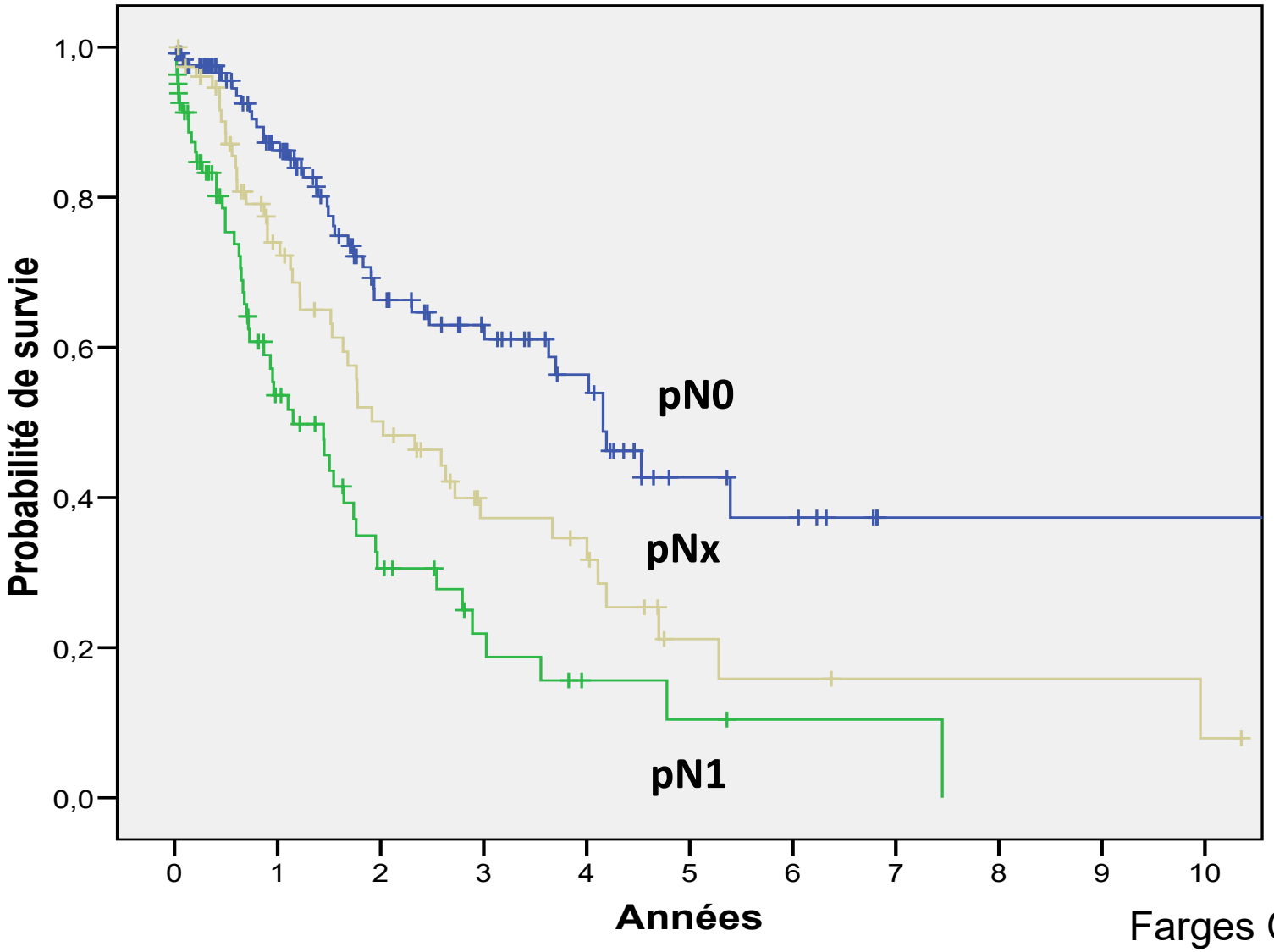
Spolverato G. et al. *Ann Surg Oncol 2015*

Curage ganglionnaire



Ribeiro et al. Arch Surg 2012

Impact statut N+



Farges O. et al. *Ann Surg 2011*

Curage coelio efficace ?

OXFORD

BJS, 2021, **108,** 419–426
DOI: 10.1093/bjs/znaa110
Advance Access Publication Date: 24 January 2021
Original Article

Laparoscopic *versus* open resection of intrahepatic cholangiocarcinoma: nationwide analysis

C. Hobeika [1,2], F. Cauchy [1], D. Fuks [3], L. Barbier[4], J. M. Fabre[5], E. Boleslawski[6], J. M. Regimbeau [7], O. Farges[1], F. R. Pruvot[6], P. Pessaux[8], E. Salamé[4], O. Soubrane[1], E. Vibert[9] and O. Scatton[2], on behalf of the AFC-LLR-2018 study group

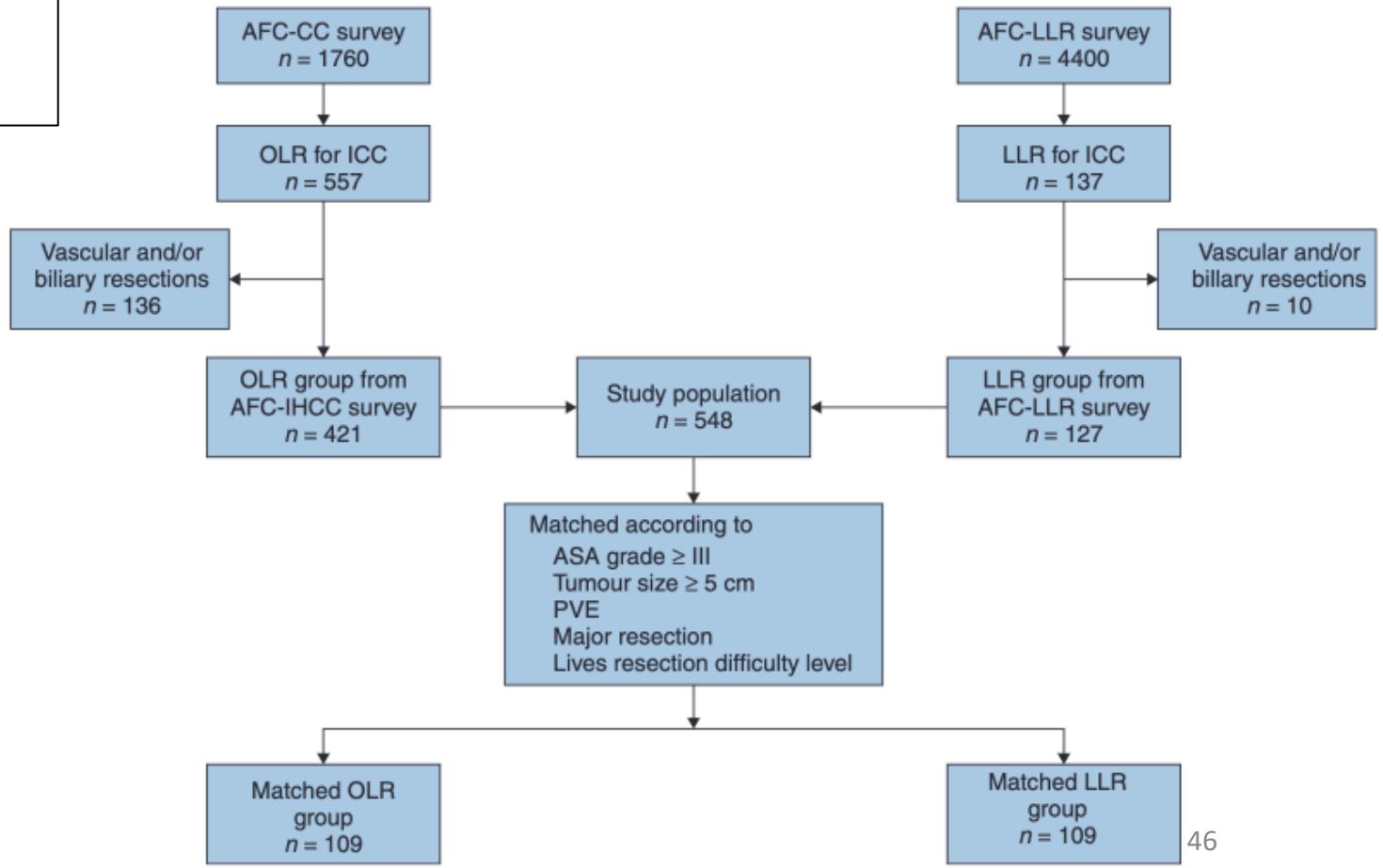


Table 1 Comparison of patients undergoing open or laparoscopic liver resection in the whole and matched populations

