



# VAI TRÒ **CHẨN ĐOÁN HÌNH ẢNH** trong **Chẩn đoán – Đánh giá** bệnh nhân **HCC**

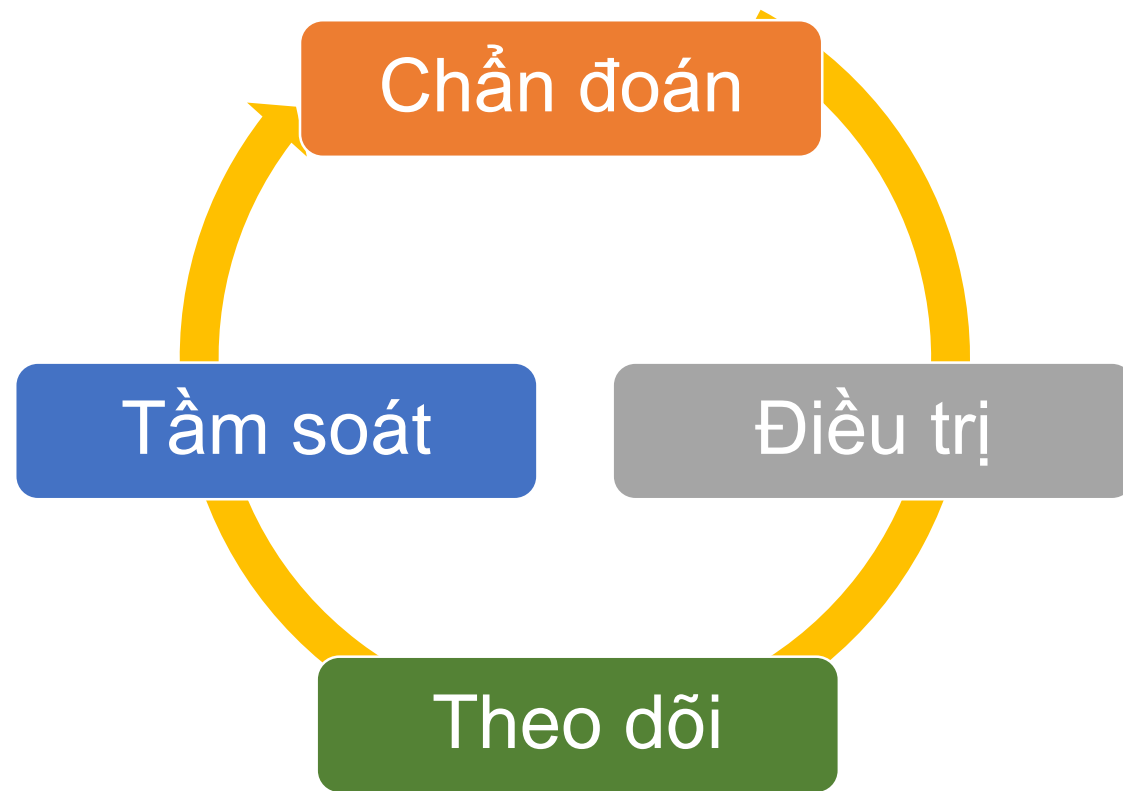


**KHOA CHẨN ĐOÁN HÌNH ẢNH**  
BỆNH VIỆN ĐẠI HỌC Y DƯỢC TP HCM

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# Bệnh nhân HCC





## Review Article

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## A concise review of updated global guidelines for the management of hepatocellular carcinoma: 2017-2024



Risk: VGSV, Xơ gan

Phương pháp điều trị ưu tiên

→ Chiến lược tầm soát và  $\Delta(+)$

**Vai trò hình ảnh trong tầm soát và  $\Delta(+)$**

**Table 1.** Current guidelines for the management of HCC across different regions

Region	Organization	Guideline	Publishing year	Distinctive feature
Asia	KLCA-NCC	2022 KLCA-NCC Korea practice guidelines for the management of hepatocellular carcinoma	2023	Comprehensive overview from prevention to palliative treatment Utilization of resection and combination of locoregional treatments in advanced-stage HCC
	JSH	Management of hepatocellular carcinoma in Japan: JSH consensus statements and recommendations 2021 update	2021	Defines the extremely high-risk group and proposes a surveillance strategy
		Clinical practice guidelines for hepatocellular carcinoma: The Japan Society of Hepatology 2021 version (5th JSH-HCC guidelines)	2023	Presents concise algorithms for surveillance, diagnosis, and treatment
	TLCA	Management consensus guidelines for hepatocellular carcinoma: 2023 update on surveillance, diagnosis, systemic treatment and posttreatment monitoring by the TLCA and the Gastroenterological Society of Taiwan	2024	Utilization of biomarkers other than AFP in the surveillance setting Suggests systemic therapy for patients with TACE refractoriness or unsuitability
	APASL	Asia-Pacific clinical practice guidelines on the management of hepatocellular carcinoma: a 2017 update	2017	Recently updated guidelines for systemic therapy Includes etiologies from across the Asia region
		APASL clinical practice guidelines on systemic therapy for hepatocellular carcinoma-2024	2024	Diagnosis and surveillance explained according to imaging modalities
	APPLE	A changing paradigm for the treatment of intermediate-stage hepatocellular carcinoma: APPLE consensus statements	2020	Focus on the treatment of intermediate-stage HCC and TACE-unsuitable cases
Europe	BSG	British Society of Gastroenterology guidelines for the management of hepatocellular carcinoma in adults	2024	Adopts risk stratification scores for surveillance of CHB patients Includes the most recent first-line systemic therapies
	BCLC	BCLC strategy for prognosis prediction and treatment recommendation: the 2022 update	2022	Focus on staging and treatment allocation Presents clinical decision-making as a key process
	EASL	EASL clinical practice guidelines: management of hepatocellular carcinoma	2018	Comprehensive overview from prevention to palliative treatment
	ESMO	Hepatocellular carcinoma: ESMO clinical practice guidelines for diagnosis, treatment and follow-up	2018	Mostly based on the modified BCLC staging system
		Updated treatment recommendations for hepatocellular carcinoma from the ESMO clinical practice guidelines	2021	Proposes the concept of treatment stage migration
USA	AASLD	AASLD practice guidance on prevention, diagnosis, and treatment of hepatocellular carcinoma	2023	Presents algorithms for each treatment according to staging Utilization of downstaging criteria for LT Broad application of treatments for early-stage HCC
	NCCN	NCCN clinical practice guidelines in oncology (NCCN guidelines®) hepatocellular carcinoma (version 4, 2024)	2024	Does not present the quality of evidence or strength of recommendation Does not follow a specific staging system
	ASCO	Systemic therapy for advanced hepatocellular carcinoma: ASCO guideline update	2024	Focus on systemic therapy
	AGA	AGA clinical practice guideline on systemic therapy for hepatocellular carcinoma	2022	Focus on systemic therapy

# Tầm soát

Á:

- **US** + AFP
- $\pm$  PIVKA II, AFP\_L3
- I: 3-12 tháng
- **CT/MRI** ( $\pm$ ) v US không đủ  $\Delta$

Âu + Mỹ:

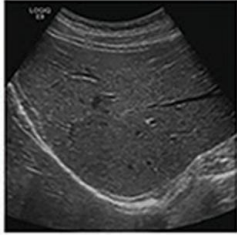
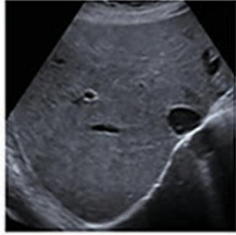
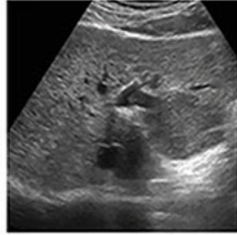
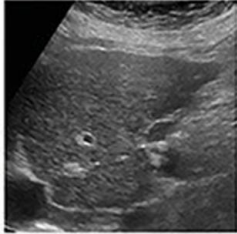
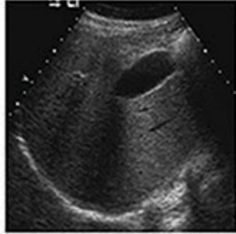
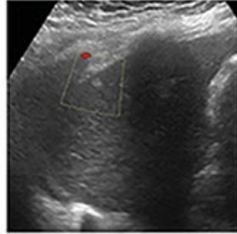
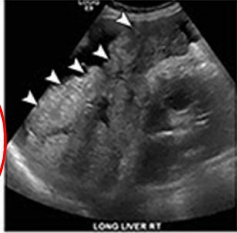

