

Hepatocellular carcinoma

EASL 2024



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Introduction



Delphi Panel

M Schwartz
A Singal
J Heimbach
L Kulik
RK Kelley
T Greten
T Simon

gel
isochin
x
erman

I Rowe
J Bruix
T Casanovas

Pi Nahon
V Vilgrain
T De Baere

P Majno
Al Cucchetti
F Piscaglia
L Crocetti
L Rimassa
M Roncalli

T Helmberger
Z Maravic

J Lee
J Seong

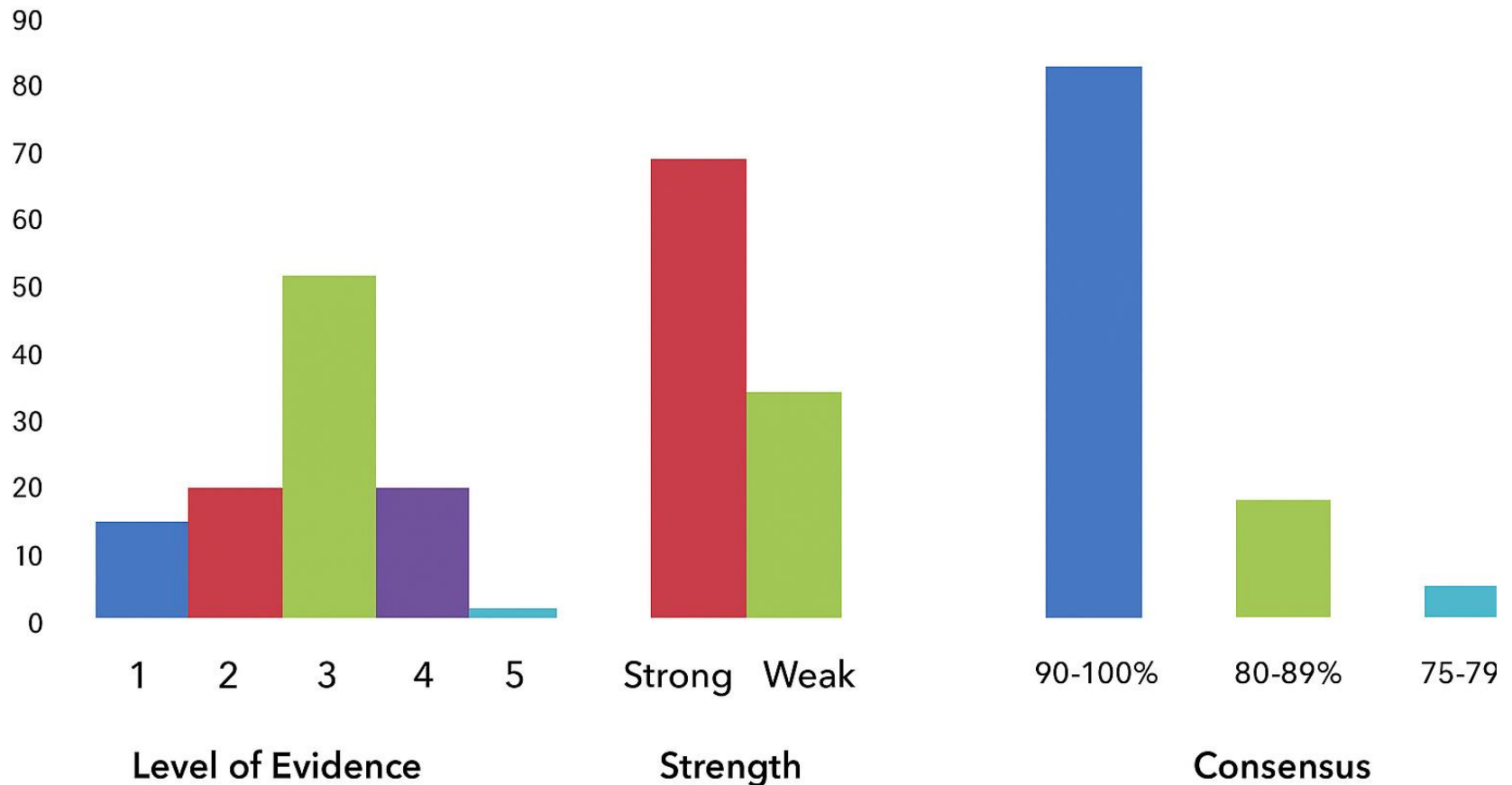
I Ng
S Chan

K Hasegawa
M Kudo



Introduction

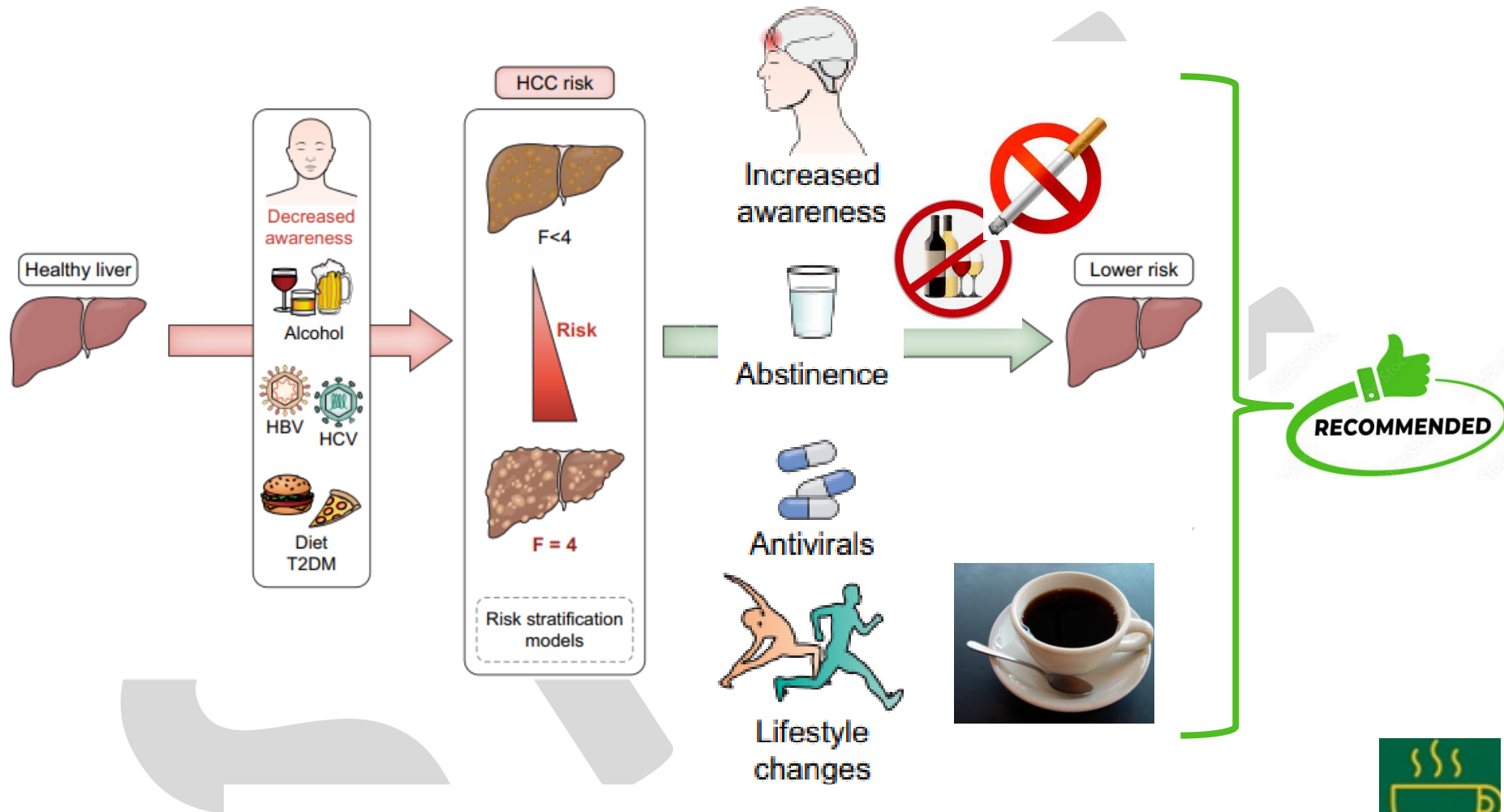
77 Recommendations



Section

- Prevention and screening
- Diagnosis and staging
- Surgery
- Locoregional therapies
- Systemic treatment

Prevention



- Coffee consumption may be recommended to reduce the risk of HCC (**LoE 3, weak recommendation, consensus**).

