Hepatic Hemodynamic Lab Barcelona

Manejo del paciente con trombosis portal aguda en la cirrosis

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FUNDACIÓ CLÍNIC BARCELONA

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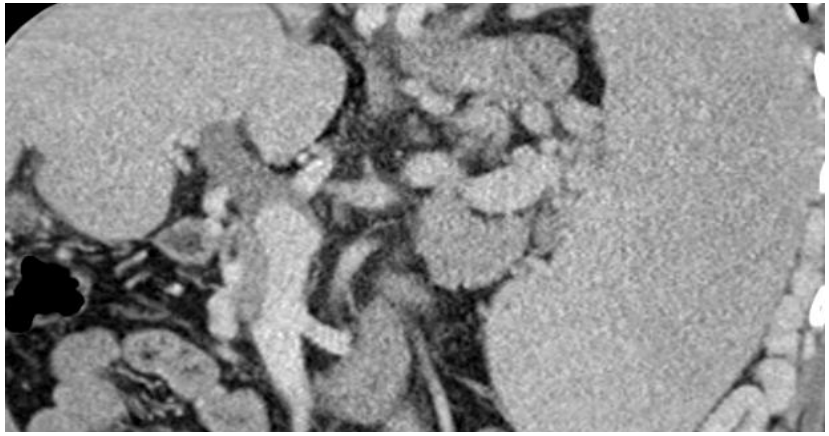
XIX JORNADAS DE AVANCES EN HEPATOLOGÍA

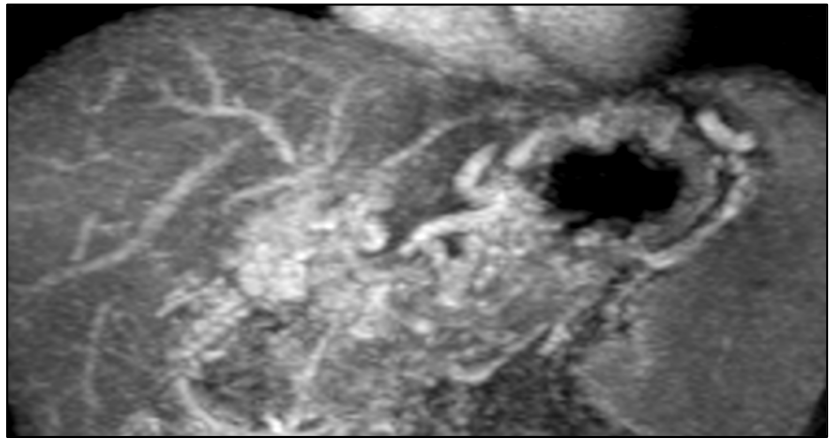
Málaga 08-09 de Octubre de 2020

TP aguda en la cirrosis

- **Como saber si la TP es aguda?**
  - **Estudio de imagen previo (fiable!) sin TP**
  - **Estudio de Imagen con Vena identificable y material que ocupa la luz en su interior**



Oclusión completa con vena porta identificable

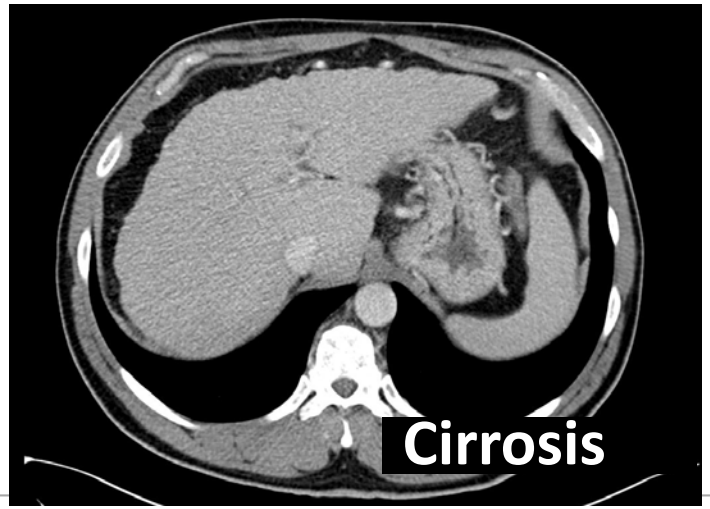


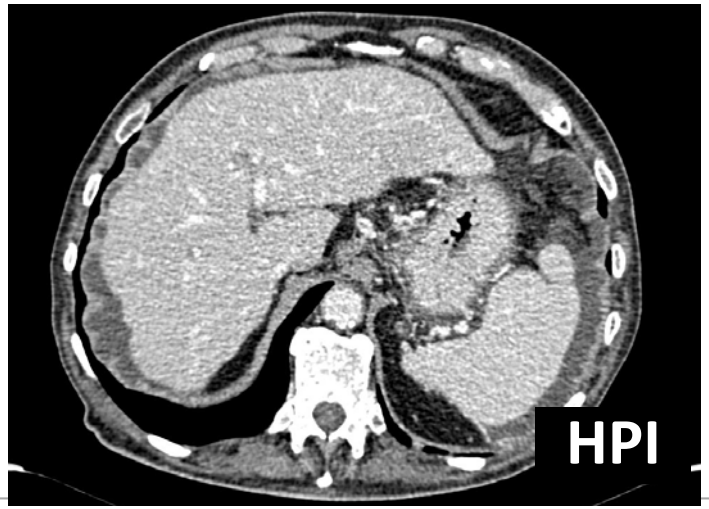
Imposible reconocer la vena porta

La TP es en un paciente con Cirrosis?