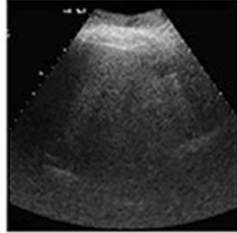
- **US**  $\pm$  AFP
- I: 6 tháng



**Table 2.** Summary of regular surveillance practices across different regions

Region	Guideline	Surveillance			
		Target population		Test	Interval (months)
Asia	KLCA-NCC	CHB or CHC or cirrhosis		US <i>plus</i> AFP CT or MRI ( <i>inadequate US</i> )	6
	JSH	High-risk	CHB or CHC or non-viral cirrhosis	US <i>plus</i> AFP or AFP-L3% or PIVKA-II	6
		Extremely high-risk	Cirrhosis with CHB or Cirrhosis with CHC	US <i>plus</i> AFP or AFP-L3% or PIVKA-II	3-4
				CT or MRI ( <i>optional</i> )	6-12
	TLCA	High-risk	CHB or CHC or cirrhosis	US <i>plus</i> AFP and/or PIVKA-II	6
		Extremely high-risk	Cirrhosis with CHB or Cirrhosis with CHC	CT or MRI ( <i>optional</i> )	6-12
	APASL	Inadequate US in high-risk group			
		Cirrhosis or CHB with Asian females >50 years or Asian males >40 years or Africans >20 years or family history of HCC	US <i>plus</i> AFP	6	
APPLE	-		-	-	
Europe	BSG	Cirrhosis or CHB with Asian females >50 years or Asian males >40 years or Africans >20 years or family history of HCC or PAGE-B >10		US <i>plus</i> AFP	6
	EASL	Cirrhosis with Child-Pugh A and B or Child-Pugh C transplant candidate or CHB with PAGE-B ≥10 or non-cirrhotic F3		US	6
	ESMO	Cirrhosis with preserved liver function and manageable comorbidities or CHB with DNA >10,000 copies/mL or CHC with F3		US±AFP	6
	BCLC	-		-	-
USA	AASLD	Cirrhosis with Child-Pugh A and B or Child-Pugh C transplant candidate or CHB with females from endemic country >50 years or males endemic country >40 years or from Africa at earlier age or family history of HCC or PAGE-B ≥10		US <i>plus</i> AFP	6
	NCCN	Cirrhosis with Child-Pugh A and B or Child-Pugh C transplant candidate or CHB		US <i>plus</i> AFP	6
	ASCO	-		-	-
	AGA	-		-	-



<p>A: No or minimal limitations</p>	<p>Limitations if any are unlikely to meaningfully affect sensitivity</p> <p><b>Comment:</b> Visualization A is assigned even when mild heterogeneity of the liver is present due to underlying cirrhosis, as long as the liver is well-visualized in near entirety.</p>	 <p>Homogeneous liver</p>  <p>Minimal beam attenuation</p>  <p>Liver visualized in near entirety</p>
<p>B: Moderate limitations</p>	<p>Limitations may obscure small masses</p> <p><b>Comment:</b> Visualization B is assigned when there is moderate parenchymal heterogeneity, ultrasound beam attenuation, or shadowing obscuring portions of the liver.</p>	 <p>Moderately heterogeneous liver</p>  <p>Moderate beam attenuation</p>  <p>Some portions of liver not visualized</p>
<p>C: Severe limitations</p>	<p>Limitations significantly lower sensitivity for focal liver lesions</p> <p><b>Comment:</b> Visualization C is assigned when there is severe parenchymal heterogeneity, ultrasound beam attenuation, or shadowing obscuring majority (&gt;50%) of liver.</p>	 <p>Severely heterogeneous liver</p>  <p>Severe beam attenuation (&gt; 50% of diaphragm not visualized)</p>  <p>Majority (&gt;50%) of liver not visualized</p>

**Figure 3:** Summary of US Liver Imaging Reporting and Data System categories and visualization scores.

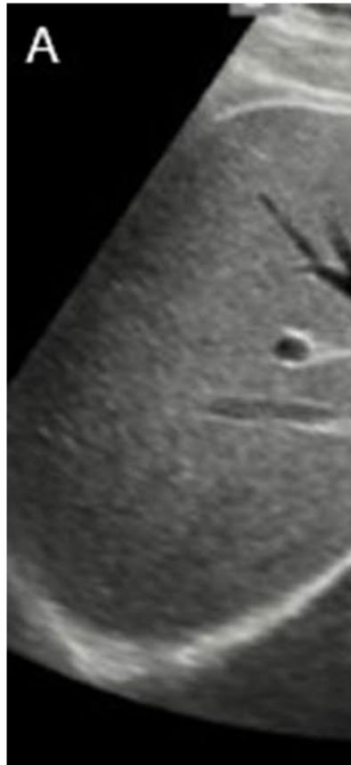
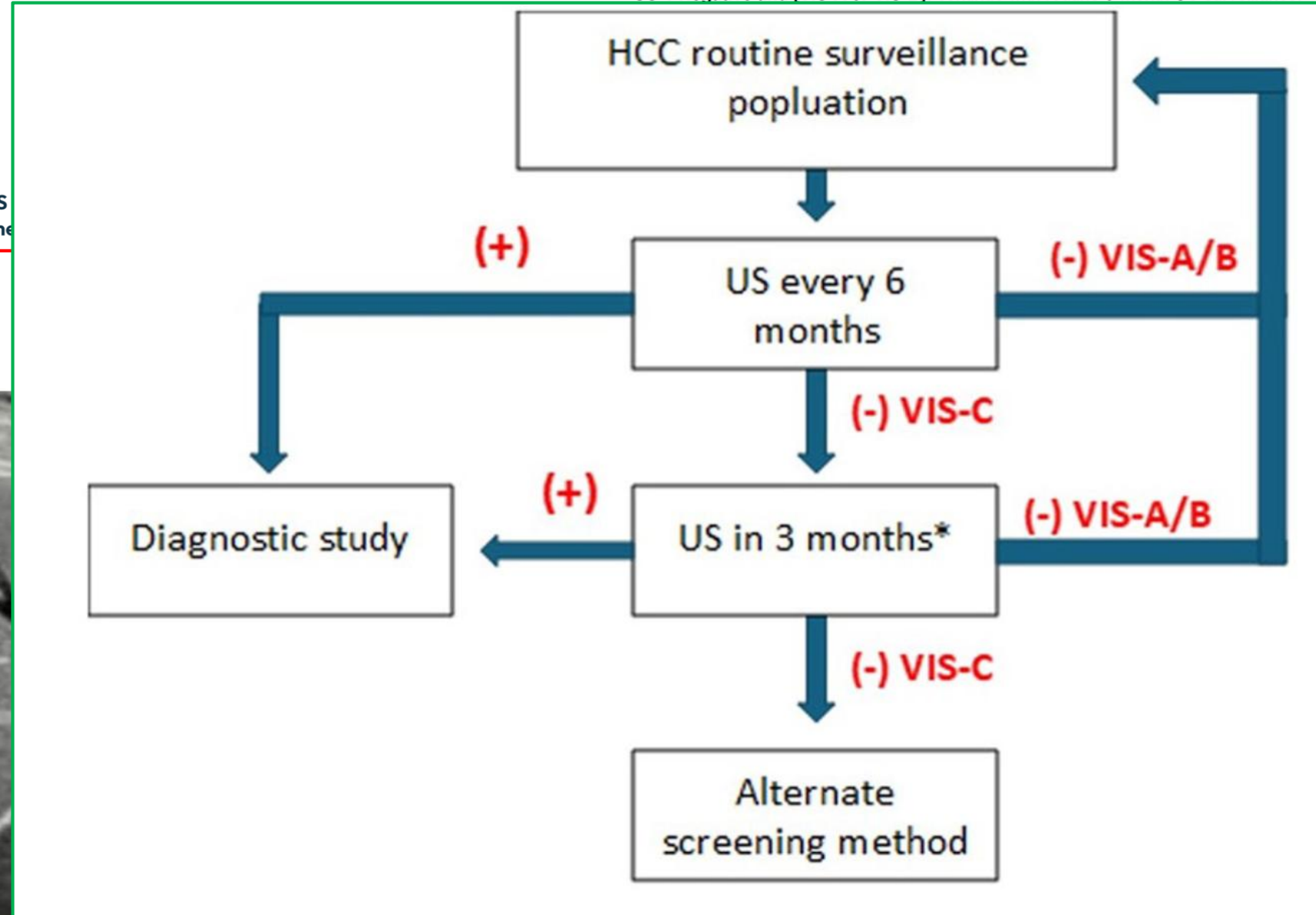
LI-RADS® v2024  
Surveillance Ultrasound Core



The American College of Radiology LI-RADS  
patients with risk factors for HCC, now termed

Both Surveillance US Category and Visualization Score, as well as serum alpha-fetoprotein (AFP),  
affect management recommendations:

US-1 Negative and [VIS-A or VIS-B]: continue with routine 6-month US surveillance.



