

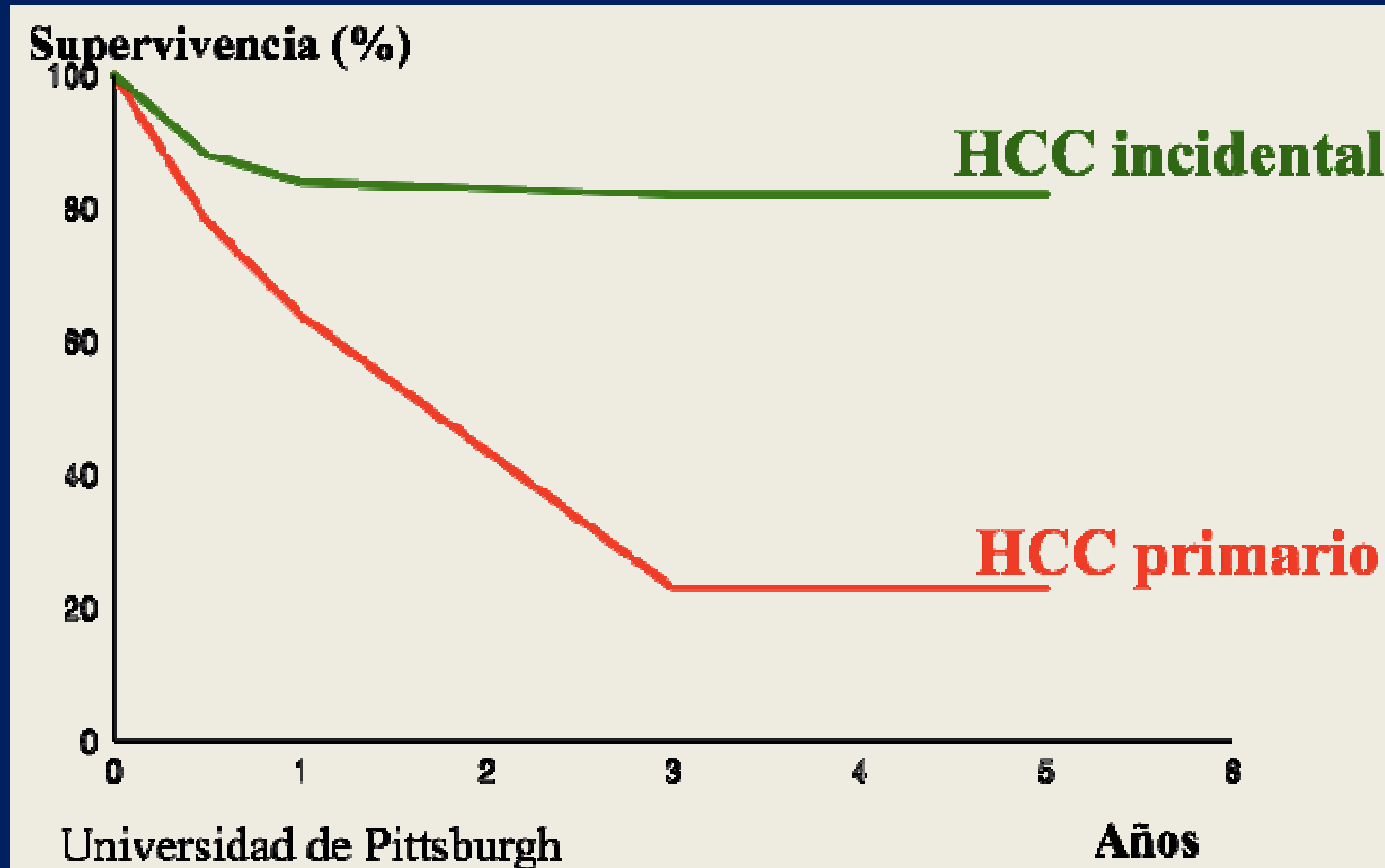
# Hepatocarcinoma

## Criterios expandidos

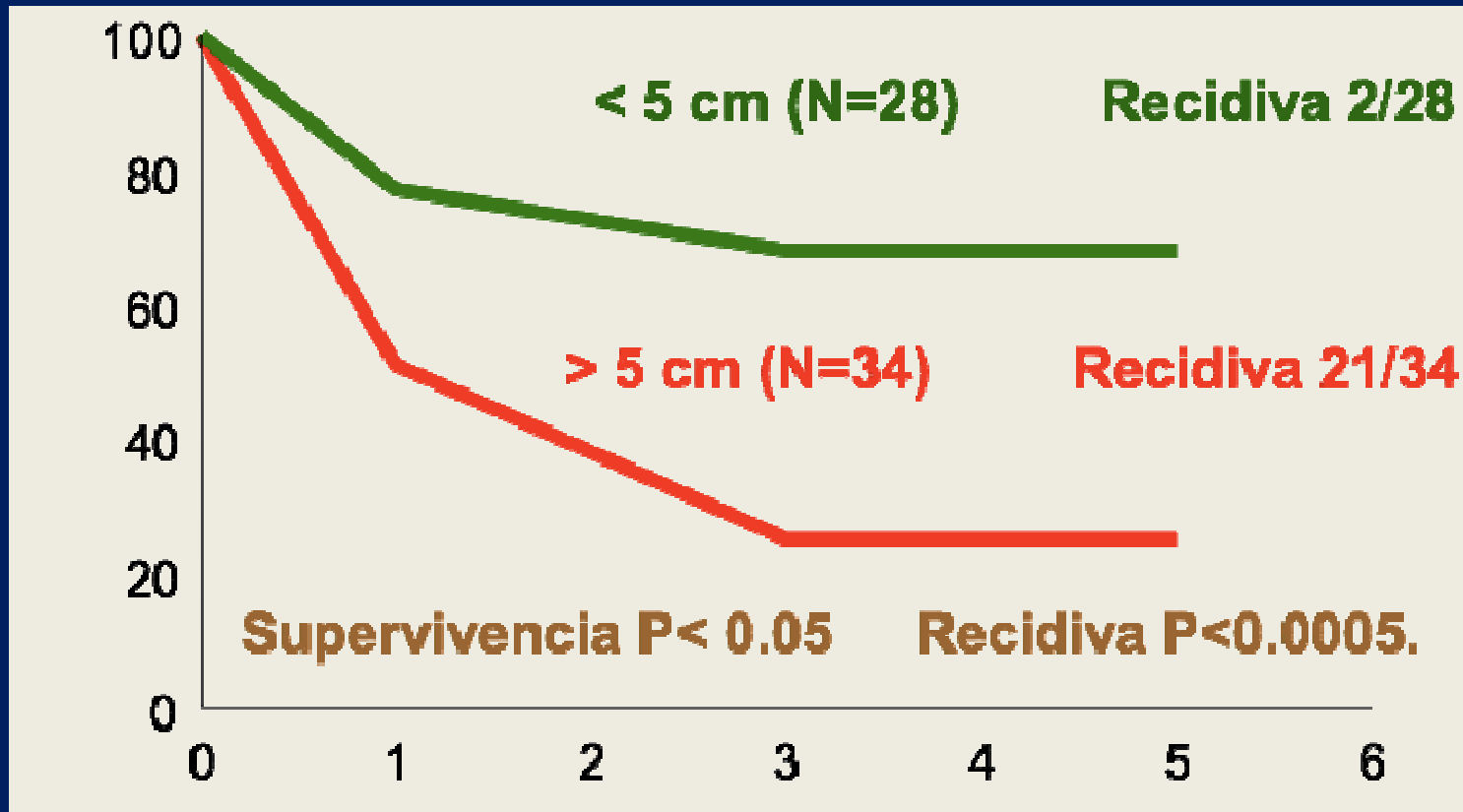
Fernando Pardo

Clínica Universidad de Navarra

## Los inicios del trasplante en HCC

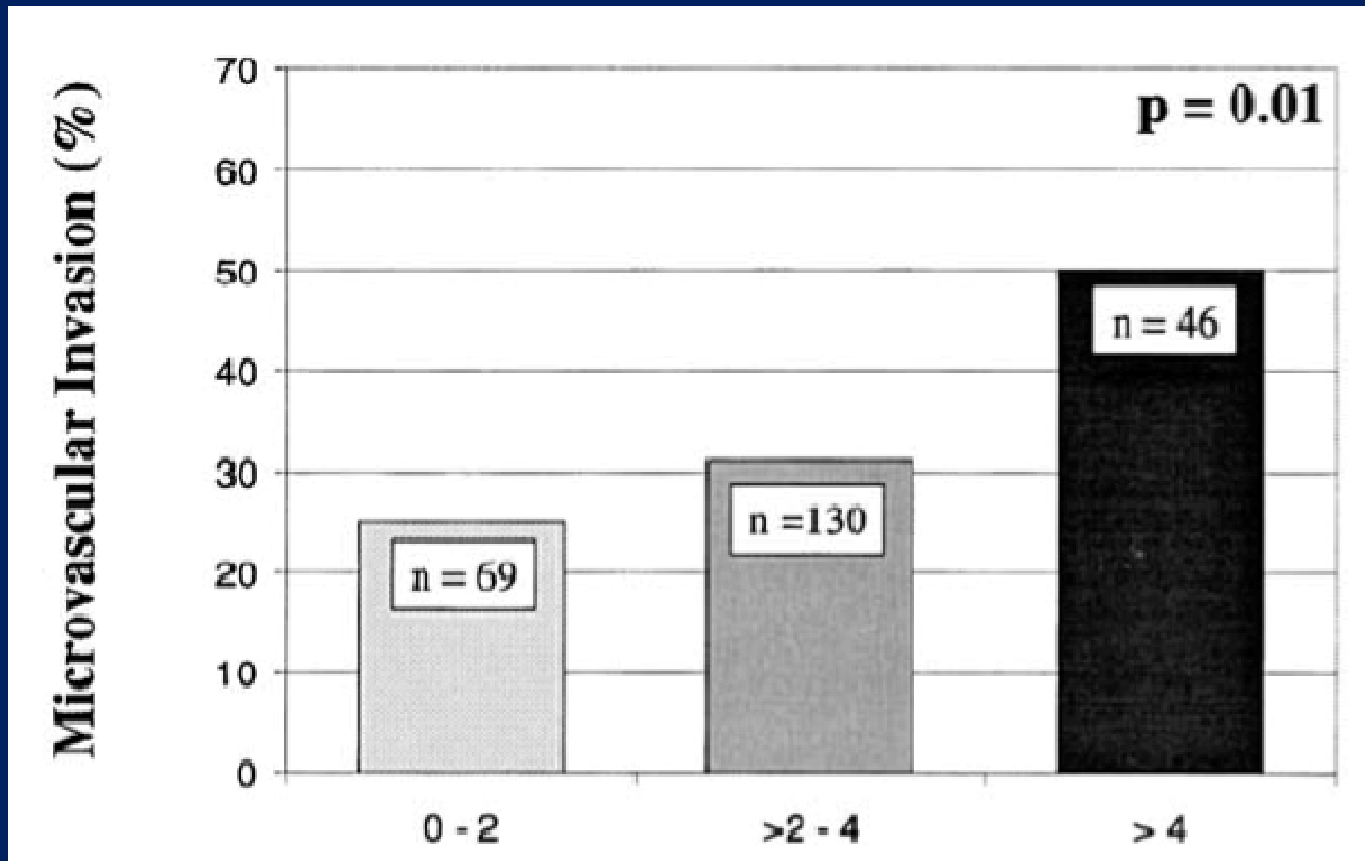


## Tamaño tumoral y evolución



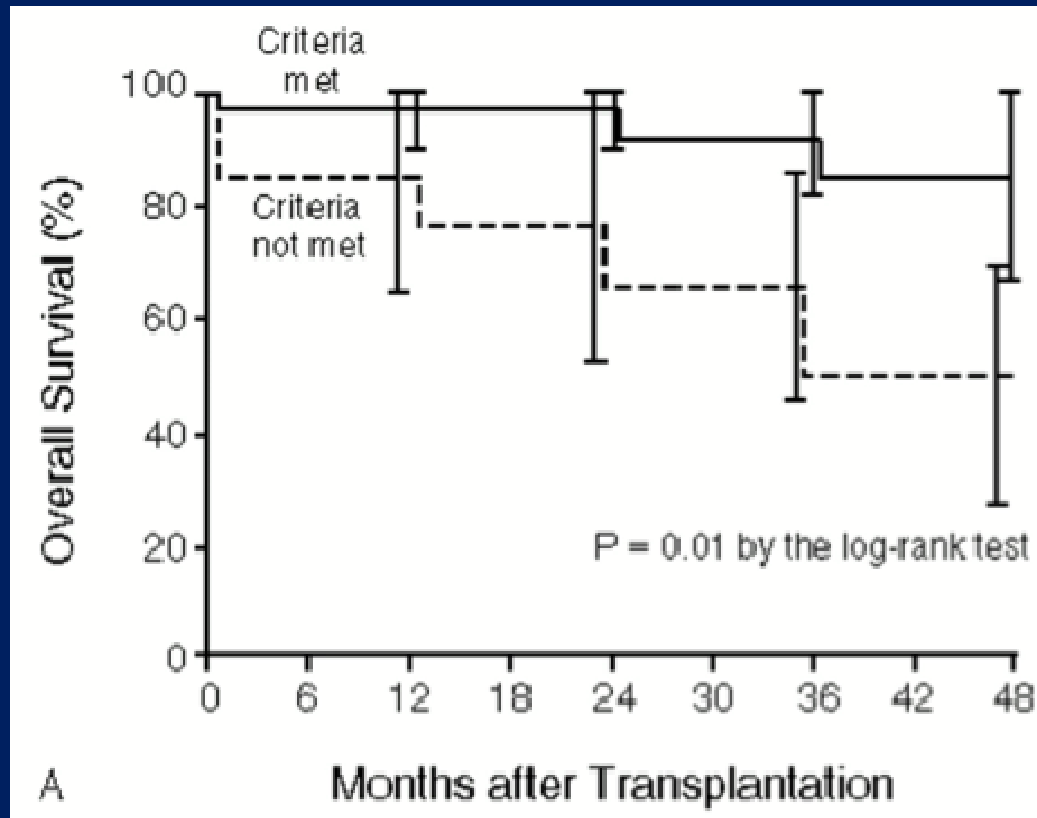
*Yokohama. Hepatogastroenterology 1990*

## Invasión vascular / tamaño tumoral



*Esnaola. J Gastrointest Surg 2002*