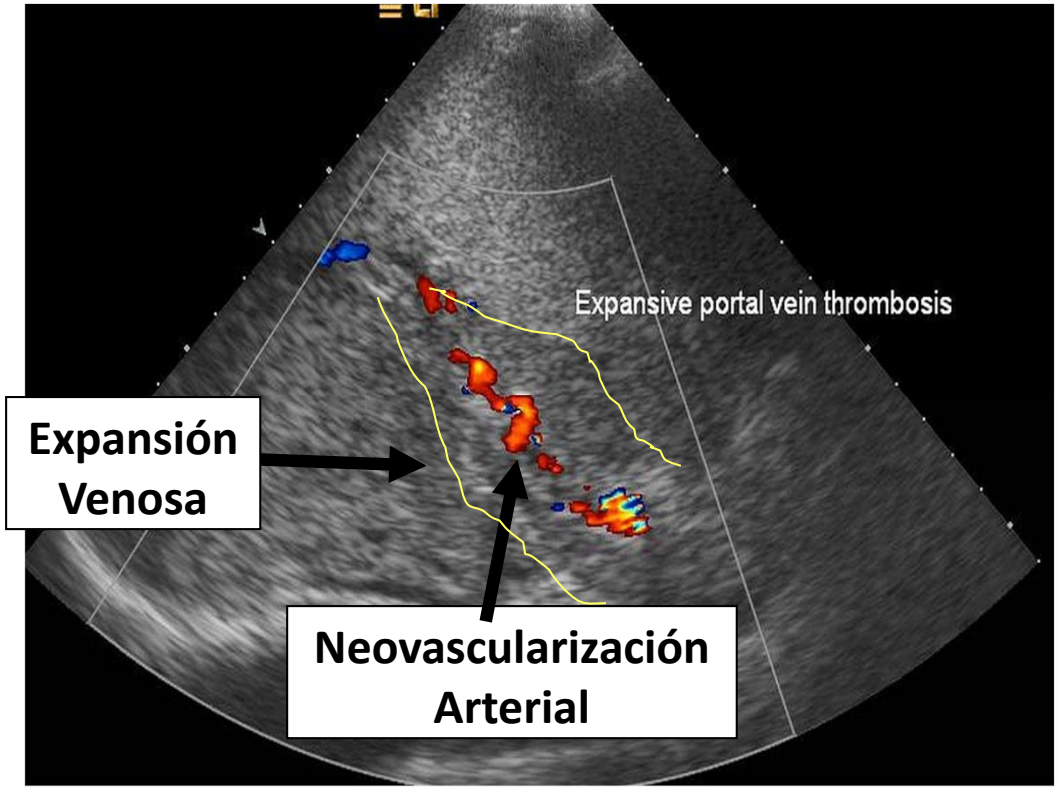
No siempre es evidente

- **La TP crónica puede promover importantes cambios macroscópicos en un hígado sano (atrofia y/o hipertrofia de diferentes segmentos)**
- **Cirrosis y la HTP idiopática pueden ocasionar cambios morfológicos semejantes**





Es trombo o es una trombosis tumoral?



- Criterios **A-VENA** (3 o más):
  - **A**FP >1000 ng/dL
  - Expansión **V**enosa
  - Realce (**E**nhancement) del trombo
  - **N**eovascularización
  - Trombo **A**dyacente al CHC
- En ocasiones será necesaria la biopsia del trombo

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Cirrosis y TP.

Tratar o no tratar?

Historia Natural de la TP en la Cirrosis

- Desaparición espontánea o disminución (0 to 70%)
- Estabilidad (hasta en un 45%)
- **Progresión (7-71%)**

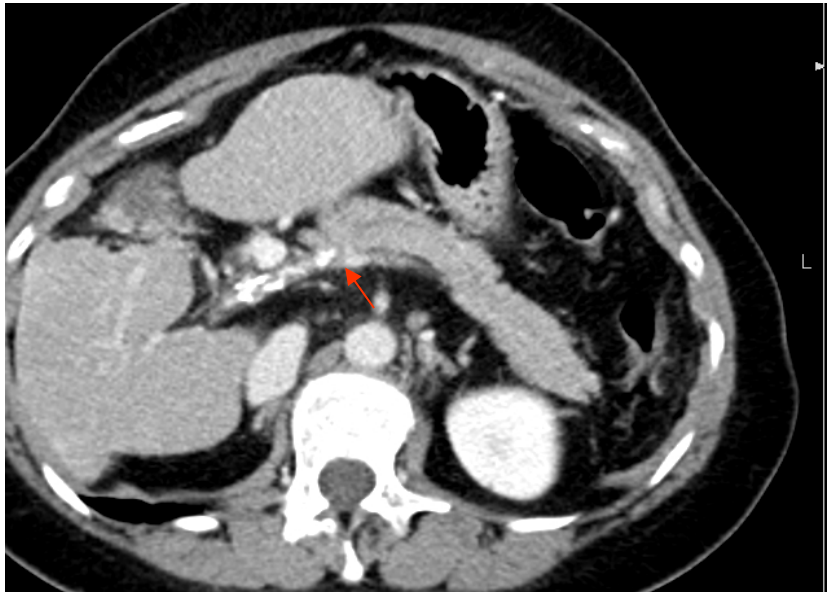
Francoz et al. 2005; Senzolo et al. 2012 ; Luca et al. 2012 ; Maruyama et al. 2013; Nery et al. 2013

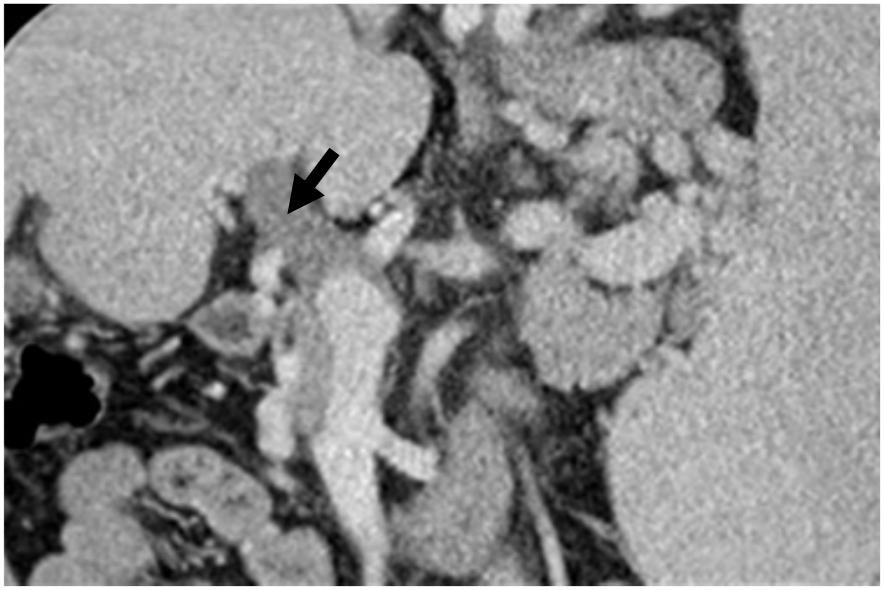
Estudios:

- Seguimiento corto
- No estratificación por el tipo de trombosis (estadiaje)

TP. Estadiaje

- **Parcial/Oclusiva (% de luz ocupada)**
- **Segmentos del Sistema portal afectados** (tronco/esplénica/mesentérica)





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¿Impacta la TP en la evolución de la Cirrosis?