	Whole population				Matched population			
	OLR ($n = 421$)	LLR ($n = 127$)	SMD	P¶	OLR ($n = 109$)	LLR ($n = 109$)	SMD	P¶
Comparison of SMDs for matching variables								
ASA grade ≥ III	141 (33.5)	46 (36.2)	0.057		38 (34.9)	38 (34.9)	< 0.001	
Tumour size > 5 cm	264 (62.7)	50 (39.4)	0.479		45 (41.3)	45 (41.3)	< 0.001	
Major resection	299 (71.0)	55 (43.3)	0.583		52 (47.7)	52 (47.7)	< 0.001	
Portal vein embolization	31 (7.4)	5 (3.9)	0.152		4 (3.7)	4 (3.7)	< 0.001	
Liver resection difficulty level								
Grade 1	39 (9.3)	33 (26.0)	0.449		22 (20.2)	22 (20.2)	< 0.001	
Grade 2	121 (28.7)	47 (37.0)	0.177		44 (40.4)	44 (40.4)	< 0.001	
Grade 3	261 (62.0)	47 (37.0)	0.516		43 (39.4)	43 (39.4)	< 0.001	
Comparison of demographic, intraoperative, and postoperative data								
Demographic characteristics and underlying liver								
Age (years)*	62 (54–69)	67 (60–72)		0.002#	61 (52–68)	67 (60–72)		0.001#
BMI (kg/m²)*†	25.4 (22.2–29.1)	25.8 (23.1–29.7)		0.061#	25.8 (22.9–29.3)	25.8 (23.0–29.3)		0.705#
Severe fibrosis (F3–F4)	78 (18.5)	37 (29.1)		0.010	21 (19.3)	30 (27.5)		0.314
Severe steatosis (≥ 33%)	89 (21.1)	24 (18.9)		0.584	23 (21.1)	23 (21.1)		0.999
Intraoperative details								
Inflow clamping	310 (73.6)	51 (40.2)		0.001	77 (70.6)	40 (36.7)		0.001
Blood loss (ml)*	410 (130–700)	200 (100–400)		0.001#	346 (170–560)	200 (100–400)		0.001#
Conversion	–	19 (15.0)			–	15 (13.8)		
Duration of surgery (min)*	260 (195–360)	237 (180–360)		0.092#	263 (190–400)	240 (170–370)		0.186#
Outcomes								
Transfusion	72 (17.1)	13 (10.2)		0.061	23 (21.1)	8 (7.3)		0.004
Complication	176 (41.8)	73 (57.5)		0.002	57 (52.3)	61 (56.0)		0.587
Severe complication	79 (18.8)	28 (22.0)		0.413	29 (26.6)	25 (22.9)		0.530
Liver failure	37 (8.8)	4 (3.1)		0.034	6 (5.5)	4 (3.7)		0.517
Postoperative death	16 (3.8)	6 (4.7)		0.617	4 (3.7)	6 (5.5)		0.517
Negative margin	324 (77.0)	110 (86.6)		0.019	95 (87.2)	94 (86.2)		0.842
Duration of hospital stay (days)*	13 (9–19)	7 (6–12)		0.001#	14 (9–22)	7 (6–12)		0.001#
Prolonged hospital stay (≥ 12 days)	251 (59.6)	37 (29.1)		0.001	66 (60.6)	32 (29.4)		0.001
Readmission	23 (5.5)	13 (10.2)		0.057	10 (9.2)	13 (11.9)		0.508
Textbook outcome	85 (20.2)	36 (28.3)		0.052	23 (21.1)	33 (30.3)		0.121
Quality of oncological resection								
LND	225 (53.4)	39 (30.7)		0.001	80 (73.4)	37 (33.9)		0.001
Adequate AJCC LND	115 (27.3)	18 (14.2)		0.002	28 (25.7)	16 (14.7)		0.043
AJCC Nx status‡	195 (46.3)	104 (81.9)		0.001	51 (46.8)	88 (80.7)		0.001
R0 + LND	161 (38.2)	35 (27.6)		0.028	70 (64.2)	33 (30.3)		0.001
R0 + adequate AJCC LND	53 (12.6)	14 (11.0)		0.640	20 (18.3)	14 (12.8)		0.263
Adjusted textbook outcome§	44 (10.5)	8 (6.3)		0.162	19 (17.4)	7 (6.5)		0.012
Patients with LND	$n = 225$	$n = 39$			$n = 80$	$n = 37$		
No. of nodes harvested*	3 (1–6)	5 (3–7)		0.019#	3 (2–6)	5 (4–7)		0.030#
Adequate AJCC LND	115 (51.1)	18 (46)		0.567	28 (35)	16 (43)		0.392
N+ status	95 (42.2)	9 (23)		0.024	30 (38)	7 (19)		0.044