LOWER RIGHT TRV

Right Liver IC

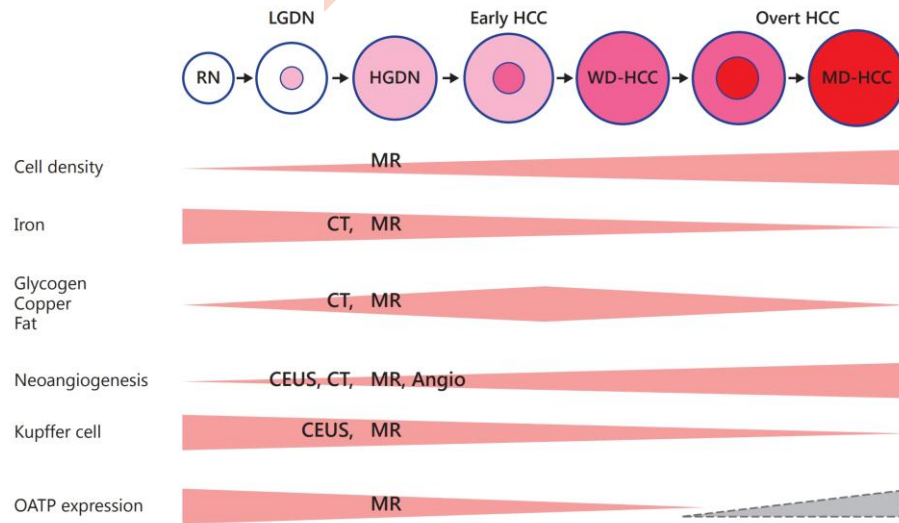
# Chẩn đoán

HAH  
không xâm lấn

Sinh thiết

	Bắt thuốc mạnh/ động mạch (+)	Bắt thuốc mạnh/ động mạch (-)
Thải thuốc (+)	<b>HCC điển hình</b>	
Thải thuốc (-)		

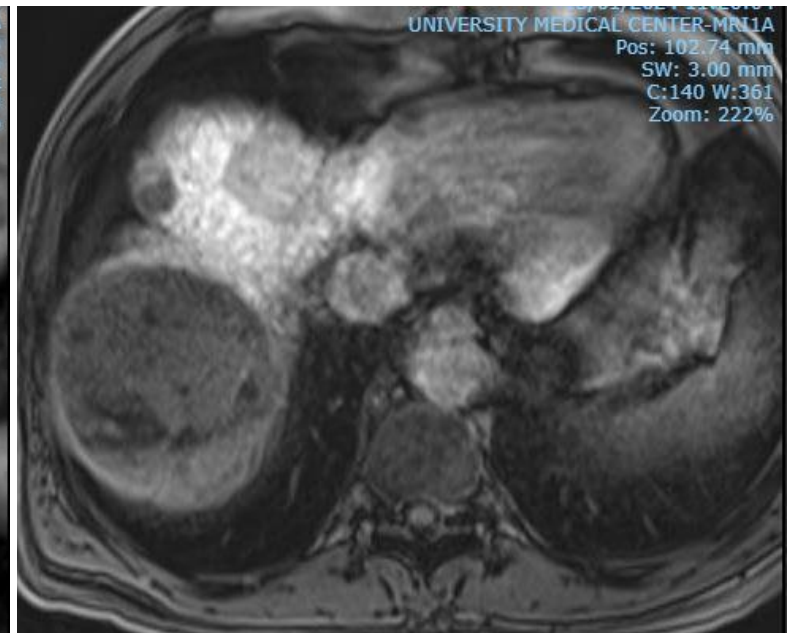
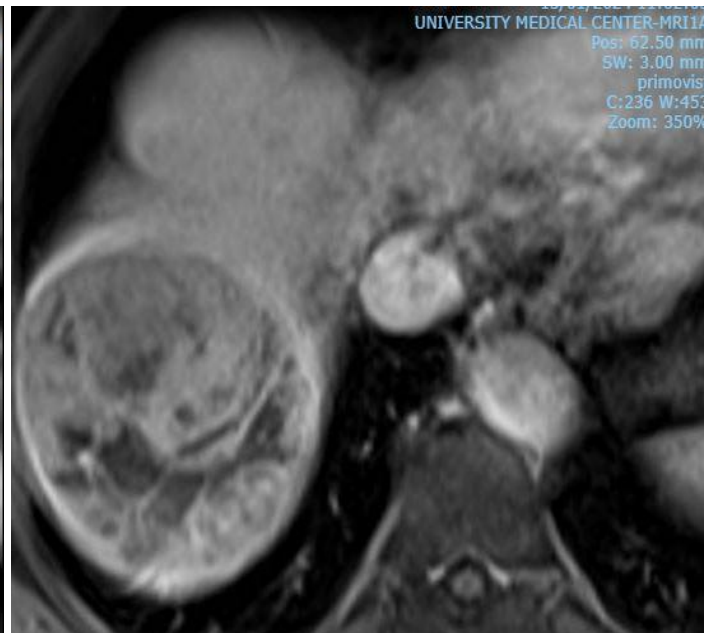
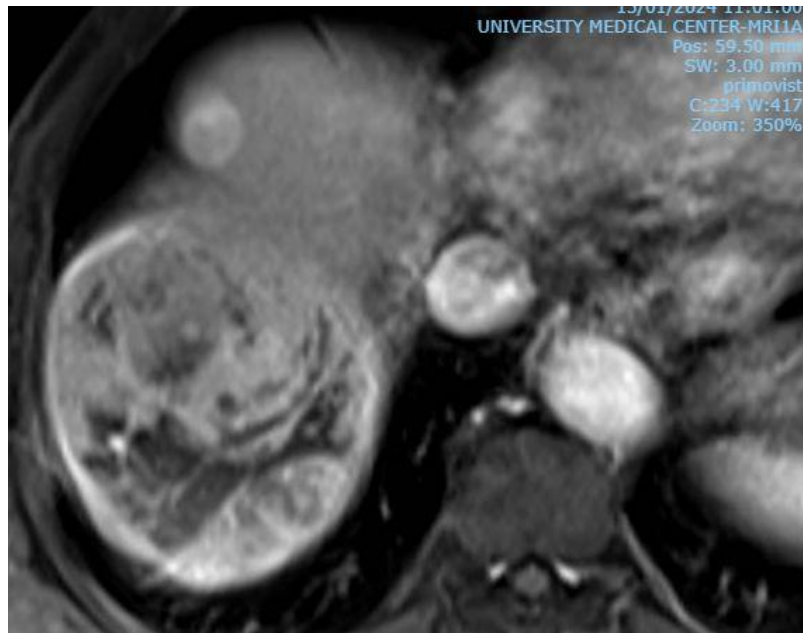
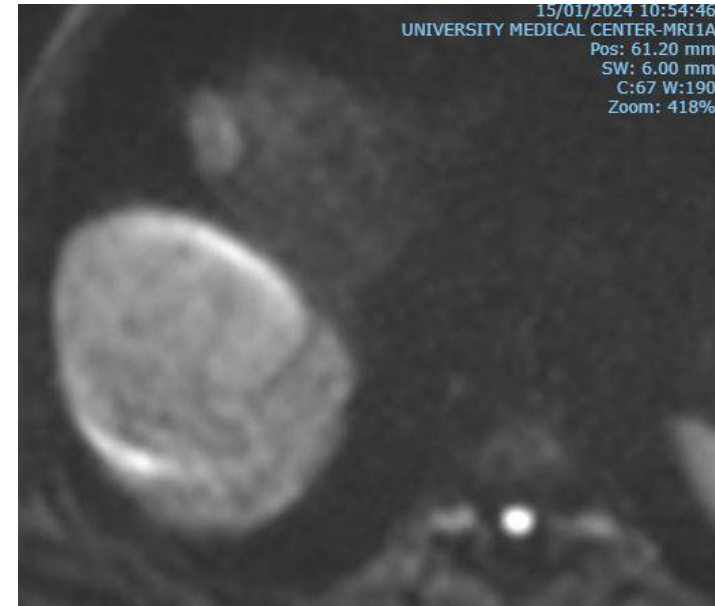
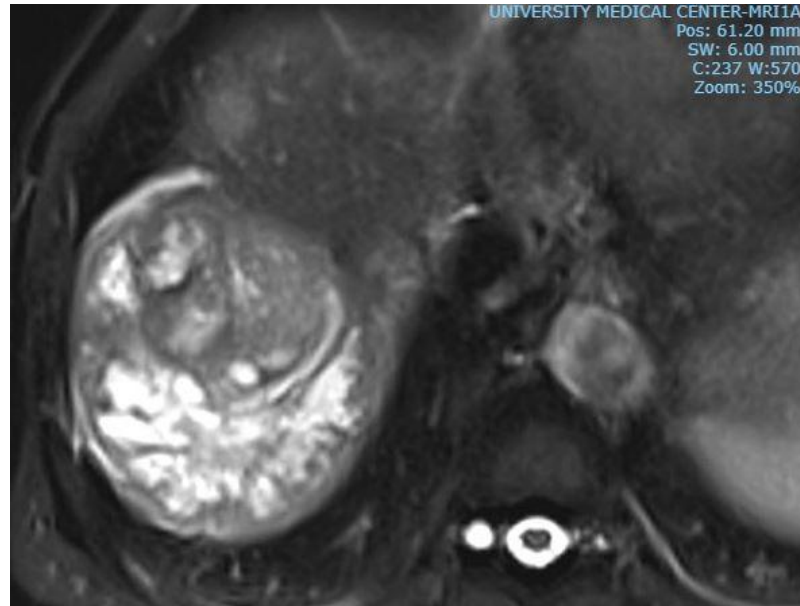
(\*) LI-RADS: Vỏ bao, Tăng nhanh kích thước