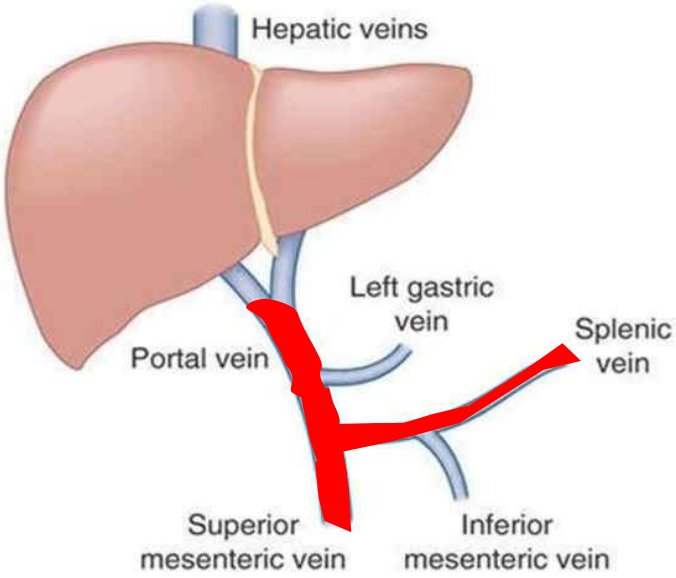
- Teoría: Incrementaría la HTP y reduciría el flujo hepático (¿sólo si una oclusión total o casi total?).

- La TP aumenta el riesgo de HDAxVE y/o se asocia a un mayor fracaso del tratamiento

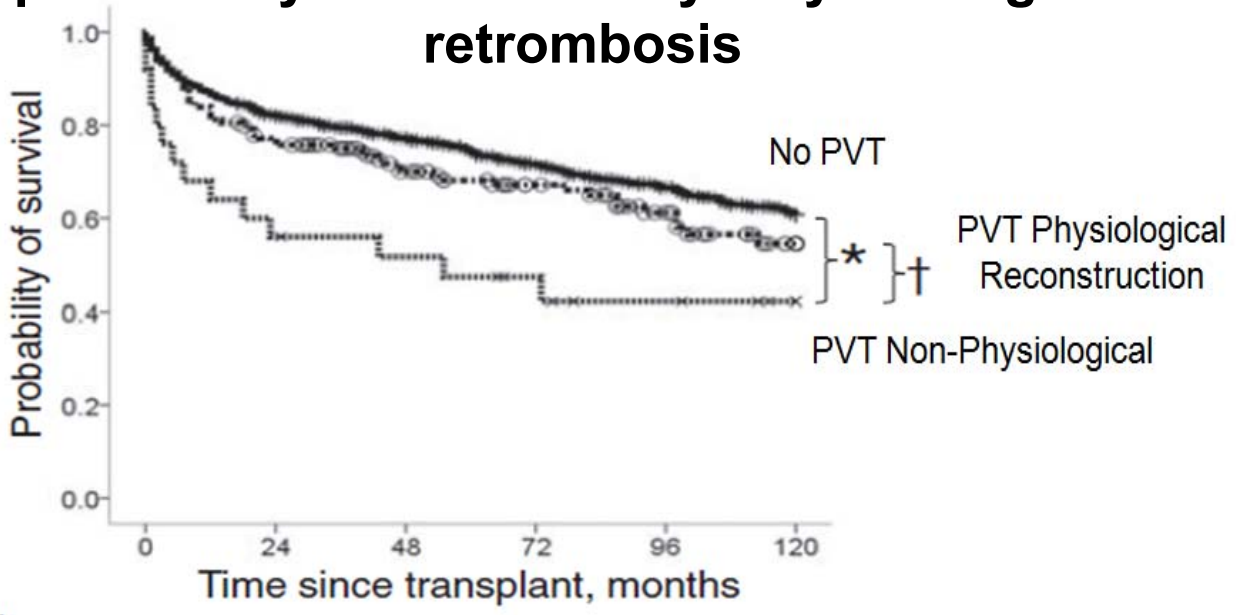
- No esta claro si el desarrollo de TP aumenta las complicaciones y empeora la supervivencia

TP y Trasplante Hepático

- Dificulta el transplante y aumenta la mortalidad Post-Transplante.
- No todos los estudios concuerdan.



La TP que impide la reconstrucción fisiológica portal: Mayor mortalidad y mayor riesgo de retrombosis



Number at risk						
No PVT	1205	954	752	567	408	234
PVT: physiological	149	111	81	61	43	22
PVT: non-physiological	25	14	12	9	6	3

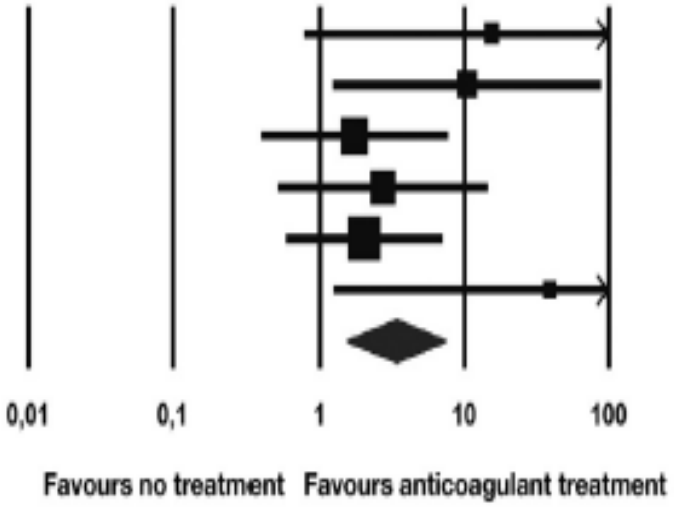
PVT in Cirrhosis. Anticoagulation Efficacy