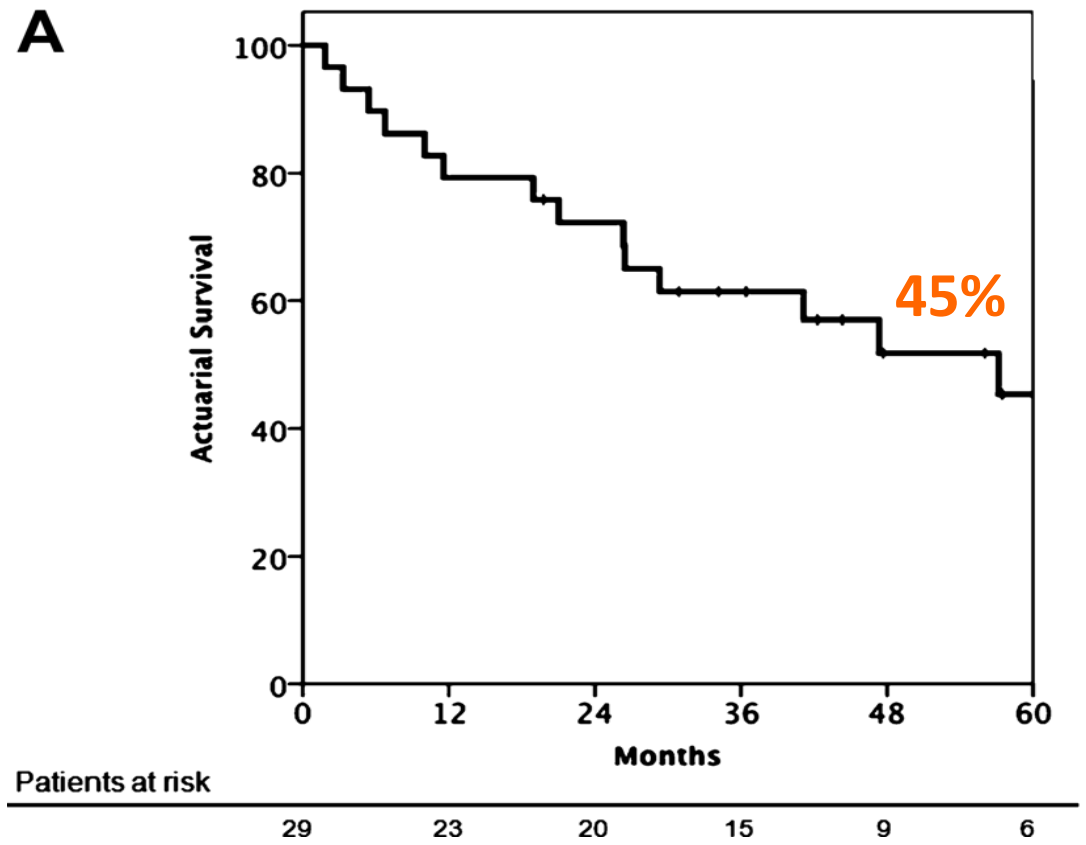
Hobeika C et al. BJS 2021

TH ? Etude multicentrique espagnole – 29 patients

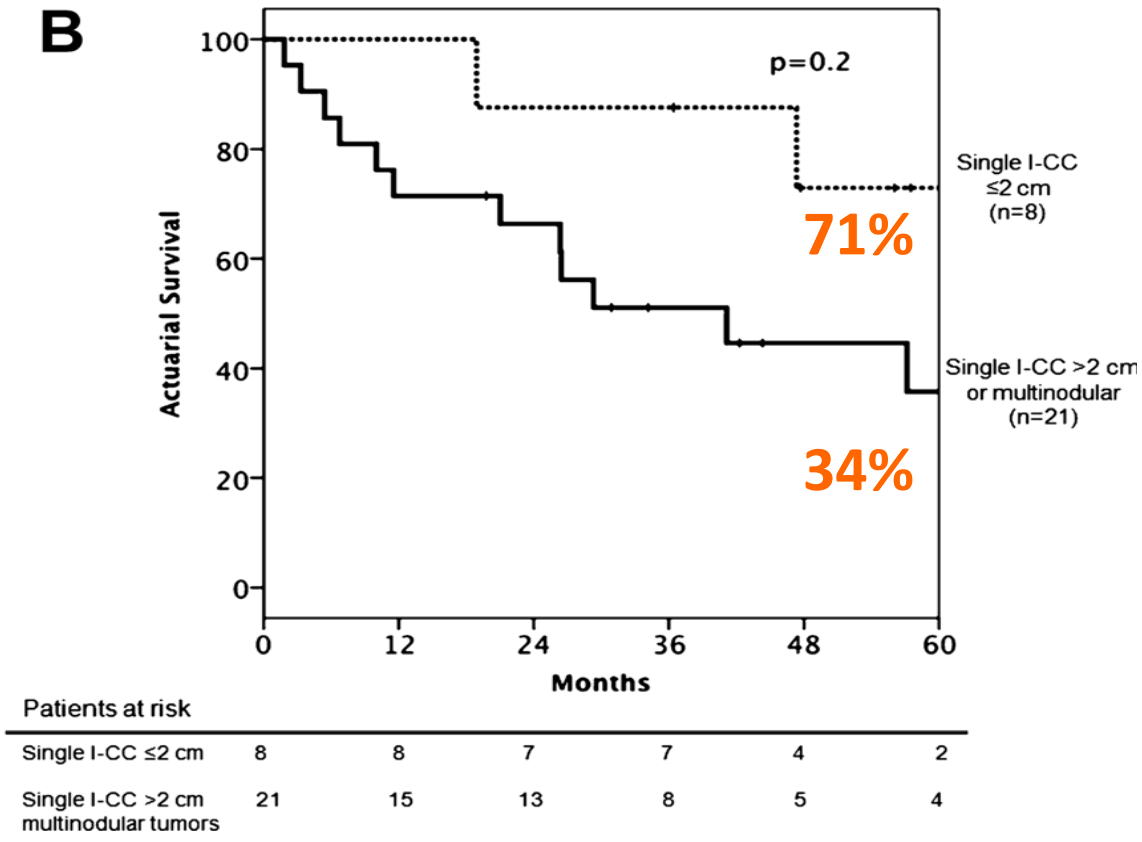
CCK IH / cirrhose

Centre Hépato-Biliaire

Overall survival of patients with iCCA on native liver



Patient survivial with an iCCA ≤ 2 cm « very early » versus > 2 cm



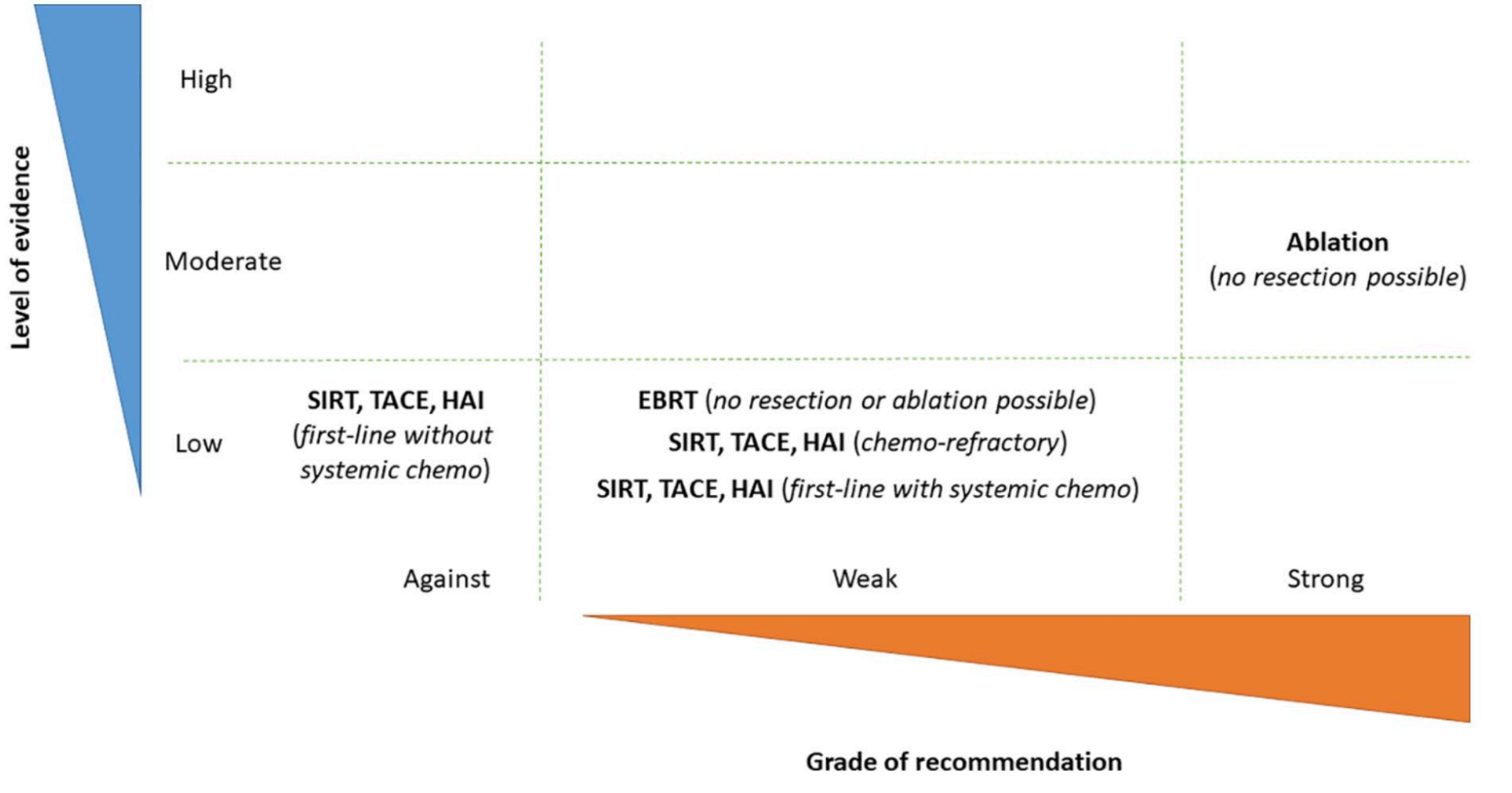
Sapisochin et al. Am J Transpl 2014

Traitements mini-invasifs du CCK IH ?

Cancer Treatment Reviews 99 (2021) 102258

Contents lists available at ScienceDirect

Cancer Treatment Reviews



Traitement mini-invasif du CCK IH ?

Centre Hépato-Biliaire
HOPITAL PAUL BROUSSE

Thésaurus National de Cancérologie Digestive©

Chapitre : 8

Cancer des voies biliaires

Date de cette version :
28/09/2023

Une ablation percutanée peut être envisagée pour les cholangiocarcinomes intra-hépatiques uniques < 3 cm sans maladie extra-hépatique si la résection chirurgicale n'est pas possible ***(grade B).***

Une radiothérapie stéréotaxique peut être discutée pour les cholangiocarcinomes intra-hépatiques < 5 cm sans maladie extra-hépatique si la résection chirurgicale et l'ablation percutanée ne sont pas possibles ***(grade C).***

(Petit) CCK Péri-Hilaire

Quel traitement proposer ?

CCK péri-hilaire : voie d'abord = open

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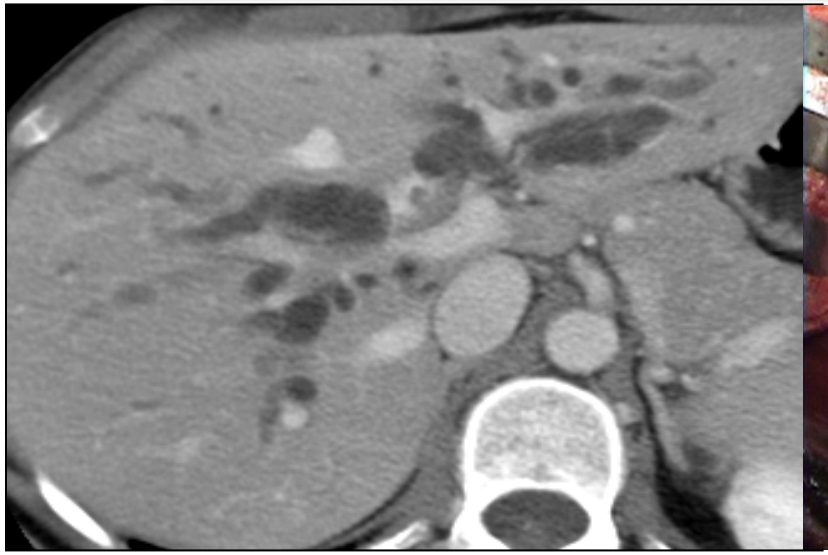
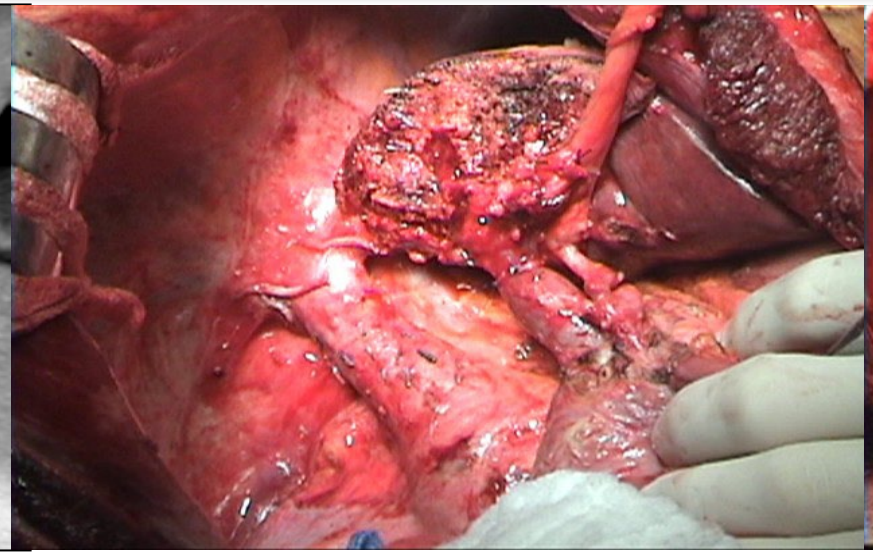
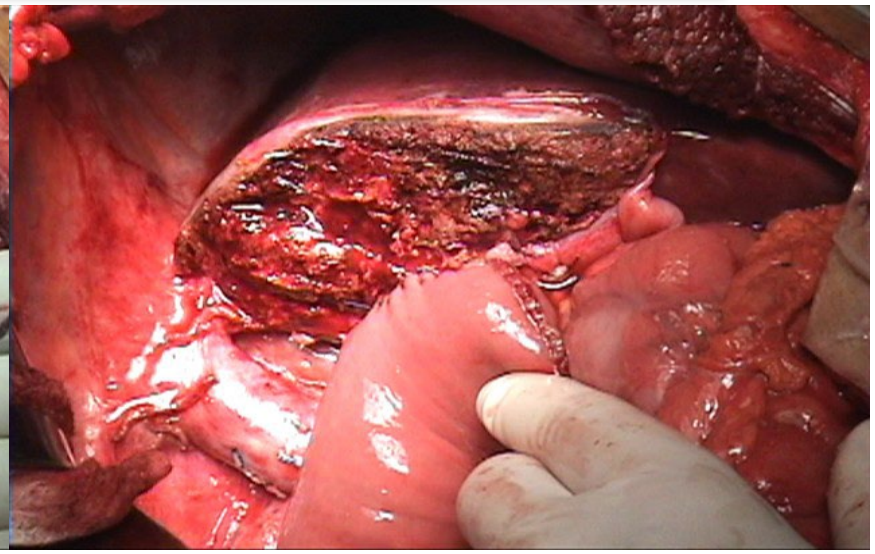
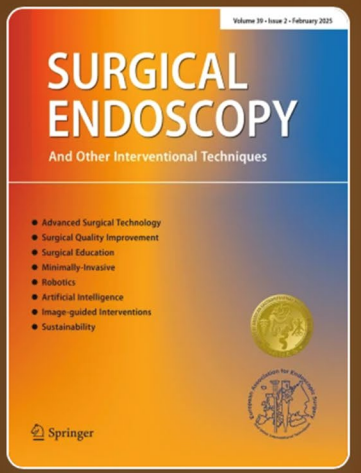