# Criterios de Milán

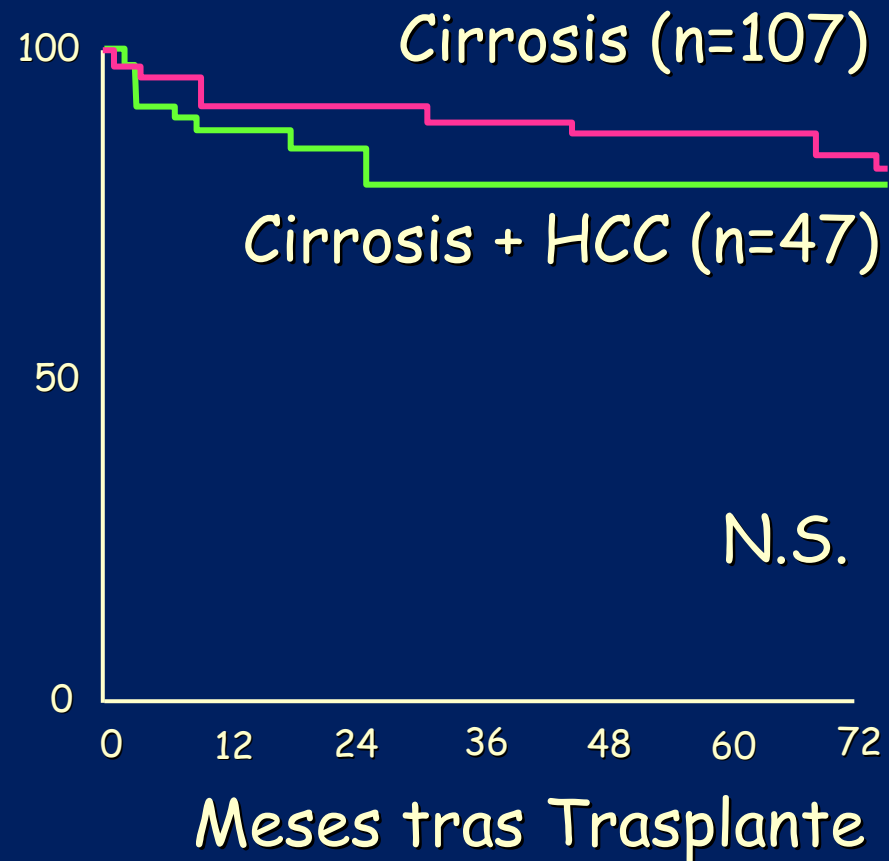


**1 HCC < 50 mm**  
**2-3 HCC < 30 mm**

*Mazzaferro. N Eng J Med 1996*

## Criterios Expandidos para Tx “más que Milán”: CUN

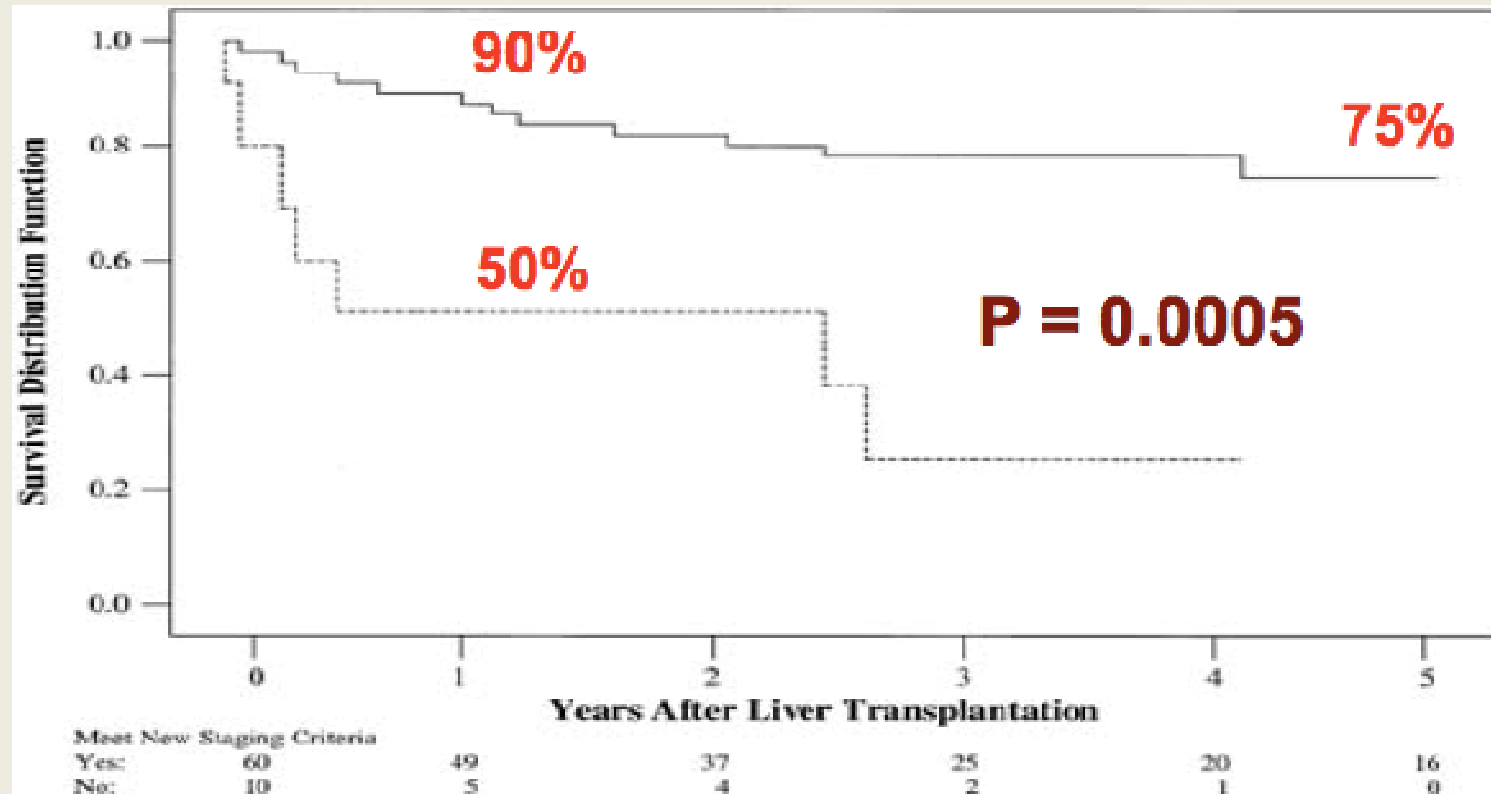
- 1 nódulo  $\leq 6$  cm
- 3 nódulos  $\leq 5$  cm



*Herrero JI. Liver Transpl 2001*

# Criterios UCSF

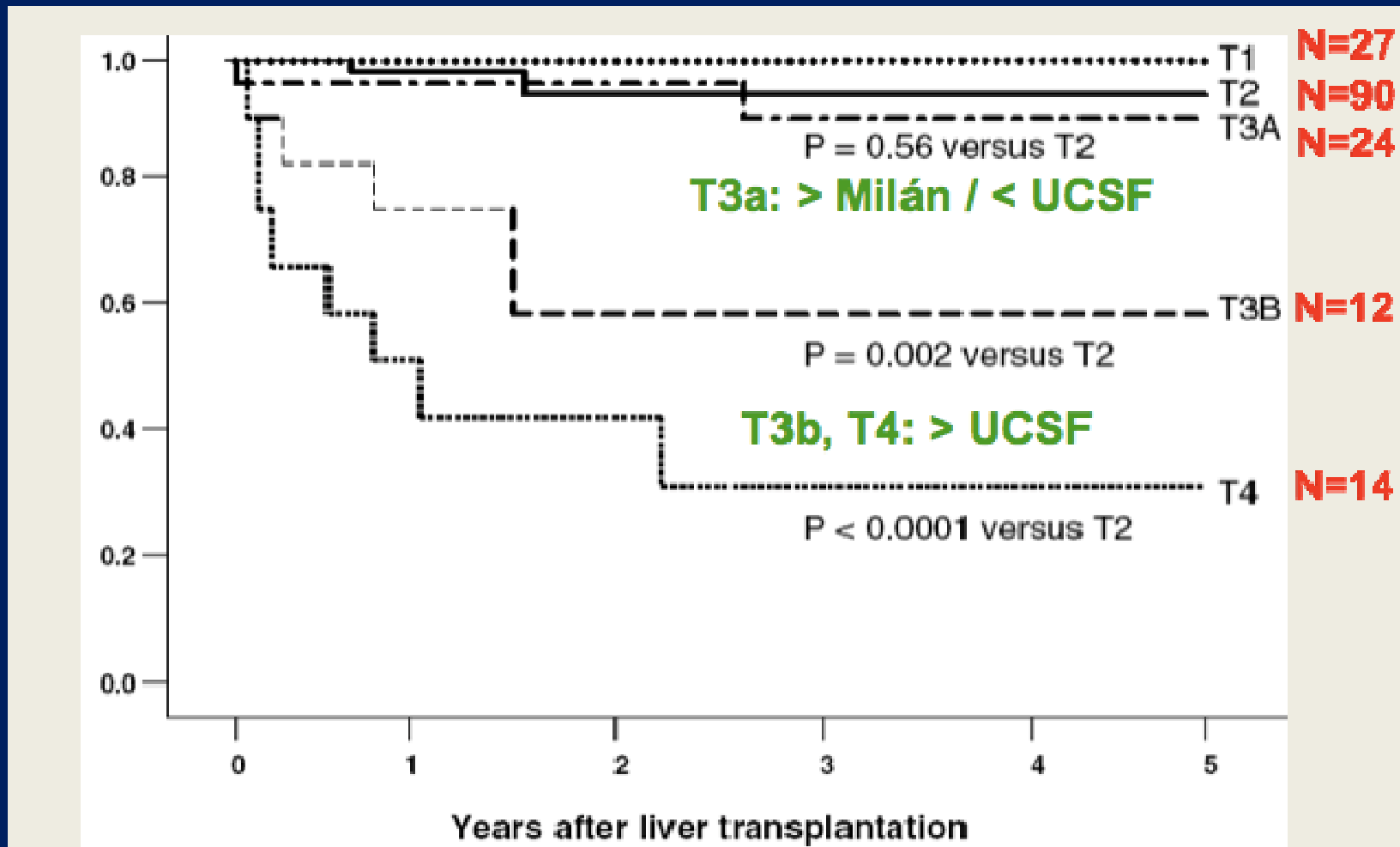
**Nódulo único < 65 mm**  
**2-3 nódulos < 45 mm; suma < 80 mm**



