

# MÁSTER EN HEPATOLOGÍA



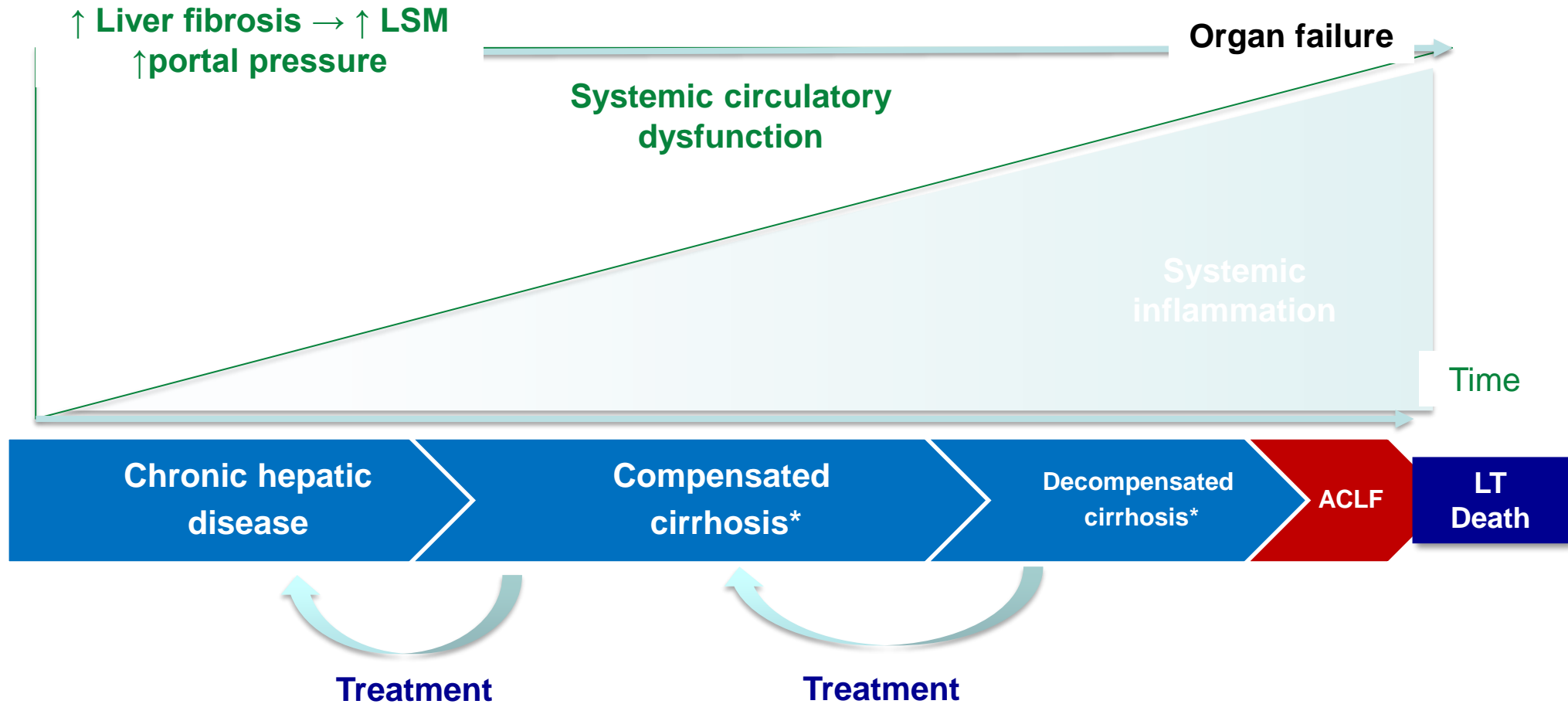
Asignatura: Cirrosis I

## **“Historia natural de la cirrosis: Cambios en los paradigmas”**

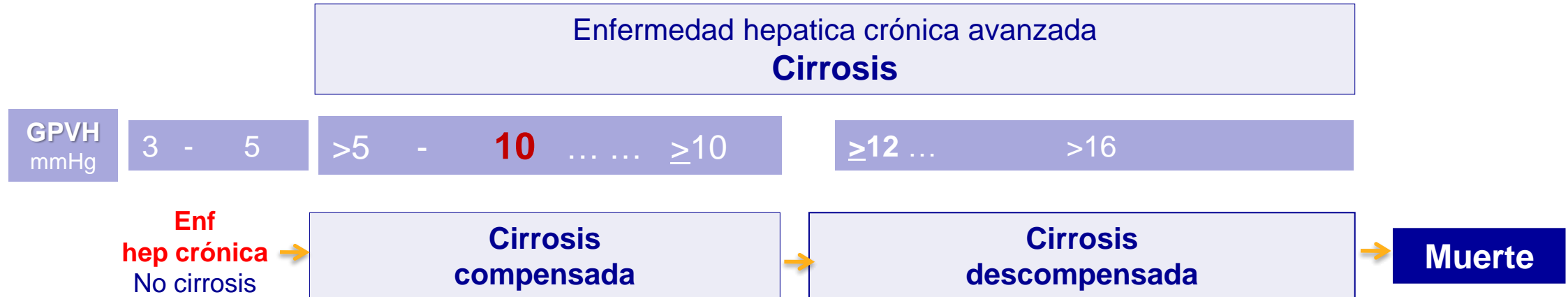
**Agustín Albillos**

Hospital Universitario Ramón y Cajal, IRYCIS,  
Universidad de Alcalá, CIBERehd, Madrid