Home › Surgical Endoscopy › Article

Robotic surgery for perihilar cholangiocarcinoma: a concise systematic review

Review Article | Published: 14 March 2025

Volume 39, pages 2701–2710, (2025) Cite this article



CCK péri-hilaire : futur = robot ?

> Ann Surg. 2025 Jun 6. doi: 10.1097/SLA.0000000000006773. Online ahead of print.

Recommendations on Perihilar Cholangiocarcinoma. The Milan Jury–Based Consensus

Matthias Pfister [1 2], Francesca Ratti [3], Gregory J Gores [4], Mickael Lesurtel [5], Laurence Chiche [6], Tomoki Ebata [7], Victoria Ardiles [8], Juan W Valle [9 10], Julie K Heimbach [11], Chiara Braconi [12], Jordi Bruix [13], Luca Aldrighetti [3], Pierre-Alain Clavien [1 2]; Consensus4pCCA Collaborative

Minimally invasive approach

42. Minimally-invasive surgery (MIS) is a safe and feasible approach with non-inferior outcomes when performed by experienced surgeons, in experienced centers, and in selected patients, i.e., those with Bismuth type I-III tumours without the need for vascular resection.

Statement: Strong, [Level of Evidence: 3]

43. Compared to laparoscopy, the robotic approach offers technical advantages in lymphadenectomy and biliary reconstruction.

MHCCR

Quel traitement mini-invasif proposer ?

MHCCR

Chirurgie vs Percutané ?

Chir > RF (méta-analyse)

International Journal of Surgery 87 (2021) 105896

Contents lists available at ScienceDirect

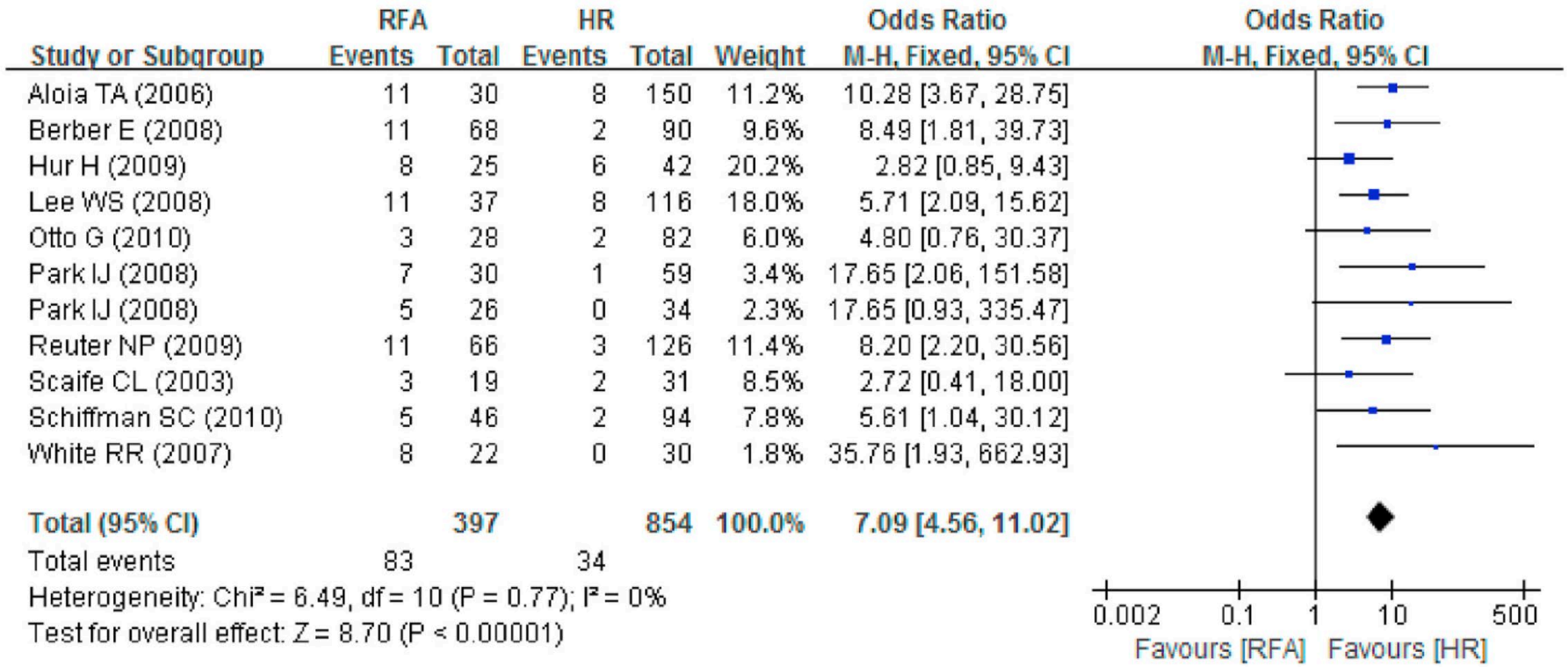
International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu

Review

The prognosis of radiofrequency ablation versus hepatic resection for patients with colorectal liver metastases: A systematic review and meta-analysis based on 22 studies

Gang Yang [a,b,1], Guan Wang [c,1], Ji Sun [b], Yongfu Xiong [b,d], Weinan Li [b], Tao Tang [b], Jingdong Li [a,b,d,*]



Study or Subgroup	RFA Events	RFA Total	HR Events	HR Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Aloia TA (2006)	11	30	8	150	11.2%	10.28 [3.67, 28.75]
Berber E (2008)	11	68	2	90	9.6%	8.49 [1.81, 39.73]
Hur H (2009)	8	25	6	42	20.2%	2.82 [0.85, 9.43]
Lee WS (2008)	11	37	8	116	18.0%	5.71 [2.09, 15.62]
Otto G (2010)	3	28	2	82	6.0%	4.80 [0.76, 30.37]
Park IJ (2008)	7	30	1	59	3.4%	17.65 [2.06, 151.58]
Park IJ (2008)	5	26	0	34	2.3%	17.65 [0.93, 335.47]
Reuter NP (2009)	11	66	3	126	11.4%	8.20 [2.20, 30.56]
Scaife CL (2003)	3	19	2	31	8.5%	2.72 [0.41, 18.00]
Schiffman SC (2010)	5	46	2	94	7.8%	5.61 [1.04, 30.12]
White RR (2007)	8	22	0	30	1.8%	35.76 [1.93, 662.93]
Total (95% CI)		**397**		**854**	**100.0%**	**7.09 [4.56, 11.02]**
Total events	83		34			

Heterogeneity: Chi² = 6.49, df = 10 (P = 0.77); I² = 0%

Test for overall effect: Z = 8.70 (P < 0.00001)

Fig. 5. Forest plot of comparison between RFA and HR for severe CRLM regarding to marginal recurrence.