*Yao. Hepatology 2001*

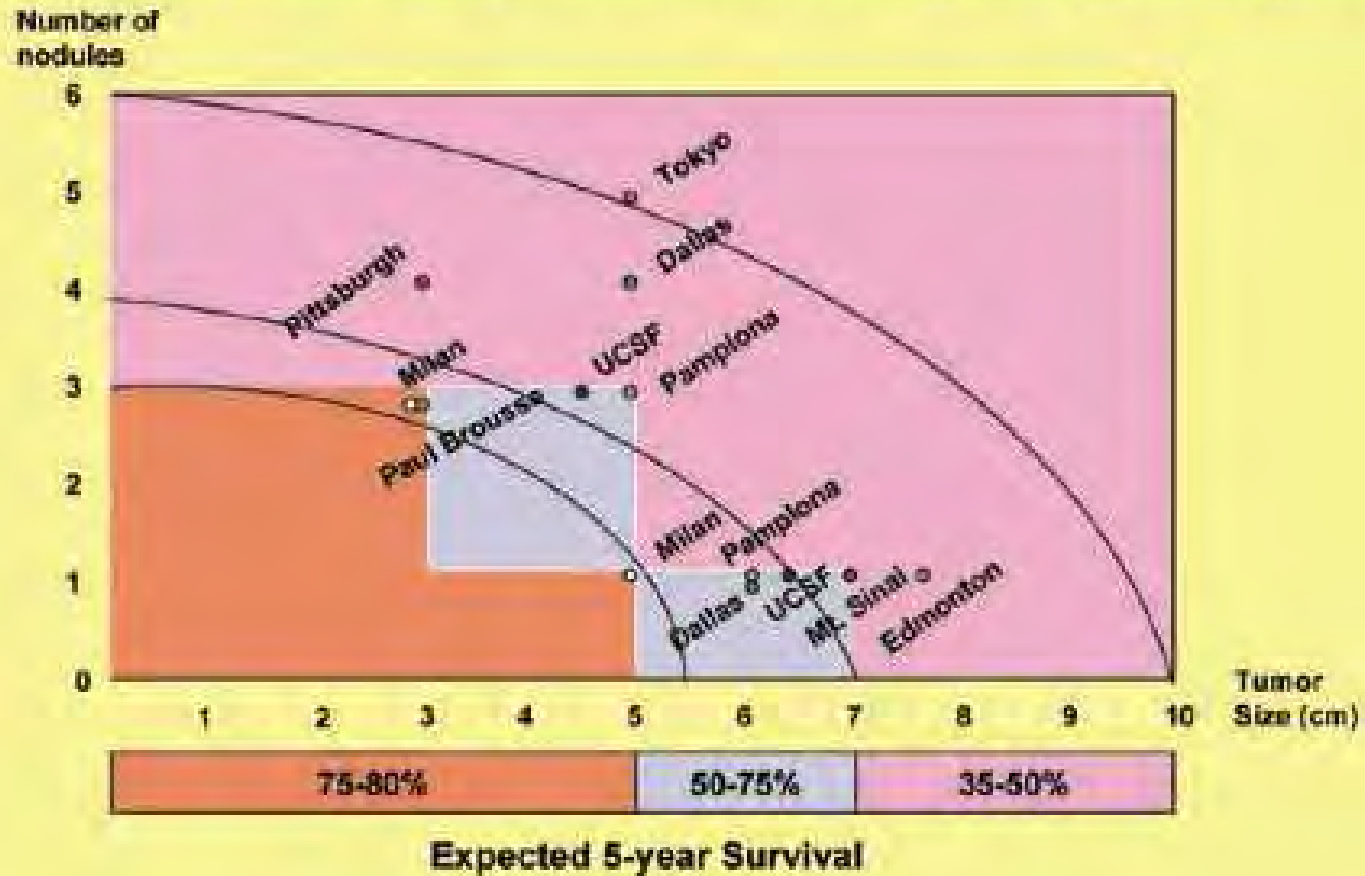
# Criterios UCSF

## SPV libre de recidiva según estadio AP



Yao. Am J Transplant 2005

HCC "Metro Ticket" - The further the distance, the higher the price



Mazzaferro. Liver Transplant 2007

# Liver Transplantation Criteria For Hepatocellular Carcinoma Should Be Expanded

*A 22-Year Experience With 467 Patients at UCLA*

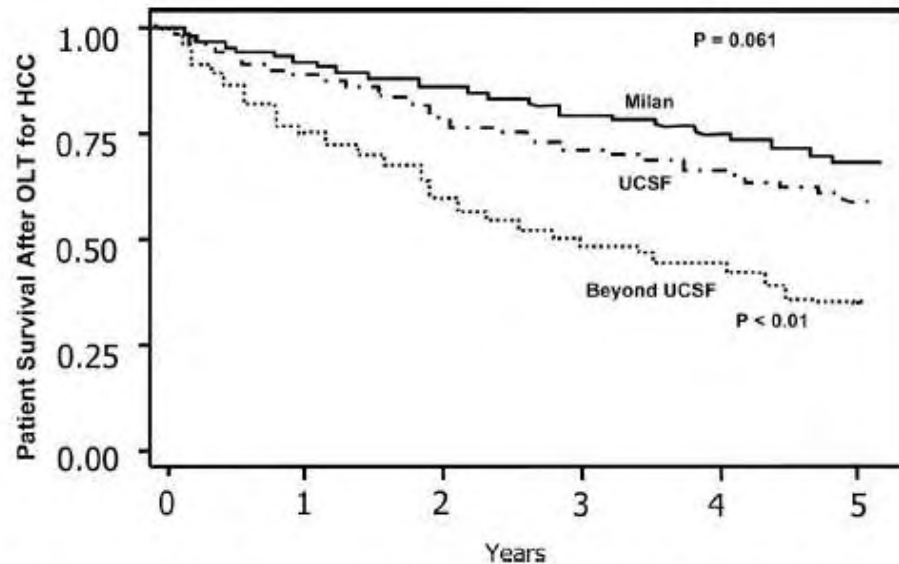


FIGURE 2. Survival estimate by preoperative imaging assessment.

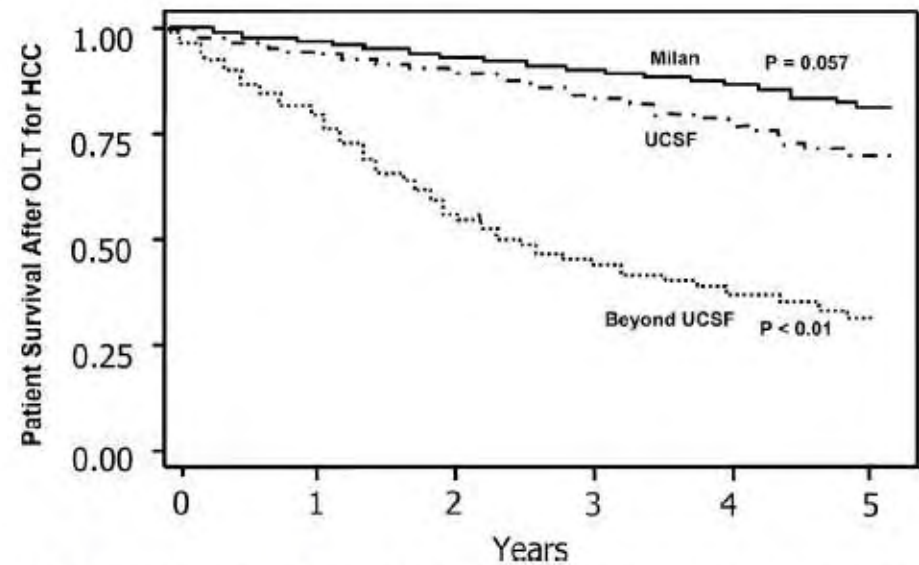
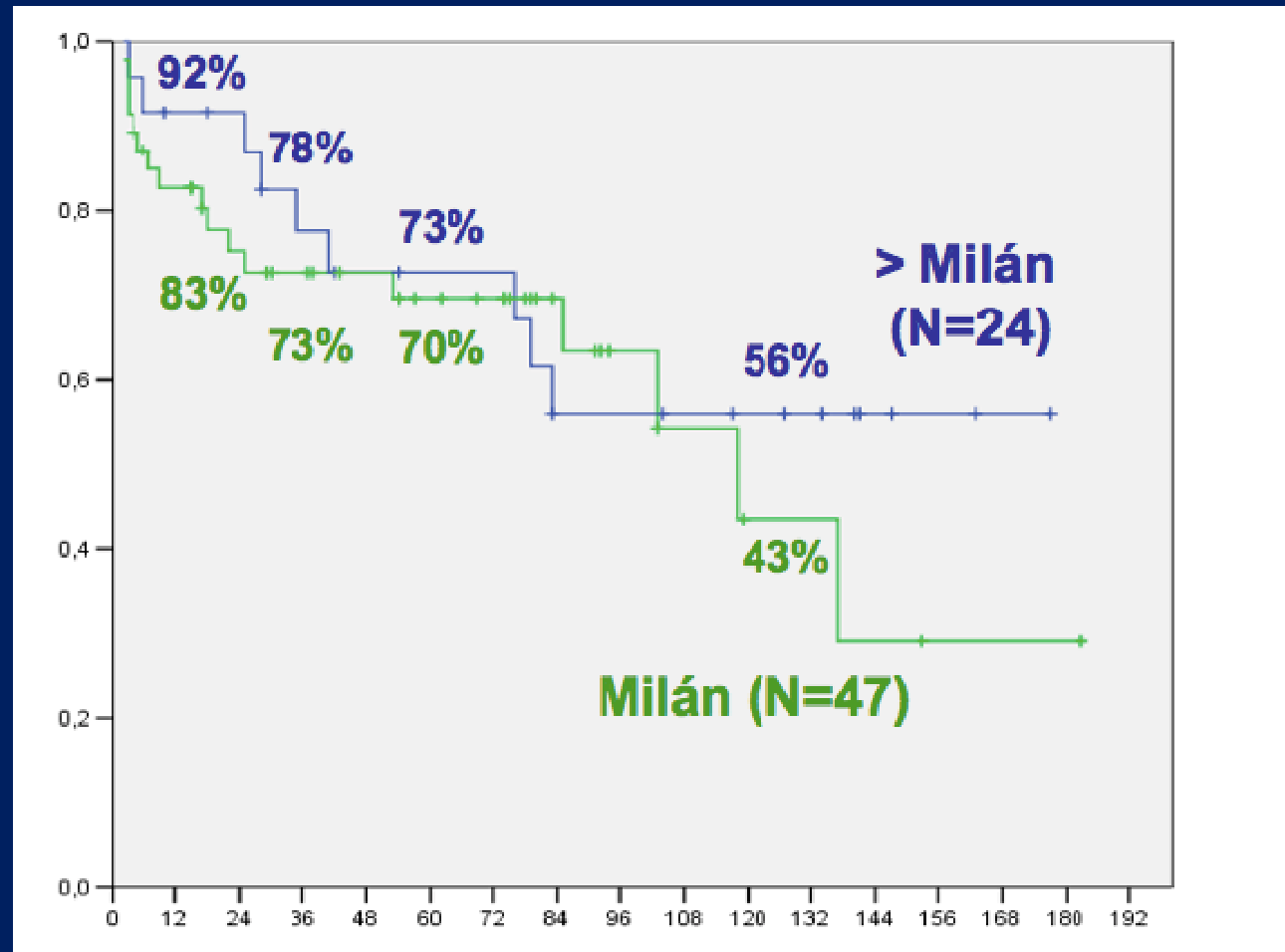


FIGURE 3. Survival estimate by pathologic explant examination.