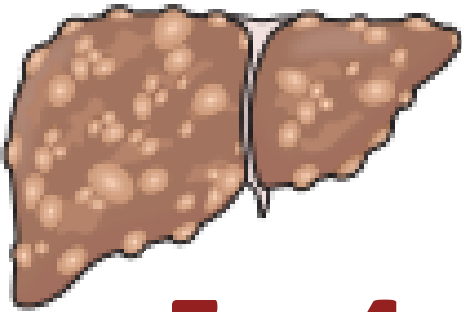
Prevention

Statin, anti-inflammatory drugs or metformin

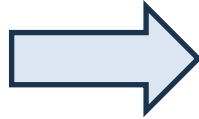


- Owing to a lack of evidence, the use of statins, aspirin and metformin cannot currently be recommended to reduce the risk of HCC development (**LoE 3, weak recommendation, strong consensus**).

Screening



F = 4



Combination use of US + AFP
↑ sensitivity



/ 6
months



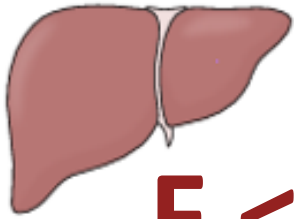
No screening if

MRI / Biomarker
Limited data

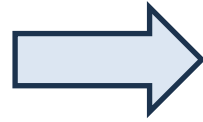


- Patients with cirrhosis should be offered surveillance for HCC unless they have a relatively high risk of death from non-HCC causes, or they could not be offered a curative-intent treatment for HCC (e.g., patients with Child-Pugh class C cirrhosis ineligible for liver transplantation) (**LoE 2, strong recommendation, strong consensus**).

Screening



F < 4



No current
recommendation

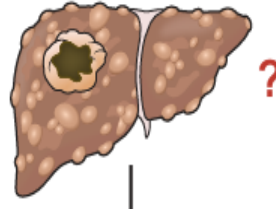


- Patients with chronic liver disease and advanced fibrosis without cirrhosis have a higher risk of HCC than the general population, but HCC surveillance cannot currently be recommended in this group owing to insufficient evidence (**LoE 3, weak recommendation, strong consensus**).

Diagnosis

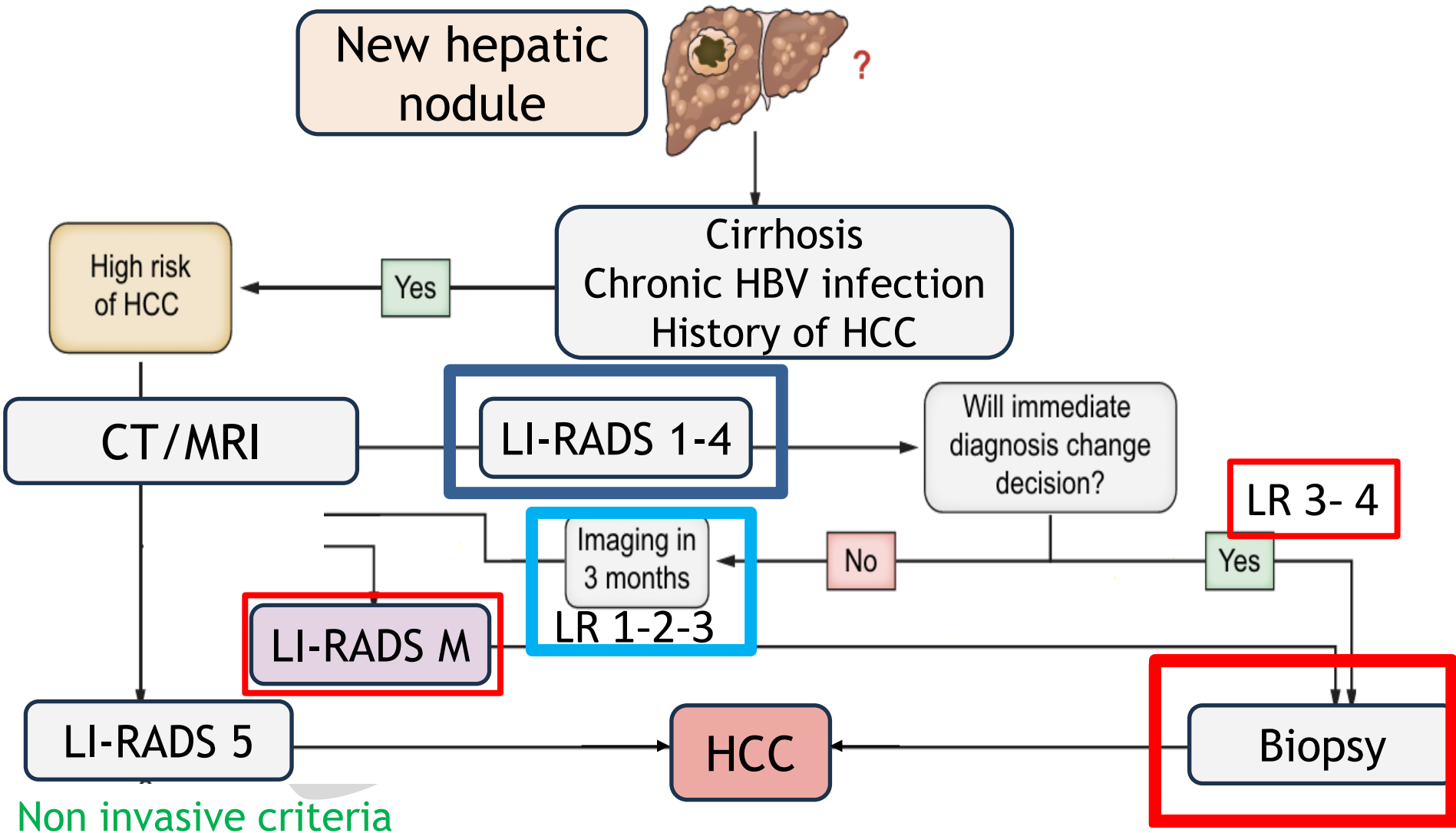
LI-RADS should be used to favour standardisation