# Changes in cirrhosis paradigms

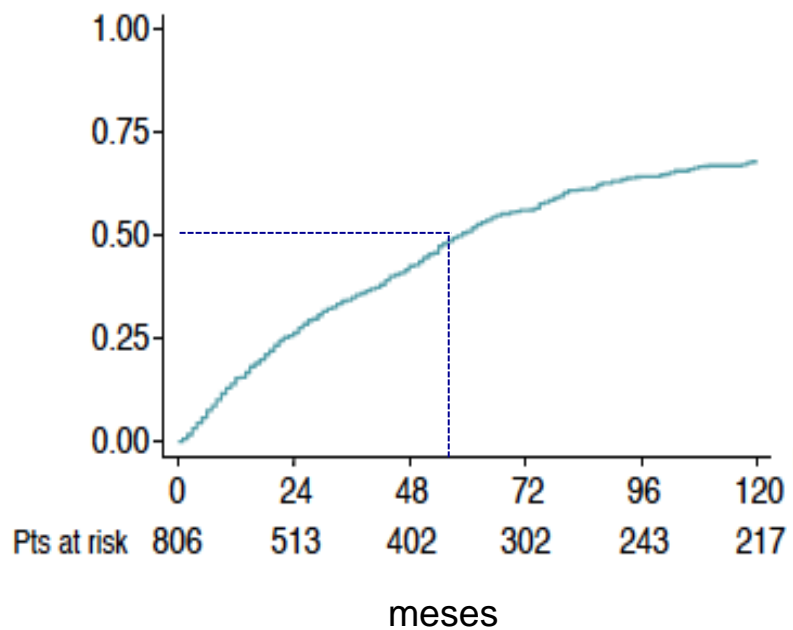


## Estadios y subestadios de la cirrosis

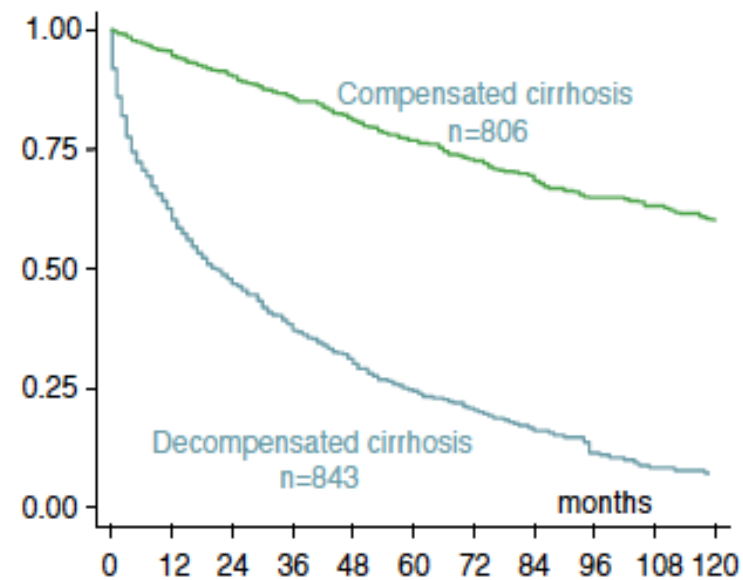


## Cirrosis: transición desde el estadio compensado al descompensado

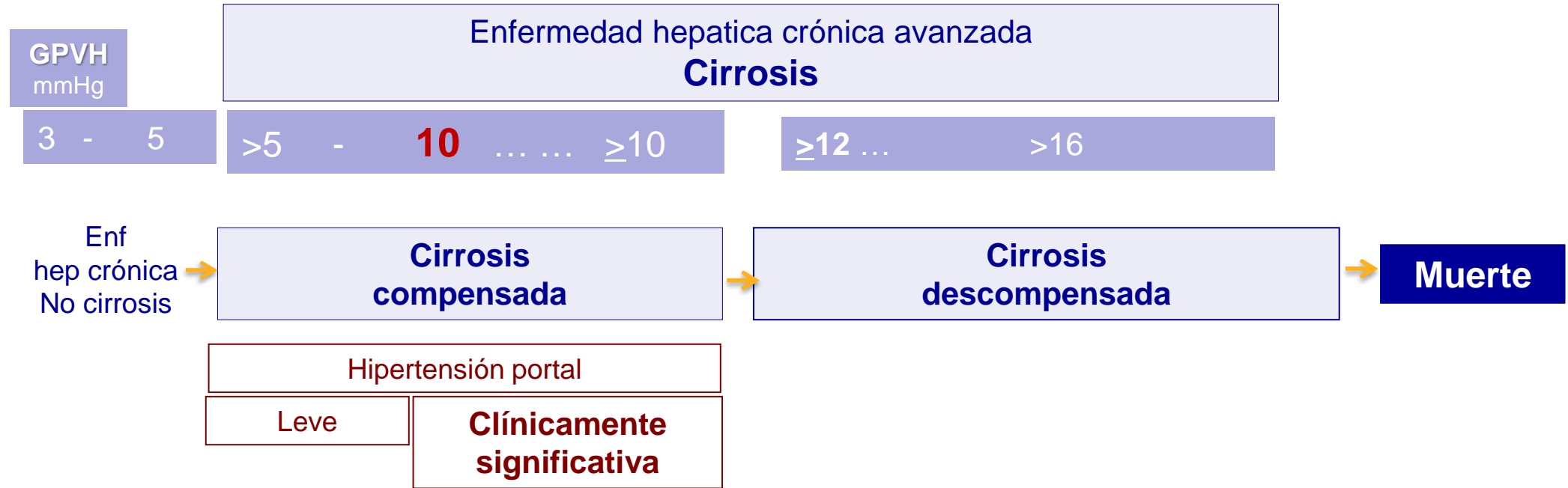
Tasa de descompensación



Supervivencia

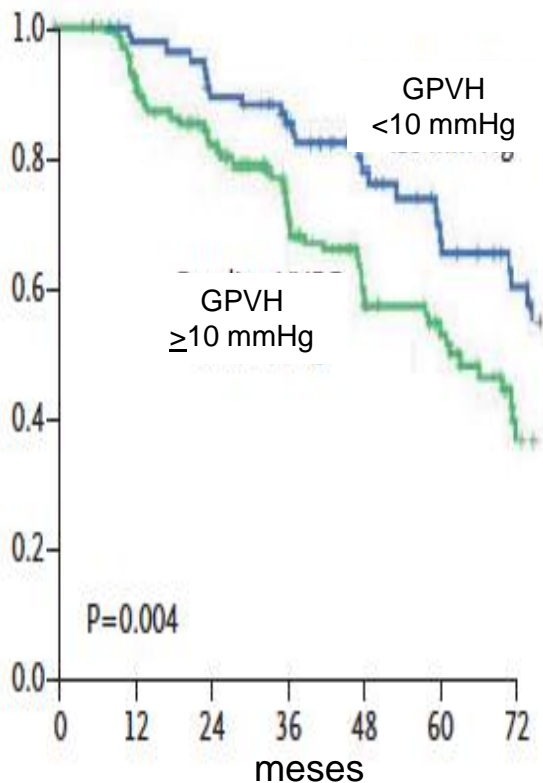


# Estadios y subestadios de la cirrosis



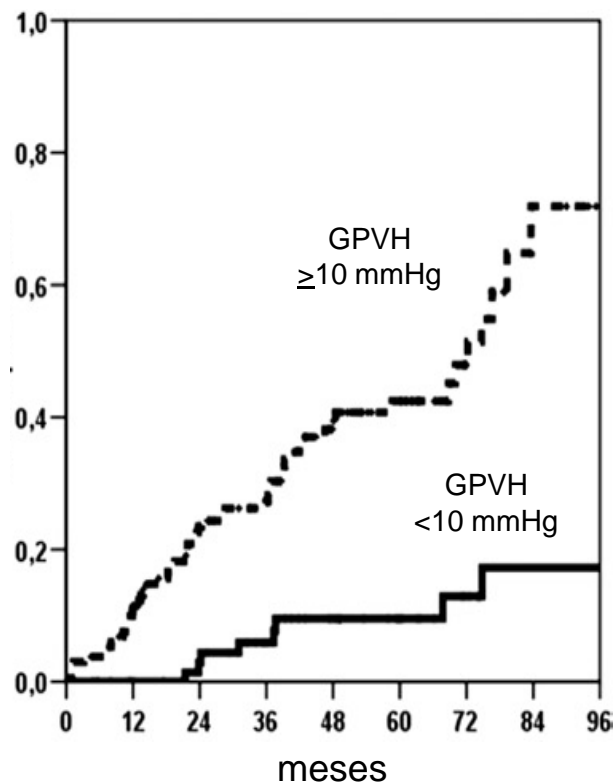
# Cirrosis compensada: Relevancia de hipertensión portal clínicamente significativa (GPVH $\geq 10$ mmHg, rigidez hepática $>20$ kPa)

### Probabilidad de desarrollo de varices



RJ Groszmann et al.  
NEJM 2005

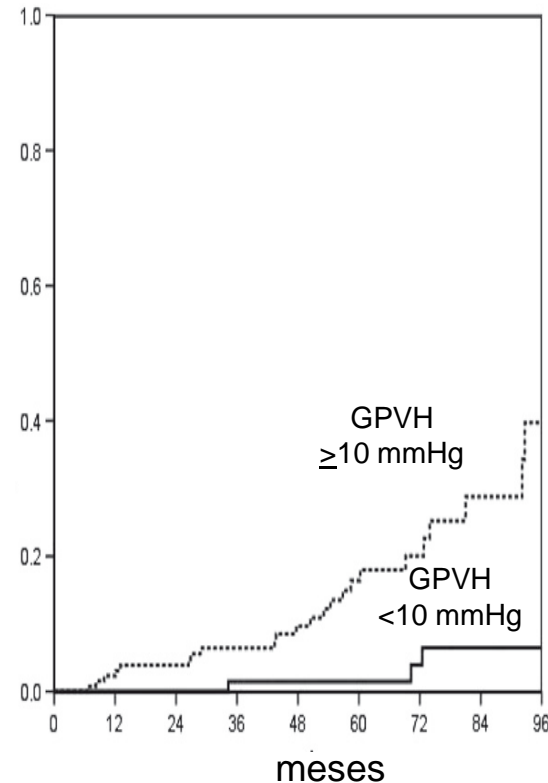
### Probabilidad de descompensación clínica