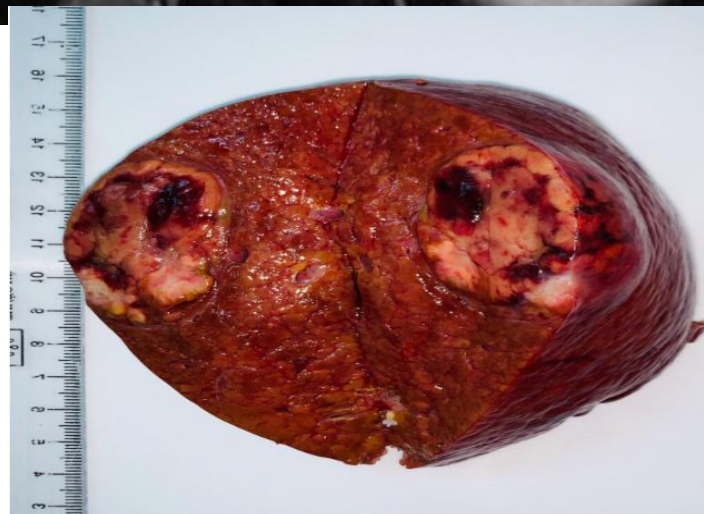
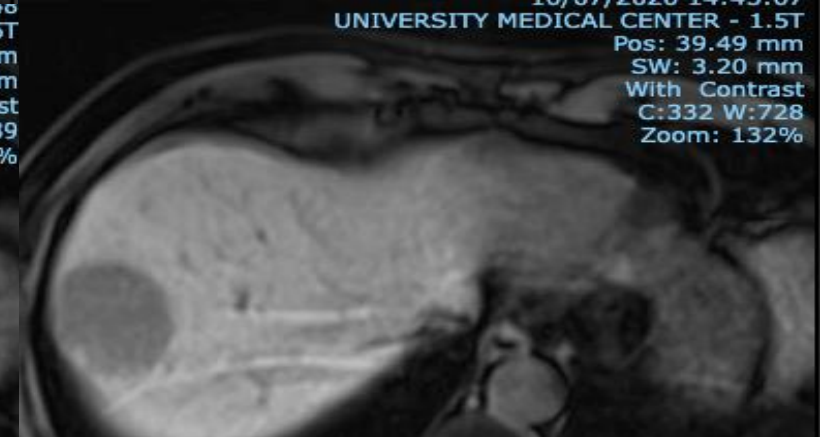
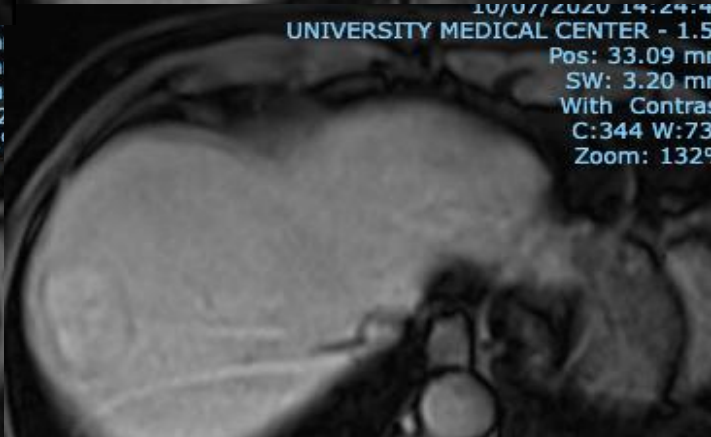
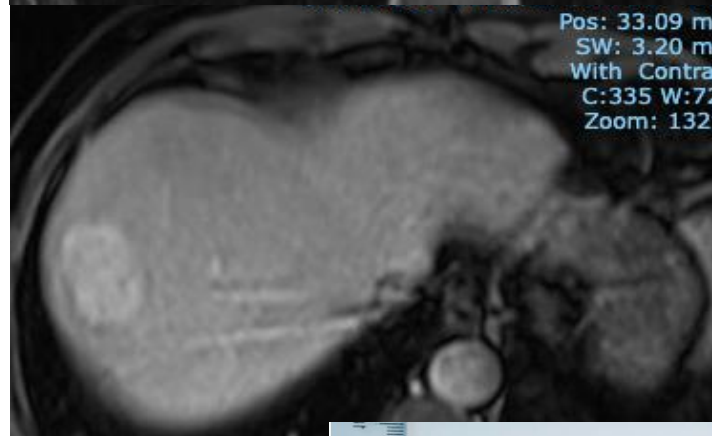
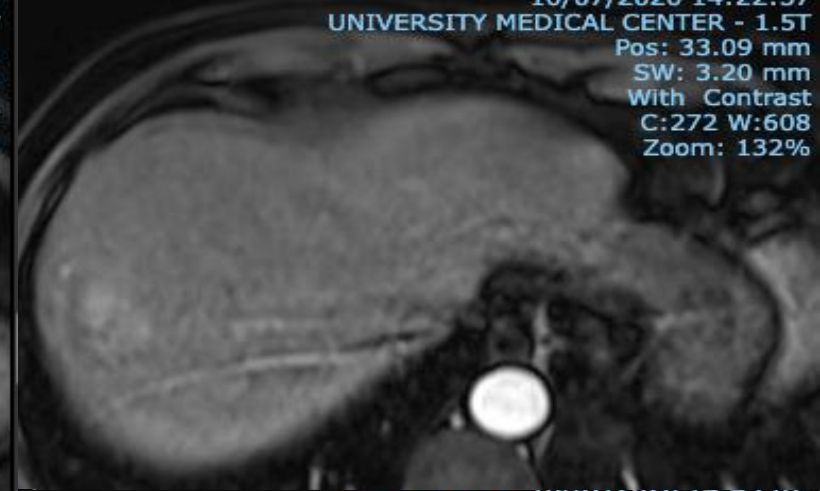
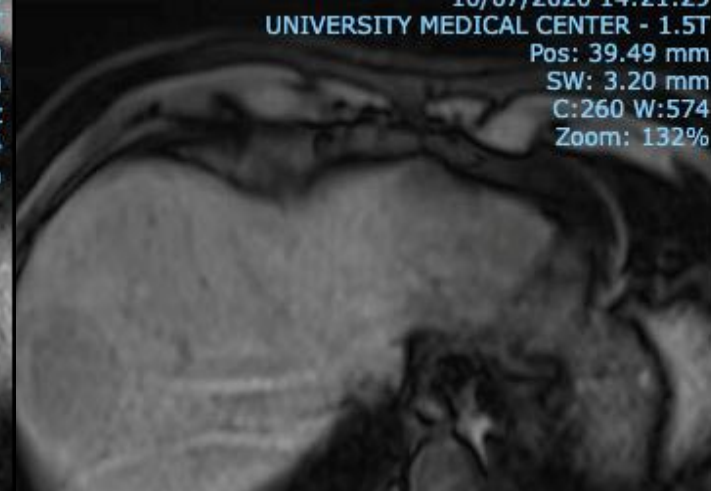
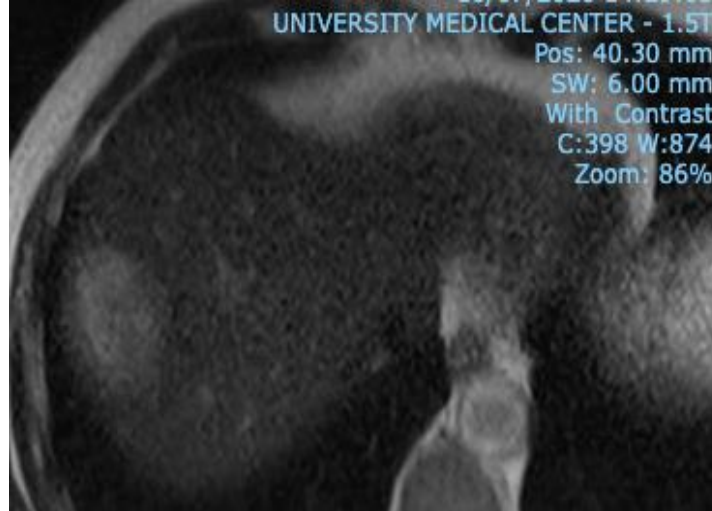
Imaging finding	Pathologic alteration	RN	LGDN	HGDN	eHCC	WD-HCC	MD-HCC	PD-HCC
Arterial enhancement	Neoangiogenesis			Borderline HCC		Increase		
Portal venous enhancement	Portal supply			Decrease				
SI on HBP	OATP expression			Darker		Iso/hyper		
DWI T2WI	Cellularity Necrosis					Increase		
SI on T1WI	Copper, fat			Increase				
Chemical shift imaging	Intralesional fat			Darker				