# Criterios CUN

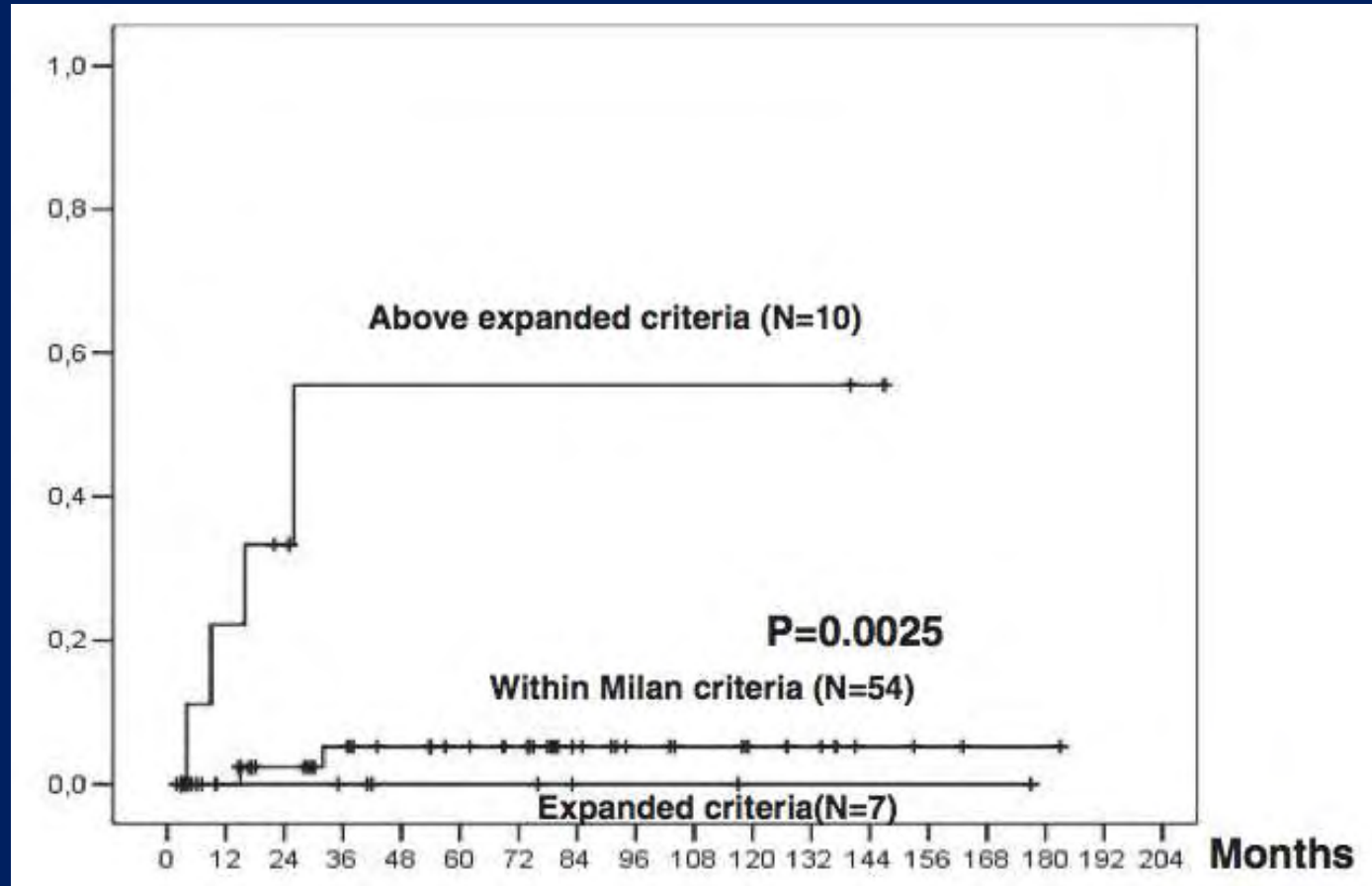
1 nódulo < 6 cm / 2-3 nódulos < 5



Herrero. Liver Transpl 2008

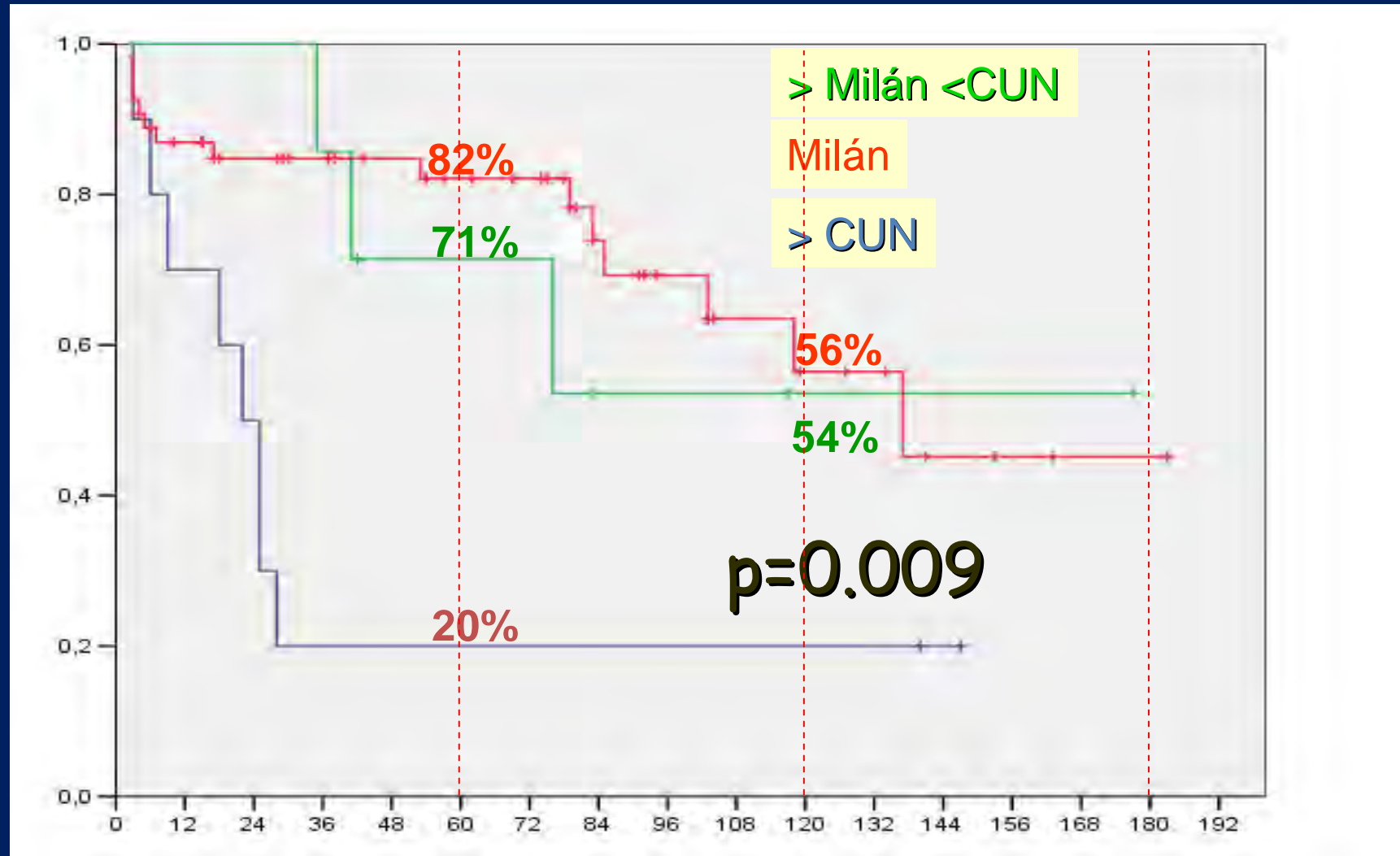
# Criterios CUN

## Recidiva según estadio patológico



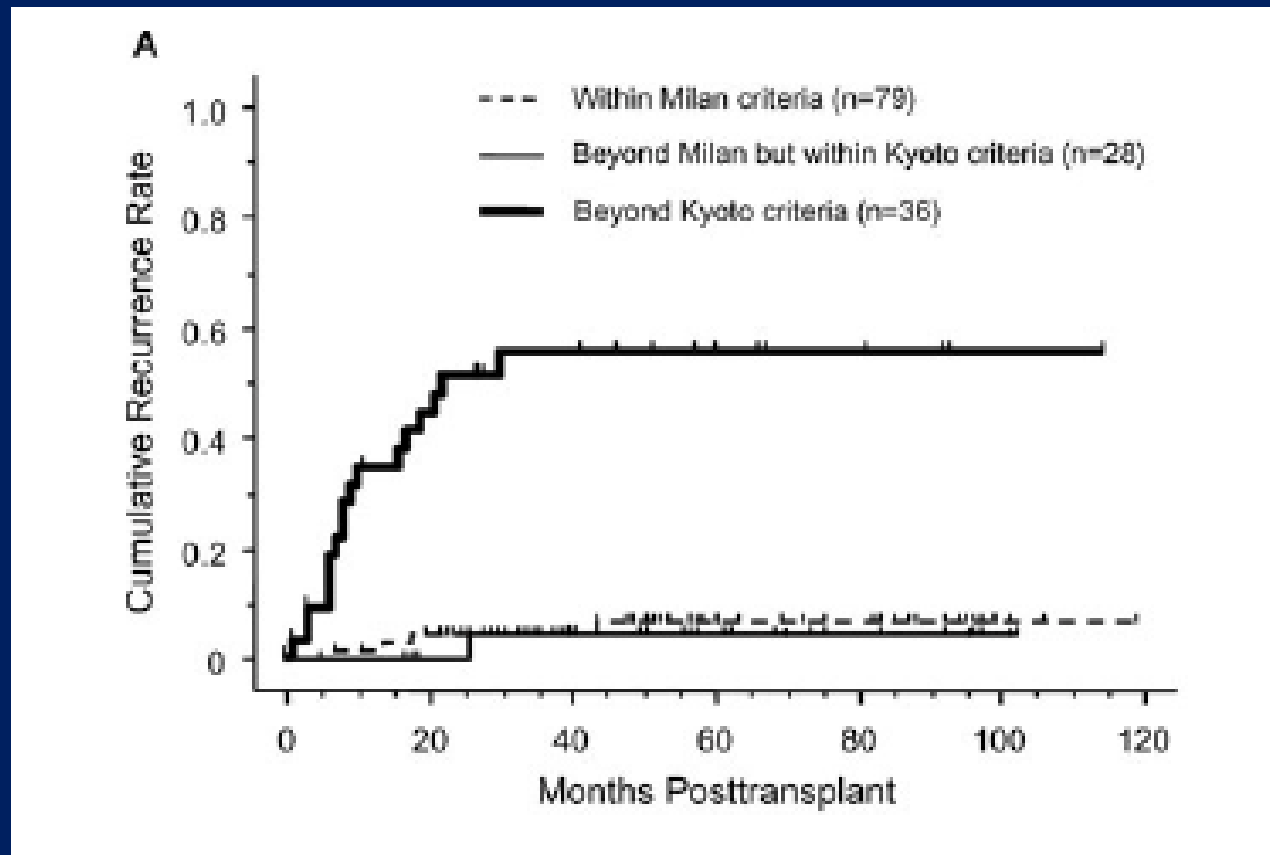
*Herrero. Liver Transpl 2008*