Chir > RF (méta-analyse)

International Journal of Surgery 87 (2021) 105896

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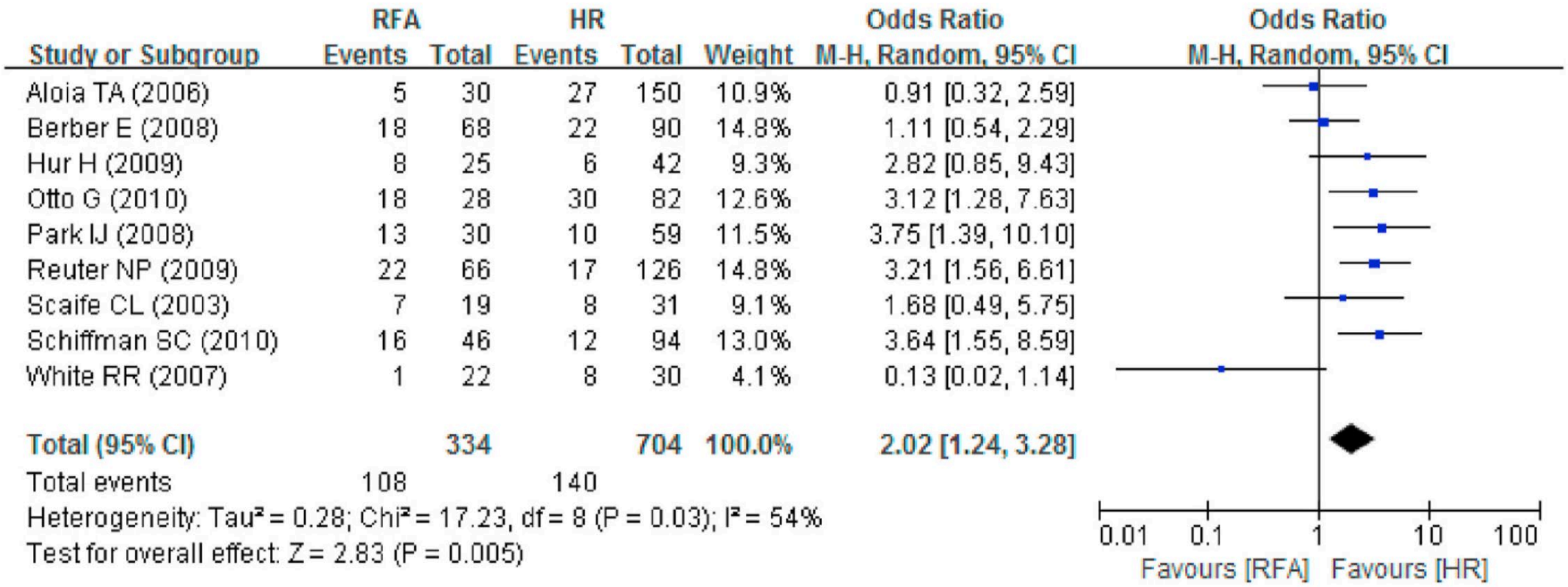

Fig. 6. Forest plot of comparison between RFA and HR for severe CRLM regarding to intrahepatic recurrence.

Chir > RF (méta-analyse)

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Review

The prognosis of radiofrequency ablation versus hepatic resection for patients with colorectal liver metastases: A systematic review and meta-analysis based on 22 studies

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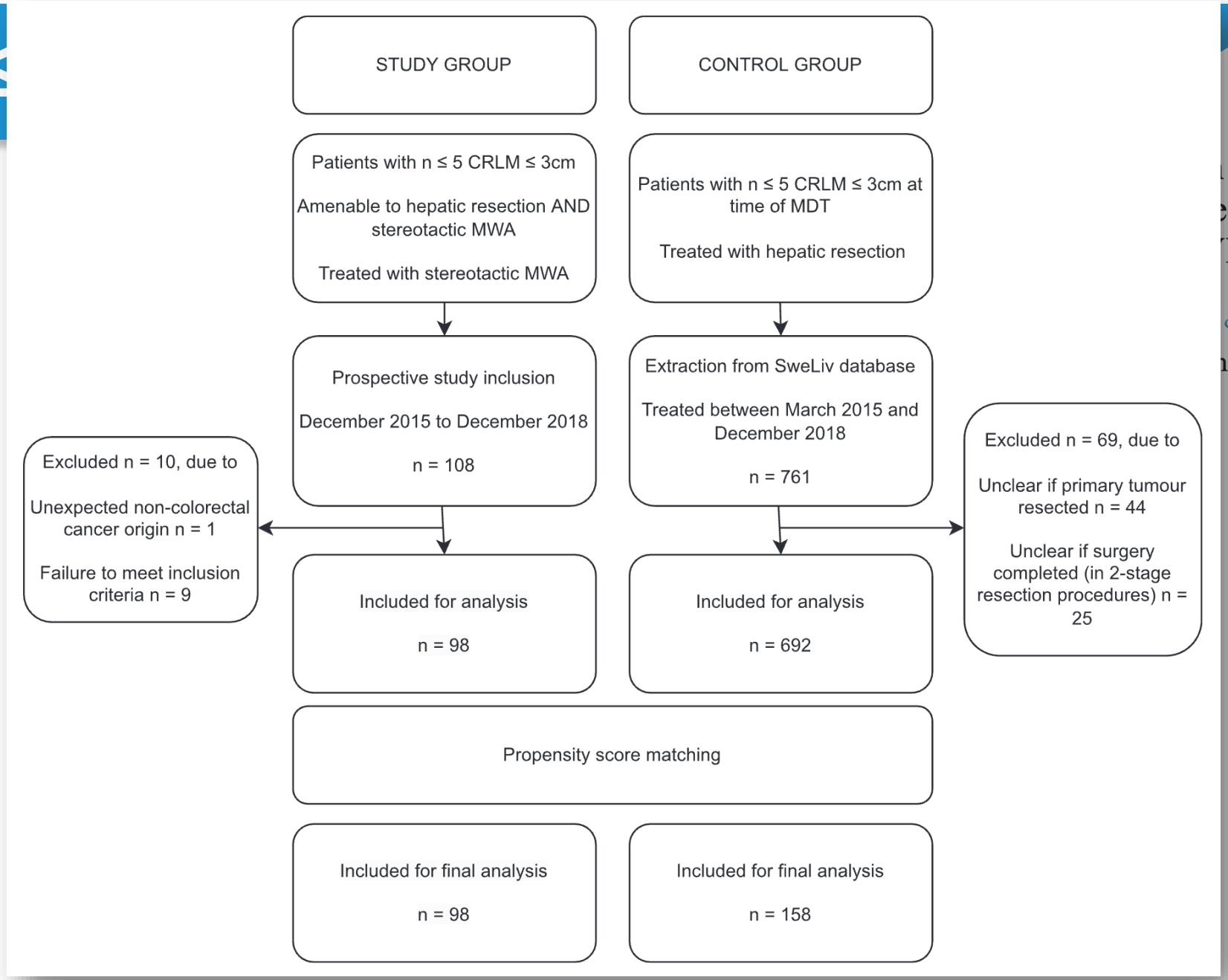
The risk factors of poor overall survival.

Factors	No. of study	Pooled results			Heterogeneity		
		HR	95% CI	*P* value	I^2	P_h value	Analytical effect model
RFA vs. HR							
UVA	9	1.71	1.14, 2.57	0.009	83%	0.00001	Random-effect model
MVA	5	1.93	1.10, 3.39	0.02	82%	0.0002	Random-effect model
RFA + HR vs.HR							
UVA	2	1.84	0.25, 2.69	0.002	0%	0.38	Fixed-effect model
MVA	1	2.14	1.28, 3.58	0.004	–	–	–
RFA + HR vs. RFA (MVA)	1	1.30	0.74, 2.28	0.36	–	–	–
Tumor size (cm)							
UVA	8	1.65	1.24, 2.20	0.0007	66%	0.004	Random-effect model
MVA	4	1.83	1.46, 2.29	0.00001	12%	0.33	Fixed-effect model
Multiple vs. single tumor							
UVA	7	1.81	1.54, 2.12	0.00001	22%	0.26	Fixed-effect model
MVA	6	1.90	1.37, 2.63	0.0001	63%	0.02	Fixed effects model
T3/4 vs. T1/T2							
UVA	2	2.73	1.05, 7.11	0.04	65%	0.09	Random-effect model
MVA	1	2.11	0.57, 7.81	0.26	–	–	–
Age (year)							
UVA	5	1.20	0.99, 1.04	0.27	73%	0.005	Random-effect model
MVA	3	1.20	1.01, 1.03	0.0001	56%	0.10	Fixed effects model
Preopeative EHD vs no EHD (MVA)	1	1.35	0.98, 1.86	0.07	–	–	–
ASA III–IV vs I–II (MVA)	1	0.97	0.76, 1.24	0.81	–	–	–

Chir ≤



survival after
ection for Resectable
ERRIC)

d,1, Jennie Engstrand e,
niel Candinas b,

2023

Chir ≤ Micro-ondes (prospectif)

< 5 Méta, ≤30 mm

A prospective multicentre trial on survival after Microwave Ablation VErsus Resection for Resectable Colorectal liver metastases (MAVERRIC)