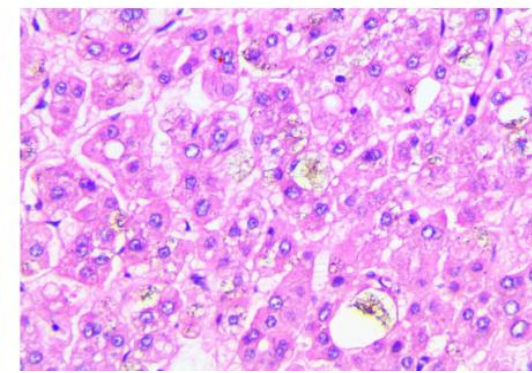
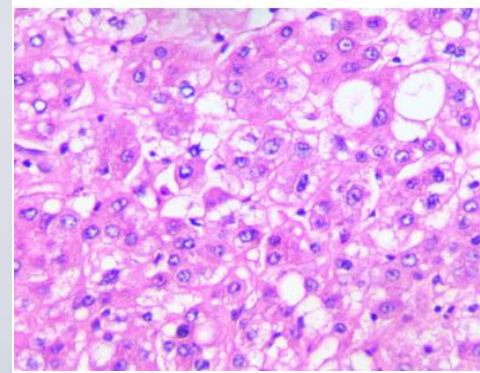
# Chẩn đoán



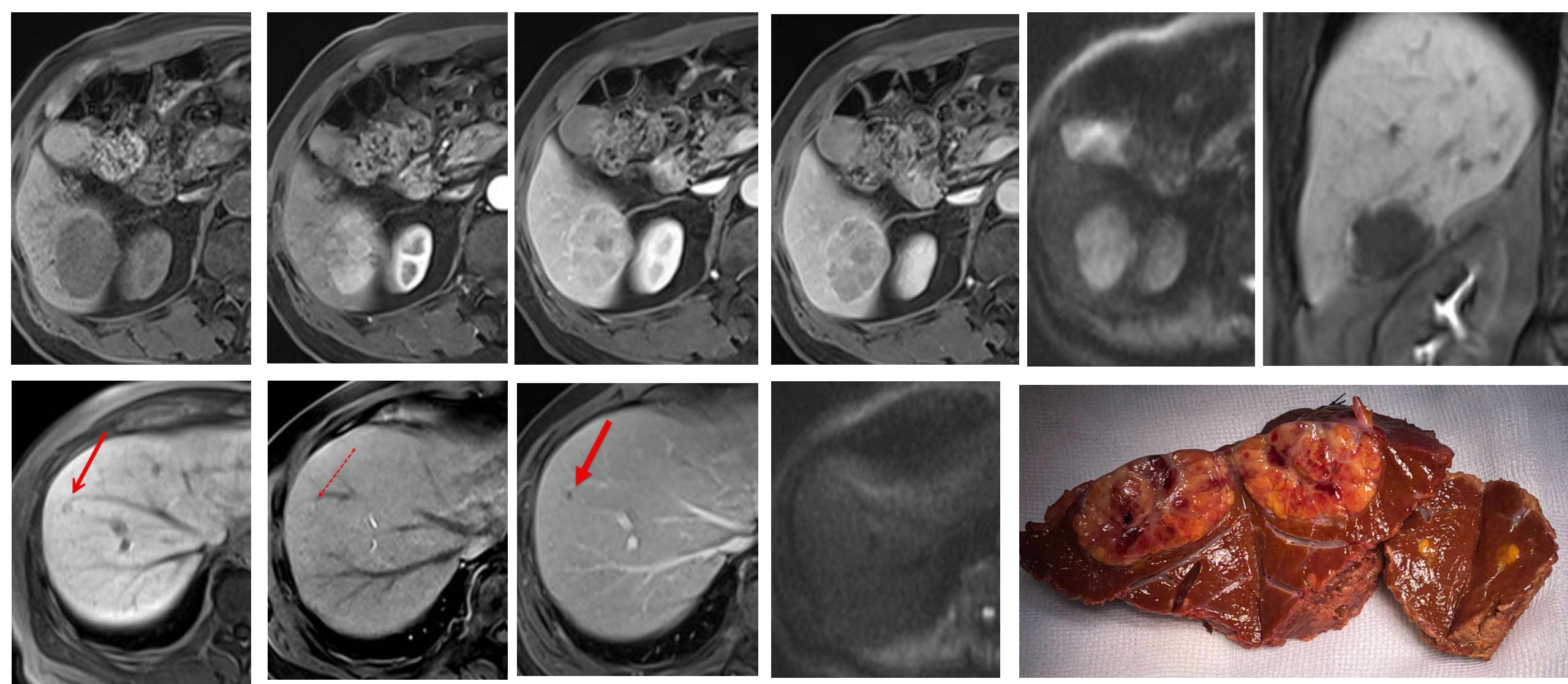




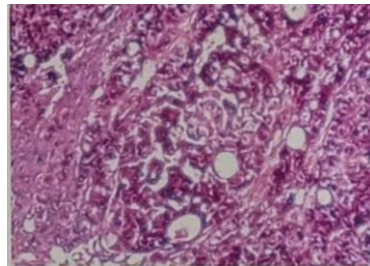
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Rìa diện cắt: KHÔNG CÓ TẾ BÀO U.