Valor predictivo negativo 90% para **NO** desarrollo de descompensación

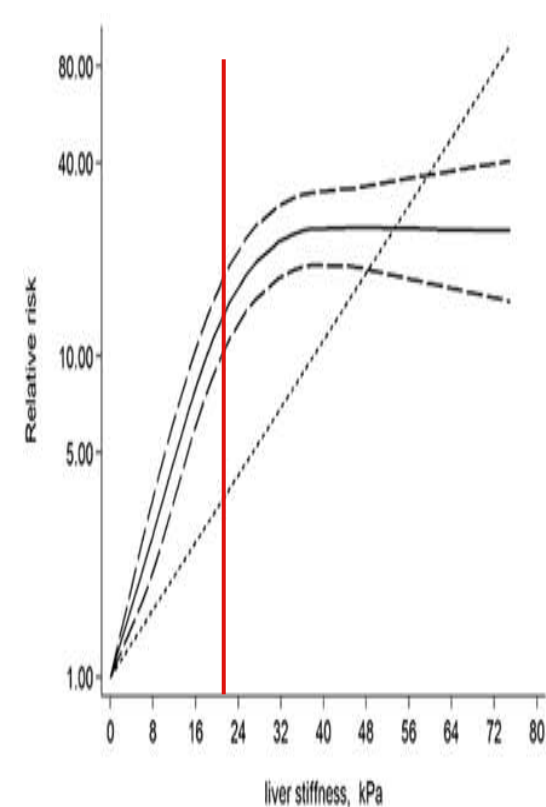
C Ripoll et al.  
Gastroenterology 2007

### Probabilidad de carcinoma hepatocelular



C Ripoll et al.  
J Hepatol 2009

### Riesgo relativo de muerte



J Wang et al.  
Hepatol Comm 2018

# Hipertensión portal clínicamente significativa (CSPH): aumento del gasto cardiaco y del flujo esplácnico (circulación hiperdinámica)

Mecanismo predominante  
en hipertensión portal leve  
(GPVH 5-10 mmHg)

Aumento  
resistencia  
intrahepática

HIPERTENSIÓN  
PORTAL

Mecanismo  
importante en  
CSPH  
(GPVH  $\geq 10$  mmHg)

Vasodilatación  
esplácnica

Aumento flujo  
esplácnico

↓ Volumen sanguíneo  
efectivo

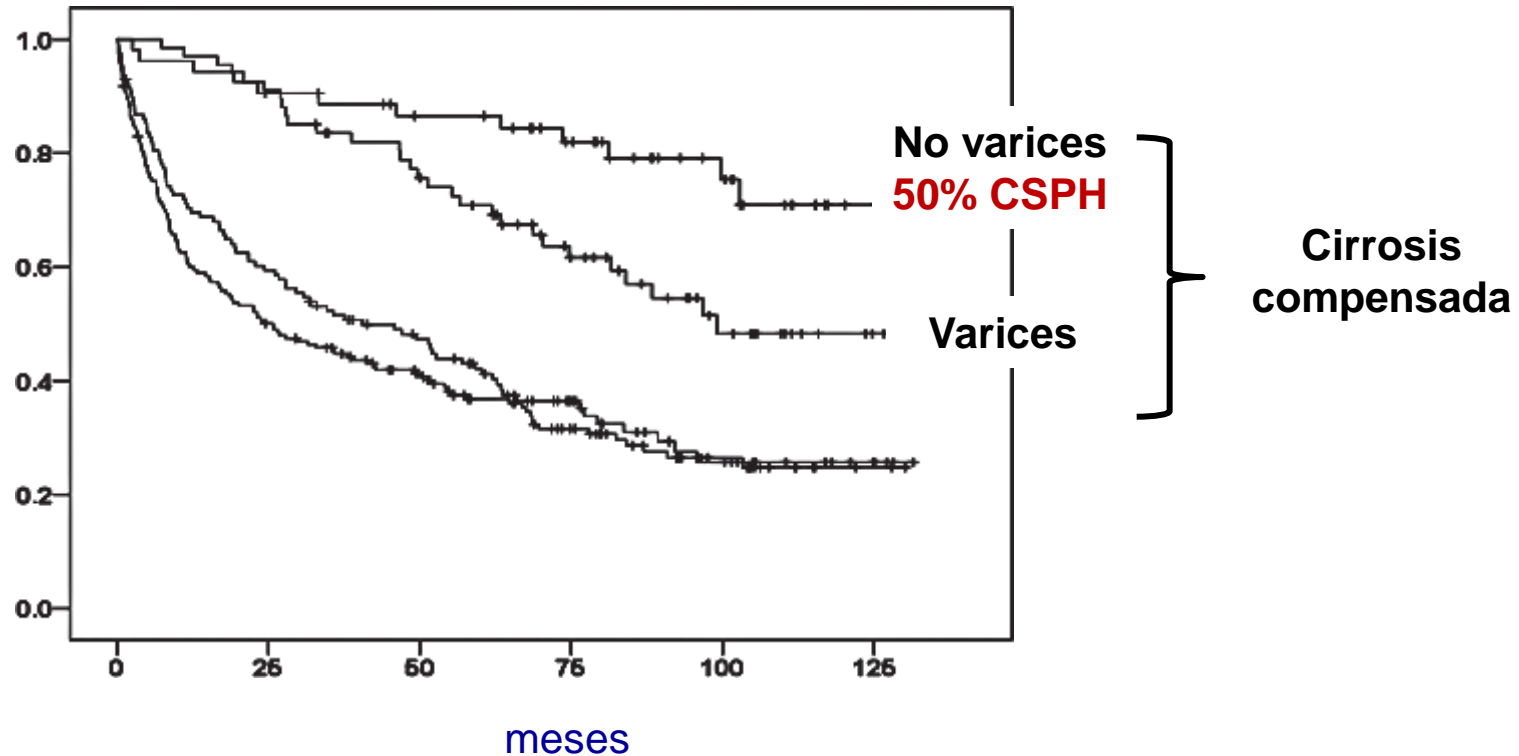
↑ Aumento  
gasto cardiaco

Activación  
sistemas neurohumorales

Retención renal de agua y sodio  
Hipervolemia

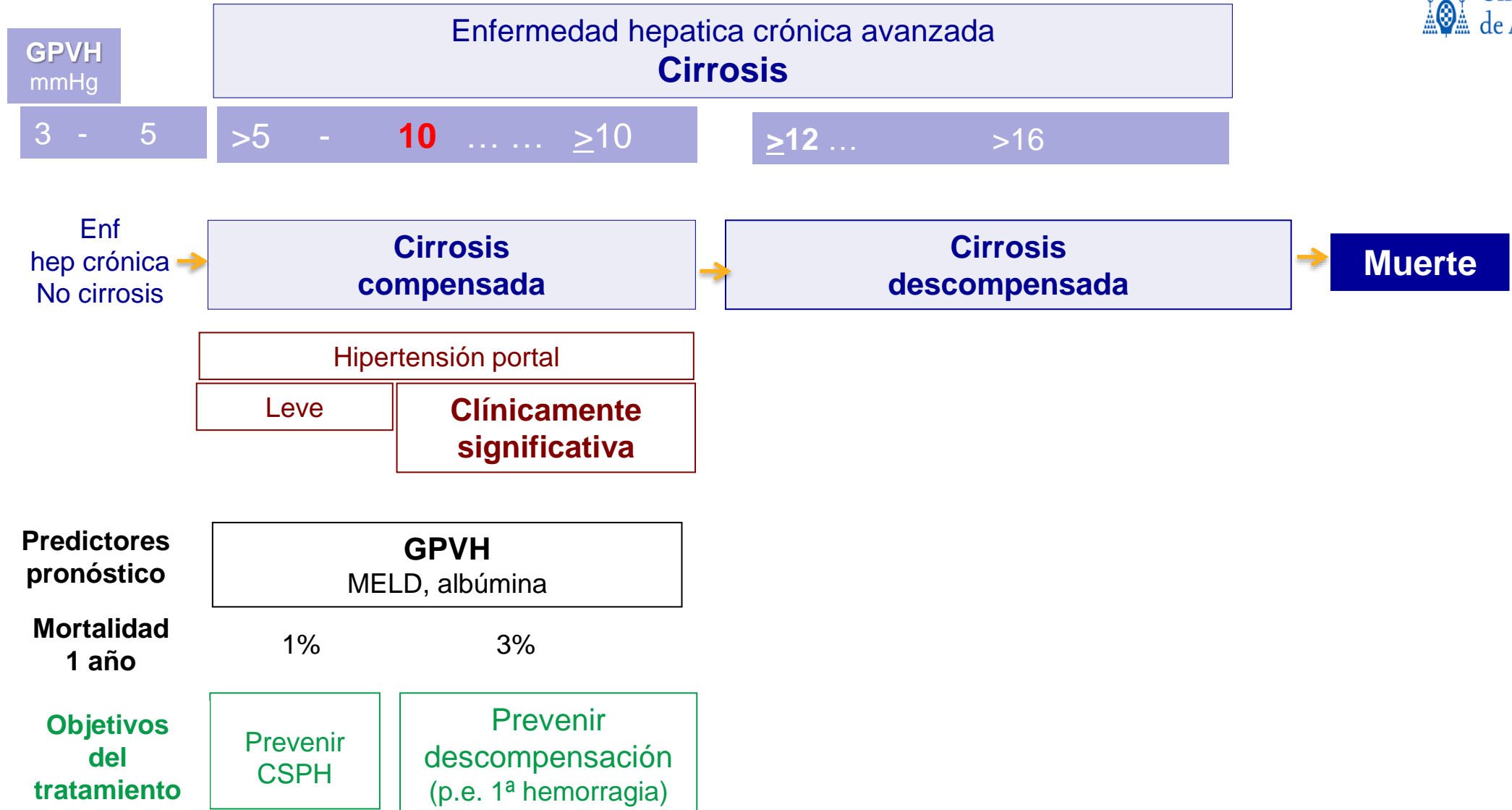
## Diferente supervivencia de la cirrosis compensada según la presencia de varices