2023

MW =

- **3x - de complications**
- **5x - de complications sévères**

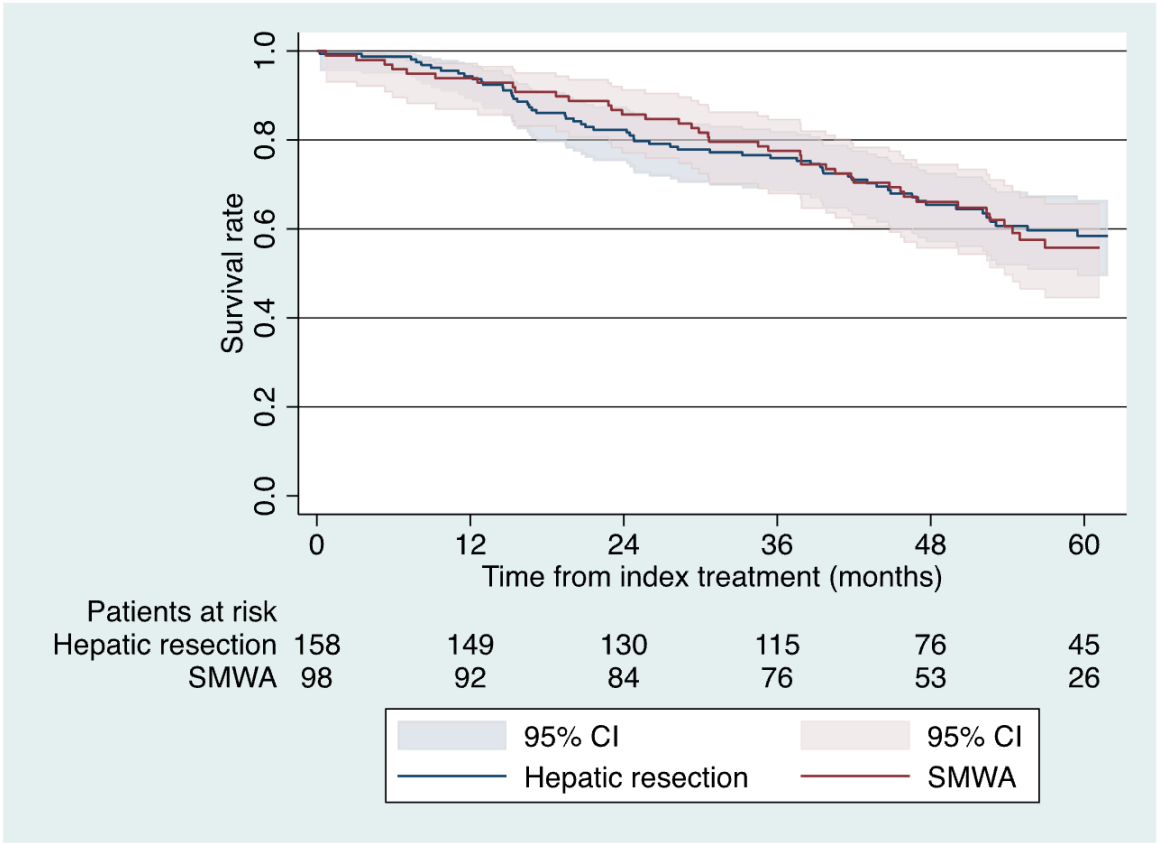


Fig. 2. Overall survival of patients after stereotactic microwave ablation (red) and hepatic resection (blue). Stratified Log-rank $p = 0.861$. SMWA, stereotactic microwave ablation; CI, confidence interval.

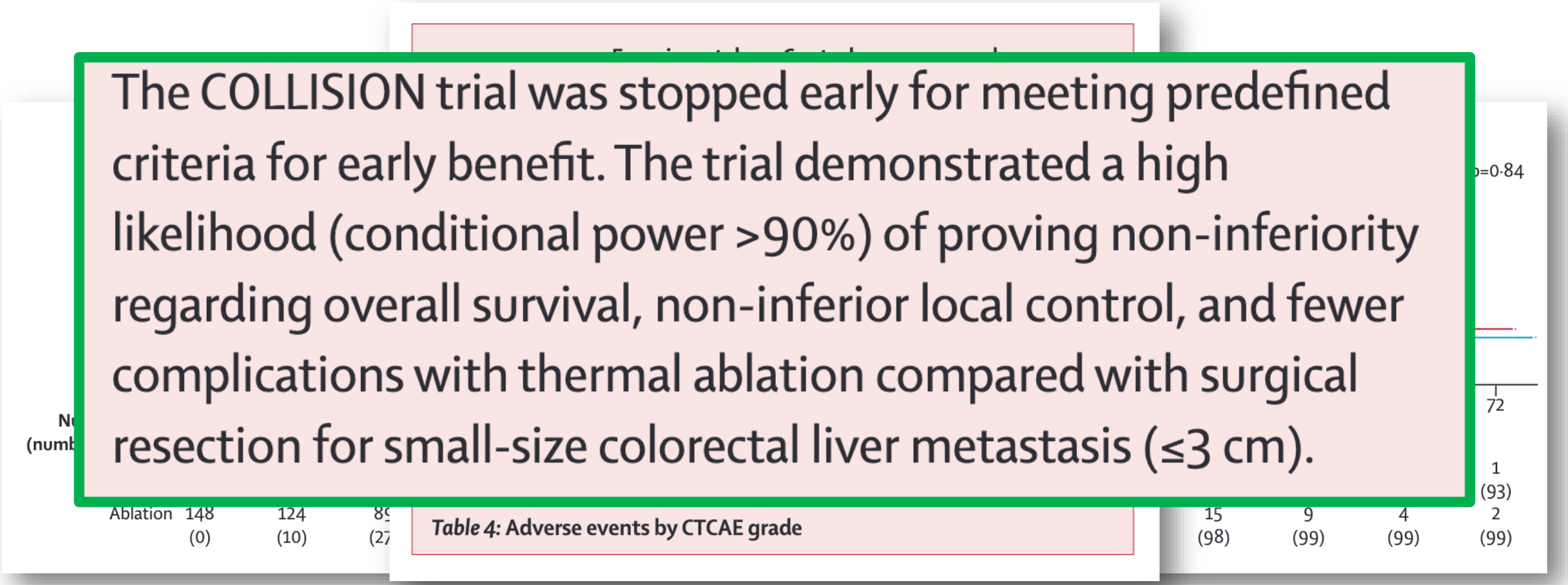
Chir ≤ MW (prospectif)

Thermal ablation versus surgical resection of small-size colorectal liver metastases (COLLISION): an international, randomised, controlled, phase 3 non-inferiority trial

Lancet Oncol 2025

< 10 Méta, ≤30 mm

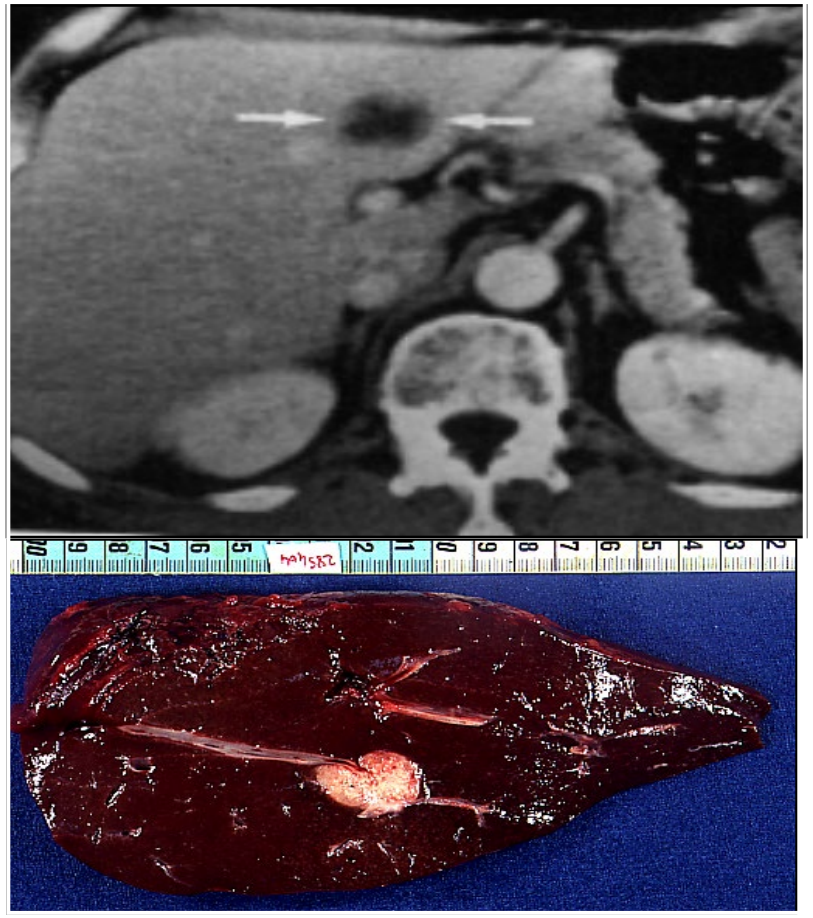
The COLLISION trial was stopped early for meeting predefined criteria for early benefit. The trial demonstrated a high likelihood (conditional power >90%) of proving non-inferiority regarding overall survival, non-inferior local control, and fewer complications with thermal ablation compared with surgical resection for small-size colorectal liver metastasis (≤3 cm).

