APASL STC on HCC, Cebu, November 21-23, 2013

APASL Guideline on HCC

Masatoshi Kudo, MD, PhD

Dept. Gastroenterology and Hepatology

Kinki University School of Medicine

Asian Pacific Association for the Study of the Liver consensus recommendations on hepatocellular carcinoma

Masao Omata · Laurentius A. Lesmana · Ryosuke Tateishi · Pei-Jer Chen · Shi-Ming Lin · Haruhiko Yoshida · Masatoshi Kudo · Jeong Min Lee · Byung Ihn Choi · Ronnie T. P. Poon · Shuichiro Shiina · Ann Lii Cheng · Ji-Dong Jia · Shuntaro Obi · Kwang Hyub Han · Wasim Jafri · Pierce Chow · Seng Gee Lim · Yogesh K. Chawla · Unggul Budihusodo · Rino A. Gani · C. Rinaldi Lesmana · Terawan Agus Putranto · Yun Fan Liaw · Shiv Kumar Sarin

Omata M, et.al Hepatol Int 2010 4:439–474

APASL Guideline

- ✓ Surveillance
- ✓ Diagnostic Algorithm
- ✓ Treatment Algorithm

Surveillance

Recommendations

- Surveillance for HCC in high-risk populations is recommended (2a, B).
- Surveillance for HCC should be performed by ultrasonography (US) and alfa-fetoprotein (AFP) every 6 months (2a, B).

Omata M, et.al Hepatol Int 2010 4:439–474

APASL Guideline

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Tumor markers

Recommendations

- Alfa-Fetoprotein alone is not recommended for the diagnosis of HCC (1b, A).
- Cutoff value of AFP should be set at 200 ng/mL for diagnosis (1b, A).
- Simultaneous measurement of AFP and DCP provides higher sensitivity without decreasing specificity (1b, A).

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Ultrasonography

Recommendations

- Ultrasonography is a screening test and not a diagnostic test for confirmation (2b, B).
- Contrast-enhanced US (CEUS) is as sensitive as dynamic CT or dynamic MRI in the diagnosis of HCC (2b, B).

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CT, MRI, and other imaging modalities

Recommendations

- Dynamic CT or dynamic MRI is recommended as a first-line diagnostic tool for HCC when a screening test result is abnormal (1a, A).

- Hallmark of HCC during CT scan or MRI is the presence of arterial enhancement, followed by washout of the tumor in the portal venous and/or delayed phases (1b, A).

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Diagnostic algorithm

Recommendations

- Typical HCC can be diagnosed by imaging regardless of the size if a typical vascular pattern, i.e., arterial enhancement with portal venous washout, is obtained on dynamic CT, dynamic MRI, or CEUS (2b, B).

- Nodular lesions show an atypical imaging pattern, such as iso- or hypovascular in the arterial phase or arterial hypervascularity alone without portal-venous washout, should undergo further examinations (2b, B).

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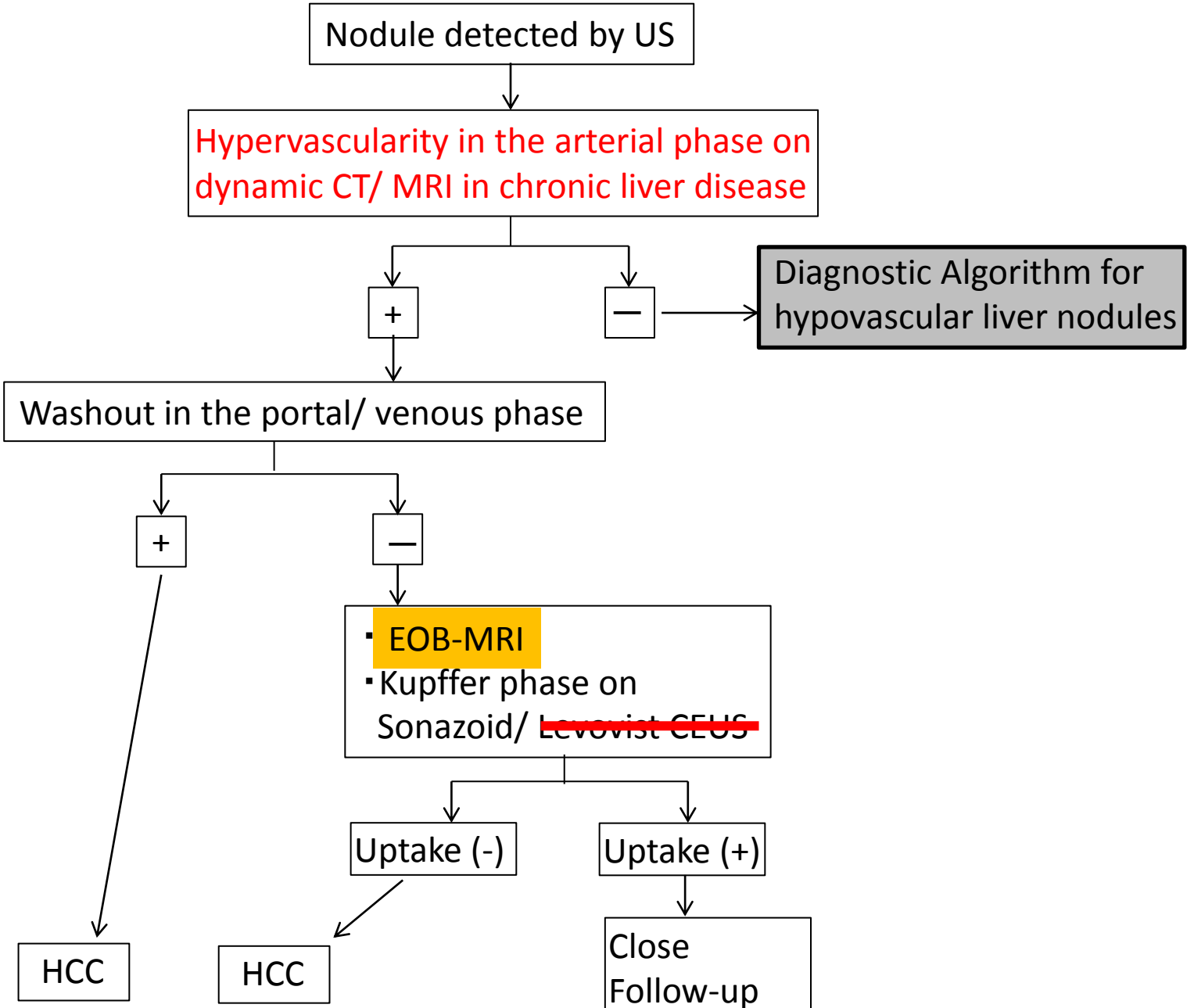
Diagnostic algorithm of hypervascular HCC



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Hallmark of HCC byCEUS and Reinjection Imaging

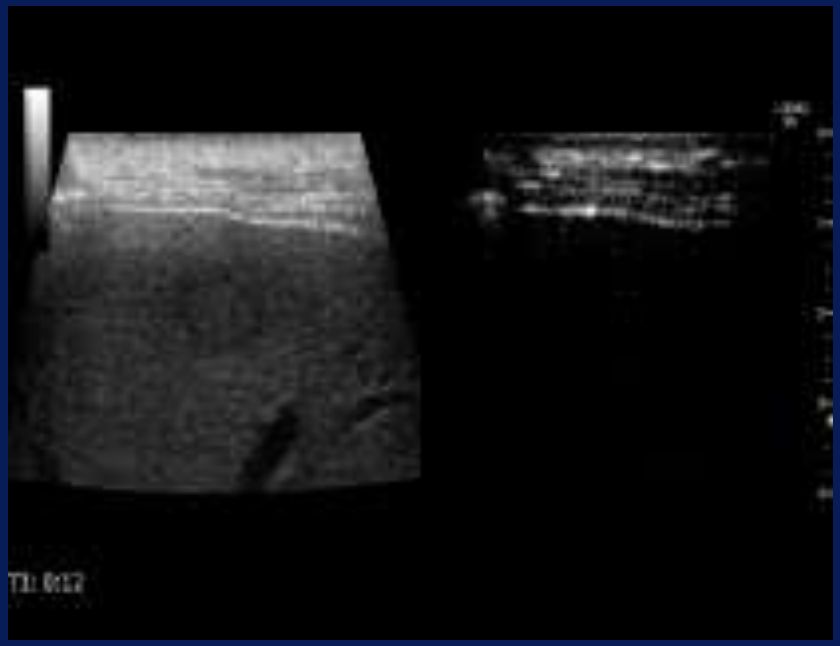
Sonazoid(0.010ml/kg)
Intravenous injection