Supervivencia en cirrosis compensada

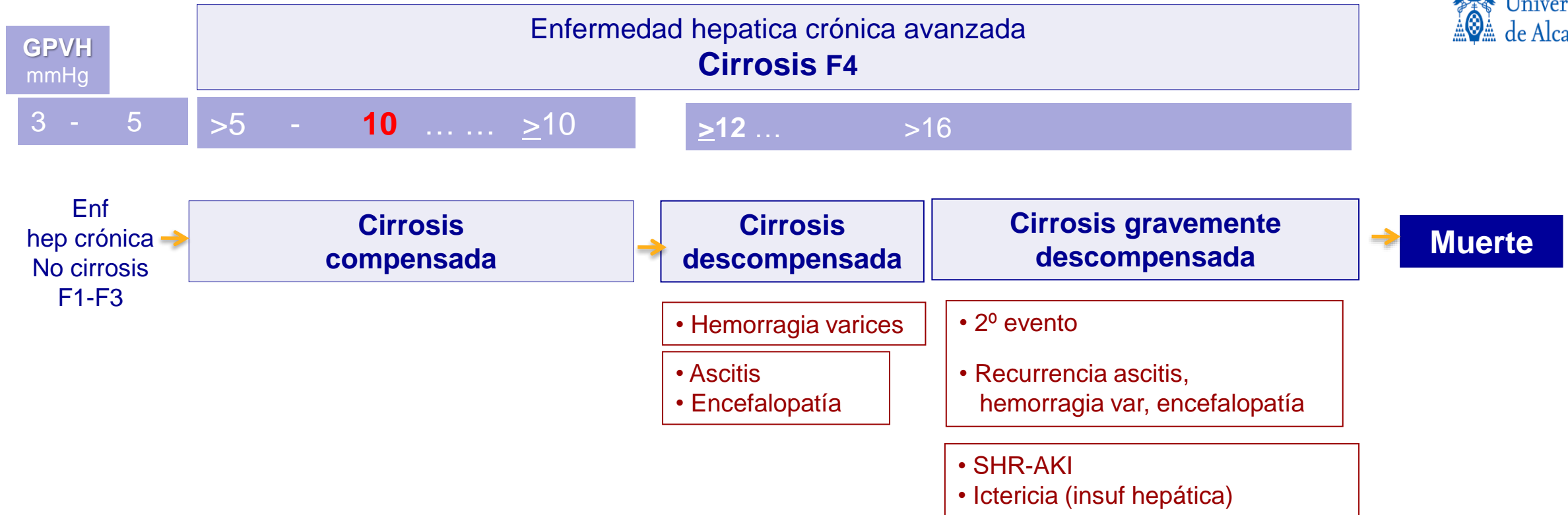




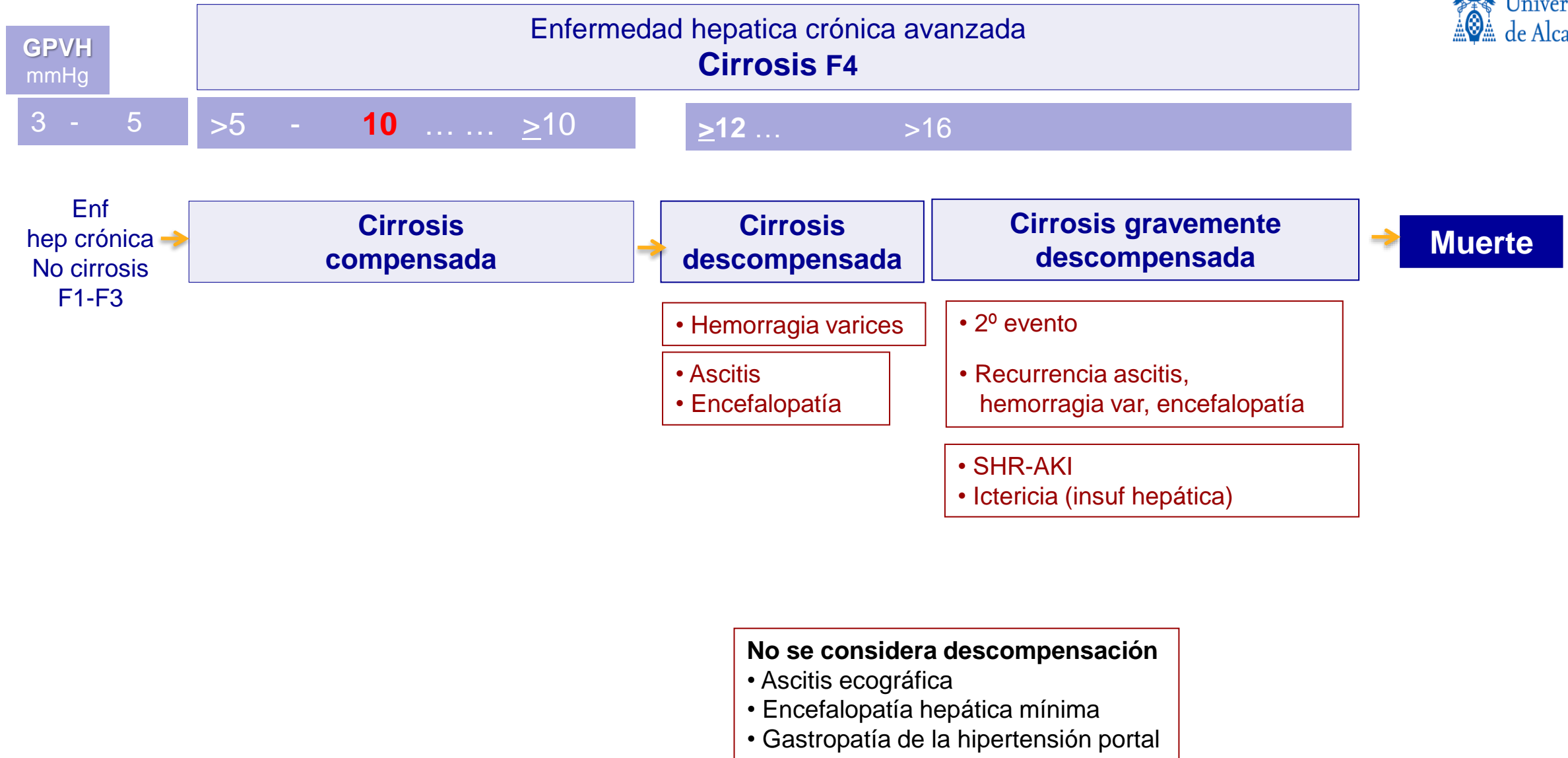
# Estadios y subestadios de la cirrosis



# Estadios y subestadios de la cirrosis



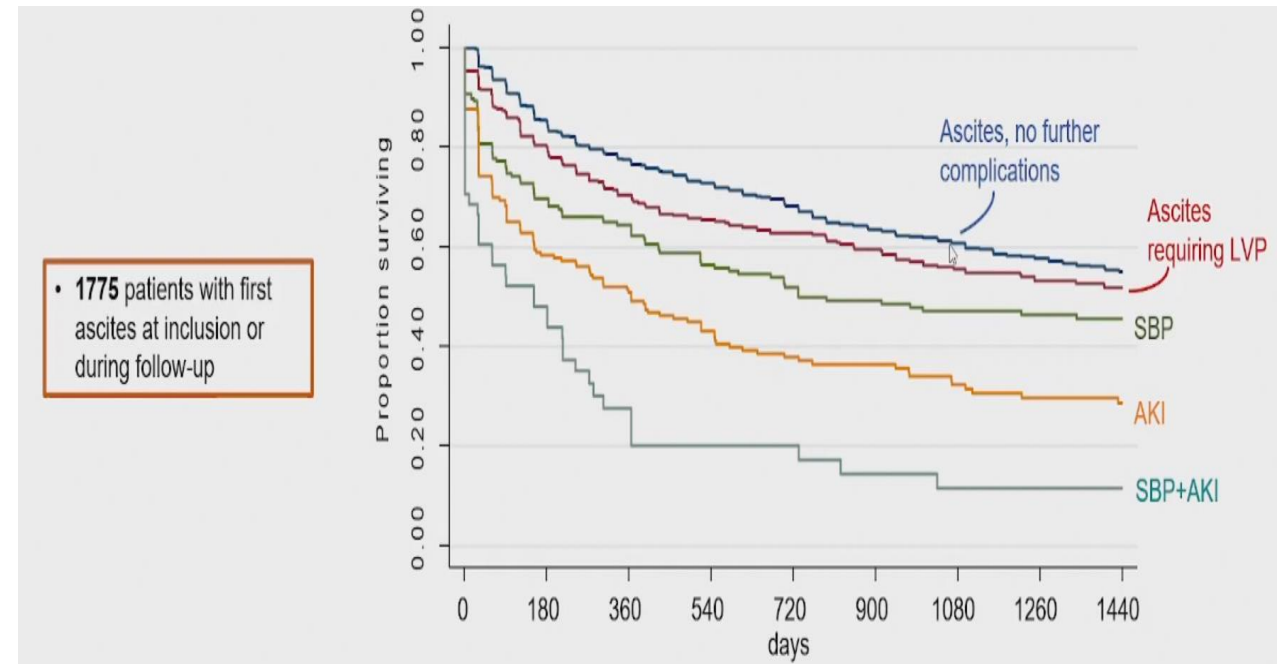