## SPV según estadio patológico



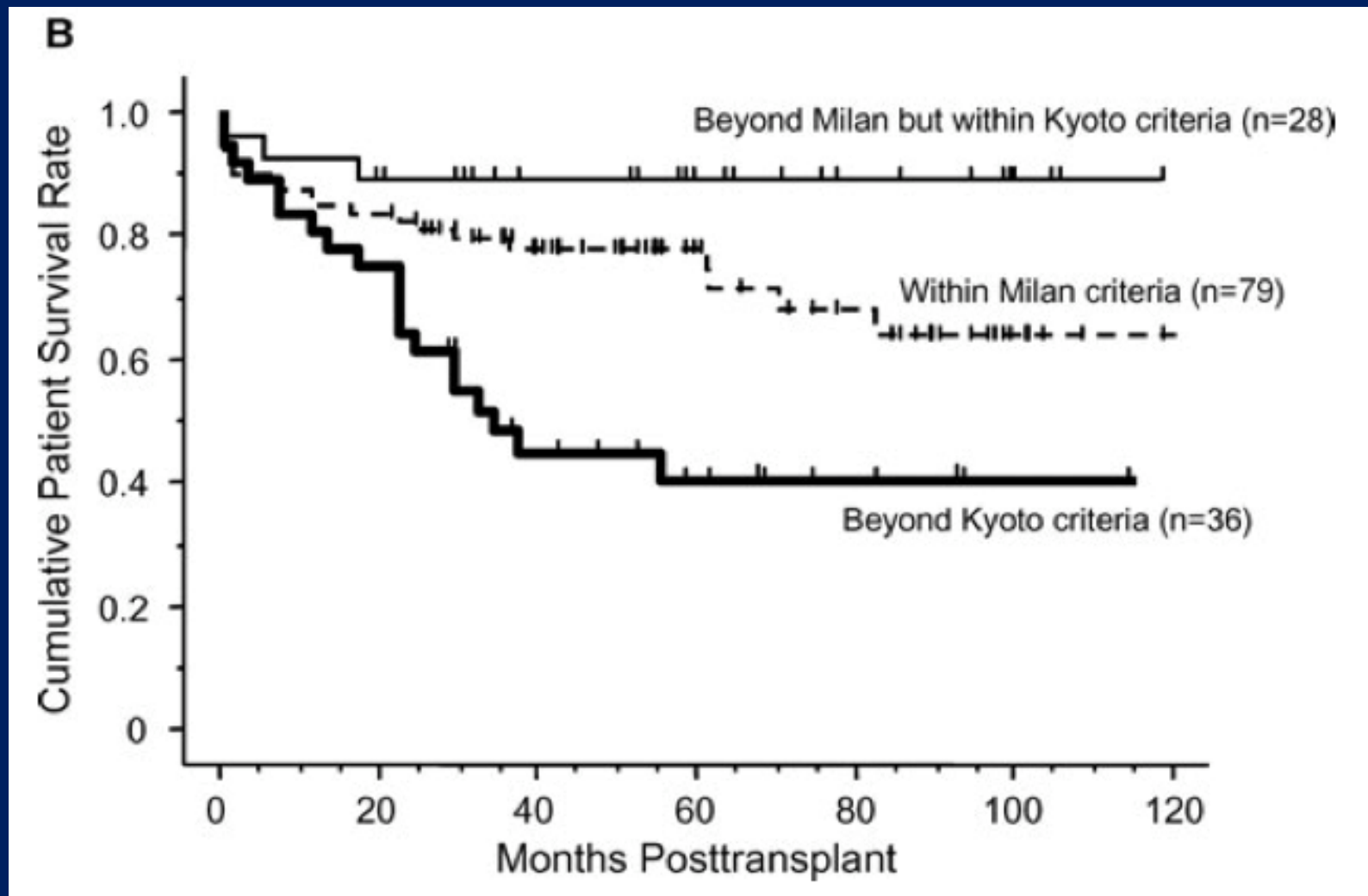
# Criterios Kyoto

$\leq 10$  nódulos /  $\leq 5$  cm / DCP  $\leq 400$  mAU/mL



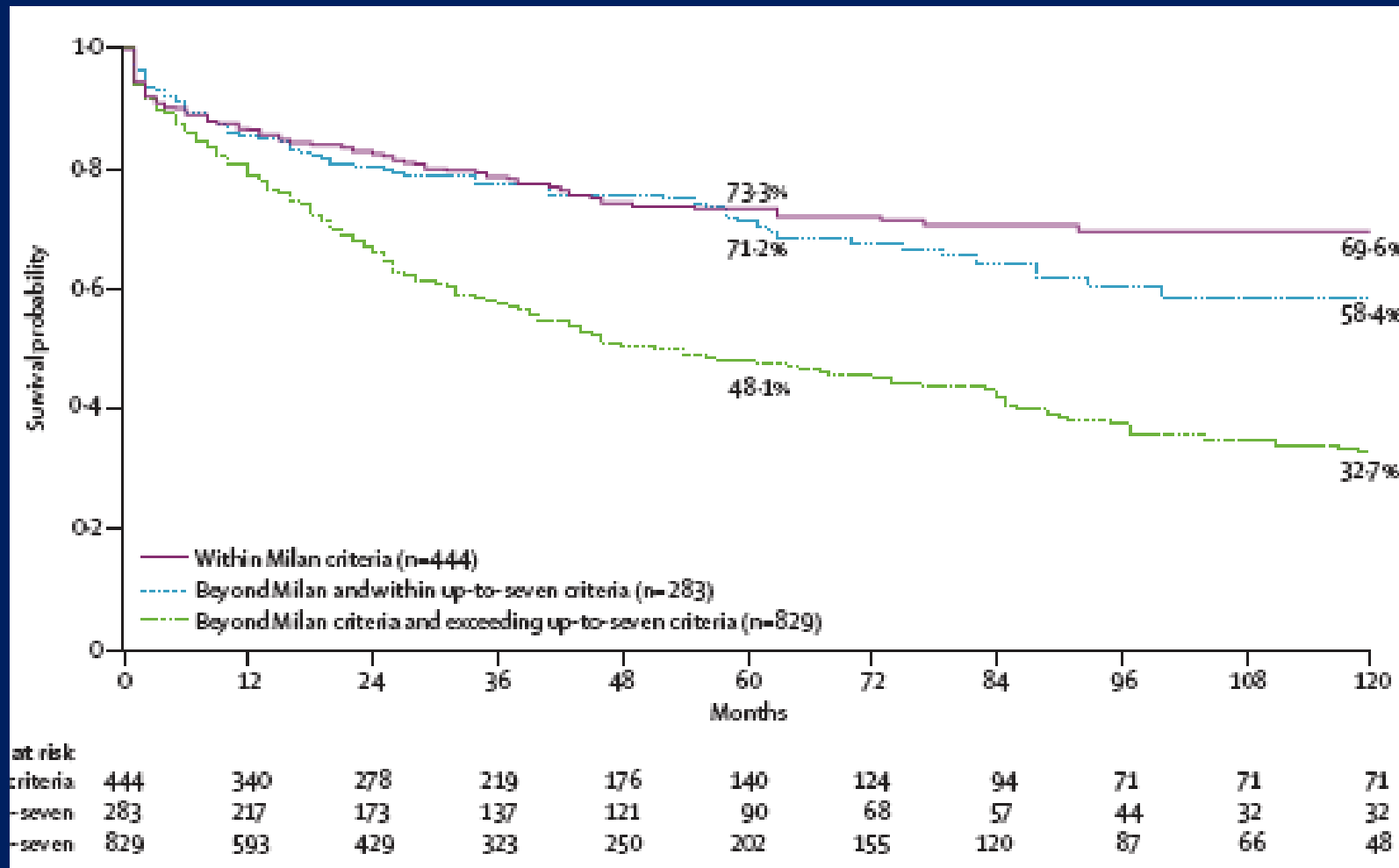
*Fujiki. Am J Transplant 2009*

## Hepatocarcinoma. Criterios expandidos



*Fujiki. Am J Transplant 2009*

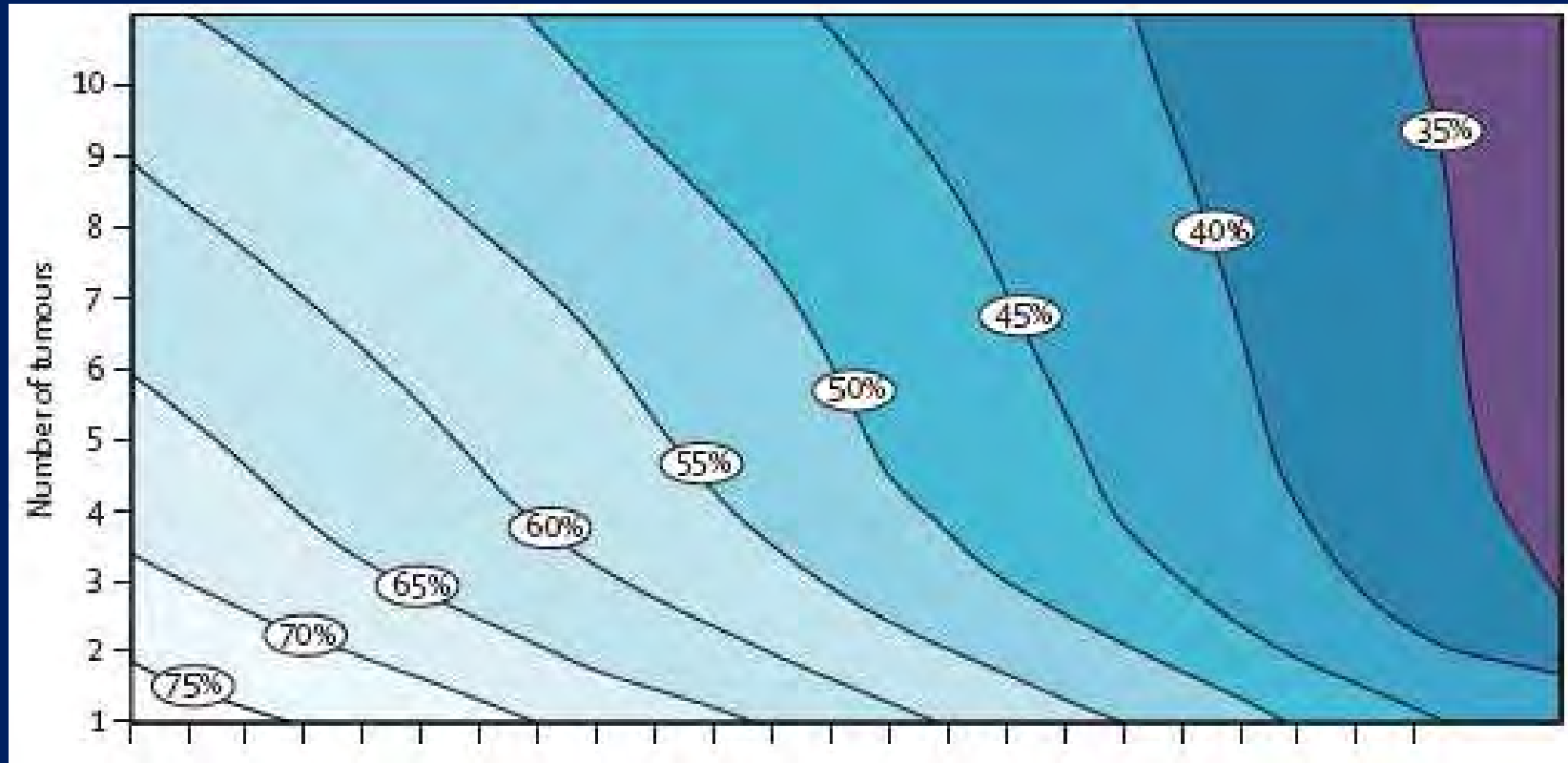
# “Up to seven”