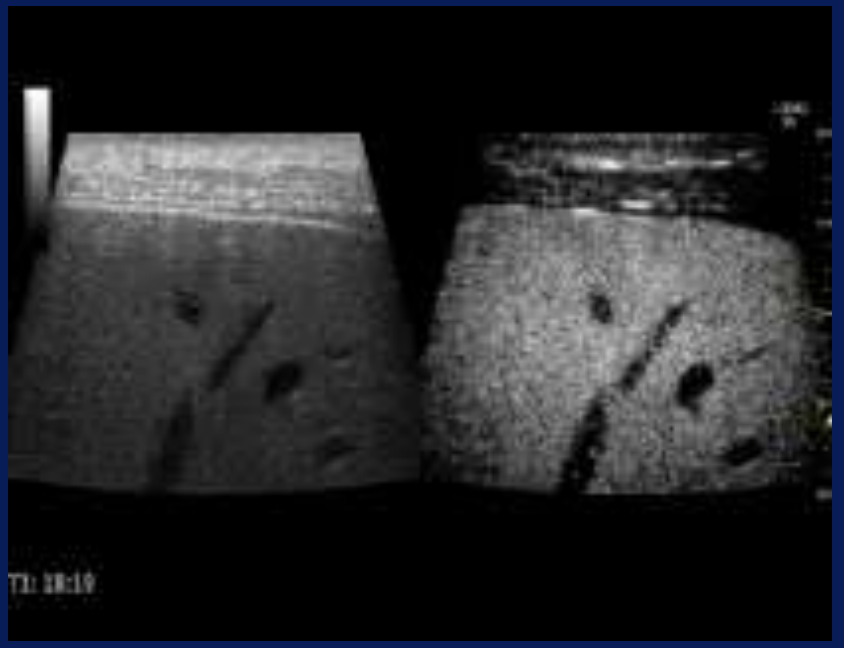
Reinjection imaging
Sonazoid(0.010ml/Kg)

0 1 3 6 10 15

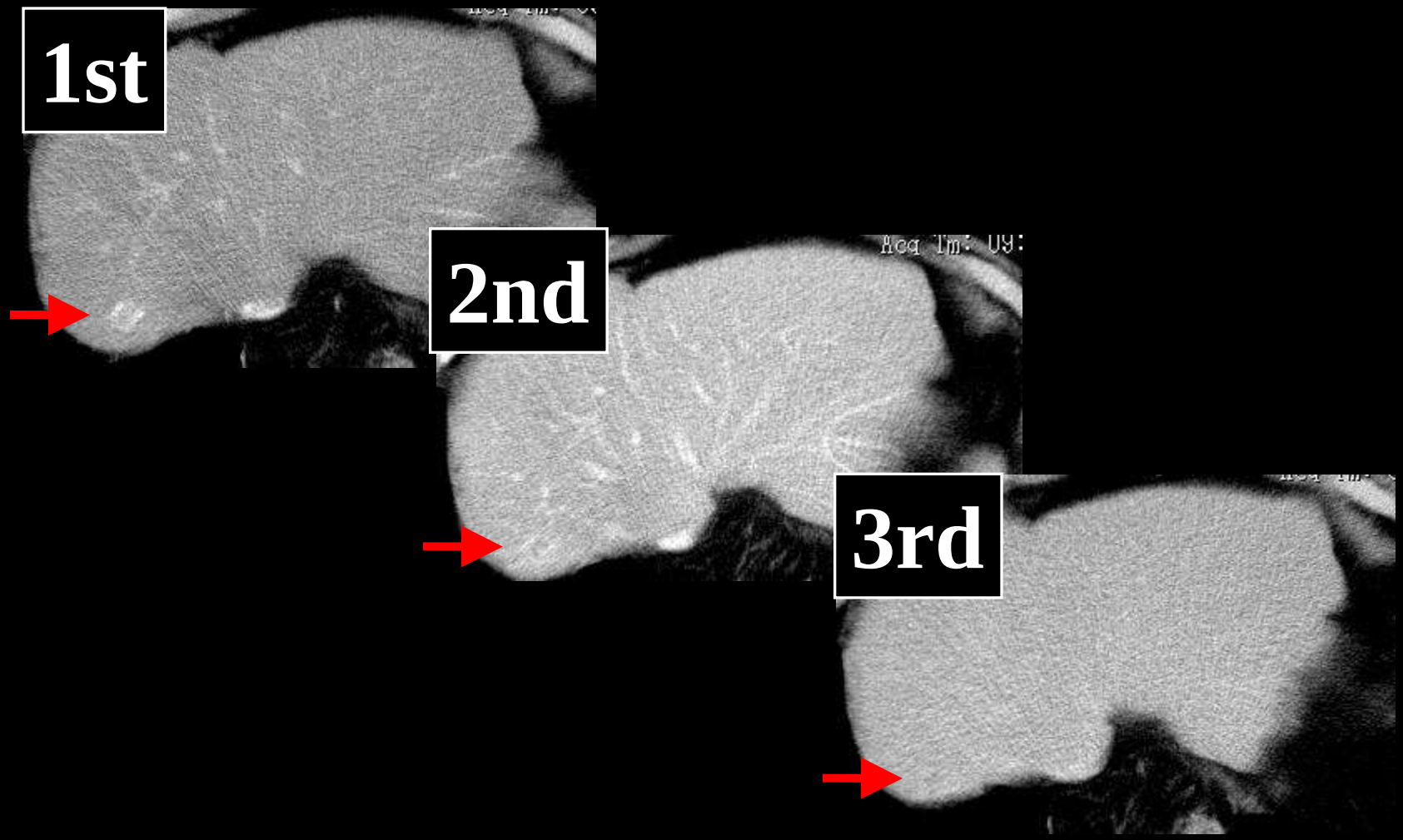
Vascular phase

Post vascular Phase(PVP)
(Kupffer phase)