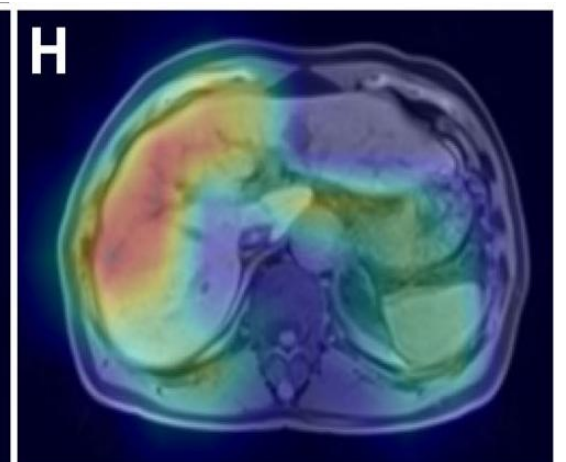
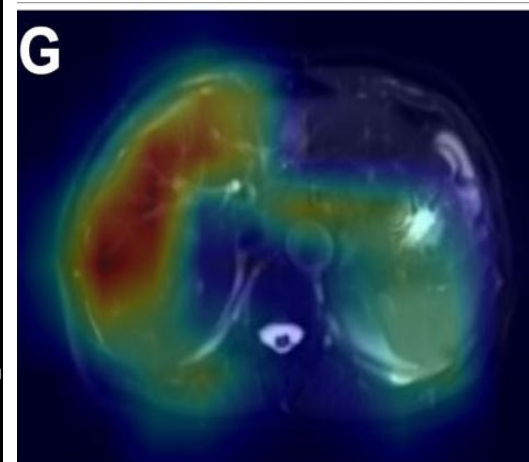
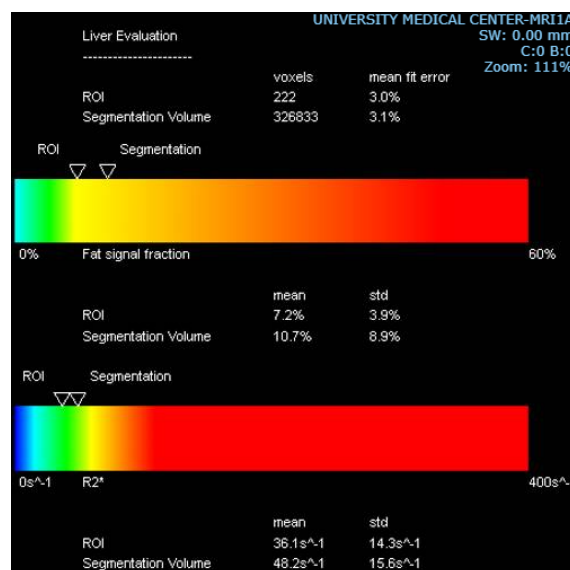
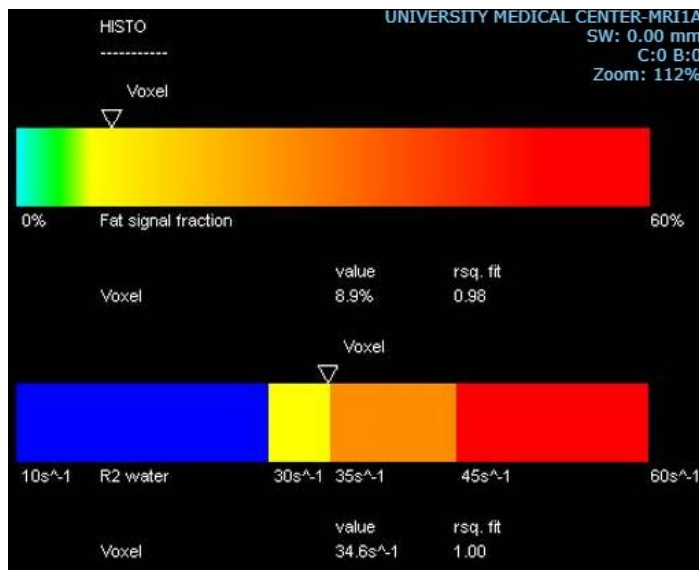
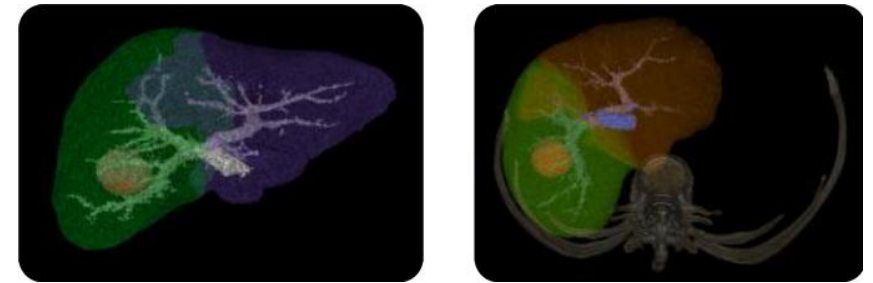
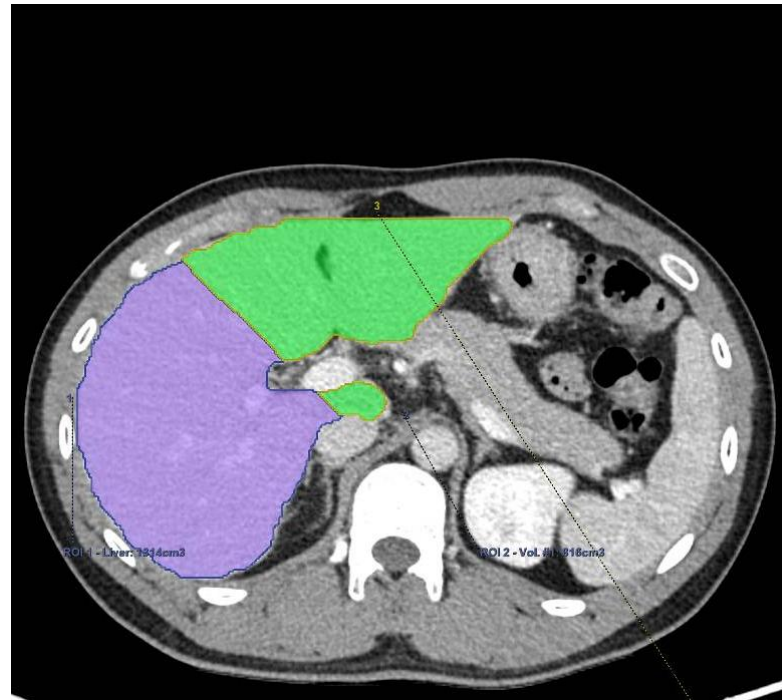
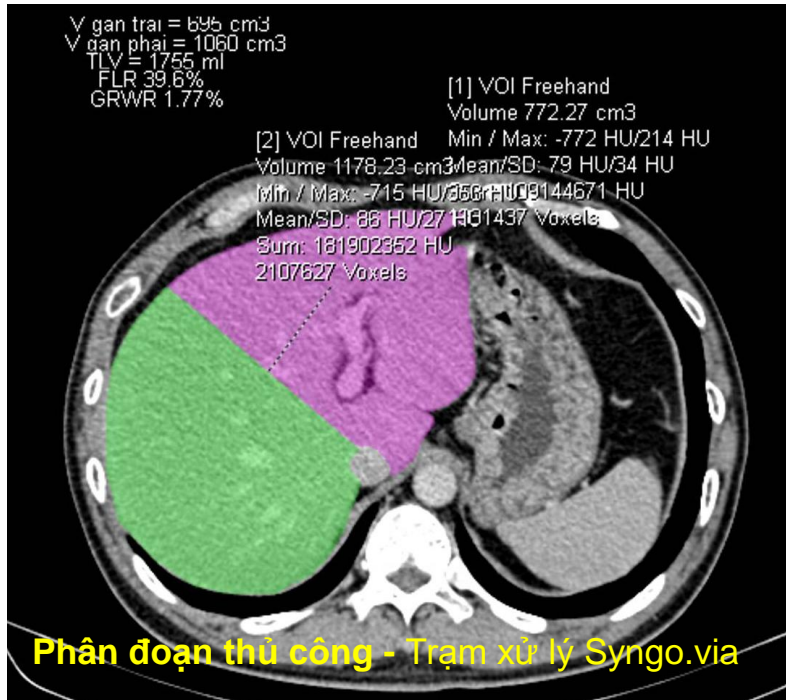


HBV (+), AFP 22ng/dL  
Nốt NHHN HPT VIII, 8mm ?