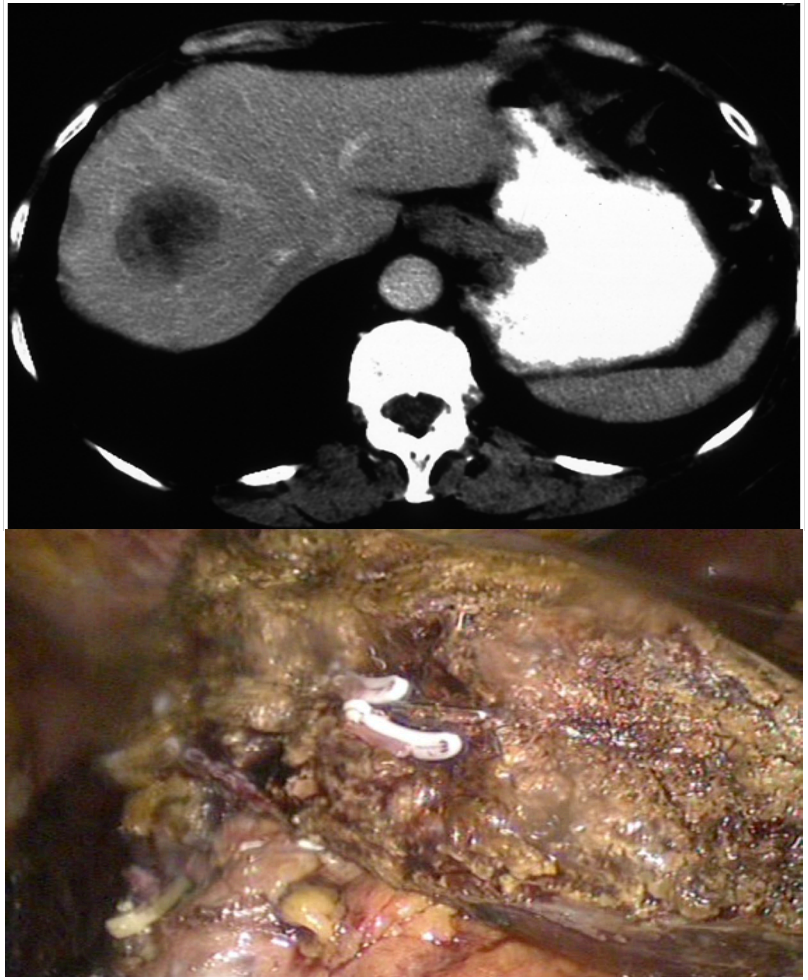


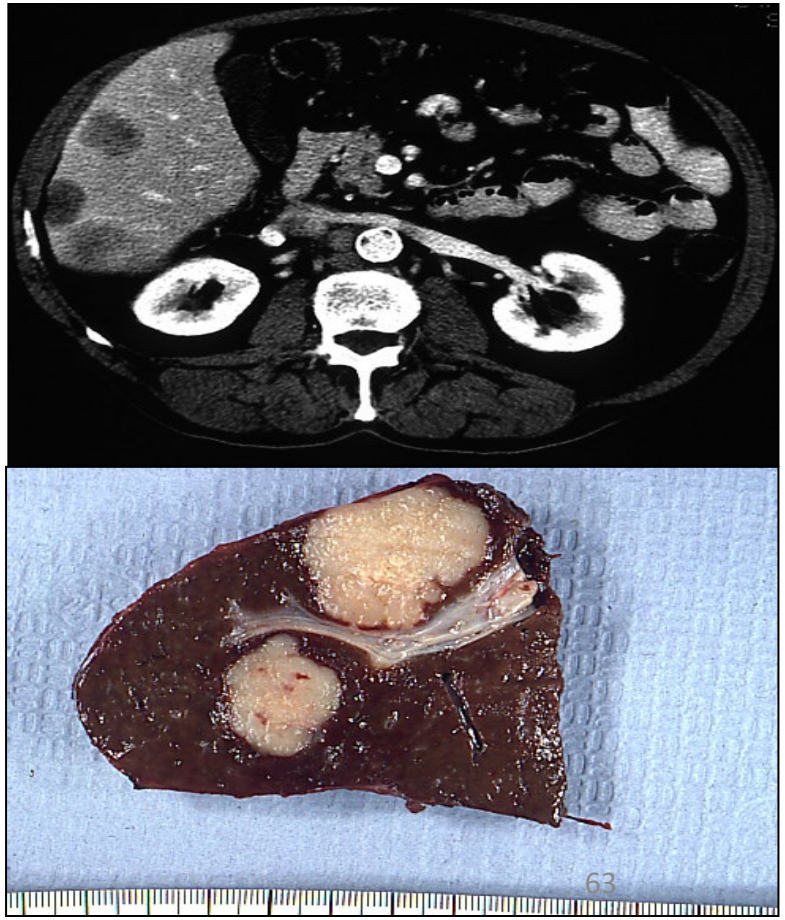
MHCCR

Laparoscopie vs Open ?

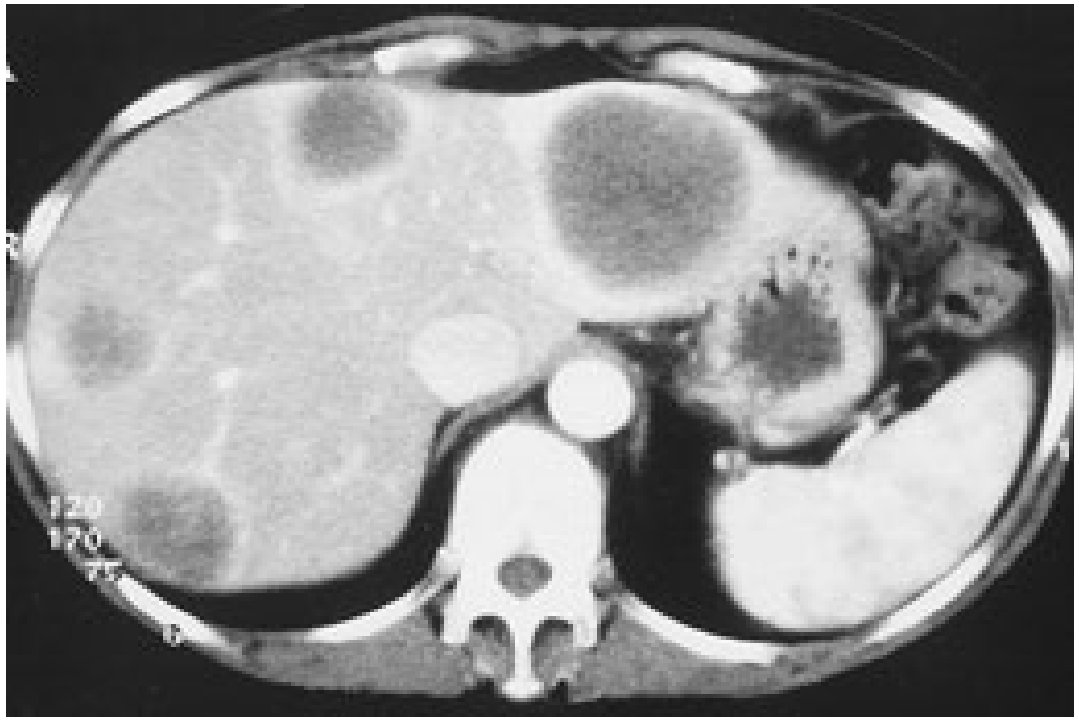
Indication laparoscopie = oligométastases







Indication voie ouverte = MH bilobaires



Laparoscopic Versus Open Resection for Colorectal Liver Metastases

The OSLO-COMET Randomized Controlled Trial

Centre Hépato-Biliaire

Résections mineures

TABLE 1. Baseline Characteristics of the Intention-to-Treat Population (n = 280)

Characteristic	Open (n = 147)	Laparoscopic (n = 133)
Male sex	87 (54%)	77 (65%)
Age, mean (SD)	66 (10)	67 (8)
Body mass index, mean (SD)	25 (4)	26 (5)
ECOG score		
0	111 (82%)	111 (85%)
1	23 (17%)	18 (14%)
2	2 (1%)	1 (1%)
ASA score		
1	20 (15%)	11 (9%)
2	73 (53%)	59 (48%)
3	44 (32%)	51 (42%)
4		1 (1%)
Number of metastases, mean (SD)	1.6 (1.1)	1.5 (1.1)
Primary tumor rectum	64 (54%)	50 (38%)
Synchronous metastases	91 (62%)	75 (56%)
Chemotherapy before surgery	99 (69%)	77 (60%)
CEA, median (IQR)	4 (1–128)	4 (1–200)
Previous liver resection	13 (9%)	23 (18%)
Clinical Risk Score, median (IQR)	2 (1–2)	2 (1–2)
Basingstoke Predictive Index, median (IQR)	5 (2–12)	5 (3–12)
Modified Iwate complexity score,[23] median (IQR)	6 (2–11)	6 (2–11)
Modified Liver surgery complexity score,[22] median (IQR)	1.36 (1.36–7.36)	1.99 (1.3–6.75)
Pathology weight of resected specimen, median (IQR)	64 (31–204)	83 (38–185)

Fretland et al. Ann Surg 2018

OSLO-COMET RCT: coelio vs open

TABLE 2. Operative Results (Modified Intention-to-treat, n = 273)

Result	Open (n = 144)	Laparoscopic (n = 129)	*P*
Postoperative complications, Accordion grade 2 or higher	44 (31%)	24 (19%)	0.021
Comprehensive Complication Index,[25] mean (95% CI)	9.3 (6.6–12.0)	5.2 (3.1–7.3)	0.021
Operation time (minutes), median (95% CI)	120 (106–134)	123 (108–138)	0.76
Blood loss (mL), median (95% CI)	200 (126–273)	300 (224–375)	0.062
Unfavorable peroperative incidents	9 (6%)	14 (11%)	0.16
Conversion to laparotomy/hand assisted	–	2 (2%)/7 (5%)	
Postoperative analgesia, PCA/EDA/none (n)	67/76/1	129/0/0	
Postoperative hospital stay (h), median (95% CI)	96 (89–103)	53 (45–61)	<0.001
Transfusion during hospital stay	12 (8%)	10 (8%)	0.91
Postoperative morphine equivalents, median (95% CI)	170 (149–191)	52 (29–74)	<0.001
Stay in recovery ward (h), median (95% CI)	4.27 (3.91–4.63)	3.67 (3.29–4.05)	0.024
Discharge to referring hospital	30 (21%)	15 (11%)	0.042
Intensive care treatment	1 (1%)	3 (2%)	0.24
Readmissions within 30 days	12 (8%)	13 (10%)	0.60
Reoperations within 30 days	6 (4%)	5 (4%)	0.88
Resection margin >1 mm	102 (71%)	92 (71%)	0.83
Resection margin <1 mm but not involved	32 (22%)	29 (22%)	0.94
Involved resection margin	10 (7%)	8 (6%)	0.88
Missed lesion	2 (1%)	4 (3%)	0.32
Changes from initial strategy			
No (parenchyma-sparing resection performed as planned)	137	124	
Converted to ablation only	1	0	
Converted to hemihepatectomy	1	2	
Exploration only	3	2	
Converted to resection + ablation	1	1	
Need for vascular reconstruction	1	0	