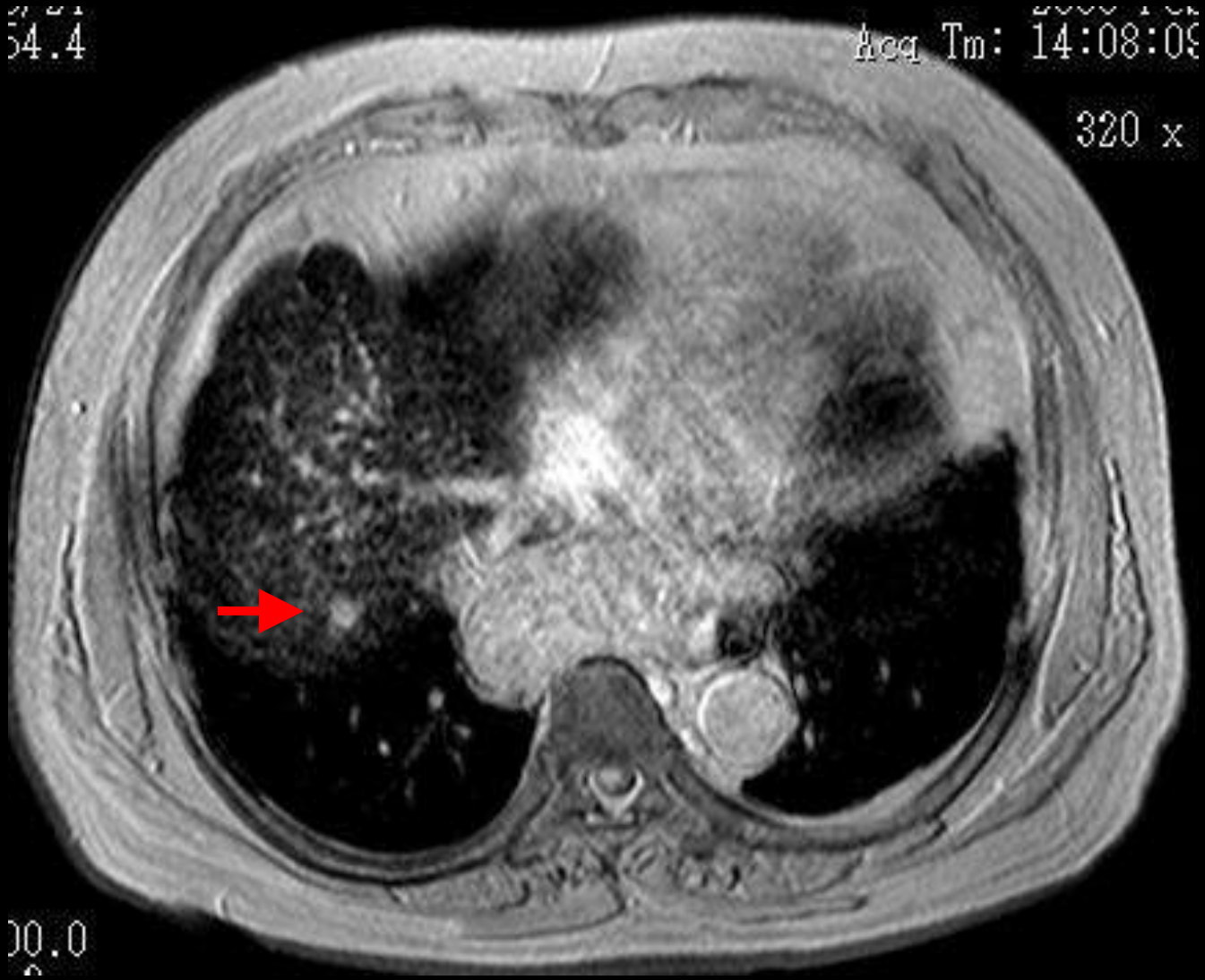
Dynamic CT



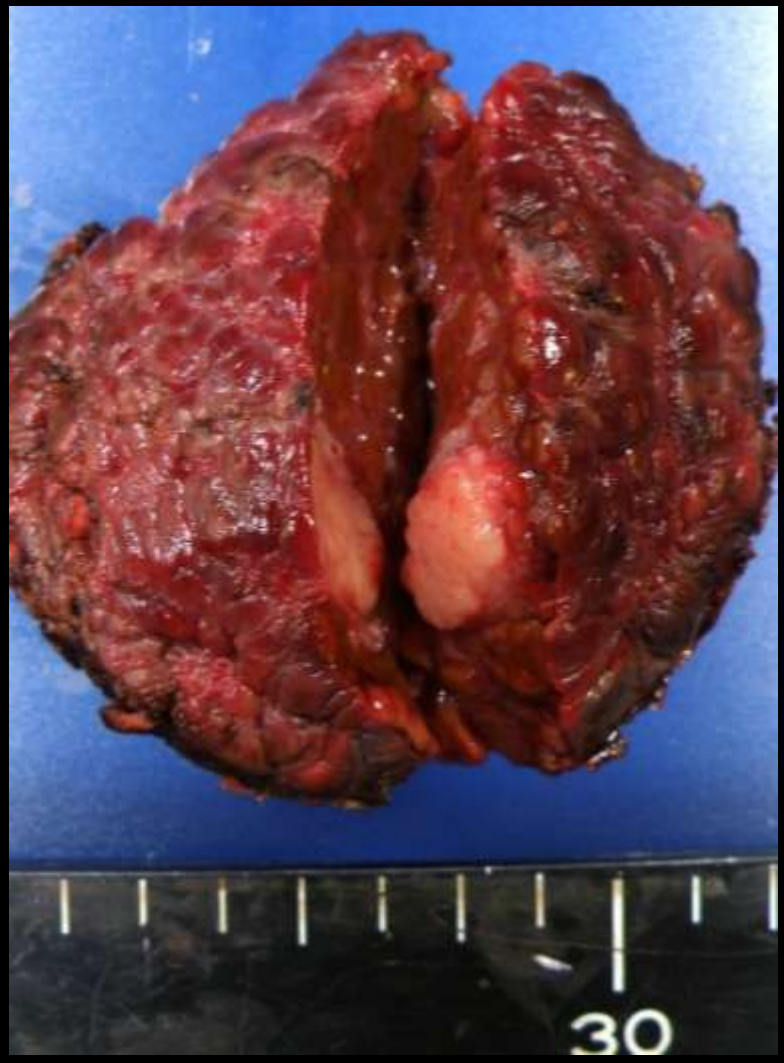
Vascular phase

Kupffer phase

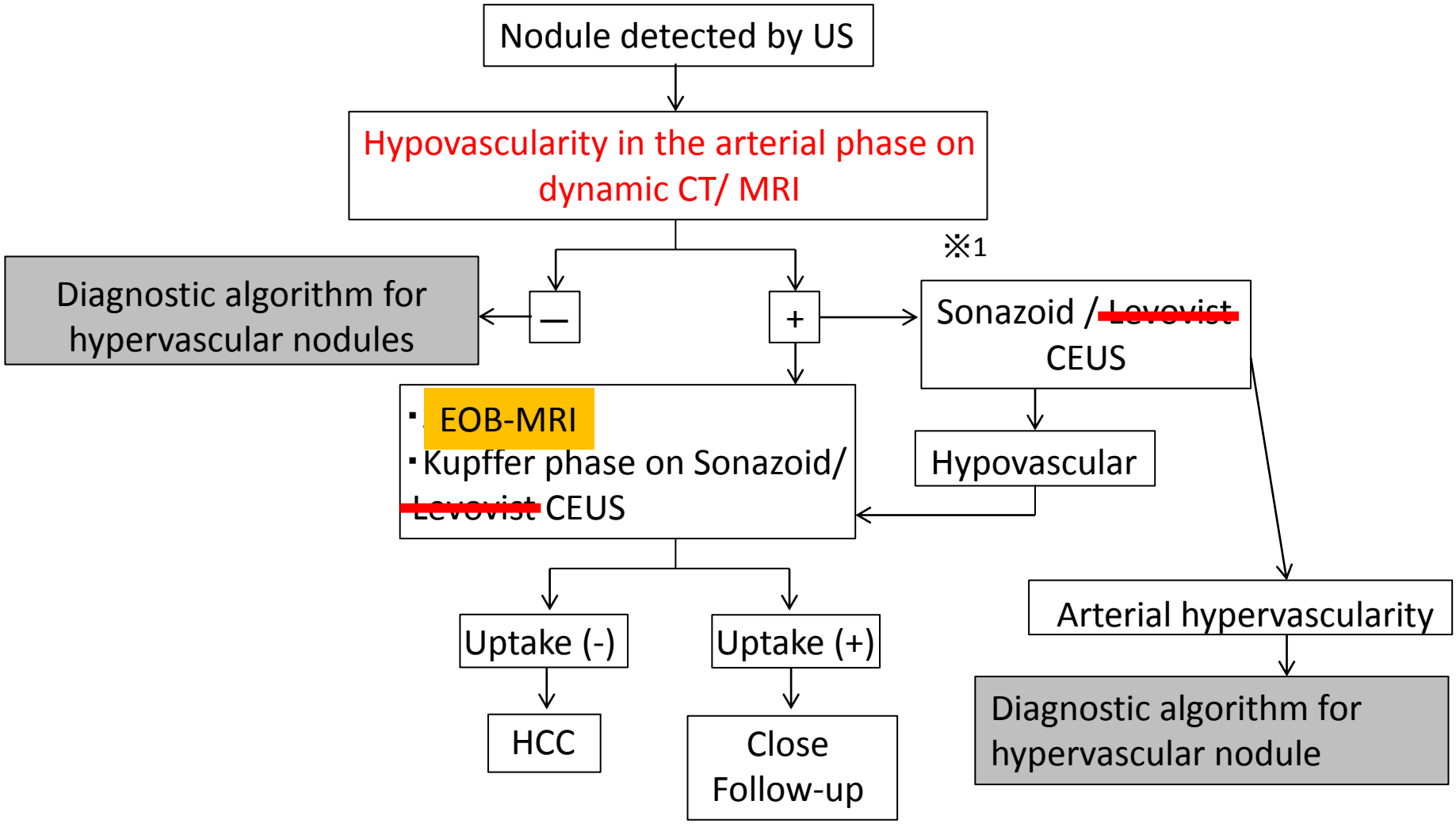
SPIO-MRI



Resected specimen



Diagnostic algorithm of hypovascular HCC