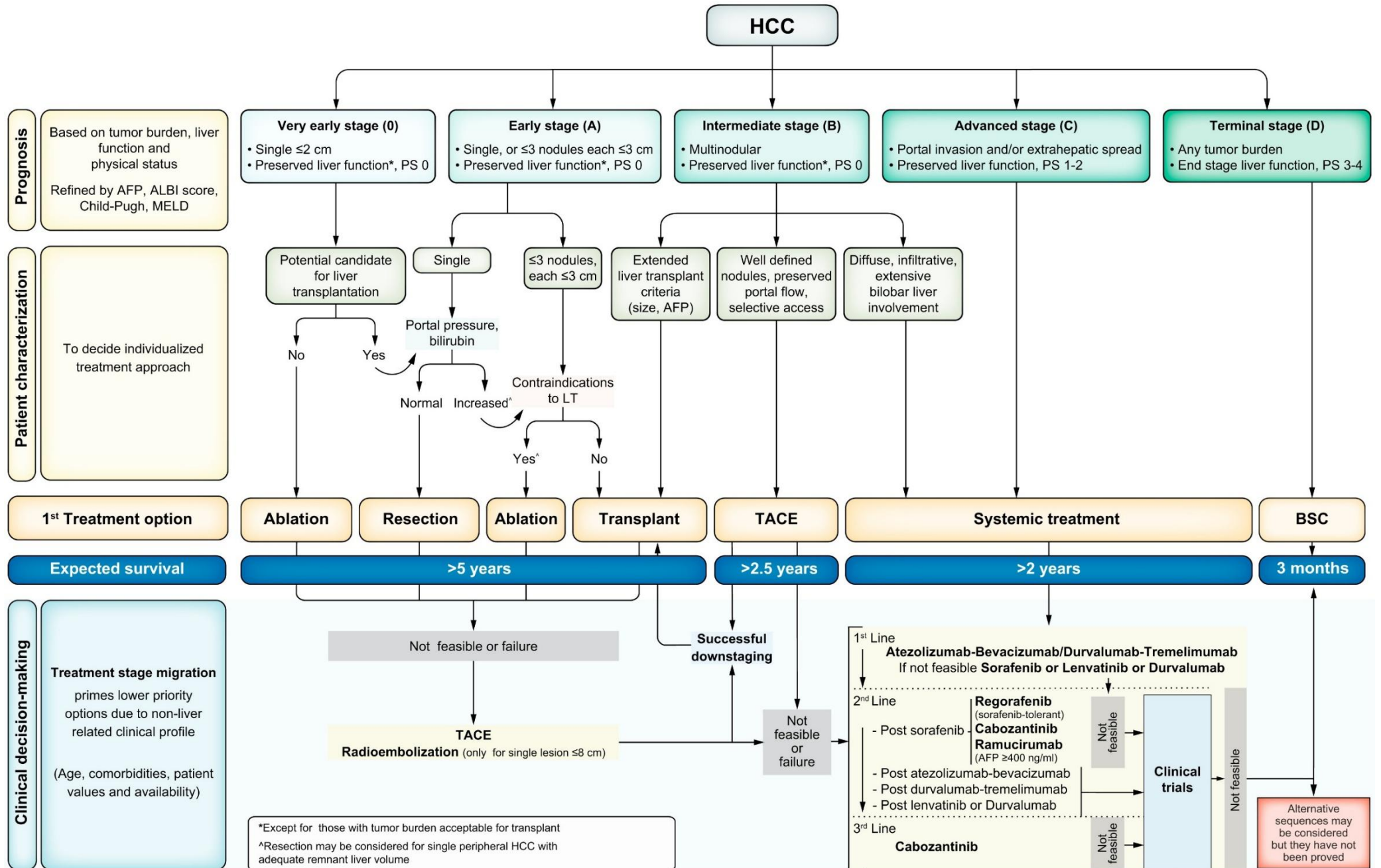


GPB: Nốt lớn + nốt nhỏ: HCC, dạng bè,  
biệt hóa trung bình

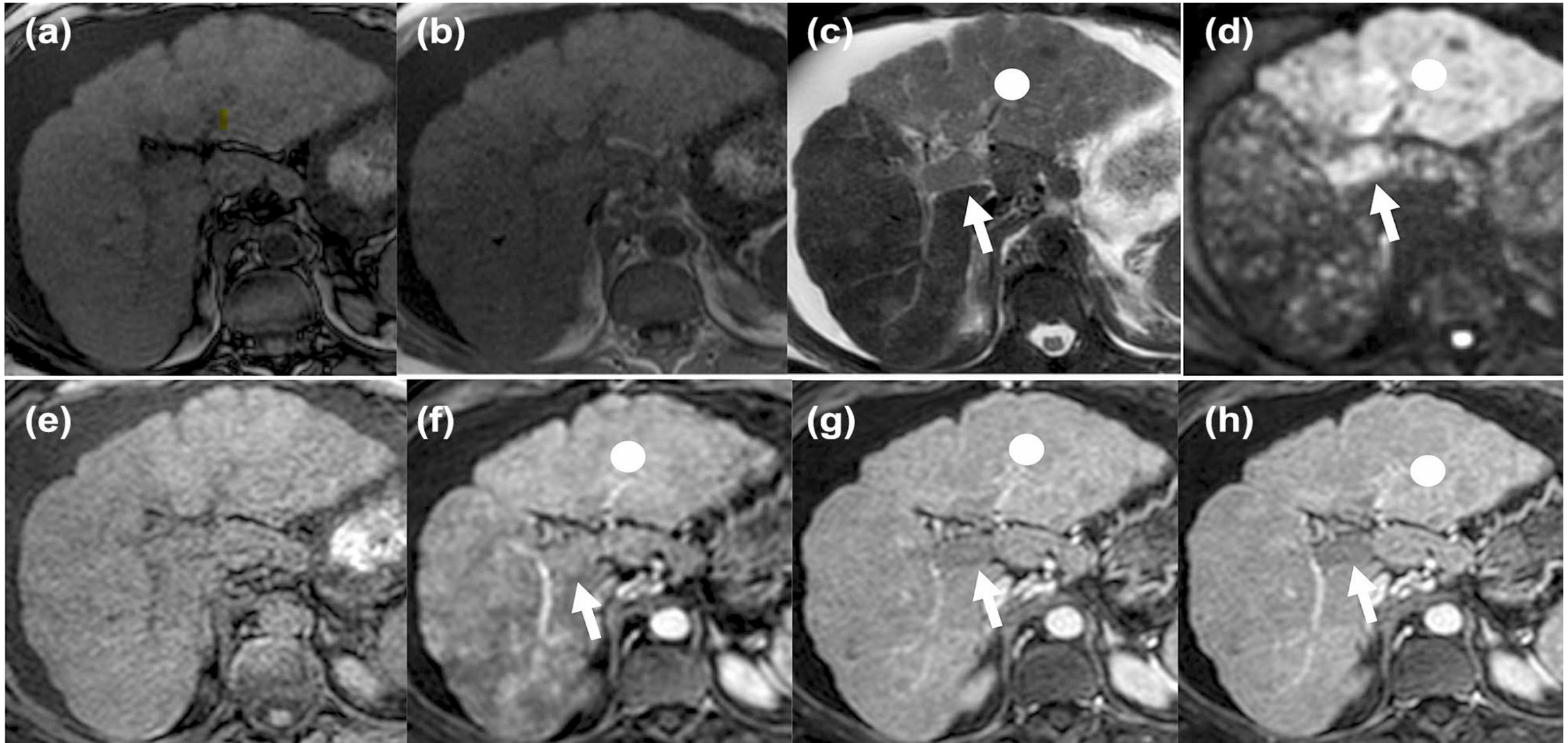




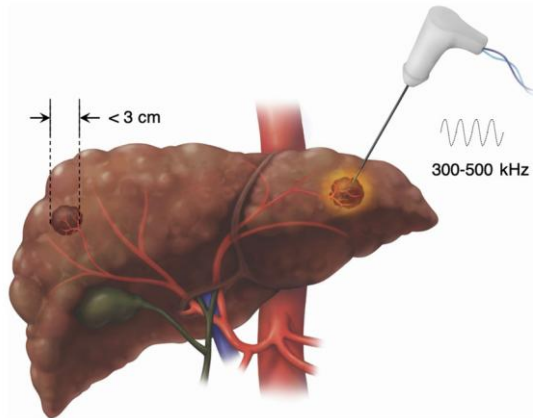
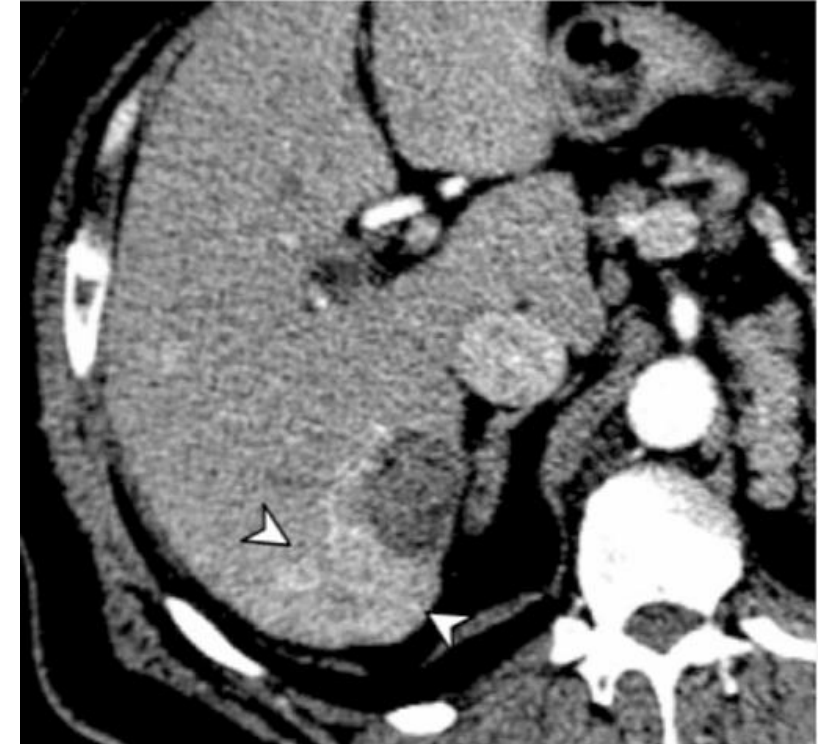
# Điều trị