Metanalysis of studies in pts with cirrhosis treated with ACO or not treated

A Complete recanalization of PVT

Study name	Odds ratio	Lower limit	Upper limit	*P*-value	Anticoagulant treatment	No treatment	Relative weight
Francoz	15,522	0,794	303,254	.071	8 / 19	0 / 10	6,60
Senzolo	10,435	1,245	87,473	.031	12 / 35	1 / 21	12,44
Garcovich	1,750	0,400	7,664	.458	7 / 15	5 / 15	23,90
Chung	2,750	0,524	14,439	.232	6 / 14	3 / 14	19,53
Wang	2,035	0,595	6,953	.257	26 / 31	23 / 32	32,50
Cai	39,000	1,277	1190,838	.036	4 / 5	0 / 6	5,04
	3,385	1,553	7,376	.002	63 / 119	32 / 98	

53% **33%**



Loffredo et al. Gastroenterology 2017

PVT in Cirrhosis. Anticoagulation Efficacy

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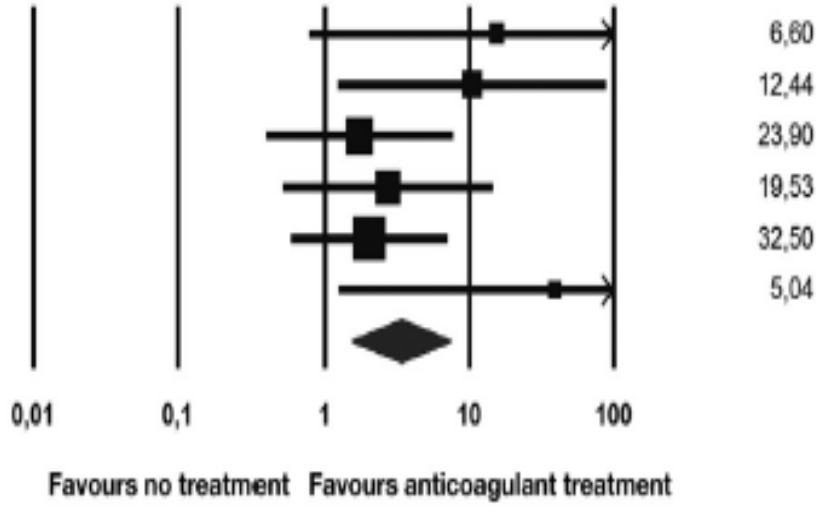


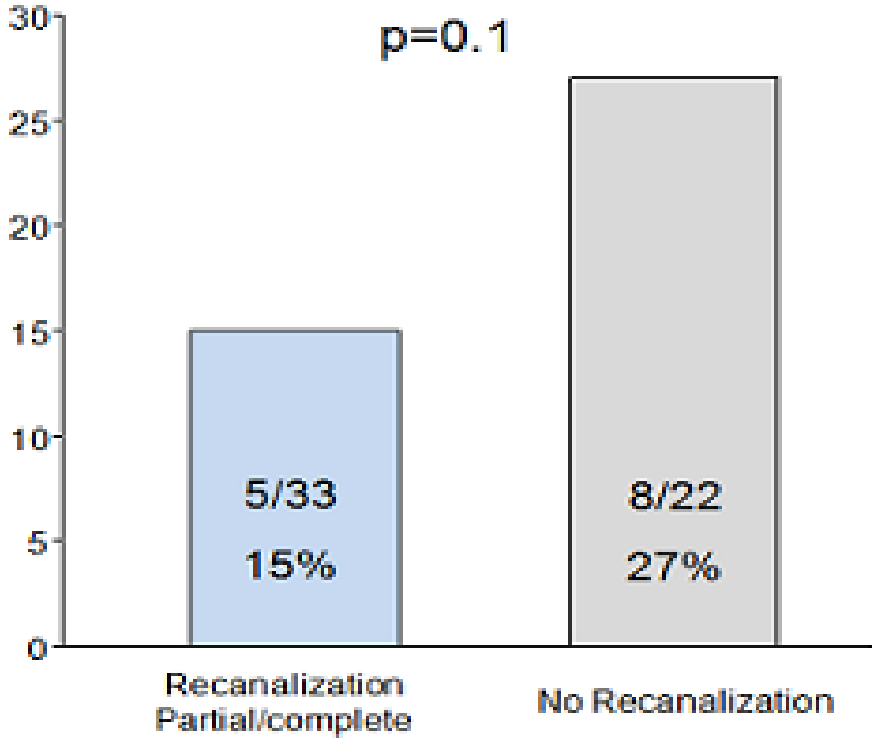
42% 13%

- **One RCT: TIPS with/without ACO. Recanalization very high without ACO, but TIPS!**
- **No data on localization or extension of thrombi**