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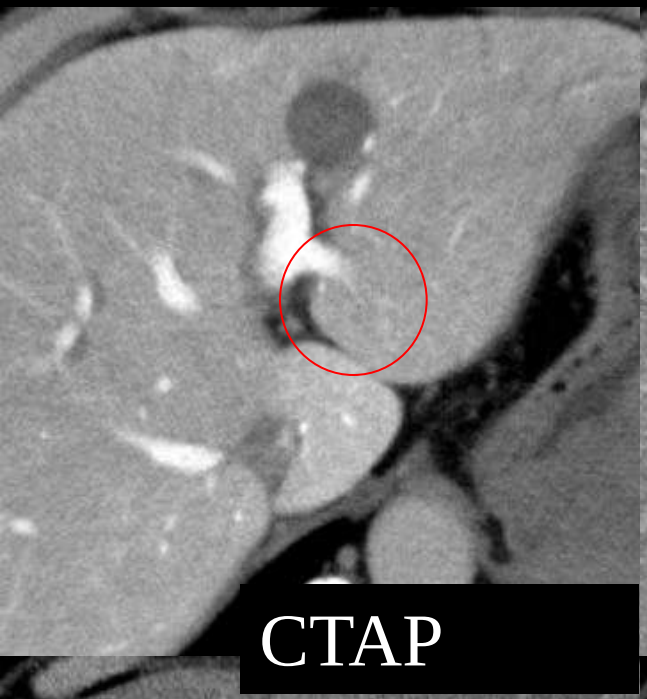
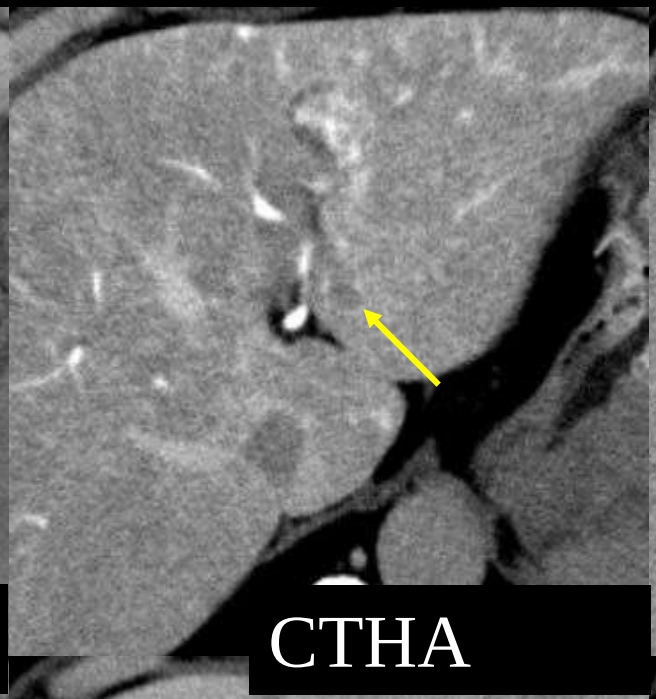
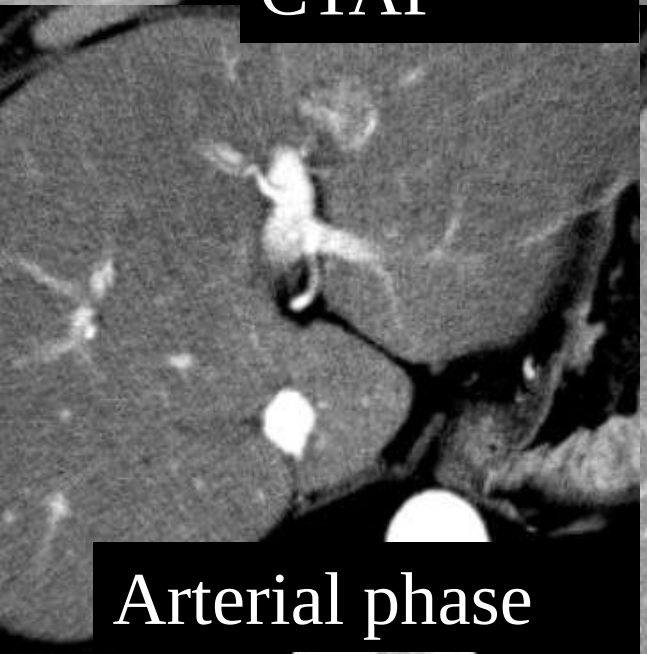
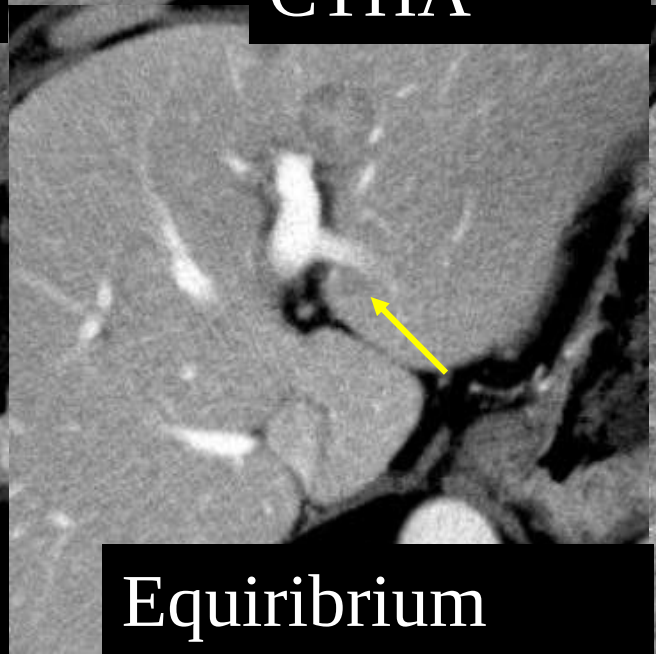
CTAP/ CTHA, Dynamic CT