New hepatic
nodule



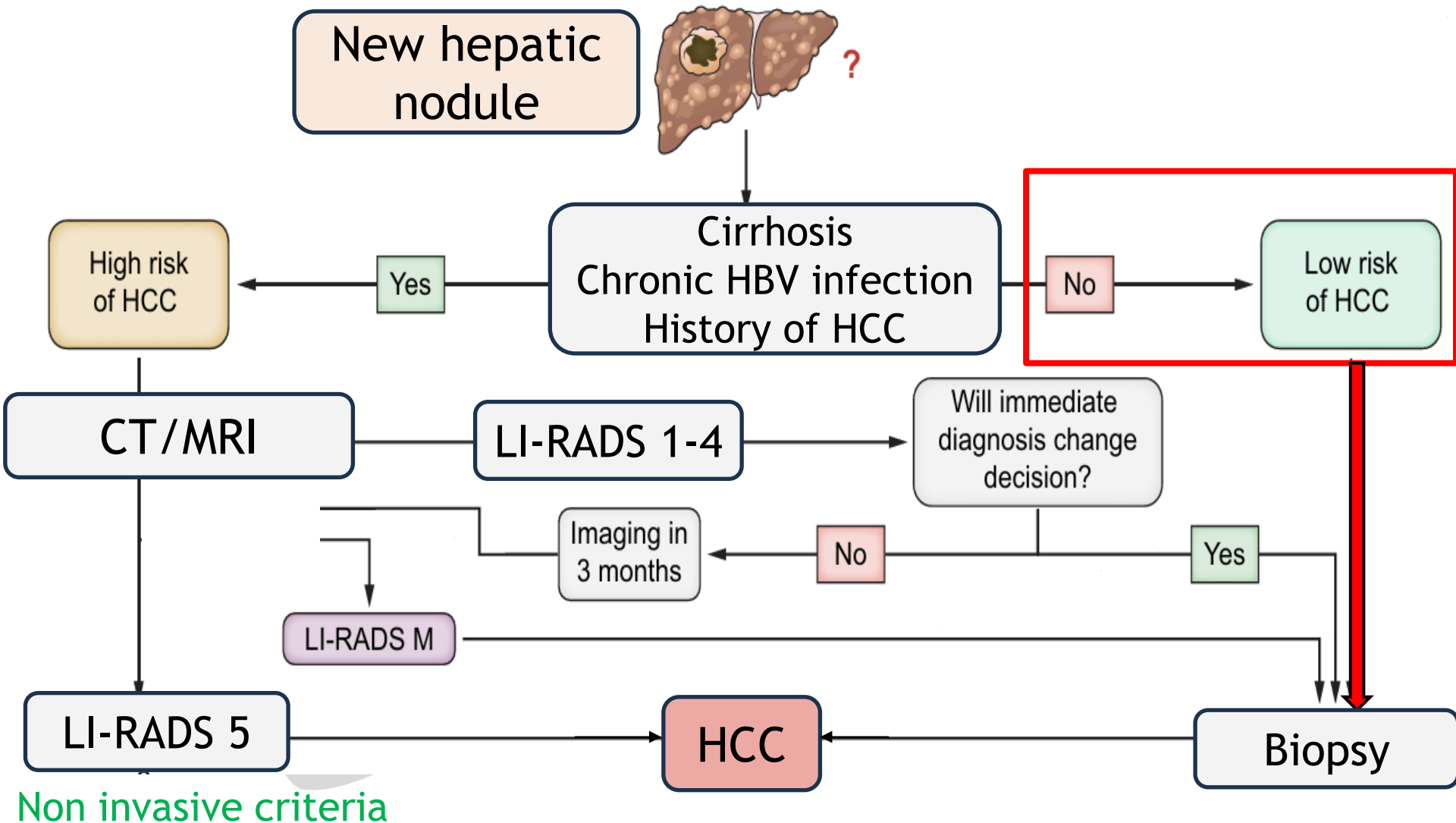
Diagnosis

LI-RADS should be used to favour standardisation



Diagnosis

LI-RADS should be used to favour standardisation



Diagnosis

- The non-invasive criteria should only be applied to patients with cirrhosis, chronic HBV infection or a history of HCC. In other patients, the diagnosis of HCC should be confirmed by biopsy (**LoE 1, strong recommendation, consensus**).

Non-invasive criteria non applicable if

- Age < 18 years
- Cirrhosis due to congenital fibrosis
- Vascular disorders budd-chiari syndrome, portal vein thrombosis
- Diffuse NRH



Biopsy





Diagnosis

Bx = tumoral + non tumoral
parenchyma

- In patients undergoing tumour biopsy for the diagnosis of HCC, it is suggested to simultaneously obtain a sample of the non-tumoural liver parenchyma to facilitate the diagnosis (**LoE 3, weak recommendation, consensus**).

Histological prognostic features

- Differentiation grade
- Vascular, neural or lymphatic infiltration
- Macrotrabecular-massive

Dysplastic nodules ?



Diagnosis



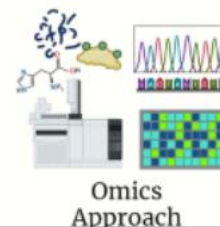