Mazzaferro. *Lancet Oncology* 2009

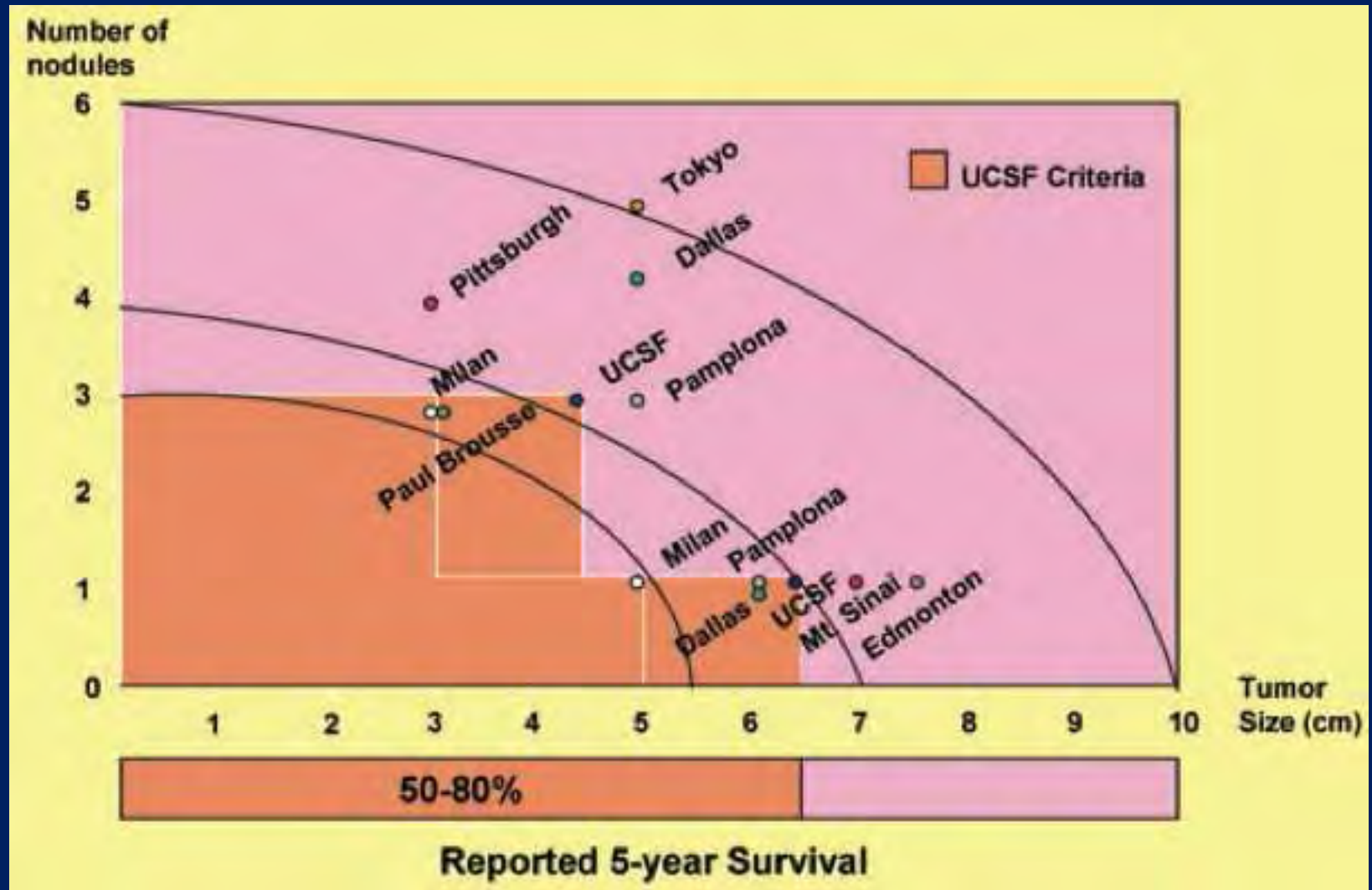
# Mayor riesgo = peor resultado

SPV a 5 años según nº y tamaño de tumores



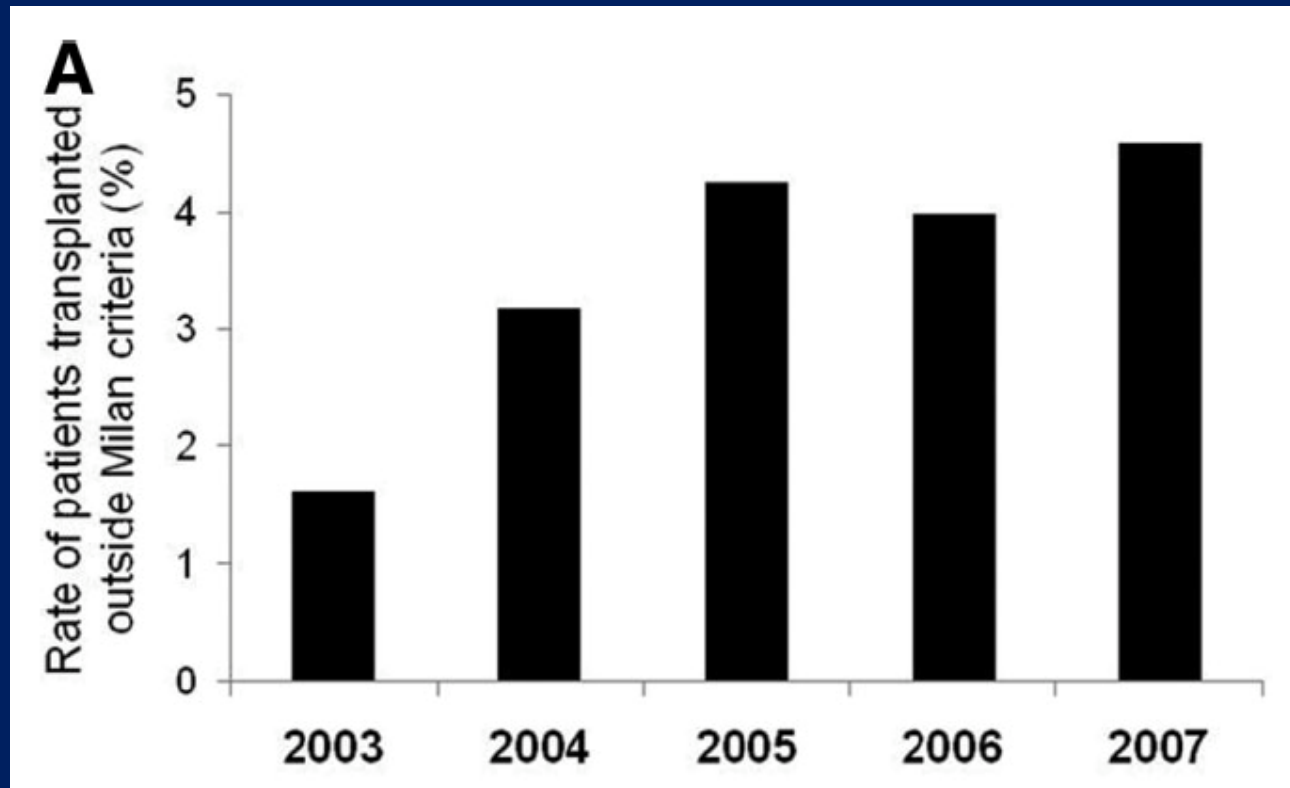
*Mazzaferro. Lancet Oncology 2009*

# Hepatocarcinoma. Criterios expandidos



*Yao. Am J Transplant 2008*

## Reassessing Selection Criteria Prior to Liver Transplantation for Hepatocellular Carcinoma Utilizing the Scientific Registry of Transplant Recipients Database



*Toso. Hepatology 2009*

## Reassessing Selection Criteria Prior to Liver Transplantation for Hepatocellular Carcinoma Utilizing the Scientific Registry of Transplant Recipients Database

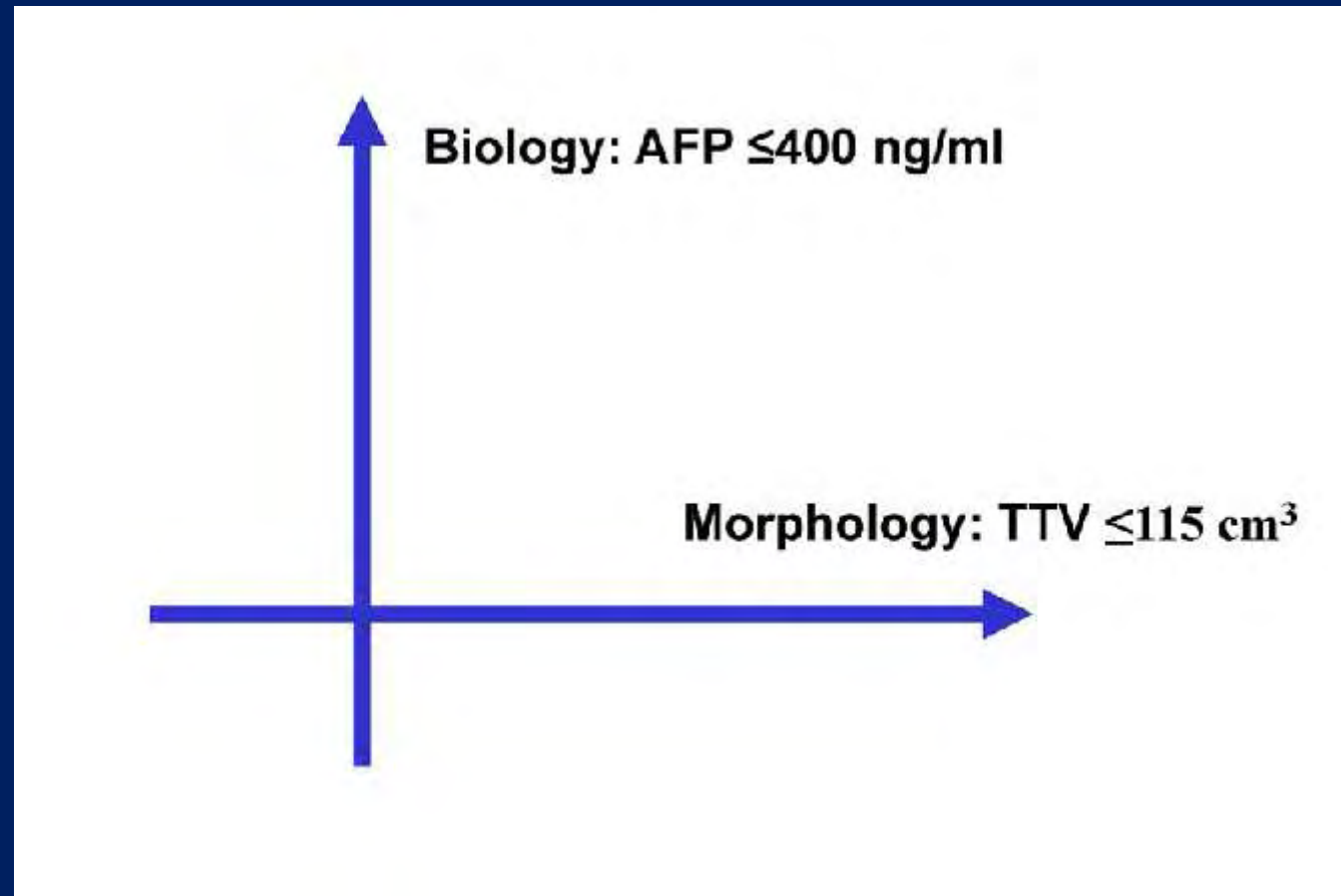
Table 3. Multivariate Cox Analysis

	HR	95% CI	P
Total tumor volume/100	1.4	1.03-2	≤0.05
Alpha fetoprotein level/1000	1.1	1.1-1.19	≤0.001