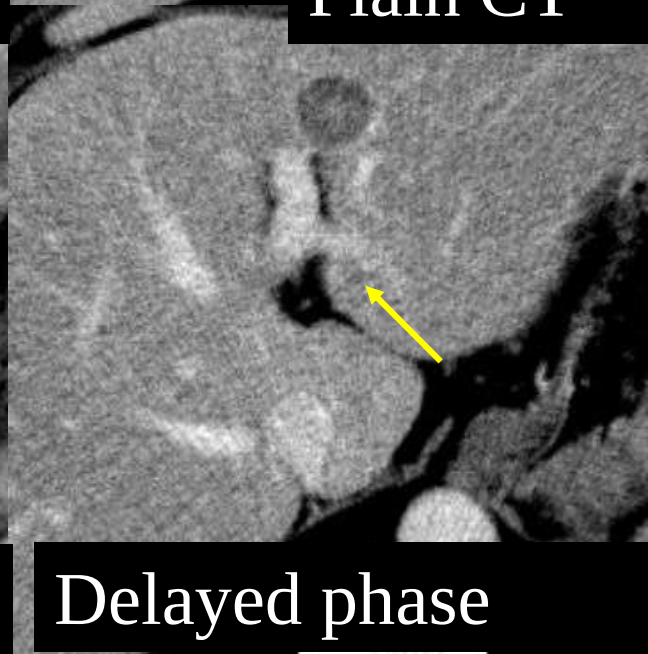

CTAP


CTHA


Plain CT

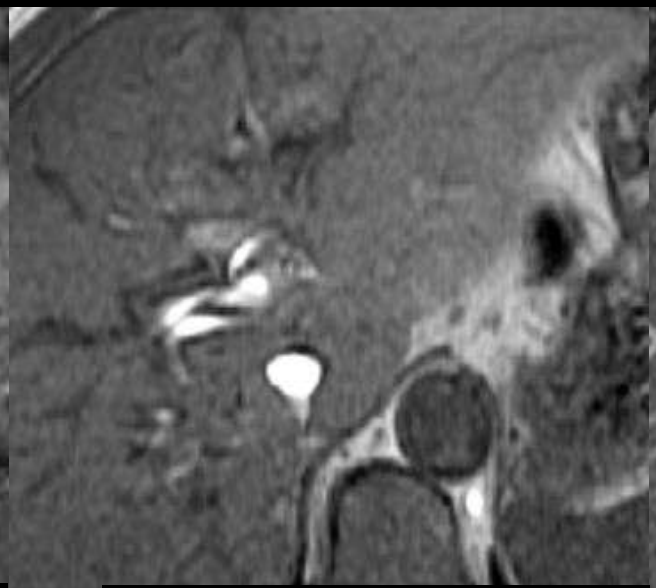

Arterial phase


Equiribrium

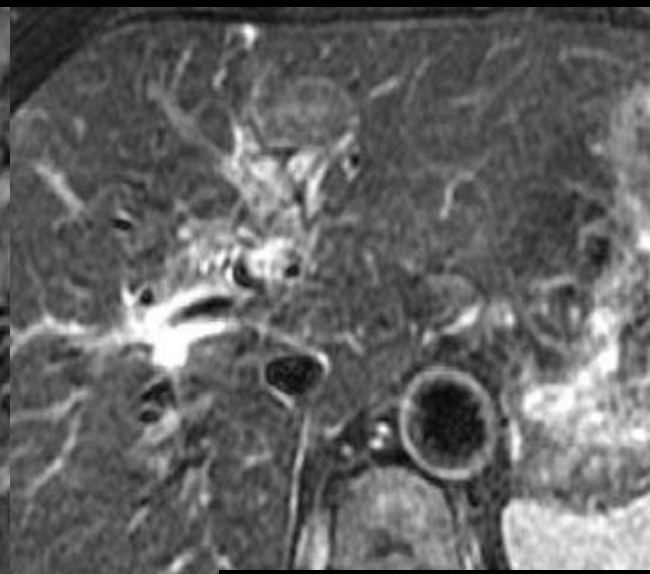

Delayed phase

MRI

T1WI opposed phase

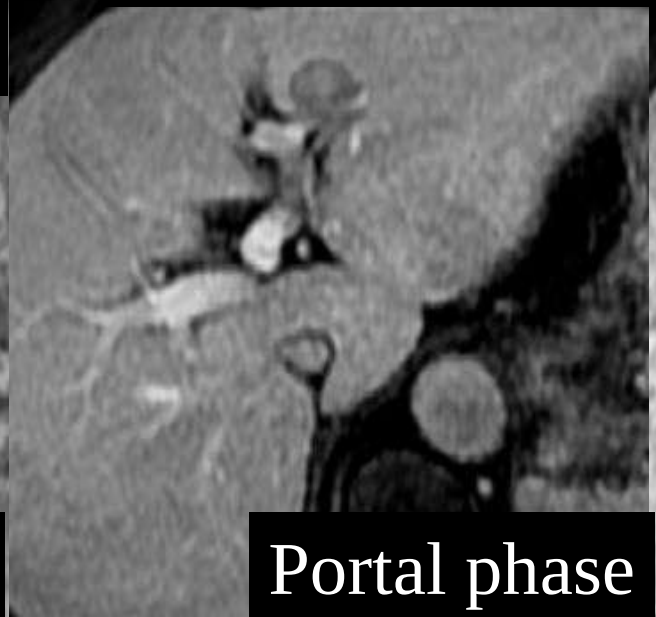


T1WI in phase

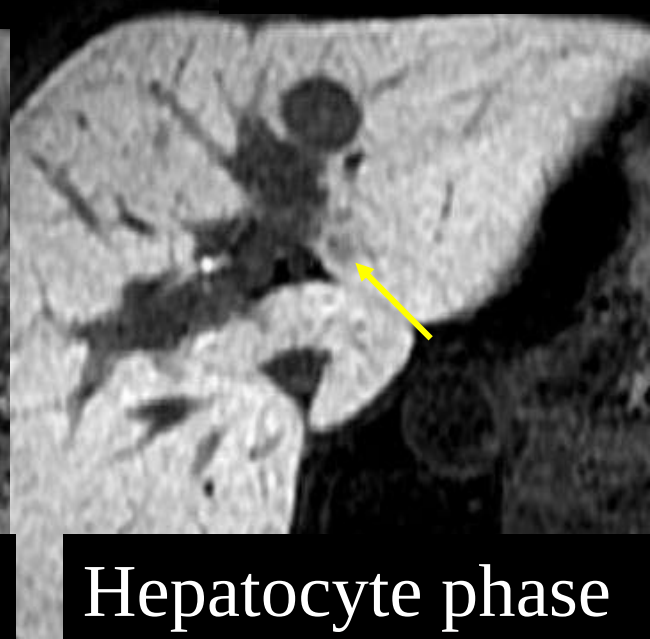


Fat SatT2WI

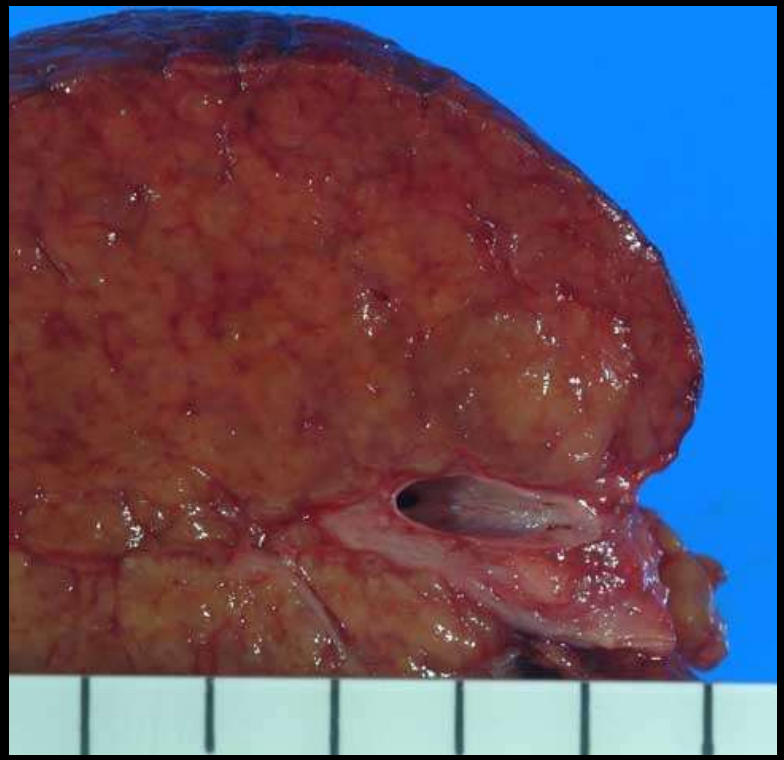
Arterial phase



Portal phase

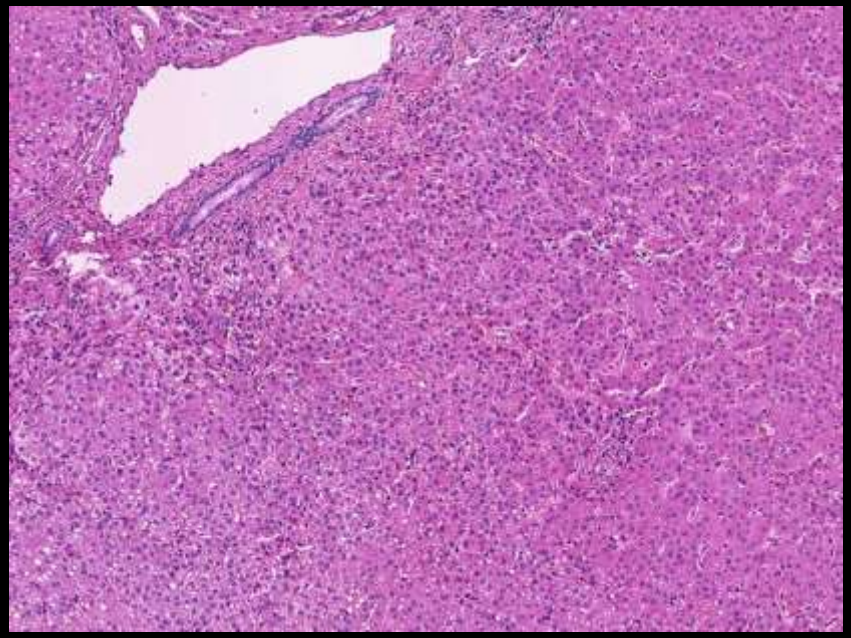


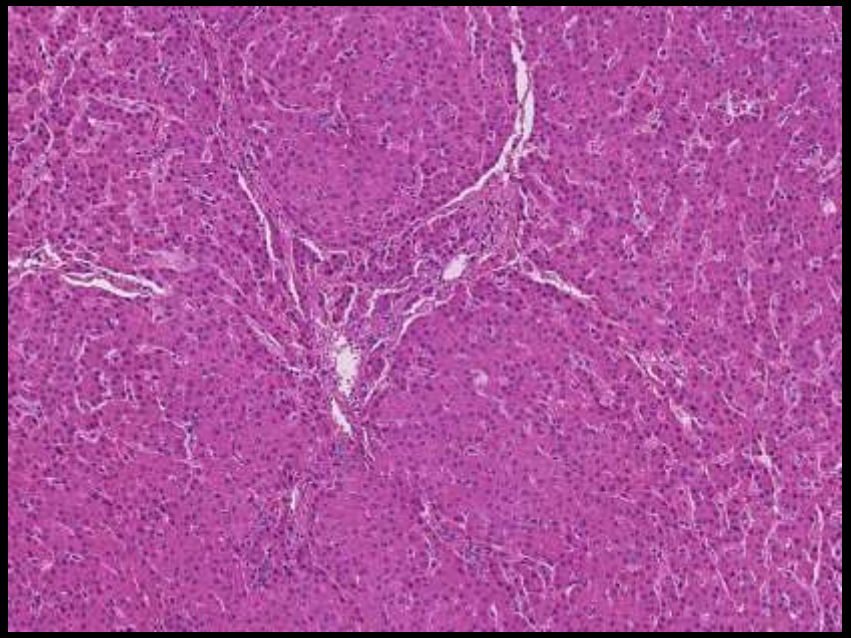
Hepatocyte phase

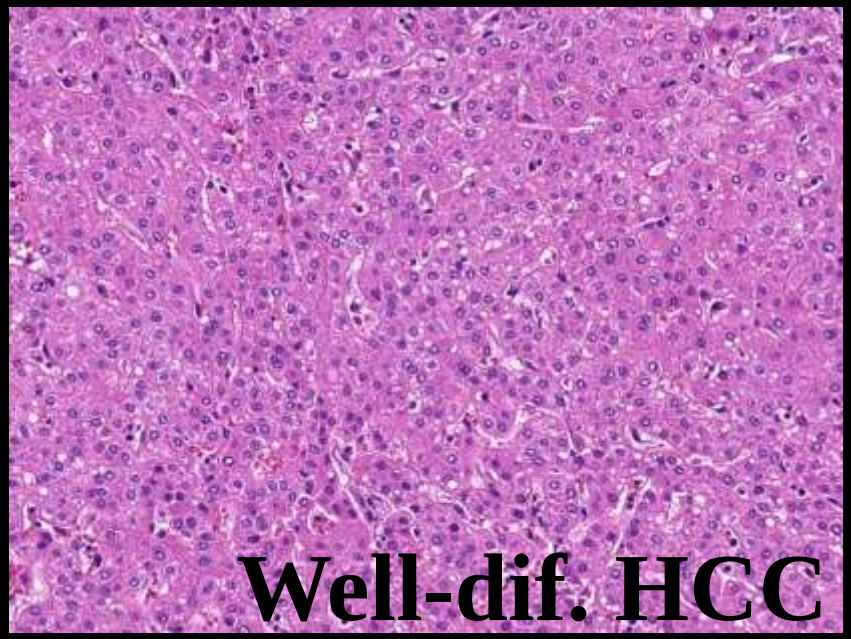


Vaguely nodular type with indistinct margin

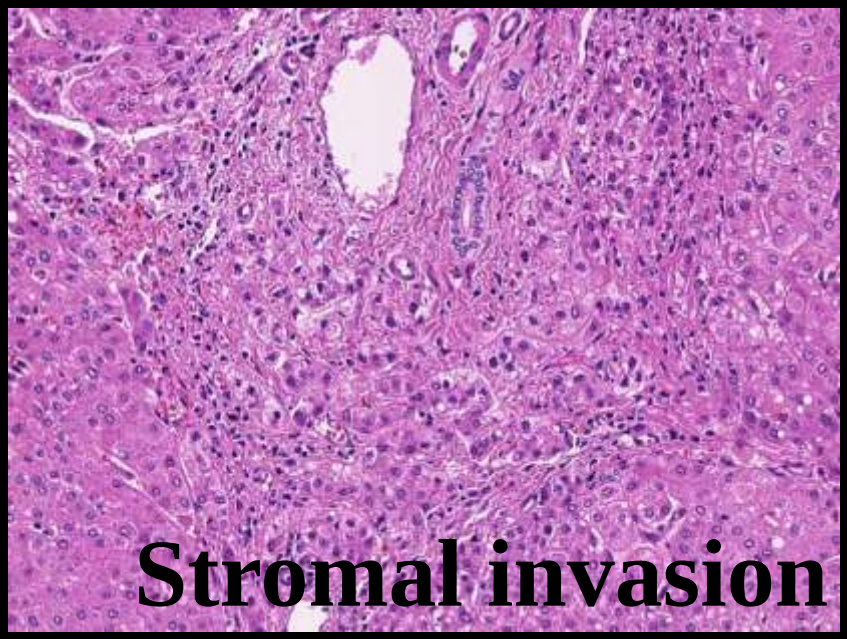
Very Early-stage HCC





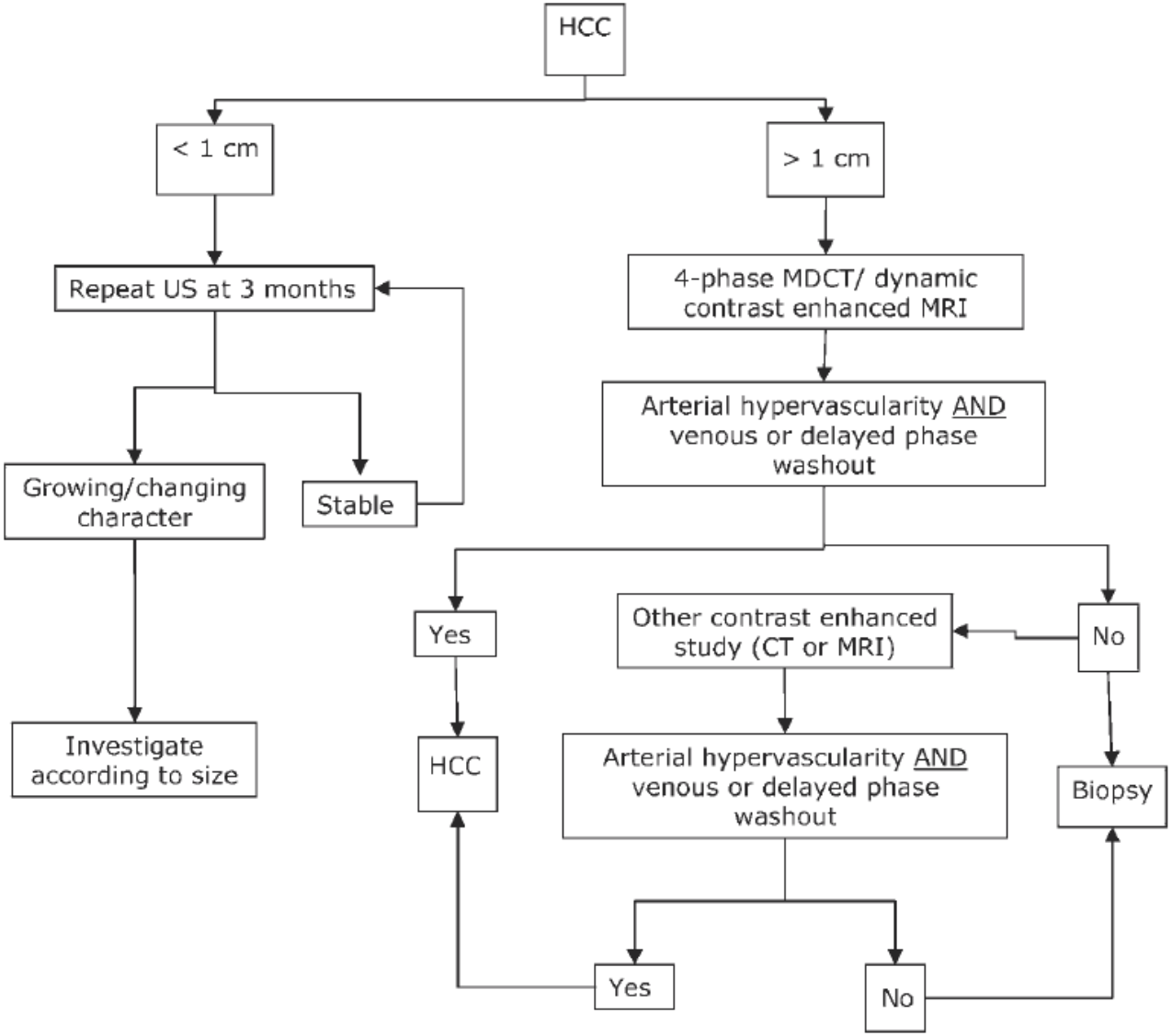


Well-dif. HCC

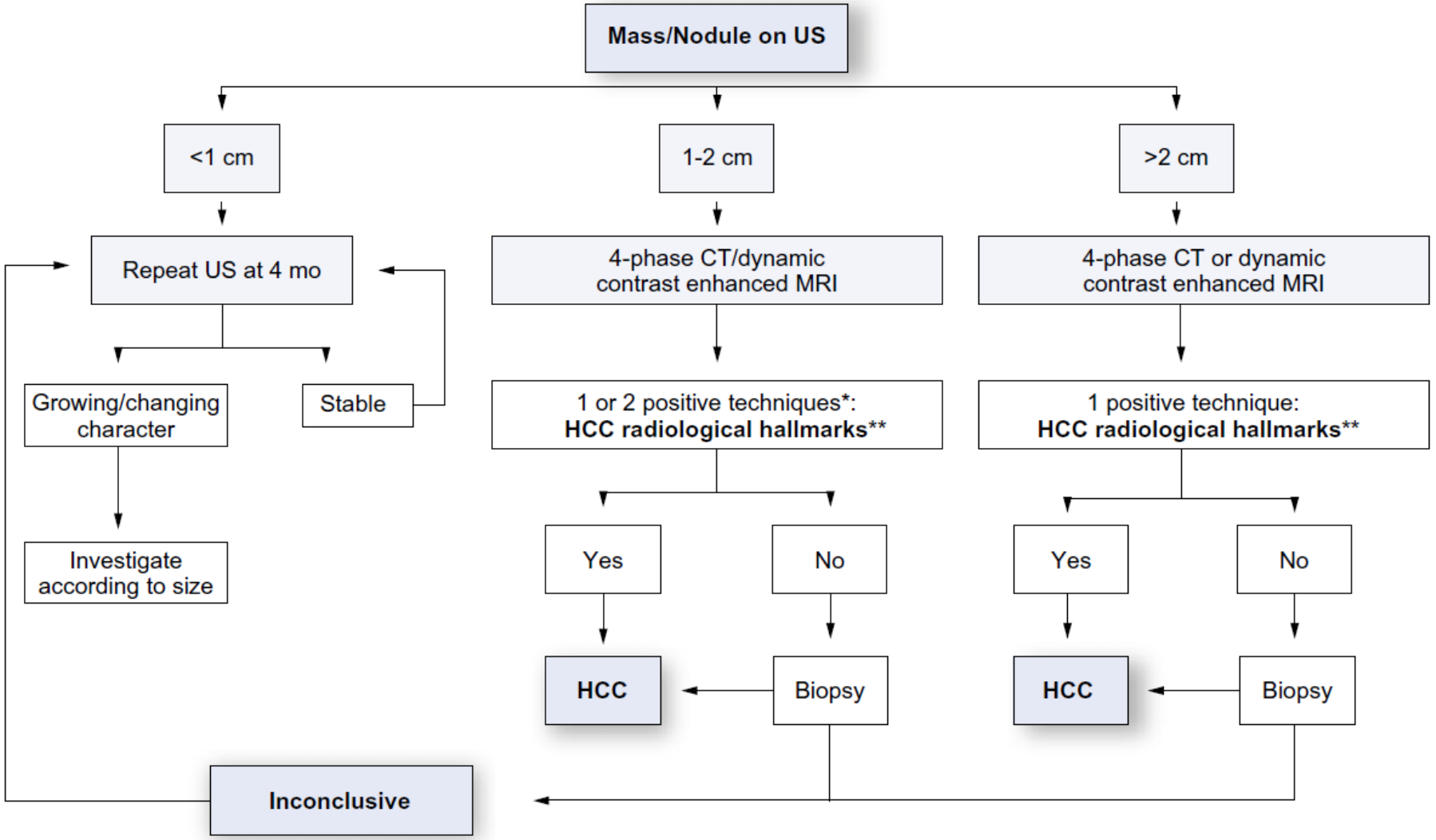


Stromal invasion

AASLD Surveillance and Diagnostic Algorithm



EASL-EORTC Diagnostic Algorithm of HCC



Difference between AASLD/EASL Guideline and APASL Guideline

- AASLD/EASL Guideline recommends diagnosing only nodules > 1 cm in diameter, whereas APASL Guideline includes nodules < 1 cm in diameter (No size limitation).
- AASLD/EASL Guideline does not include CEUS, whereas APASL Guideline includes utility of CEUS.
- AASLD/EASL Guideline uses only hallmark of vascular pattern by dynamic CT/MRI, whereas APASL Guideline includes hallmarks of vascular AND functional findings using CEUS with Sonazoid and SPIO (EOB)-MRI (Kupffer and hepatocyte function).