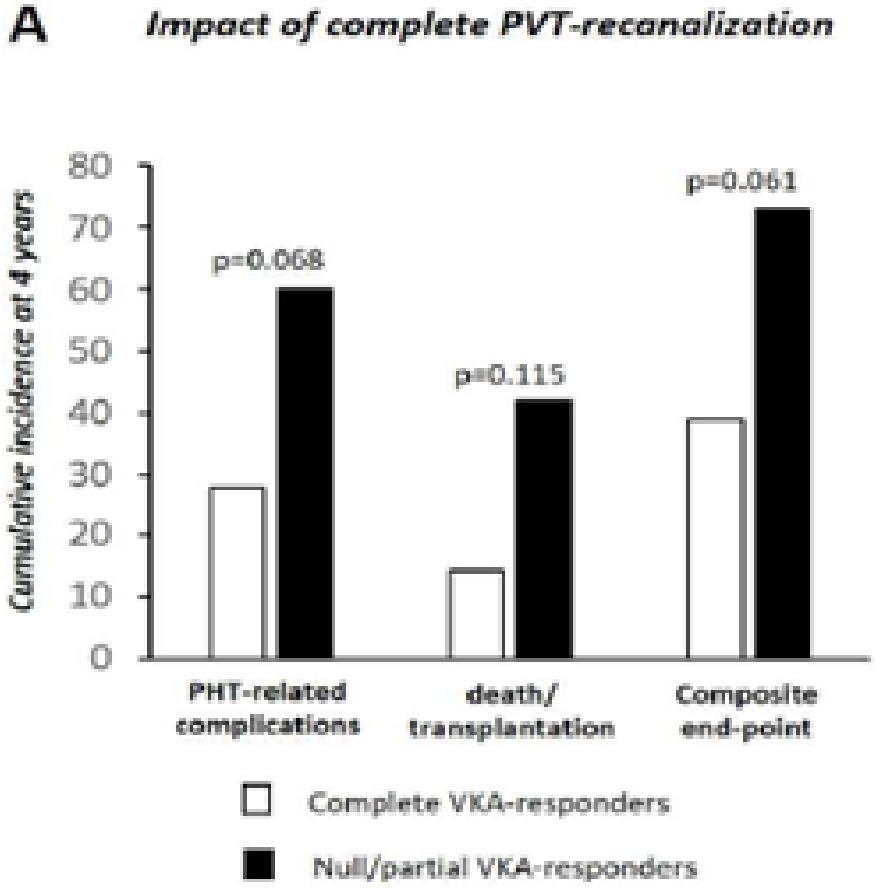
Loffredo et al. Gastroenterology 2017

Does PVT recannalization impact outcomes?

Liver related complications



Delgado et al. Clin Gastroenterol Hepatol. 2012



La Mura et al. Clinical Gastroenterology and Hepatology 2018

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What should we expect if stopping ACO?

Pathophysiological mechanisms leading to PVT remain

Rethrombosis (27-38.5%) after successful recannalization has been reported after stopping anticoagulation

Amitrano et al. 2010; Delgado et al. 2012; Pettinari et al.2019

In seven of the 35 pts (20%) without recanalization additional PVT progression after treatment discontinuation.

Pettinari et al.2019

Take this into account if you consider stopping Anticoagulation!

Anticoagulant agents in cirrhosis

- **LMWH:**
  - **Requires antithrombin; reduced in cirrhosis.**
  - **1-2 daily injections.**
  - **Do not need monitoring (anti-FXa assay is not reliable in patients with cirrhosis to measure anticoagulant effect).**
  - **Safer than VKA?**
- **VKA:**
  - **Also decrease the anticoagulants protein C and S already reduced in cirrhosis**
  - **INR aimed at interval 2.0-3.0 but suboptimal monitoring using INR.**

Direct Oral Anticoagulants in Cirrhosis

Similar/reduced risk of bleeding when compared to traditional ACOs

Intagliata et al. Dig Dis Sci 2016 (any indication)
De Gottardi for the VALDIG group. Liv Intern 2017 (any indication)
Lapumnuaypol K et al. QMJ 2019 (any indication)
Chokesuwattanaskul et al. Dig Liv Dis 2019 (atrial fibrilation)

Higher efficacy? in PVT

Nagaoki et al. Hepatol Res 2018
Hanafy et al. Vascul Pharmacol 2019

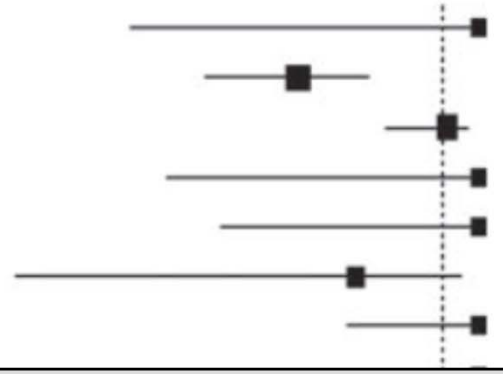
- Retrospective study (Edoxaban vs Warfarin). Warfarin very poor results
- RCT Acute PVT post-splenectomy (Rivaroxaban vs Warfarin). Small sample size. Recanalization rate with Riva >80%!

Safe for Child A. Also for Child B?.
Child C not recommended but not data

TIPS in Pts with Cirrhosis and PVT

(A) *Overall technical feasibility rate*

Study	Cases	Total	Prevalence	95% C.I.
Bauer 2006	9	9	1.00	[0.53; 1.00]
Han 2011	43	57	0.75	[0.63; 0.85]
Luca 2011	67	70	0.96	[0.88; 0.99]
Luo J 2011	11	11	1.00	[0.58; 1.00]
D'Avola 2012	15	15	1.00	[0.65; 1.00]
Chen 2015	5	6	0.83	[0.37; 0.98]
Luo X 2015	37	37	1.00	[0.82; 1.00]
Lv 2017	23	24	0.96	[0.76; 0.99]



- **In most cases, TIPS was indicated to treat severe complications of portal hypertension and not PVT itself**

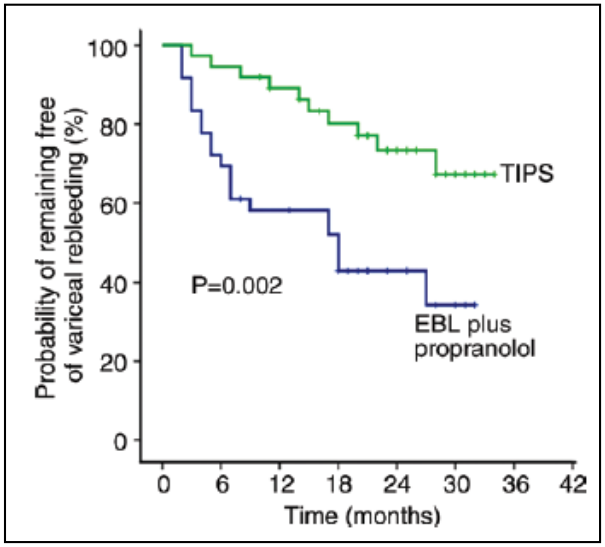
- **The number of patients in whom TIPS was even not considered because of extensive PVT is unknown**
- **Difficult to estimate the applicability of TIPS in PVT in cirrhosis**

Rodrigues et al. Aliment Pharmacol Ther. 2019.