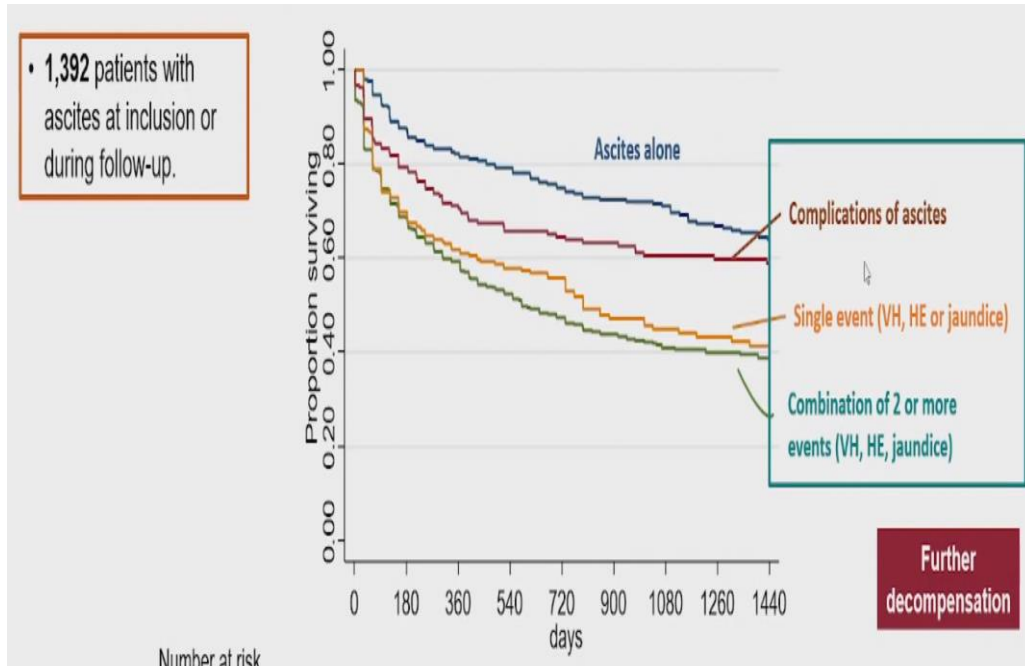
# Estadios y subestadios de la cirrosis



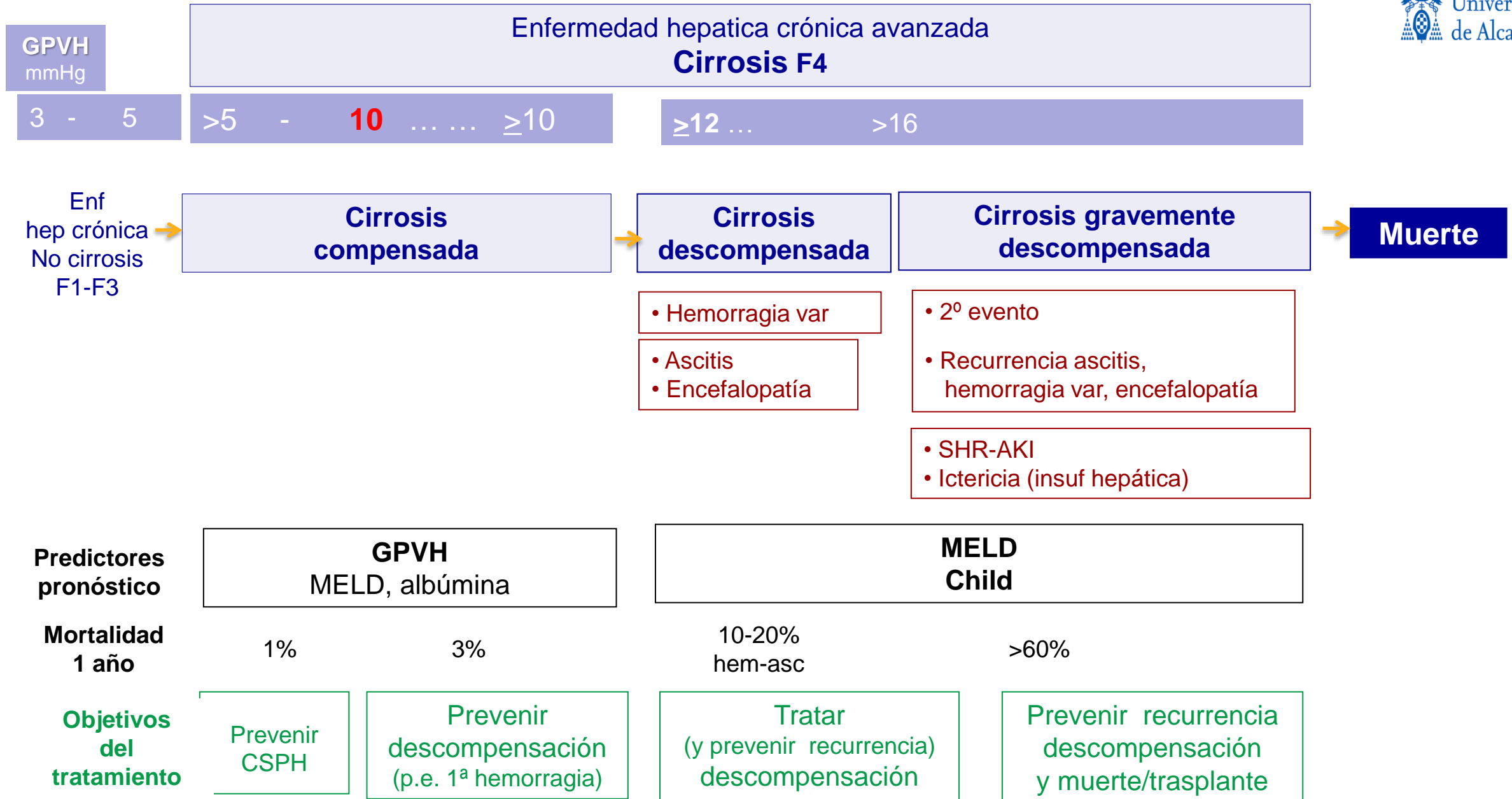
## One-year mortality in patients after variceal bleeding with or w/o ascites