- AASLD/EASL Guideline includes only diagnostic algorithm of hypervascular HCCs, whereas APASL Guideline includes diagnostic algorithm of hypovascular (early) HCCs.

APASL Guideline

- ✓ Surveillance
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Liver resection and transplantation

Recommendations

- Liver resection is a first-line curative treatment of solitary or multifocal HCC confined to the liver, anatomically resectable, and with satisfactory liver function reserve (2b, B)

- Liver transplantation for HCC provides the best curative treatment of solitary HCC 5 or less cm or 3 or less tumor nodules, each 3 or less cm (Milan criteria) associated with Child-Pugh (C-P) class C cirrhosis (2b, B).

- Bridge therapy using local ablation or TACE may reduce dropout rate with long waiting time of more than 6 months, but there is no proven benefit in long-term survival or down staging to allow expanded indication (2b, B).

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Ablation

Recommendations

- Local ablation is an acceptable alternative to resection for small HCC (<3 cm) in C-P class A cirrhosis (2b, B).
- Local ablation is a first-line treatment of unresectable, small HCC with 3 or fewer nodules in C-P class A or B cirrhosis (2b, B).

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Transarterial chemoembolization

Recommendations

- TACE is recommended as a first-line treatment for patients with unresectable, large/multifocal HCCs who do not have vascular invasion or extrahepatic spread (1b, A).

- Selective TACE can be performed in early-stage patients in whom RFA is difficult to be performed because of tumor location or medical comorbidities (3, C).

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Systemic therapy

Recommendations

- Sorafenib is recommended for the treatment of advanced stage patients (portal vein invasion or extrahepatic spread) who are not suitable for locoregional therapy and who have C-P class A liver function (1b, A).

- Sorafenib may be used with caution in patients with C-P class B liver function (C).

- Cytotoxic drugs are not routinely recommended but may be considered in highly selected patients whose general and hepatic conditions are adequate (3, C).

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Tertiary prevention

Recommendations

- Interferon may be effective in reducing the recurrent HBV-related HCC after curative ablation of HCC (1b, B).
- Entecavir may be effective in reducing the recurrent HBV-related HCC after curative ablation of HCC (2c, C).

- Interferon-based antiviral treatments after complete removal or ablation of HCV-related HCC may reduce HCC recurrence and improve survival (1b, B).