Fretland et al. Ann Surg 2018

Oslo-Comet: résultats à long terme

Annals of Internal Medicine ORIGINAL RESEARCH

Long-Term Oncologic Outcomes After Laparoscopic Versus Open Resection for Colorectal Liver Metastases

A Randomized Trial

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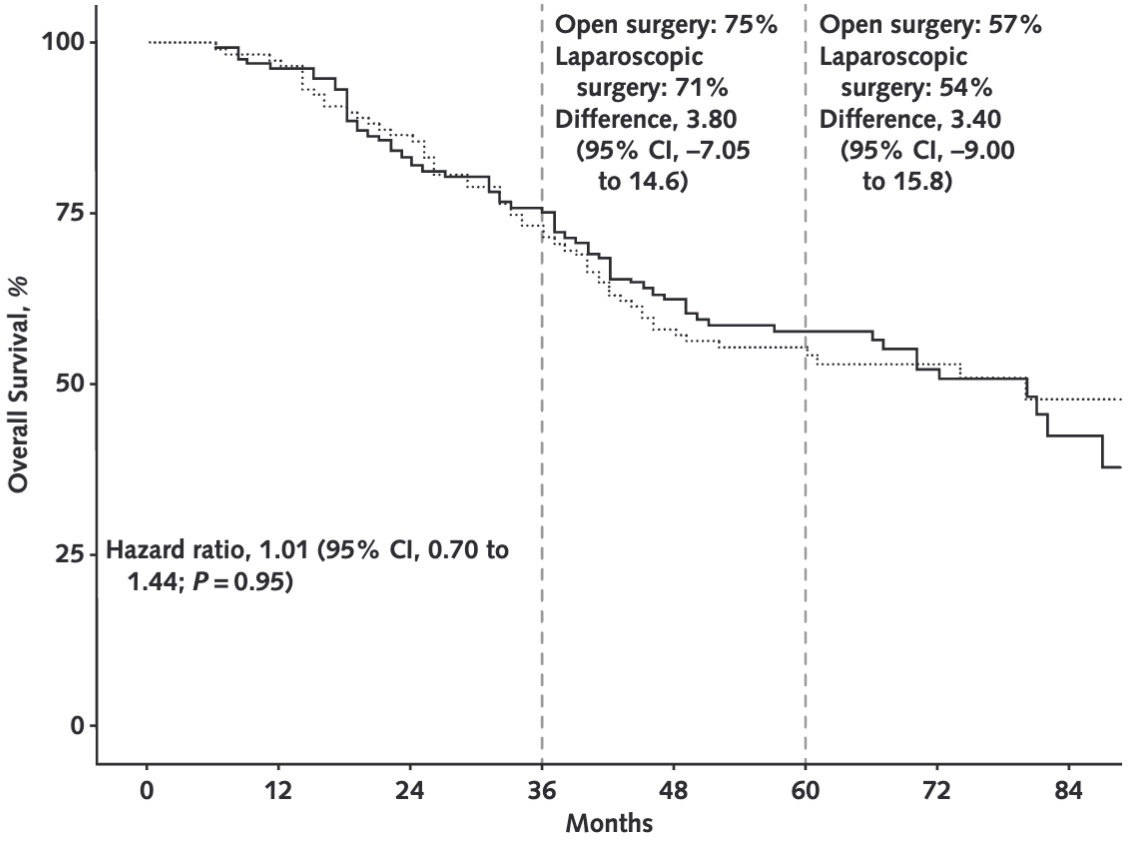
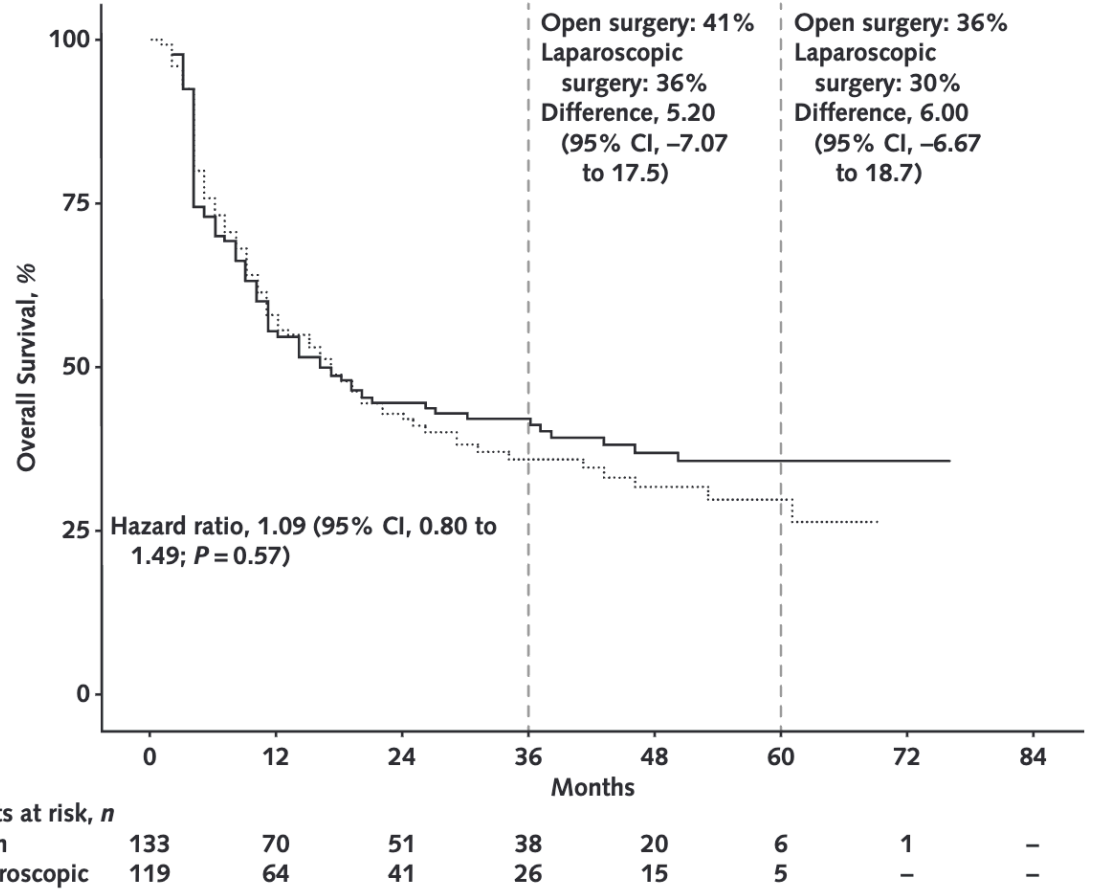
OS



RFS



Coelio : reprise + précoce de la CT adjuvante

Centre Hépato-Biliaire — HOPITAL PAUL BROUSSE

Laparoscopic Versus Open Hemihepatectomy: The ORANGE II PLUS Multicenter Randomized Controlled Trial

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ASCO Journal of Clinical Oncology®

2024

Secondary End Point—Oncological[f]	Laparoscopic (n = 136)	Open (n = 145)	Model 2—Multivariable[b] % Difference (99% CI)	Odds Ratio (99% CI)	Hazard Ratio (99% CI)	*P*
Time to adjuvant systemic therapy, median, days[g] (IQR; range)	46.5 (36.5-62.8; 6-84)	62 (47-72; 22-88)			2.20 (1.01 to 4.77)	.009
R0 resection margin	106/132 (77.9)	122/140 (84.1)		0.60 (0.25 to 1.45)		.14
R1 and R2 resection margin	26/132 (19.1)	18/140 (12.4)		1.65 (0.69 to 3.97)		.14
Recurrence total	66 (48.5)	84 (57.9)		0.72 (0.38 to 1.37)		.19
Recurrence liver only	36 (26.5)	50 (34.5)		0.67 (0.34 to 1.34)		.13
Disease-free survival[h]	55 (40.7)	51 (35.4)				.46
Overall survival[h]	67 (57.3)	86 (65.6)				.59

Take home messages

- CHC:
  - Coelio ou robot > laparotomie car moins de décompensation et adhérences (TH)
  - RF ok si T<3cm, mais + de récidives
  - Toujours évoquer la transplantation….

- CCK IH:
  - Chirurgie en 1ère intention
  - Coelio si petite tumeur, attention au curage coelio moins efficace, ok robot

- CCK PH: chirurgie / voie ouverte dans 99,9% cas
  - Robot reste anecdotique

- MHCCR:
  - coelio/robot si possible, rarement
  - MW (RF) probablement en première intention si T < 2-3 cm

Quels traitements mini invasifs en cas de détection précoce des cancers hépatiques primitifs et secondaires ?

Nicolas Golse, MD PhD

Hôpital Paul Brousse - Villejuif