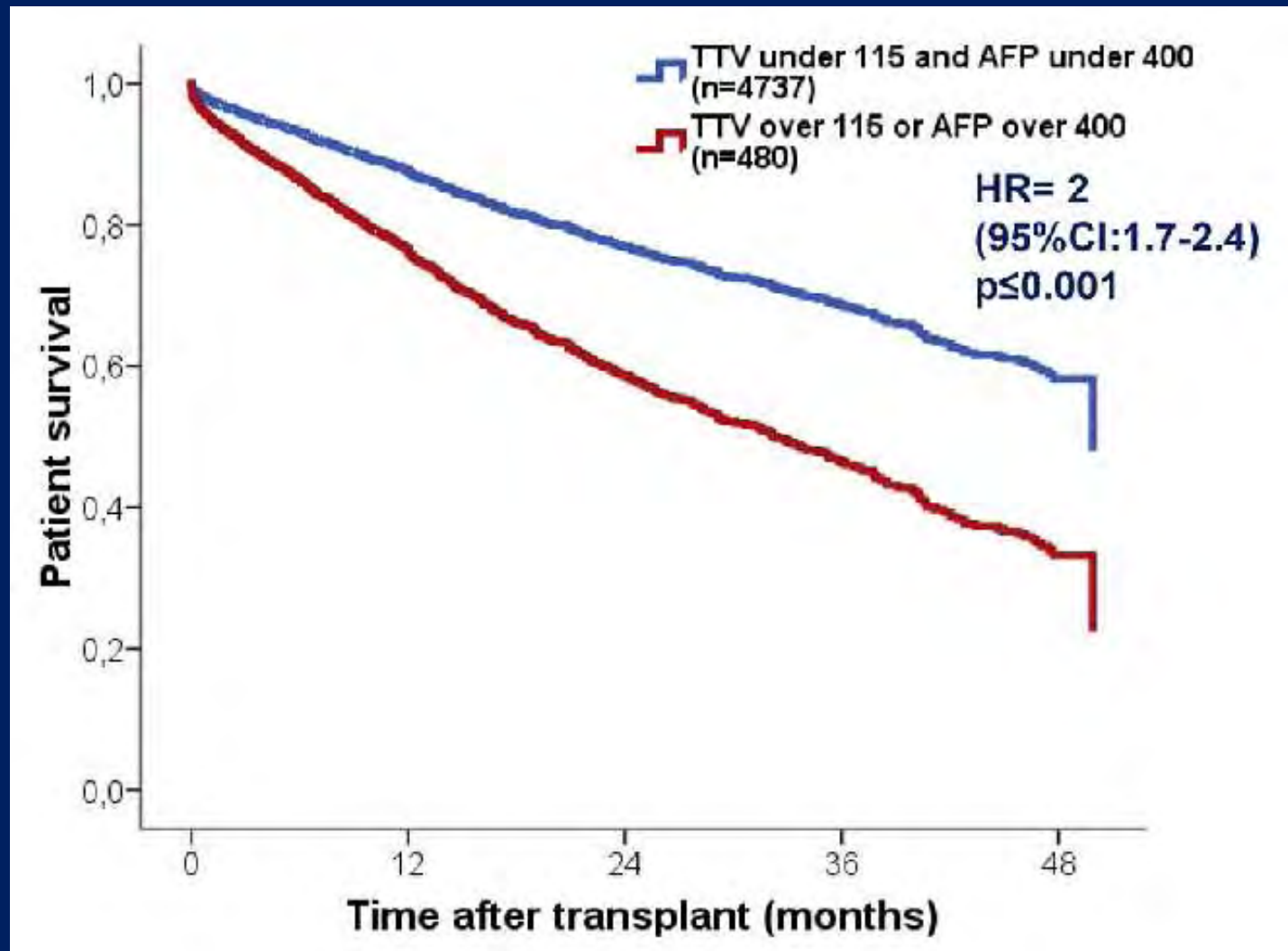
Results were corrected for the Model for End-Stage Liver Disease, date of transplant, age at transplant, gender, race, primary liver disease (not hepatocellular carcinoma), and pretransplant tumor treatment (yes or no).

Abbreviations: CI, confidence interval; HR, hazard ratio.

*Toso. Hepatology 2009*

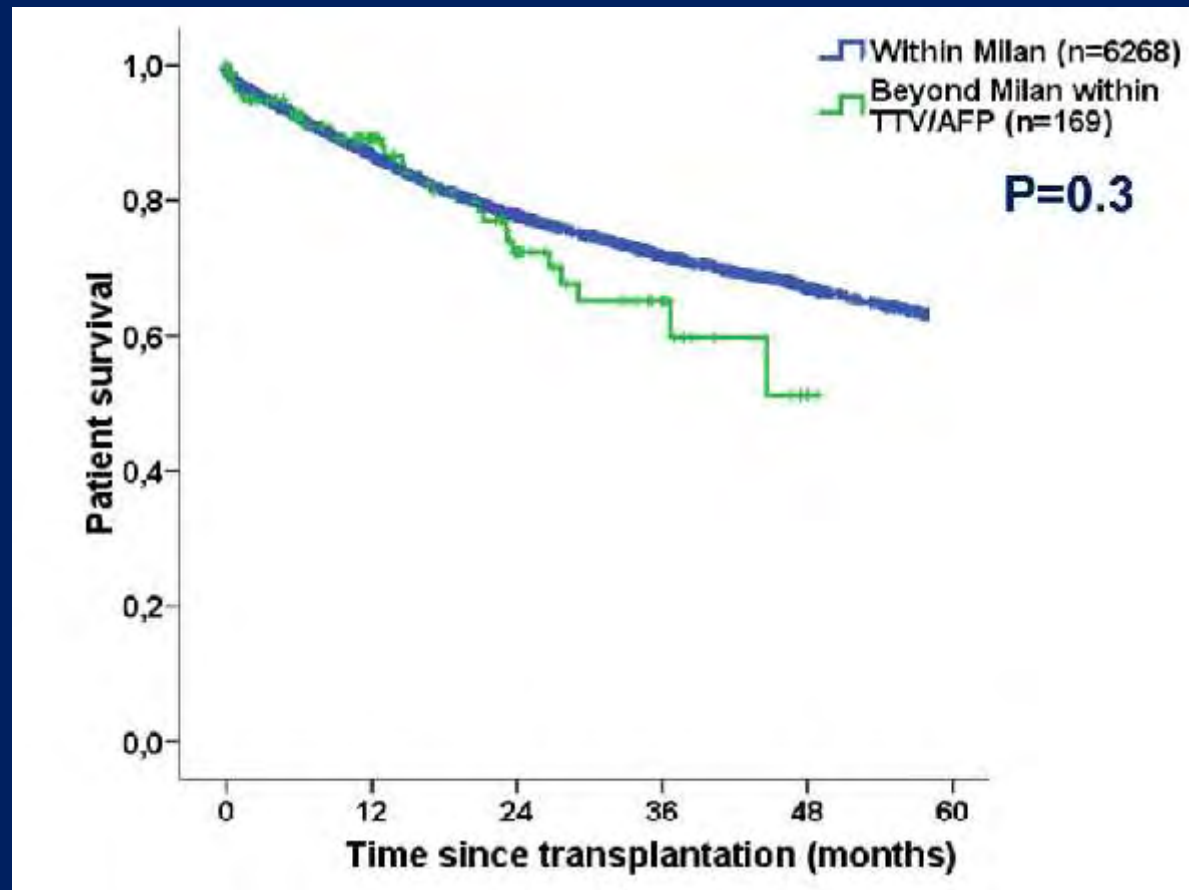


*Toso. ILTS Hong Kong 2010*



*Toso. ILTS Hong Kong 2010*

## Hepatocarcinoma. Criterios expandidos



*Toso. ILTS Hong Kong 2010*

$$\text{Volumen} = \frac{4}{3} \cdot \pi \cdot r^3$$

1 nod 5 cms 65,4 ml

1 nod 6 cms 113,0 ml

3 nod de 3 cms 42,4 ml

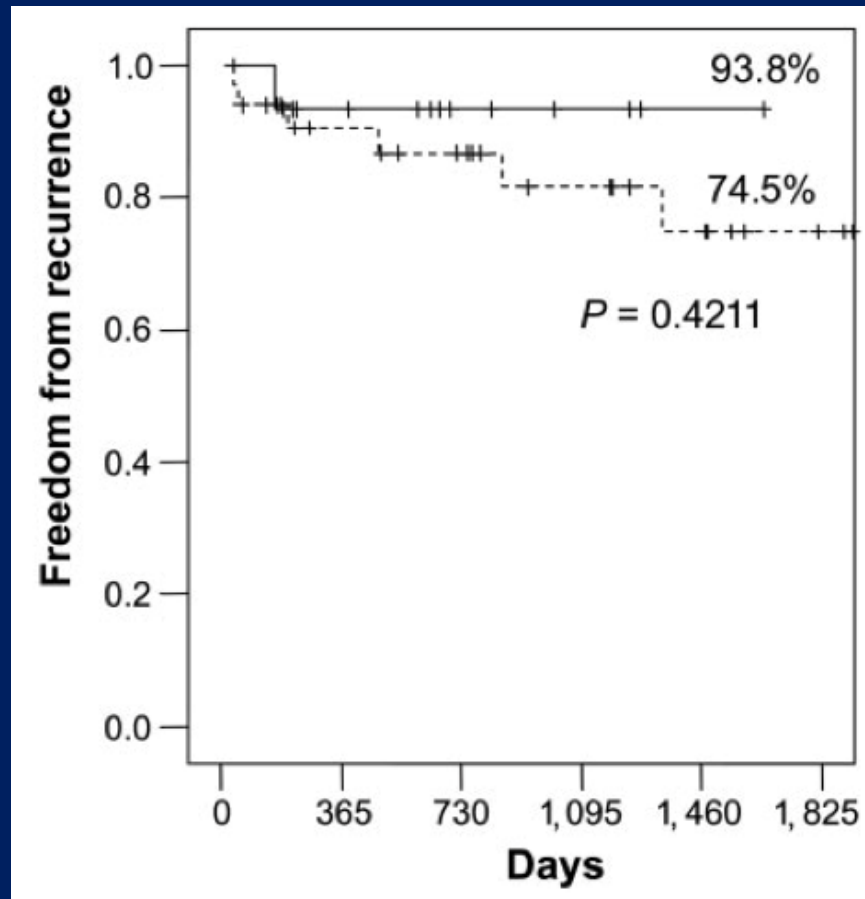
3 nod de 4 cms 100,5 ml

## **Reassessing Selection Criteria Prior to Liver Transplantation for Hepatocellular Carcinoma Utilizing the Scientific Registry of Transplant Recipients Database**

Taken together, the presented registry-based data suggest that Milan criteria are too restrictive and that a combined patient selection score based on TTV and AFP would be more appropriate for patient selection of liver transplantation in the presence of HCC.

*Toso. Hepatology 2009*

## Response to Transarterial Chemoembolization as a Biological Selection Criterion for Liver Transplantation in Hepatocellular Carcinoma