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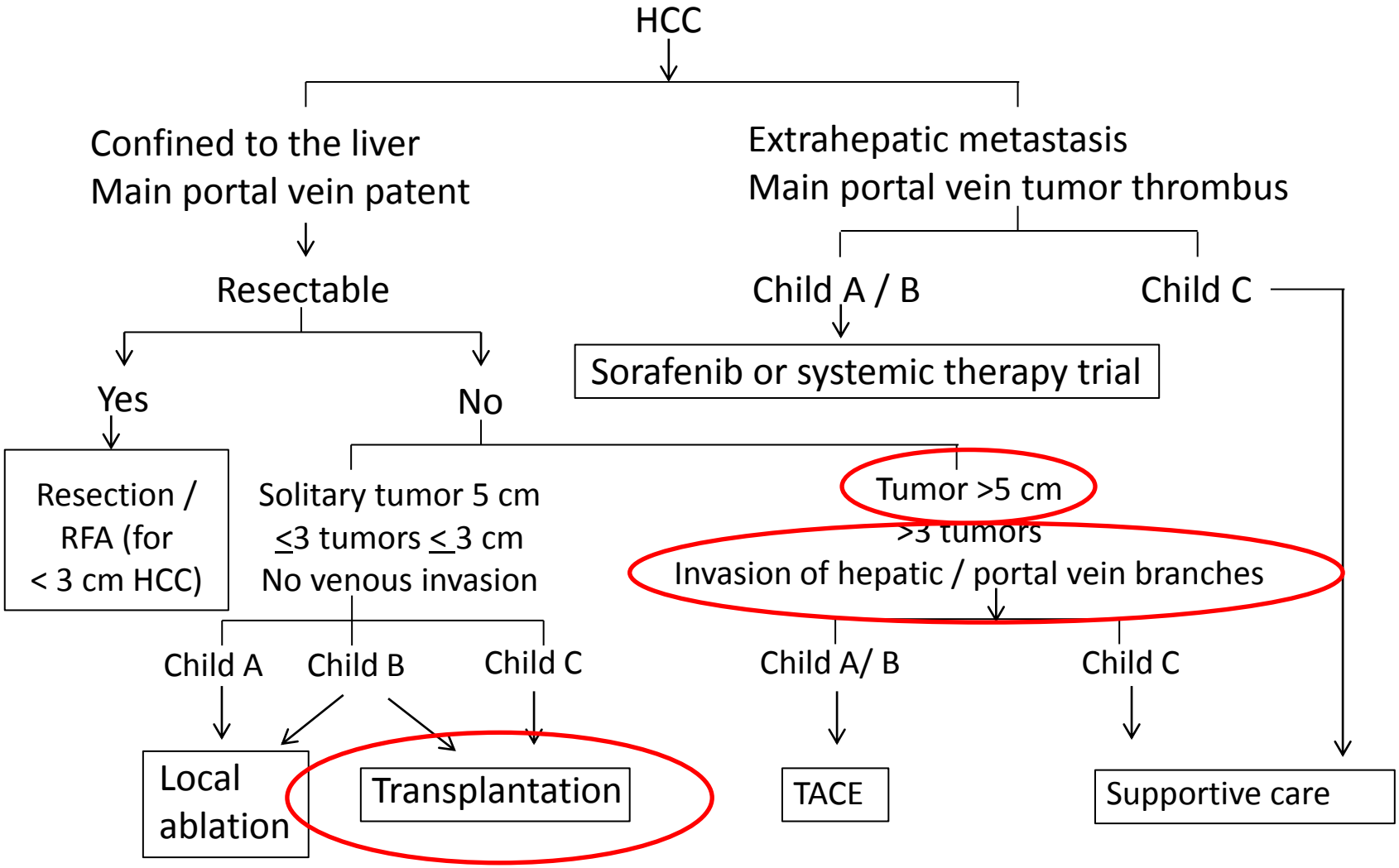
Treatment algorithm of HCC



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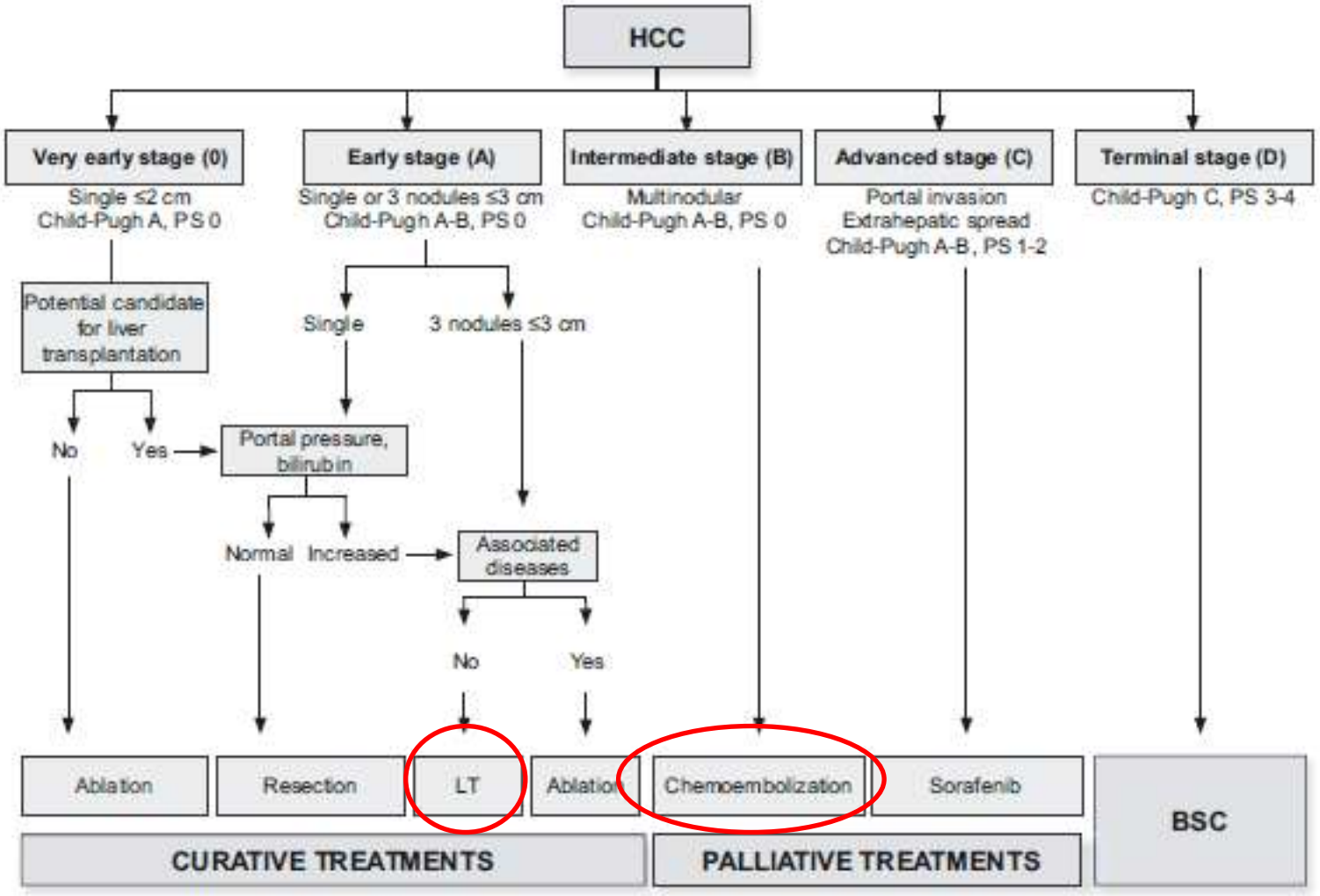
AASLD/EASL-EORTC treatment strategy updated in 2011



Lope CR, Bruix J et al. *J Hepatol* 2012;S75-87

Difference between AASLD/EASL Guideline and APASL Guideline

- AASLD/EASL Guideline recommends LT for patients with CP A/B liver function (not mention on CP C), whereas APASL Guideline recommends LT only for patients with CP B or C liver function.
- AASLD/EASL Guideline recommends TACE for patients with multinodular HCCs, whereas APASL Guideline recommends TACE for patients with minor vascular invasions.
- AASLD/EASL Guideline recommends TACE for patients with multinodular HCCs, whereas APASL Guidelines recommends TACE for patients with solitary tumors > 5cm in diameter.
- AASLD/EASL Guideline recommends curative treatment s for patients with solitary tumors having CP A/B liver function, whereas APASL Guideline recommends TACE for patients with solitary large tumors.