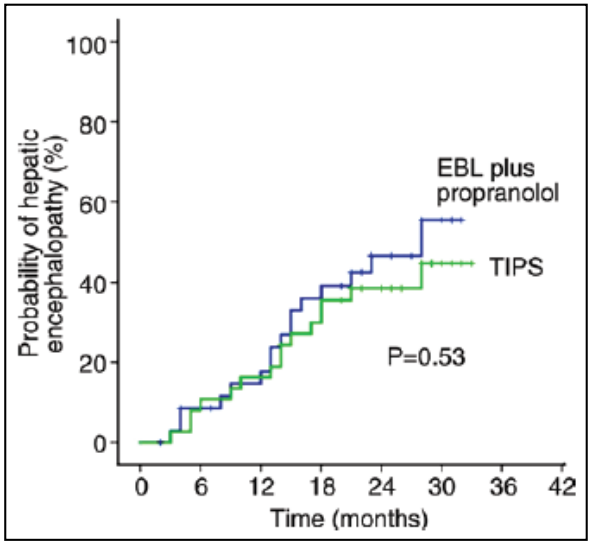
HDA x Varices en Pacientes con cirrosis y TP

- TIPS + ACO (n=37); EBL + Prop (n=36), ACO tras erradicación
- Child B (n=49) + C (n=24)

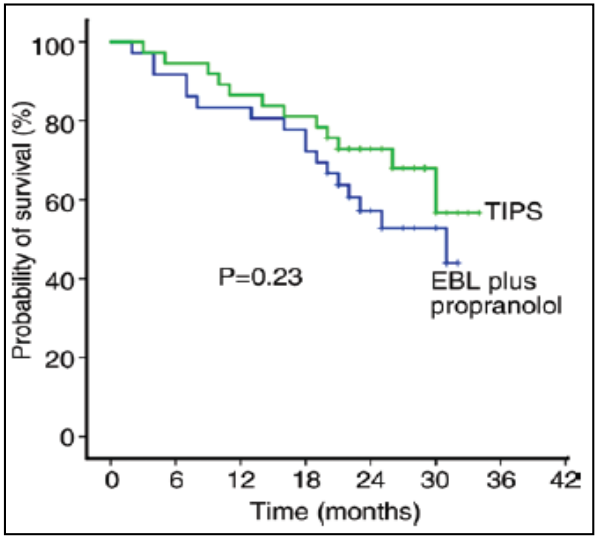
Variceal Rebleeding



H. Encephalopathy



Survival