Author	Patients	Variceal hemorrhage (%)	Variceal hemorrhage + Ascites (%)
<b>Jepsen 2010</b> Population based cohort Alcohol related cirrhosis	426	18	<b>50</b>
<b>D'Amico 2010</b> Abstract. Multicenter study	1962	14	<b>38</b>
<b>Zipprich 2012</b> Single center study	323	15	<b>40</b>
<b>Bruno 2013</b> Multicenter study	490	8	Insufficient number

## Cirrosis gravemente descompensada: Peor supervivencia de las complicaciones de la ascitis comparadas con ascitis no complicada



# Estadios y subestadios de la cirrosis

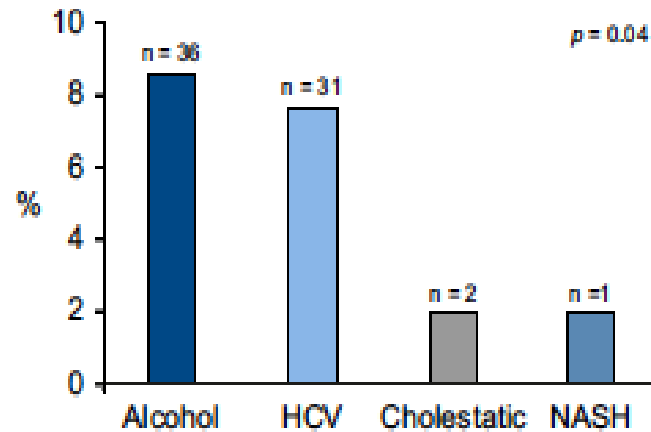


## De-listing/re-compensation of patients with decompensated cirrhosis after treatment of etiology

### 8.6% with alcoholic cirrhosis delisted for improvement

Criteria for delisting: absence/easy control of complications  
And improvement in liver function

#### Proportion of patients delisted according to etiology



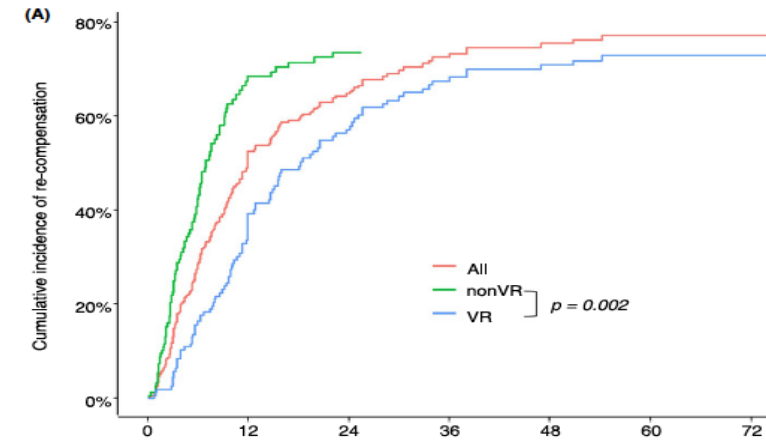
1,001 patients with decompensated cirrhosis  
420 with alcoholic cirrhosis, abstinence >6 months

*E Pose et al, JHEP 2021*

### 62% with HBV cirrhosis delisted for improvement

Criteria for delisting: recovery to Child A5

#### Re-compensation by viral response to NUC

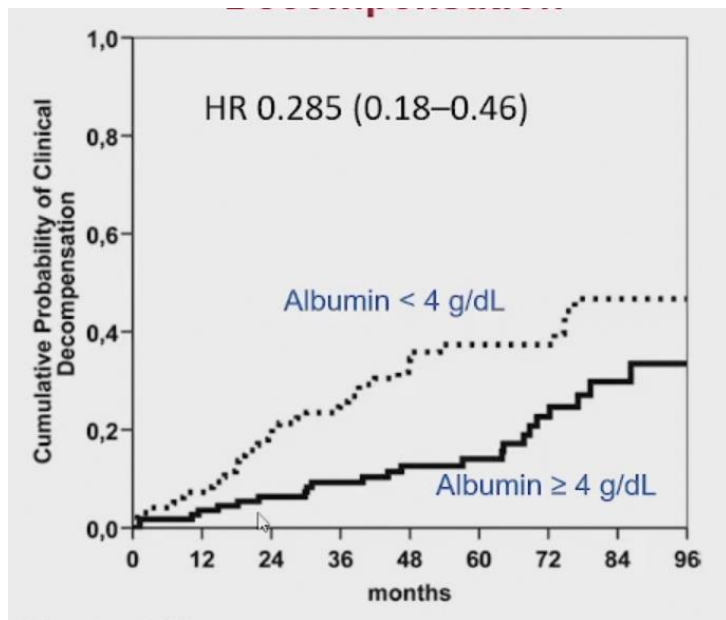


311 patients with HBV decompensated (Child B/C) cirrhosis  
on NUC listed for liver transplantation

*R Kim et al, APT 2021*

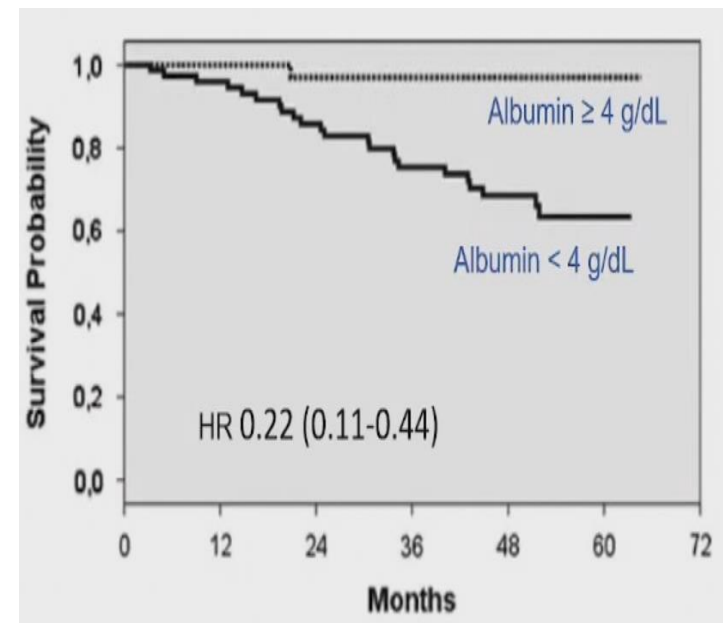
## Serum albumin: strong predictor of decompensation in compensated cirrhosis

### Decompensation



C Ripoll et al, Gastroenterology 2007

### Survival



C Ripoll et al, JCG 2015

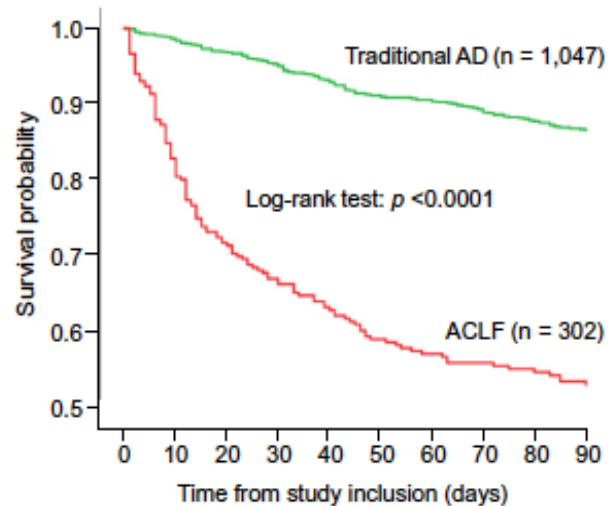


# Acute-on-chronic liver failure (ACLF): The need of a new concept in acute hepatic decompensation

'Acute deterioration in liver function over a period of 2–4 weeks leading to severe deterioration in clinical status with a high SOFA/APACHE II score **with** jaundice and either hepatic encephalopathy or renal failure'

*R Jalan, R Williams. Blood Purification 2002*

## Survival curves in patients with acute decompensation and ACLF (CANONIC study)



*R Moreau et al. Gastroenterology 2013*

### Acute decompensation of cirrhosis:

- Ascites, encephalopathy, bleeding, encephalopathy, infection
- Worsening of survival (~2 yr)