- In patients undergoing tumour biopsy for the diagnosis of HCC, it is suggested to simultaneously obtain a sample of the non-tumoural liver parenchyma to facilitate the diagnosis (**LoE 3, weak recommendation, consensus**).

Dysplastic nodules ?



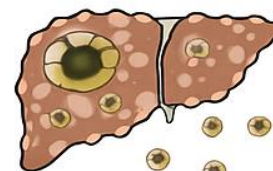
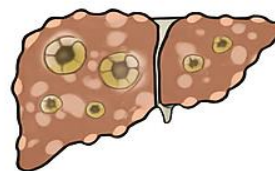
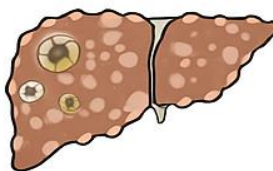
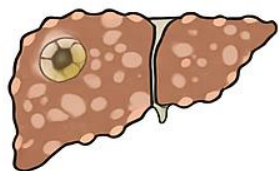
- Until therapeutic decisions can be reliably informed by molecular analysis of tumours, routine molecular analysis is not recommended (**LoE 3, strong recommendation, strong consensus**).

No evidence yet
supports systematic
molecular analysis



Work up and staging

Main determinants for clinical decisions making



Tumour stage

Very early
BCLC 0

Early
BCLC A

Intermediate
BCLC B

Advanced
BCLC C

Other
determinants

Liver function - Portal hypertension - Performance status - Comorbidities -
Patient preferences

Main initial
treatment
aim

Tumour ablation

Disease control

Surgery : LR or LT

Thermal ablation

Intra-arterial
TTT

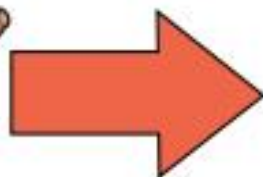
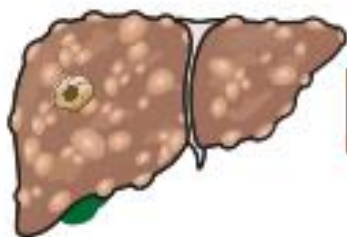
EBRT external Rxt / SIRT : internal Rxt