Luo et al. Radiology 2015;

Resultados semejantes en otro RCT (Lv et al. Gut 2018). Ambos pequeño tamaño muestral

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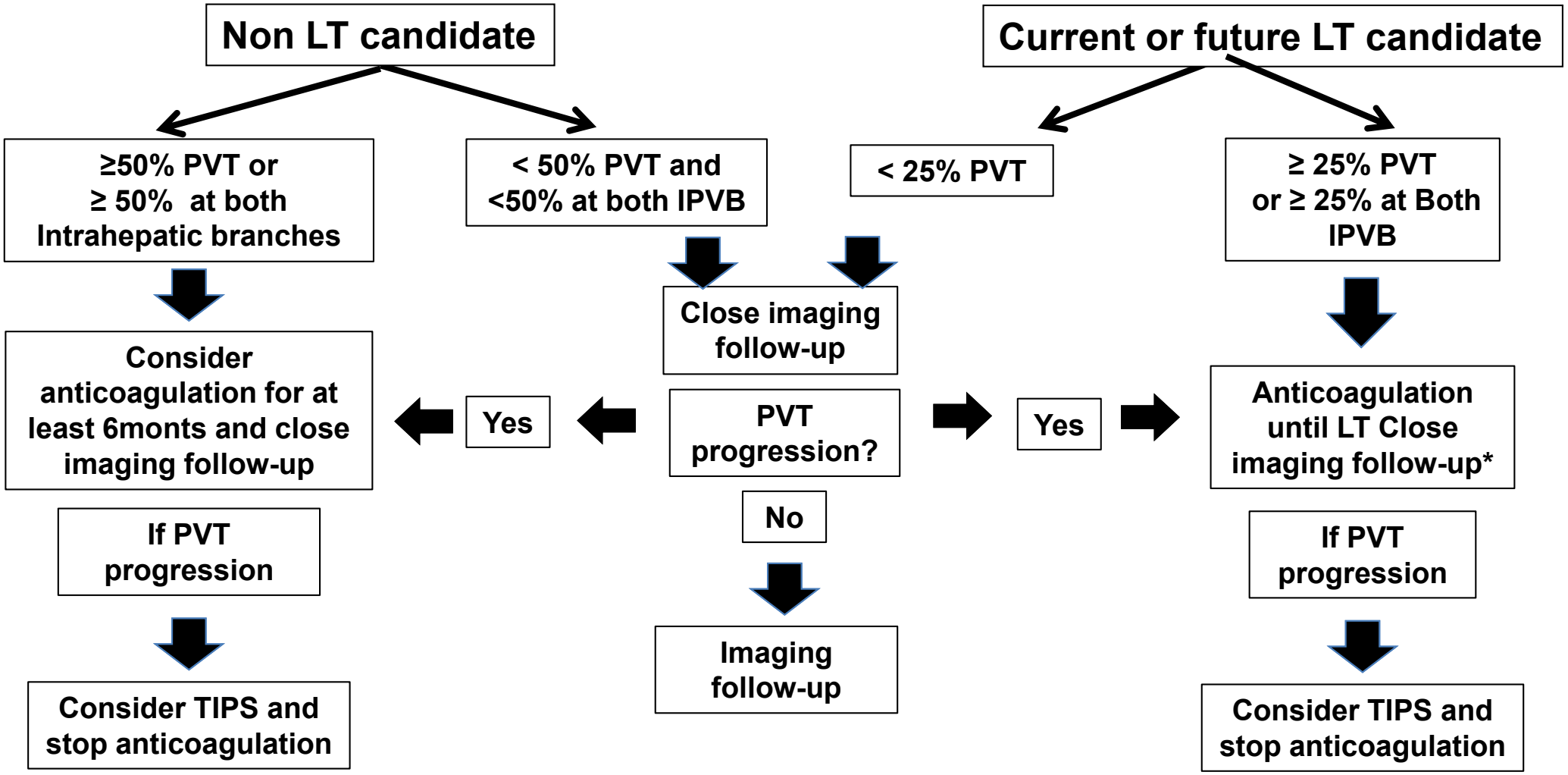
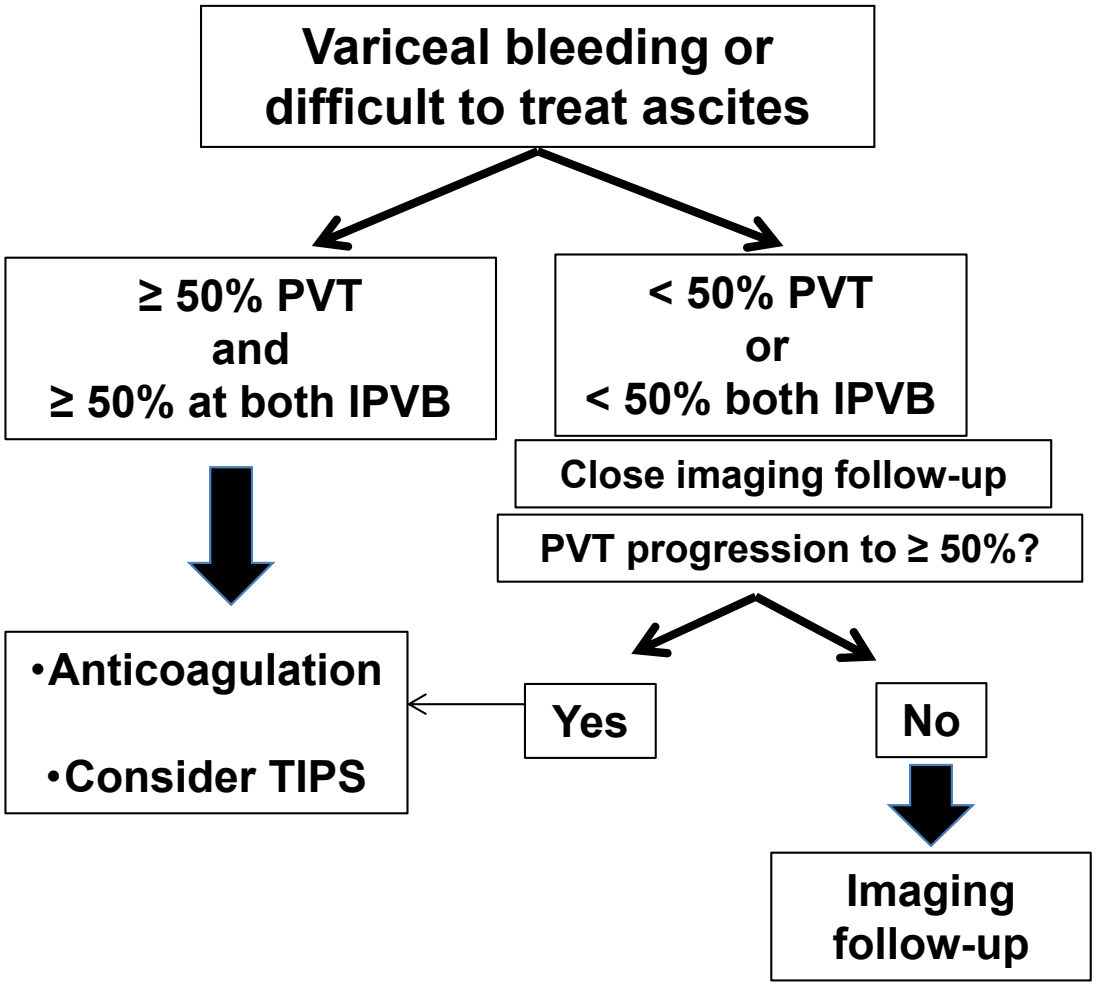
Treatment of PVT in Cirrhosis. Points to Consider