Milán

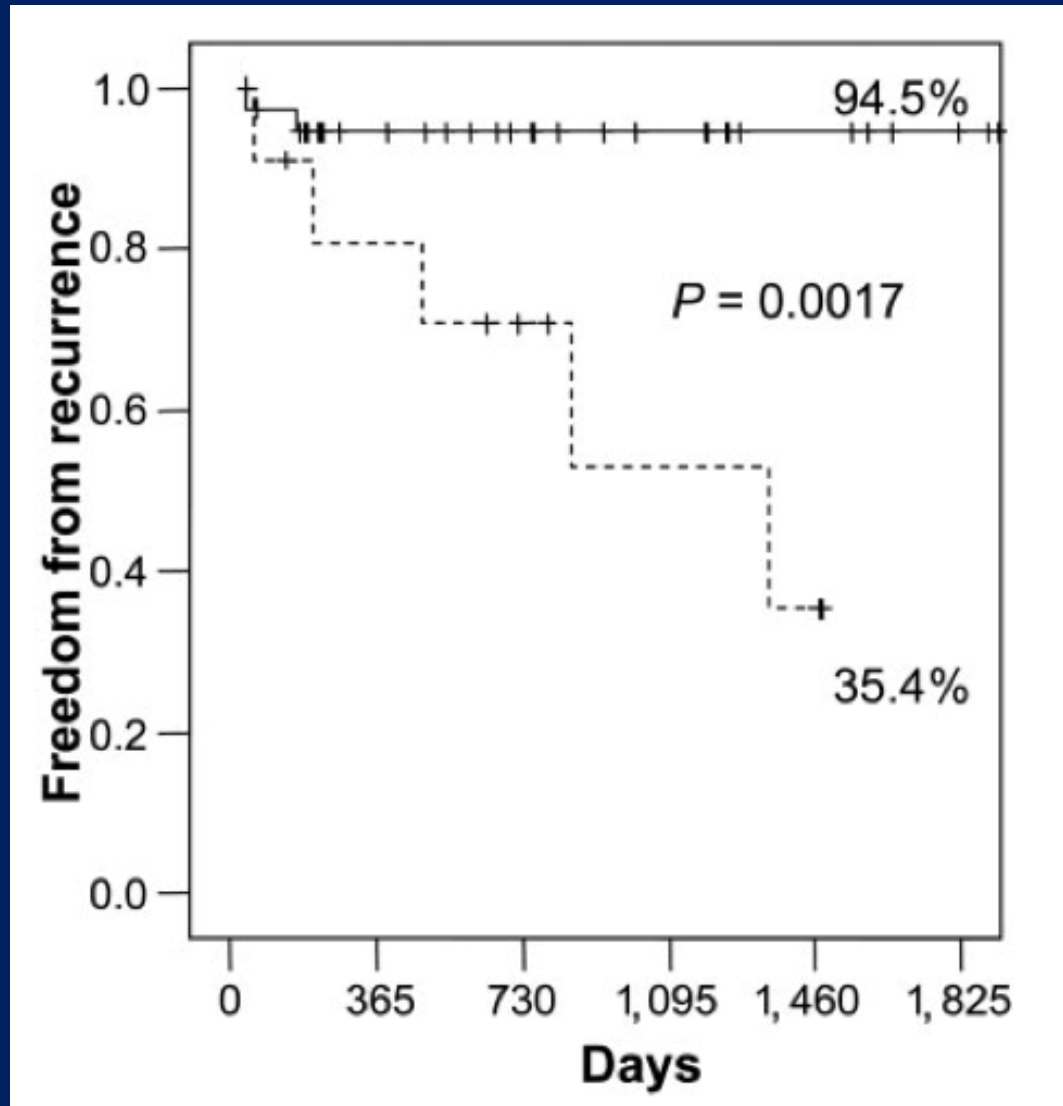
> Milán

*Otto. Liver Transplant 2006*

## SLE TACE

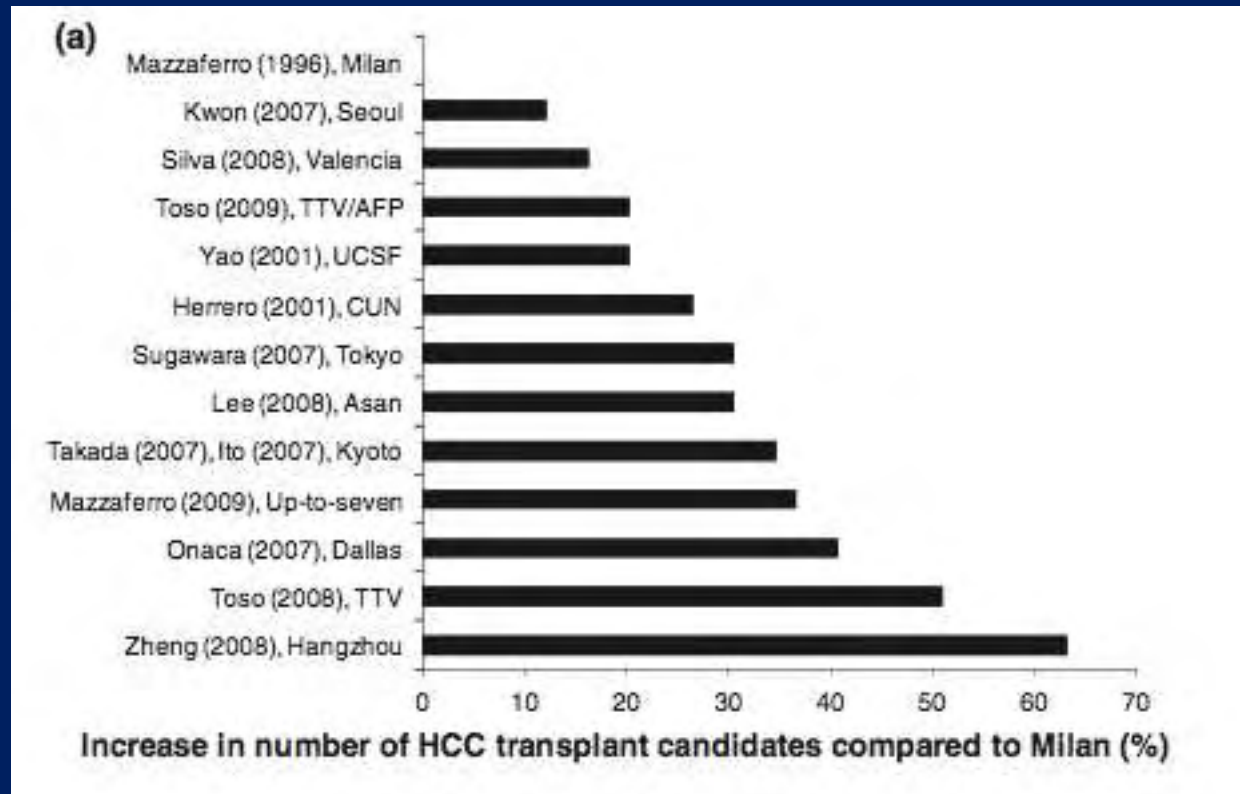
No progresión en lista

Progresión en lista



*Otto. Liver Transplant 2006*

**The estimated number of patients with hepatocellular carcinoma selected for liver transplantation using expanded selection criteria**

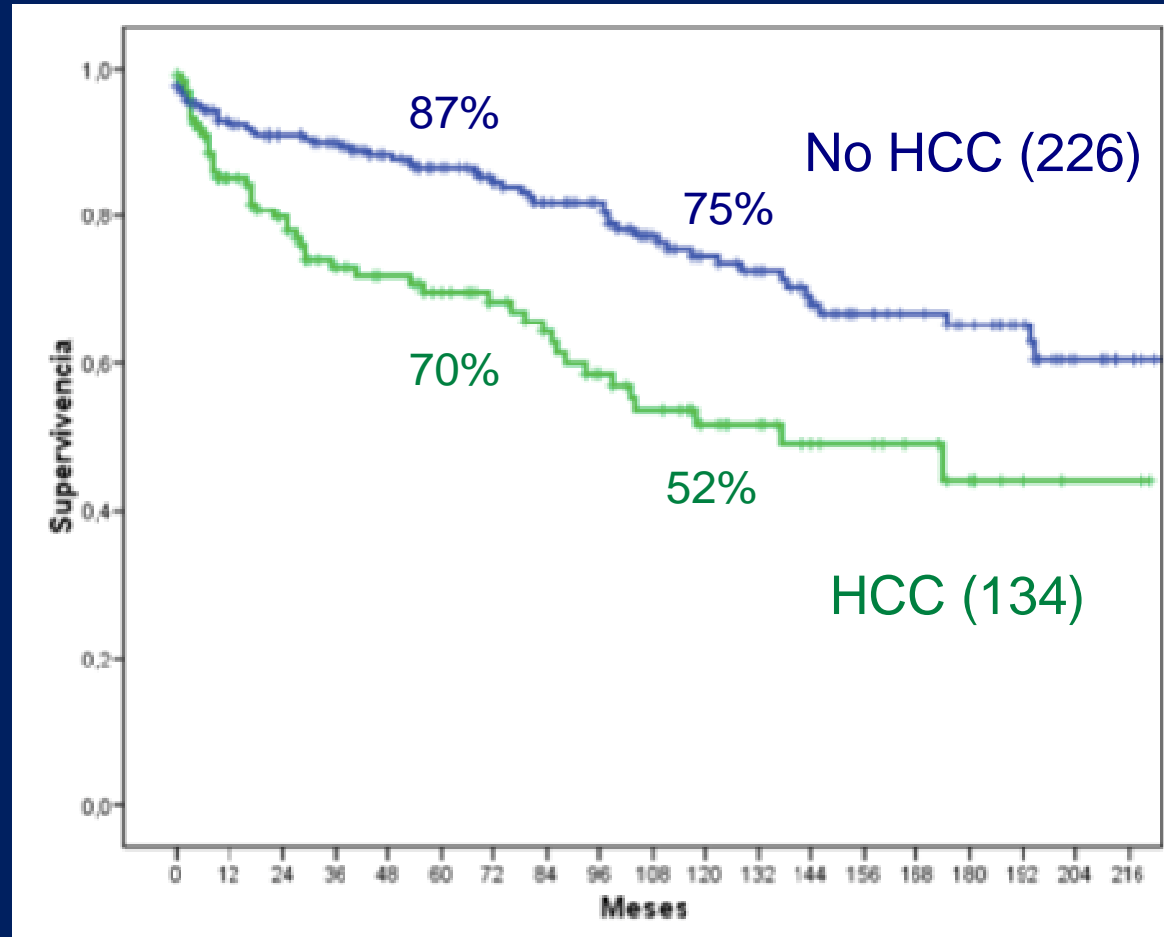


*Toso. Transplant Int 2009*

## ¿Cuándo contraindicar el trasplante?

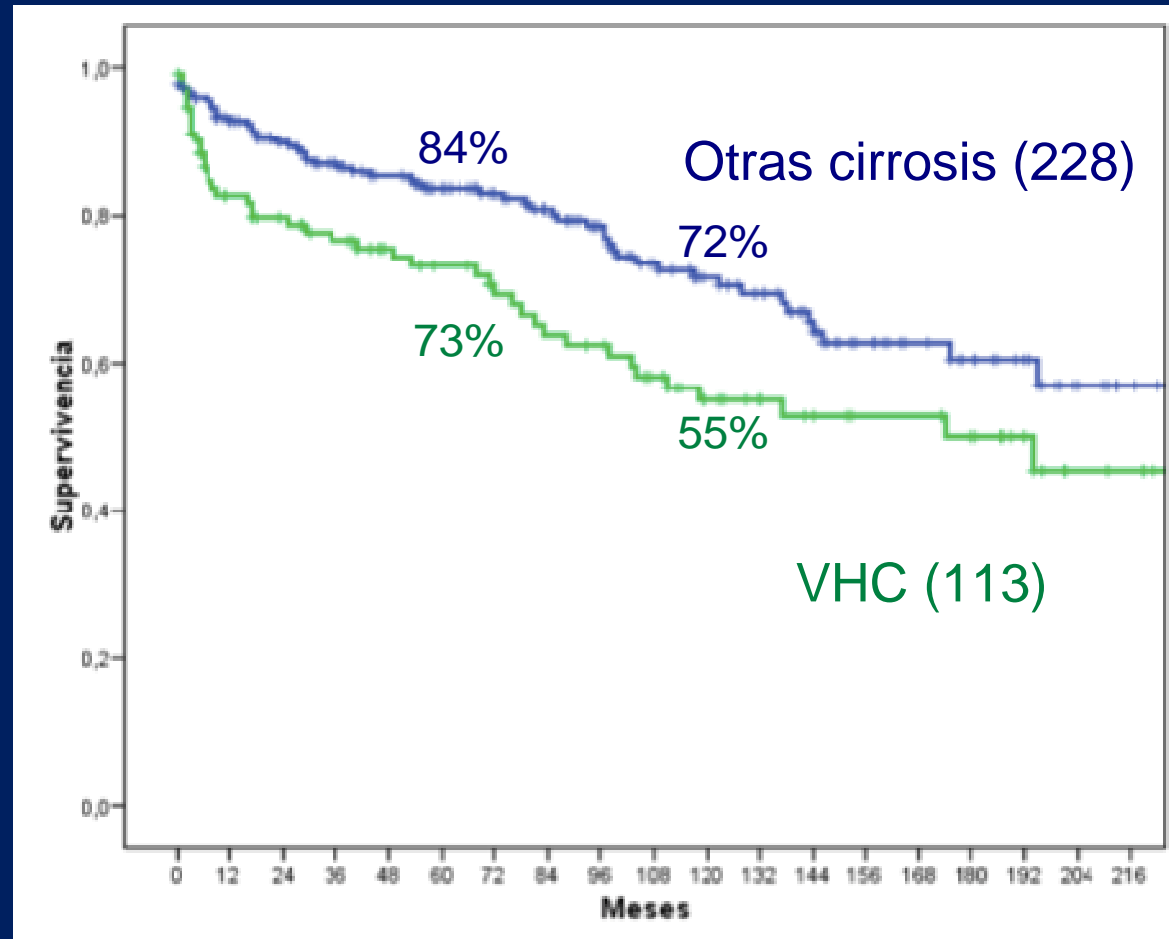
- ¿Cuando la SPV esperable a 5 años sea menor del 50%?
- ¿Cuando la SPV esperable a 5 años sea menor que la de otros pacientes de la lista de espera?
- ¿Se pueden trasplantar pacientes tras “downstaging” eficaz?

# El HCC es una mala indicación de TH



**p<0.001**

# La cirrosis por virus C también es una mala indicación de TH



**p=0.008**

# conclusiones

- Los criterios de Milán pueden ser superados
- La aceptación de criterios más amplios aumenta el riesgo de recidiva y el número de pacientes en lista de espera.
- El riesgo de recidiva no es sólo la consecuencia del número y tamaño de las lesiones.
- Las estrategias de *downstaging* pueden 'rescatar' a pacientes que superan los criterios habituales.