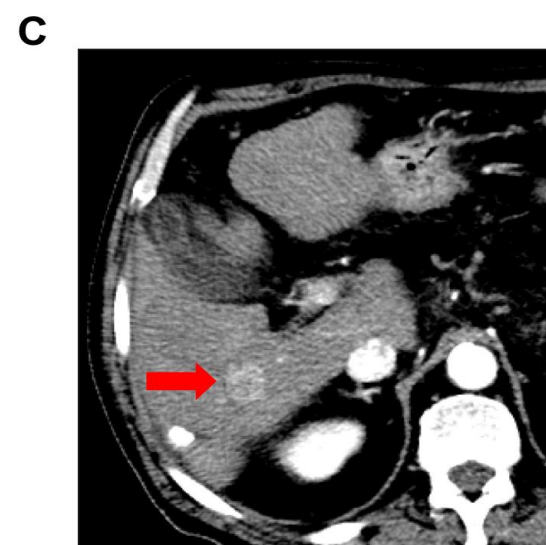
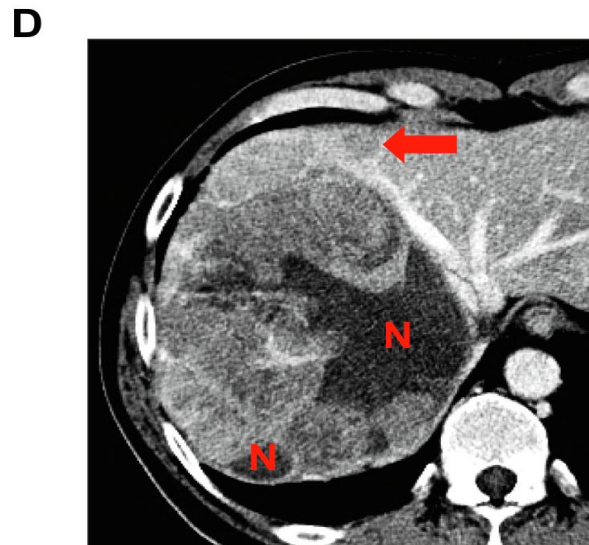
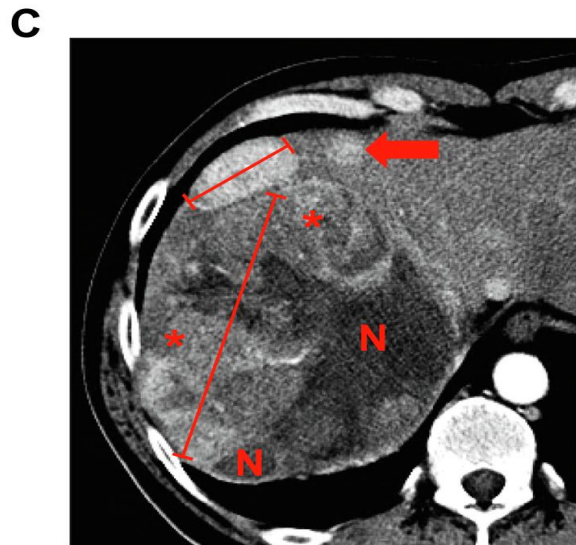
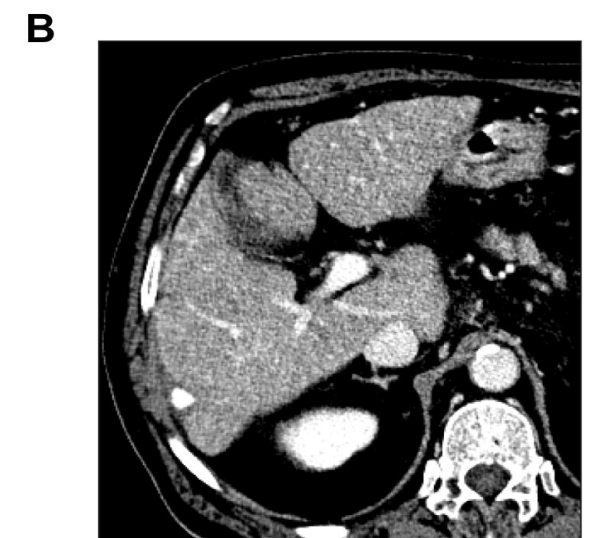
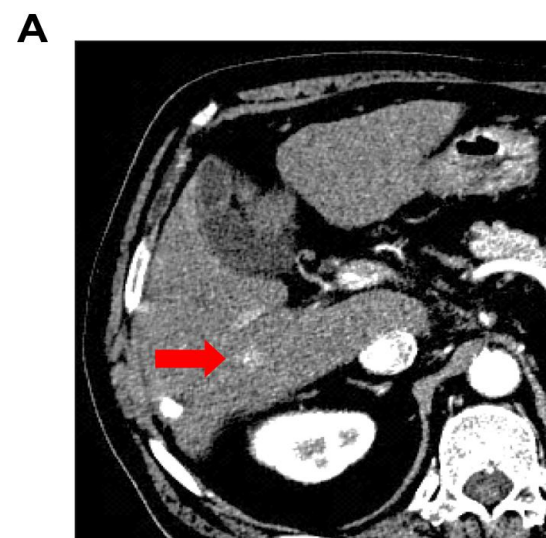
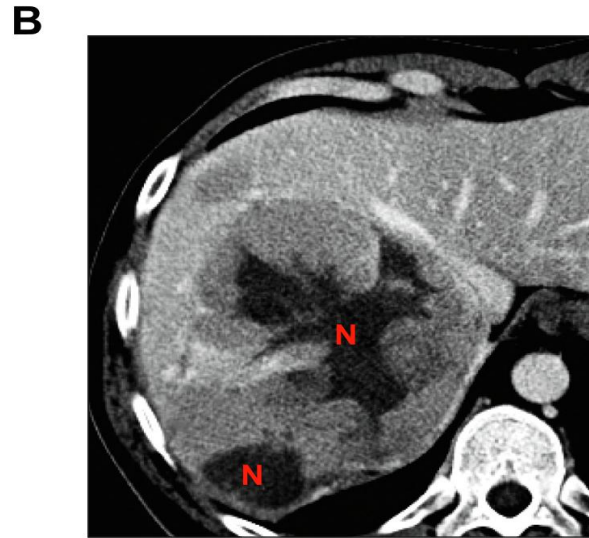
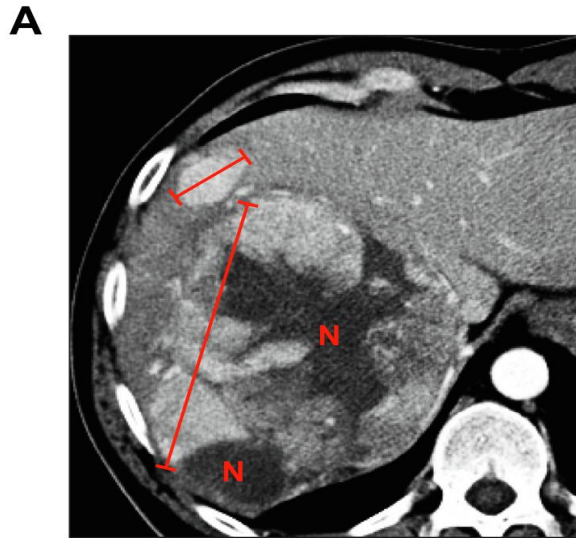


**HCC dạng thâm nhiễm**



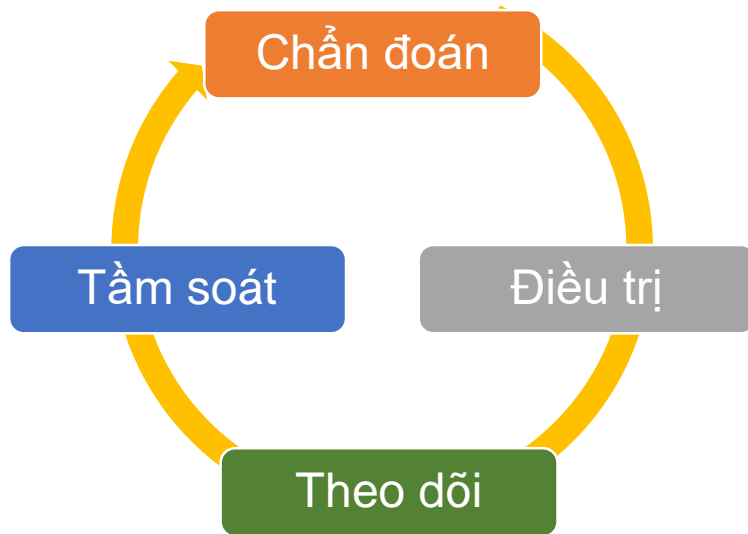
HCC HPT VI  
Sau RFA 2 tháng → Sau RFA 8 tháng  
**Δ: Tái phát**





mRESIST sau Điều trị toàn thân

# Tóm lại



- HCC: Phức tạp bệnh nguyên, bệnh học, mô học → cá thể hóa.
- HAH cần được đánh giá trong bối cảnh HC LCK

*Kết quả HAH và GPB thay đổi # 18,4% và 10,9% khi đọc tại các buổi HC LCK*

*→ Thay đổi kế hoạch  $\Theta$  # 41,7% TH.*

*Zhang J. Impact of a single-day multidisciplinary clinic on the management of patients with liver tumours. Curr*

*Oncol. 2013;20(2):e123.*