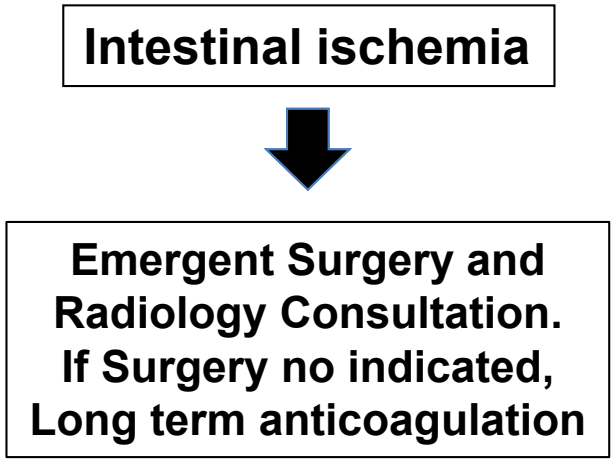
- Actual or Potential OLT Candidate
- Adequate portal vessels for OLT
- PVT Extension (partial or occlusive)
- Associated Symptoms

Recent asymptomatic PVT

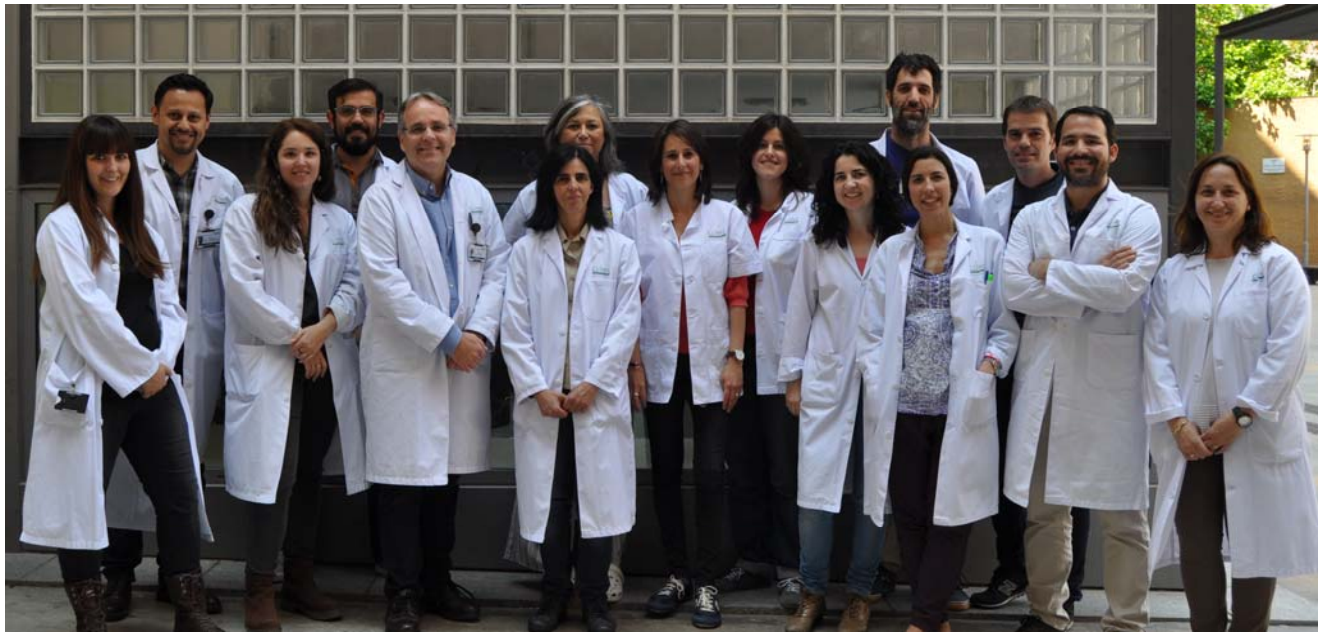


Symptomatic Recent PVT





Barcelona Hepatic Hemodynamic Group



V. Hernández-Gea
F. Turon
A. Baiges
M. Magaz
F. Betancourt
P. Olivas
V. Perez
Nurse Staff

CDI. HCP

MA Garcia-Criado
A Darnell
E Ripoll
R Gilabert
E Belmonte
M Barrufet
M Burrel
P Bermudez

Surgery. HCP

J Fuster
JC Garcia-Valdecasas
C Fontdevila

Hematology. HCP

F Cervantes
A Alvarez
JC Reverter
D Tassies

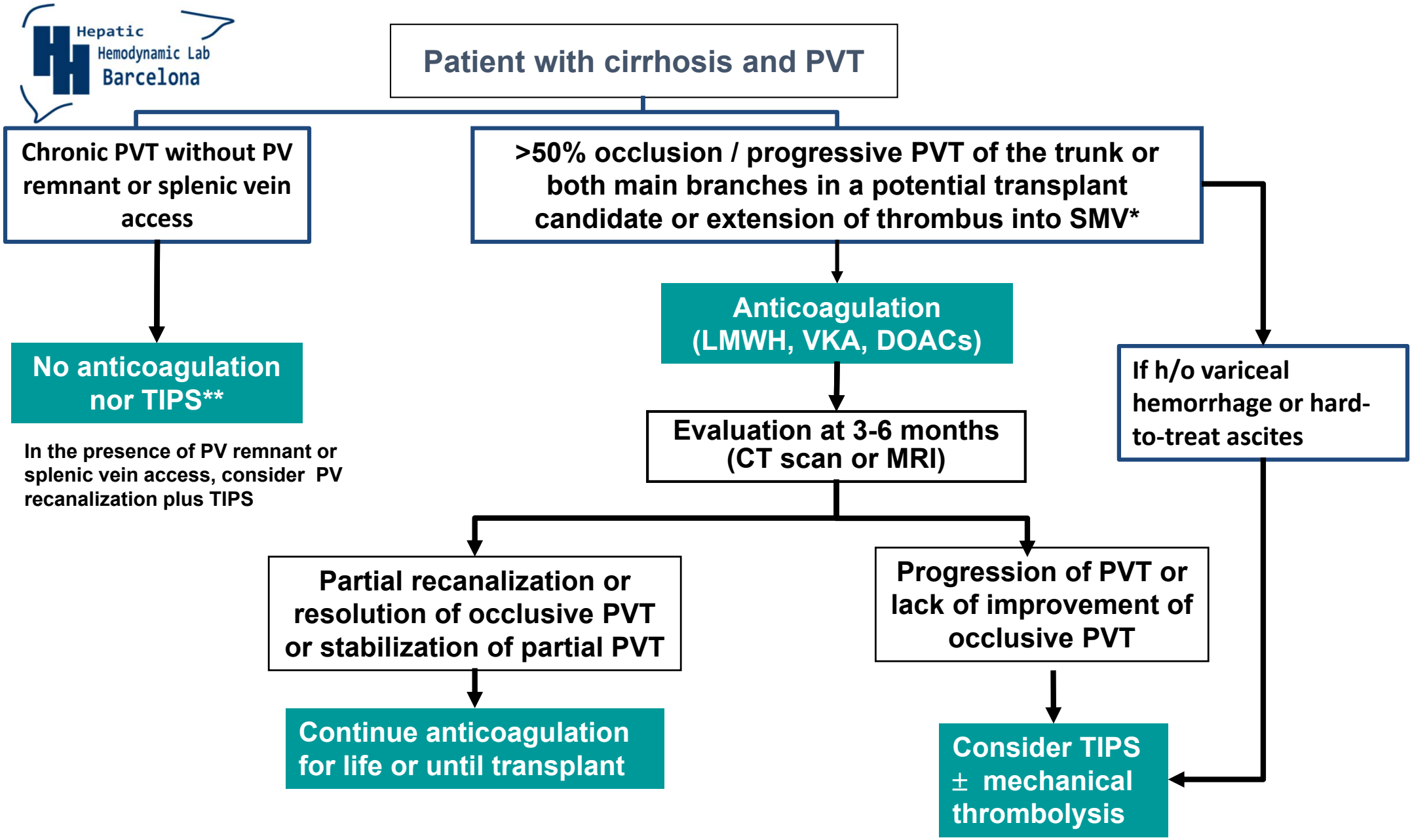
Intensive Care Unit and Hepatology wards personnel. IMDIM. HCP

REHEVASC and VALDIG members

VALDIG
VASCULAR LIVER DISEASE GROUP

TP aguda en la cirrosis. Formas de presentación

- Hallazgo casual. US screening CHC
- En contexto descompensación cirrosis
  - **HDA x VEG** (TP se asocia con mayor fracaso en el control de la hemorragia, recidiva y muerte)
  - Otras descompensaciones
- **Isquemia Intestinal x congestión venosa (VMS)**. Poco frecuente por preexistencia colaterales x HTP



- In patients who do not meet these criteria, evaluating with US Doppler every 3 months for progression of thrombus is reasonable, no anticoagulation recommended