Systemic TTT

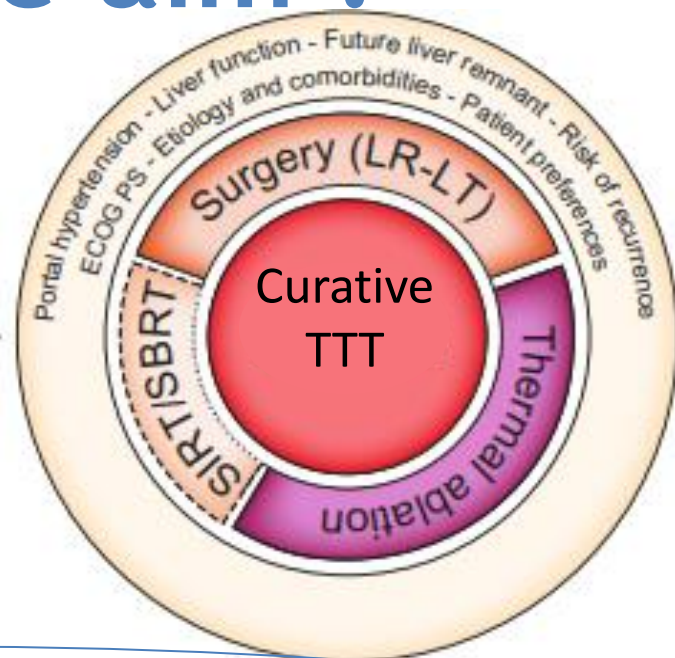
Multidisciplinary assessment and clinical decision making

What is the aim ?

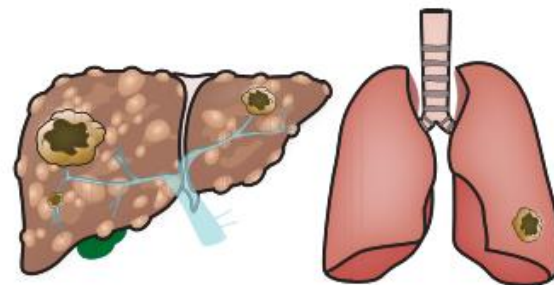
Small burden of disease



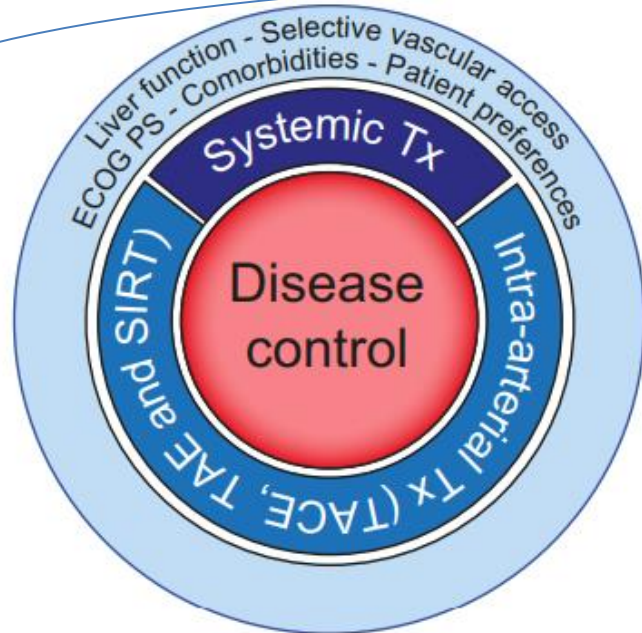
BCLC Stage 0-A-B



Vascular invasion or extrahepatic disease

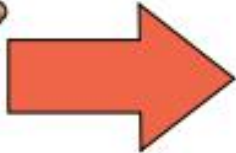
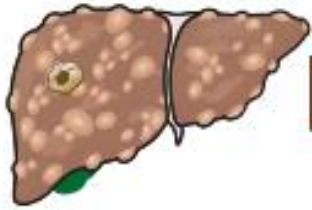