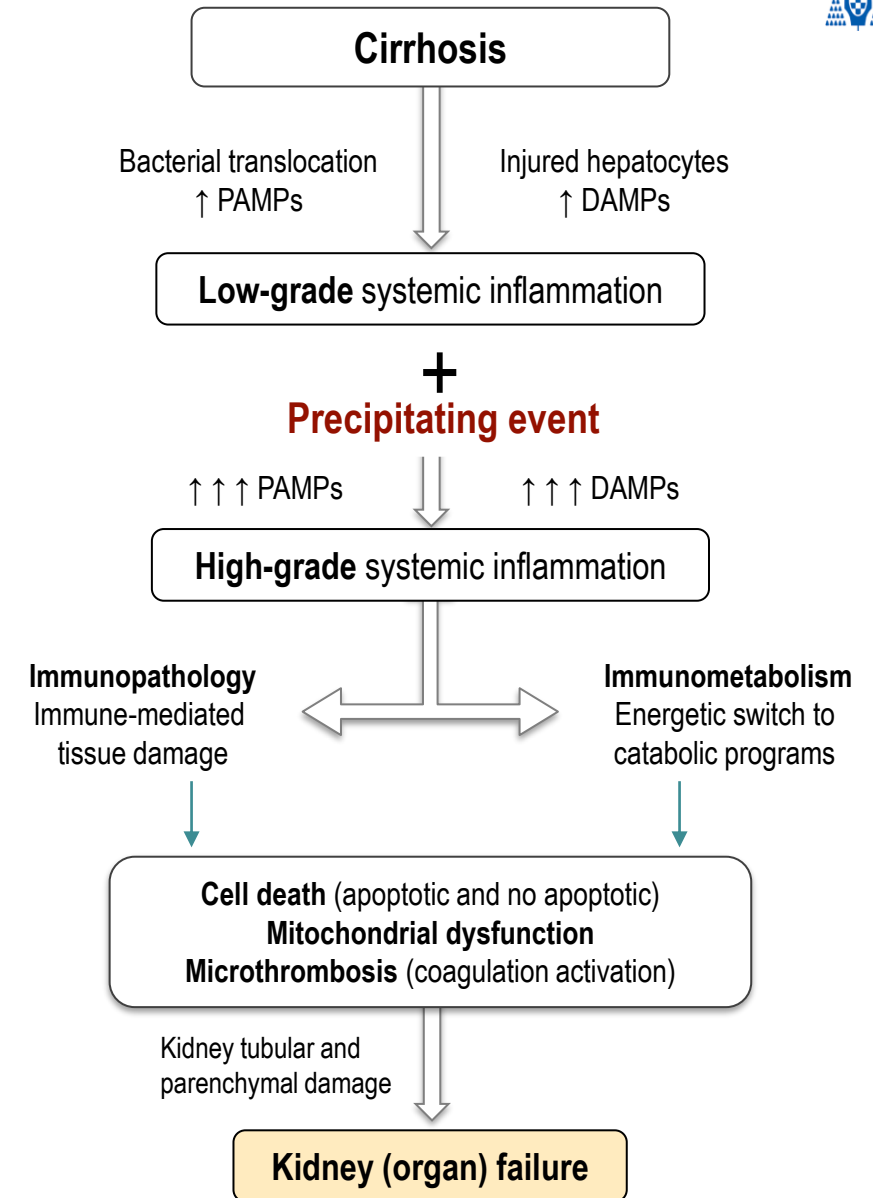
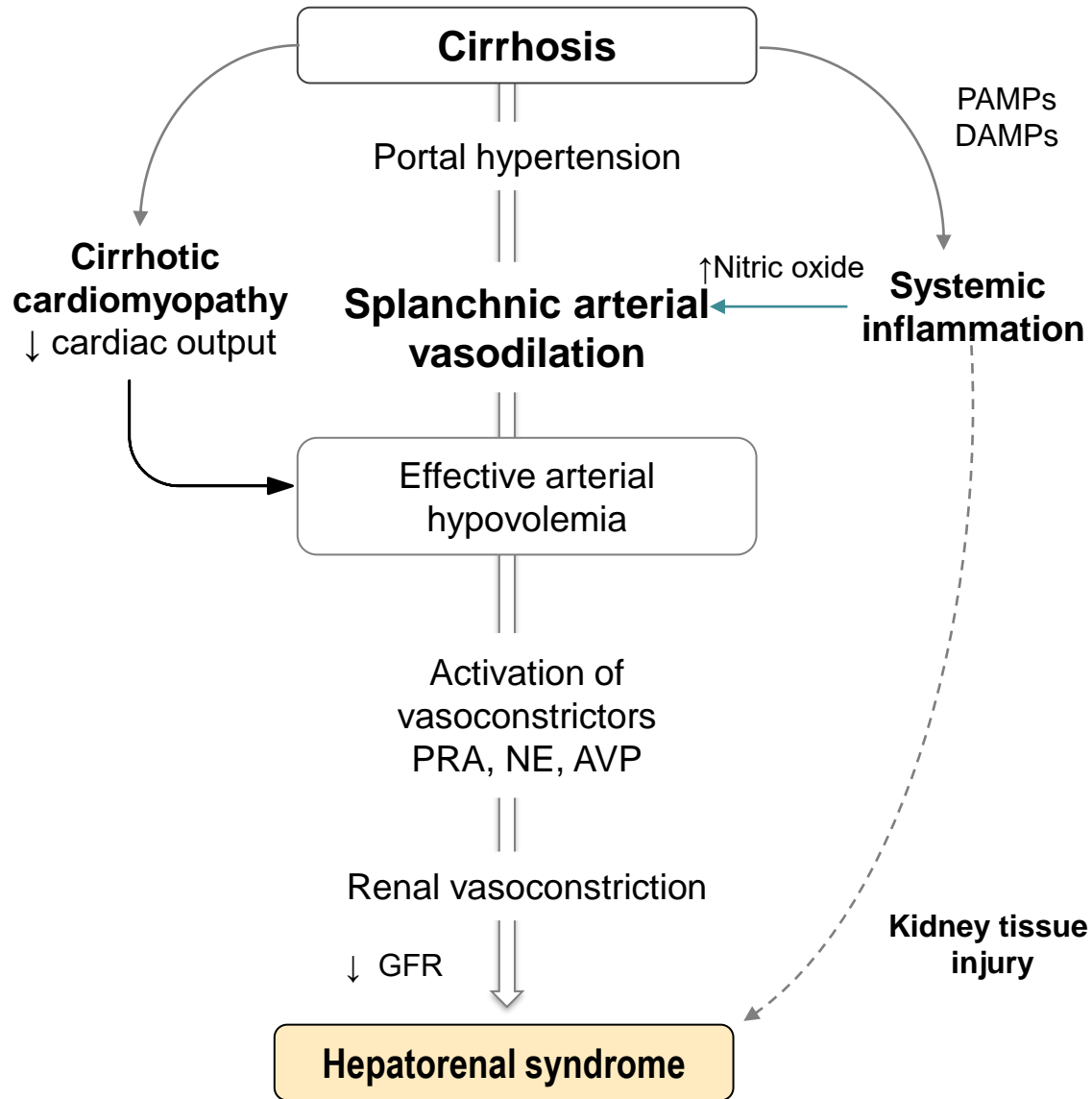
### Acute decompensation of cirrhosis **AND**:

- **Organ failure** (hepatic and/or extrahepatic)
- **High short-term mortality** (>15% a los 28 días)

### Definitions

- Ascites and jaundice: **APASL**
- Organ failure: European (**EASL-CLIF**) and North America (**NACSLs**)