BCLC Stage B-C

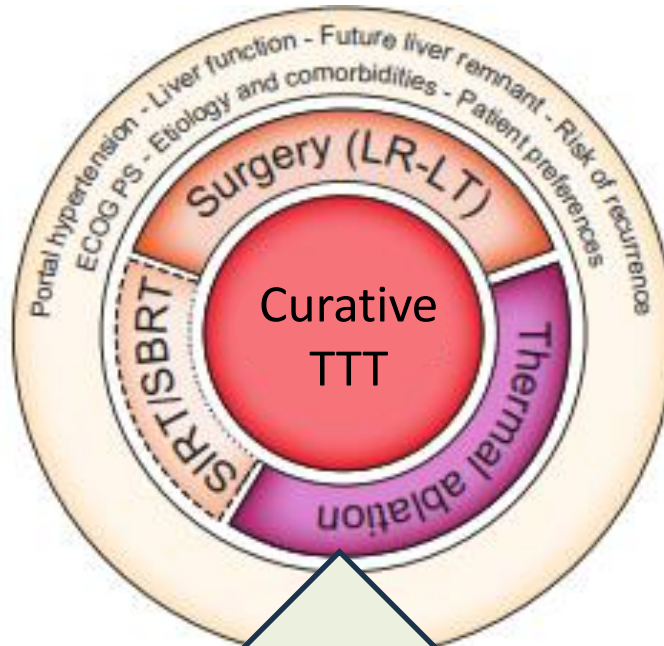


The aim may change !

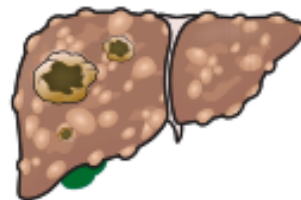
Small burden of disease



BCLC Stage 0-A-B



Downstaging



BCLC Stage B-C

Systemic treatment

?

Loco-regional therapies

Liver transplantation

"Ideal" theoretical treatment

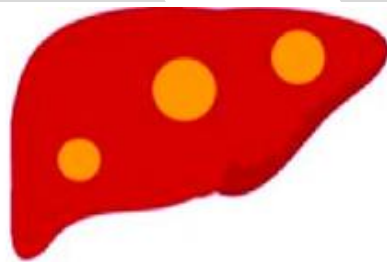
5-year survival > 70% and > 60% at 10 years

- Selection:**
- No vascular invasion, no metastasis
 - Transplant criteria adopted by each center

Within Milan
criteria

Consider
bridge TTT

Transplant



Single tumor
nodule < 5 cm

3 tumor nodules
< 3 cm



Liver transplantation



"Ideal" theoretical treatment

5-year survival > 70% and > 60% at 10 years

- Selection:**
- No vascular invasion, no metastases
 - Transplant criteria adopted by each center

Within Milan
criteria

Consider
bridge TTT

Beyond Milan within
extended criteria

Downstaging

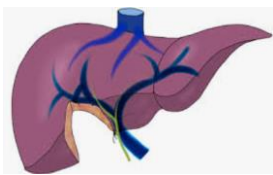
Histological High-risk
recurrence after LR

Observation >
6 mois

Transplant



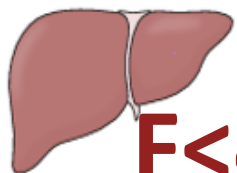
**AFP level > 1000 ng/ml =
Absolute contraindication to LT**



Liver resection

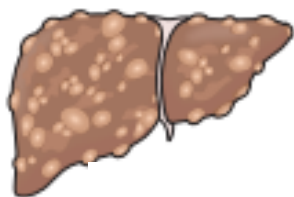


Preoperative assessment for LR ++



F<4

Reference option in non-cirrhotic
If single HCC even large



F=4

Preferred option in cirrhosis in:

- ✓ Unique HCC > 2 cm < 5 cm
- ✓ < 3 nodules 3 < cm same segment
- ✓ Child A - no CSPH- sufficient LV

Child B- CSPH possible if minor resection



CSPH / CHILD B:

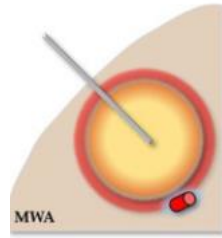
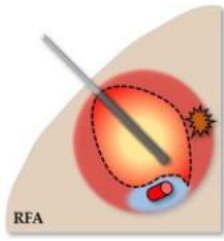
contraindicated if major LR



Advanced age not an absolute
contraindication

HCC < 2cm: Resection or thermal ablation

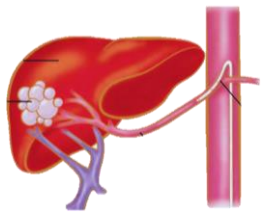
Thermal ablation



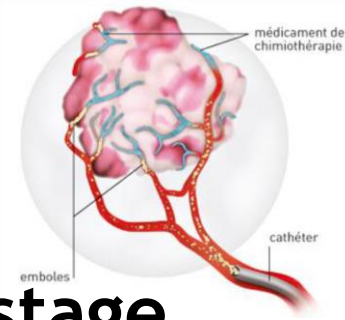
Selection:

- ✓ Tumor size < 3 to 5 cm
- ✓ Accessible via US or CT scan
- ✓ Away from vascular (heat sink) or biliary structures
- ✓ Preserved liver function

• No one thermal ablation technique (radiofrequency or microwave) is recommended over the others



Intra-arterial therapy



-> First line palliative TTT of intermediate stage

Selection:

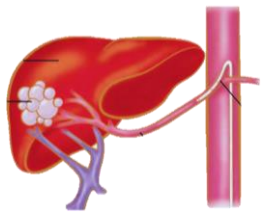


- ✓ Multinodular
- ✓ Large size
- ✓ Preserved liver function
- ✓ Preserved portal flow
- ✓ No metastasis

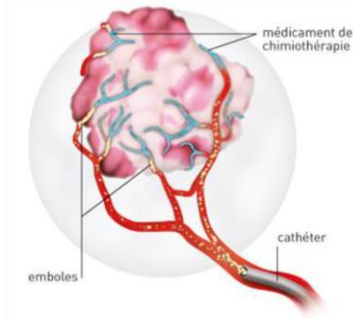
Conventional TACE
(cTACE)

Drug-eluting beads
TACE (DEB-TACE)

Trans-arterial
embolisation (TAE)



Intra-arterial therapy



cTACE or DEB TACE ??

cTACE, DEB-TACE should be considered equivalent

TACE or Trans arterial embolization (TAE) ?

TAE → acceptable alternative to TACE

When to stop TACE ?

No response after up **to 2 consecutive TACE**
According to mRecist criteria



Intra-arterial therapy: SIRT

Selective Internal Radiation Therapy = Radioembolization

Selection:



- ✓ Single within MC or larger HCC
- ✓ Preserved liver function
- ✓ Thrombosis (VP1-3)

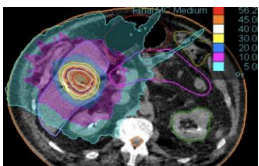
— Contradicated if troncular portal thrombosis (VP4)

Alternative to
ablation

Alternative to
TACE

Single tumours unsuitable for LR or LT or TACE
significant risk of recurrence

Bridge to LT or LR



EBRT

External beam radiation therapy

Selection:

- ✓ Single or pauci-nodular HCC 3 to 5 cm
 - ✓ Preserved liver function
- ✓ Unsuitable for resection or ablation
 - ✓ Good alternative for TACE
- High risk complications from TACE
 - ✓ Recurrence after ablation



Not an alternative to
systemic TT



Systemic treatment

Diffuse HCC - PVT- Extra hepatic spread- PS 0-1
Preserved liver function CHILD A

1st Line

Atezo-Beva
Or Durva -Treme
If no feasible:
Sorafenib / Lenvatinib (TKI)

2nd Line

Tyrosine kinase inhibitors (TKI)

3rd Line

?

The choice should not be influenced by aetiology



Systemic treatment ICI-based combinations



Should patients with mildly decompensated cirrhosis be offered systemic therapy?

- Patients with decompensated cirrhosis should not be routinely treated with systemic therapy outside a prospective clinical trial.



Careful selection in
Child-Pugh 7-8 patients





Systemic treatment ICI-based combinations



How to assess ?

RECIST v1.1

Response	Target lesions	Non-target	New lesions
CR	Disappearance of all target lesions	Disappearance of all non-target lesions	No
	Lymph node axis < 10 mm	Normalization of tumor marker levels	Partial Response
PR	30% \geq decrease in SLD from baseline (\geq 4 weeks)	No progression	No
PD	\geq 20% increase in SLD from Nadir with an absolute SoD increase \geq 5 mm	Unequivocally progression in lesion size	Yes, appearance of new unequivocally metastatic lesions
SD	Neither PR nor PD with the Nadir as reference point	Persistence of one or more non-target lesions and/or tumor markers > normal	No



Systemic treatment ICI-based combinations



Until when ?

Complete / partial
response

Stable disease

Progressive
disease



CONTINUE



Switch to 2nd Line

CONTINUE



If ongoing clinical
benefit

Conclusion

➔ Multidisciplinary team

Oncologist Hepatologist Pathologist



Radiation
oncologist



Surgeon



Radiologist



Factors considering
for treatment selection



Safety



Rationality



Response



Real-World data



HRQoL