# Portal hypertension, circulatory dysfunction and systemic inflammation as drivers of cirrhosis progression

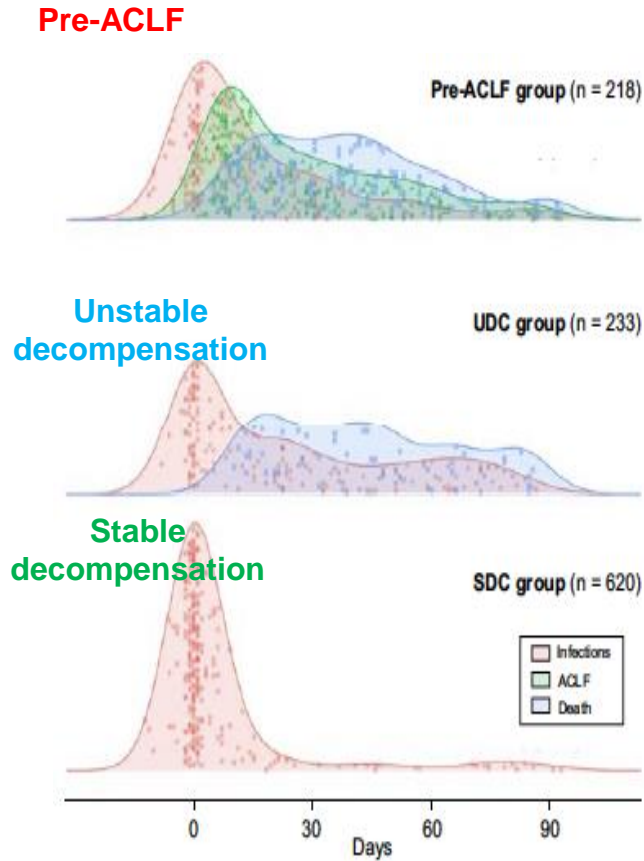


# Acute decompensation in cirrhosis: three clinical courses

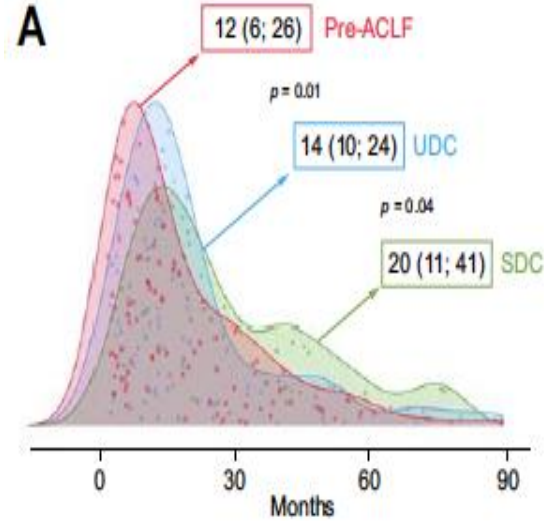
## PREDICT study

1071 patients with cirrhosis with acute decompensation  
Follow-up 3 months and 1 year after the event

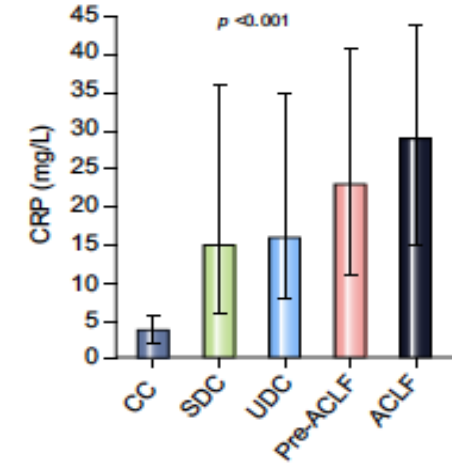
### Density curves of events



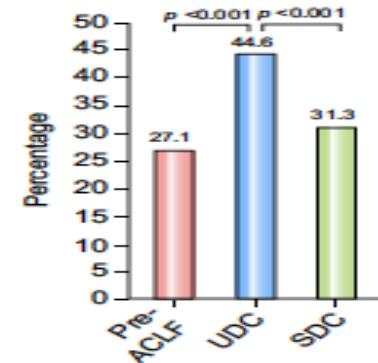
### Density curves of LTx/death



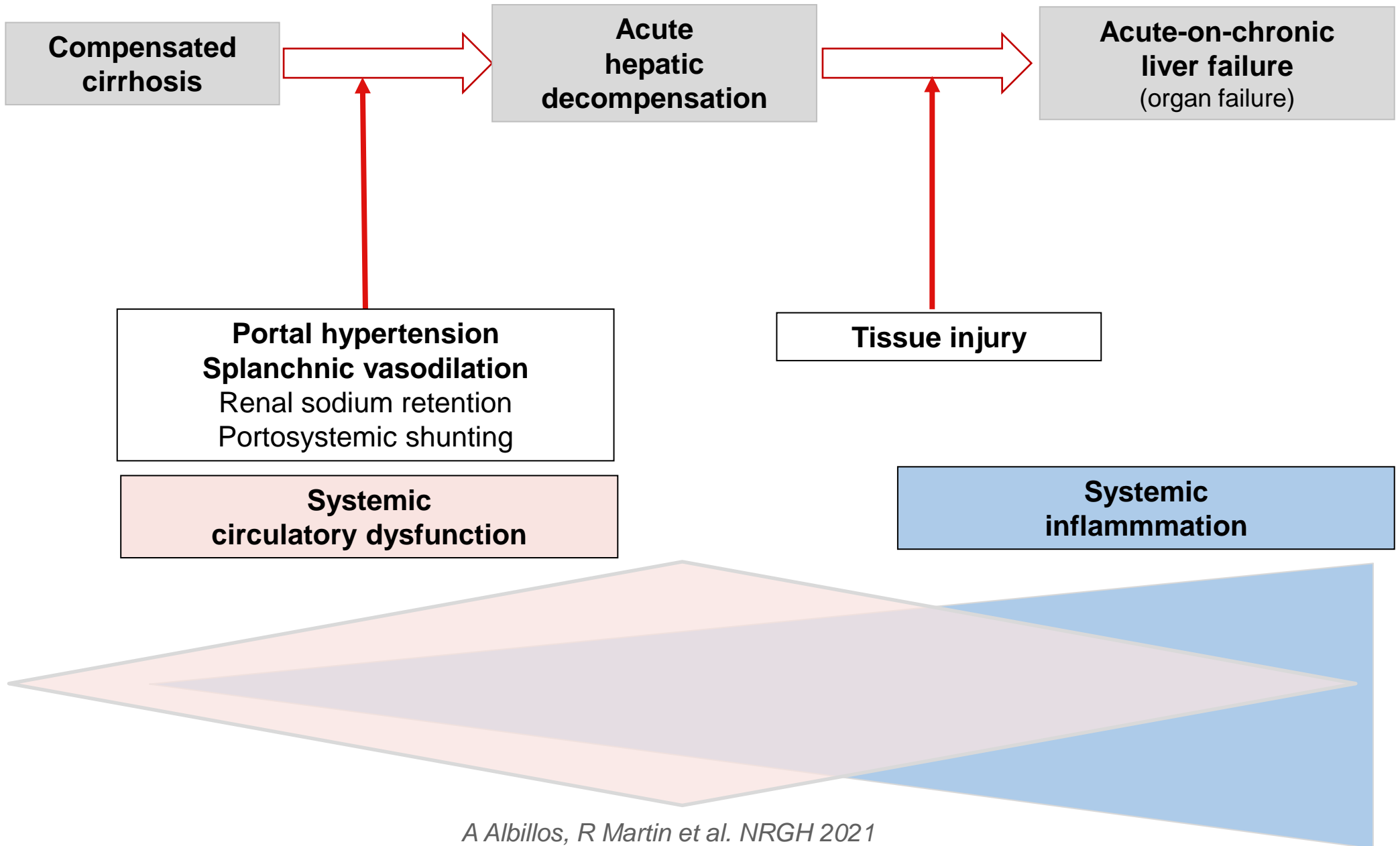
### C-reactive protein



### Surrogate of severe portal hypertension

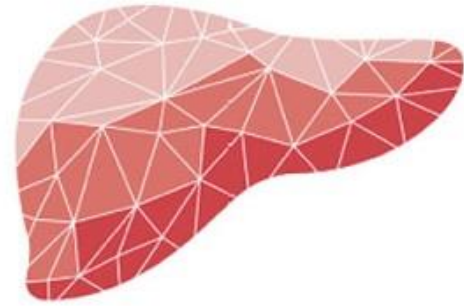


# Drivers of cirrhosis progression



# Final messages

- Chronic hepatic disease / **advanced hepatic chronic disease (cACLD) – cirrhosis**
- Compensated and decompensated cirrhosis
- **Compensated cirrhosis:**
  - clinically significant portal hypertension: risk of decompensation
  - staging by liver stiffness measurement by TE
  - esophageal varices mean CSPH
- **Decompensated cirrhosis**
  - prognostic meaning of one or two decompensating events
  - recompensation after etiological treatment
- **ACLF:** organ failure
- **Drivers** of cirrhosis: portal pressure, SCD, systemic inflammation



# MÁSTER EN HEPATOLOGÍA

