

Listing HCC Patients for OLT: Mayo Rochester

- “Milan Criteria”
 - 1 lesion \leq 5 cm
 - 3 lesions \leq 3 cm
 - no vascular invasion
 - no extrahepatic disease



Radiographic Criteria for the Diagnosis of HCC

- **Cirrhosis**
- **≥ 2 cm mass identified by 2 imaging modalities**
- **Arterial contrast enhancement on CT, MRI, angiography or**
- **AFP >100 ng/mL**

Radiographic Criteria for the Diagnosis of HCC

- **Accuracy 99.6%**
- **Sensitivity 100%**
- **Specificity 98.9%**
- **Positive predictive value 99.3%**
- **Negative predictive value 100%**

Torzilli et al: Hepatology 30:889, 1999

Staging Patients with HCC for OLT

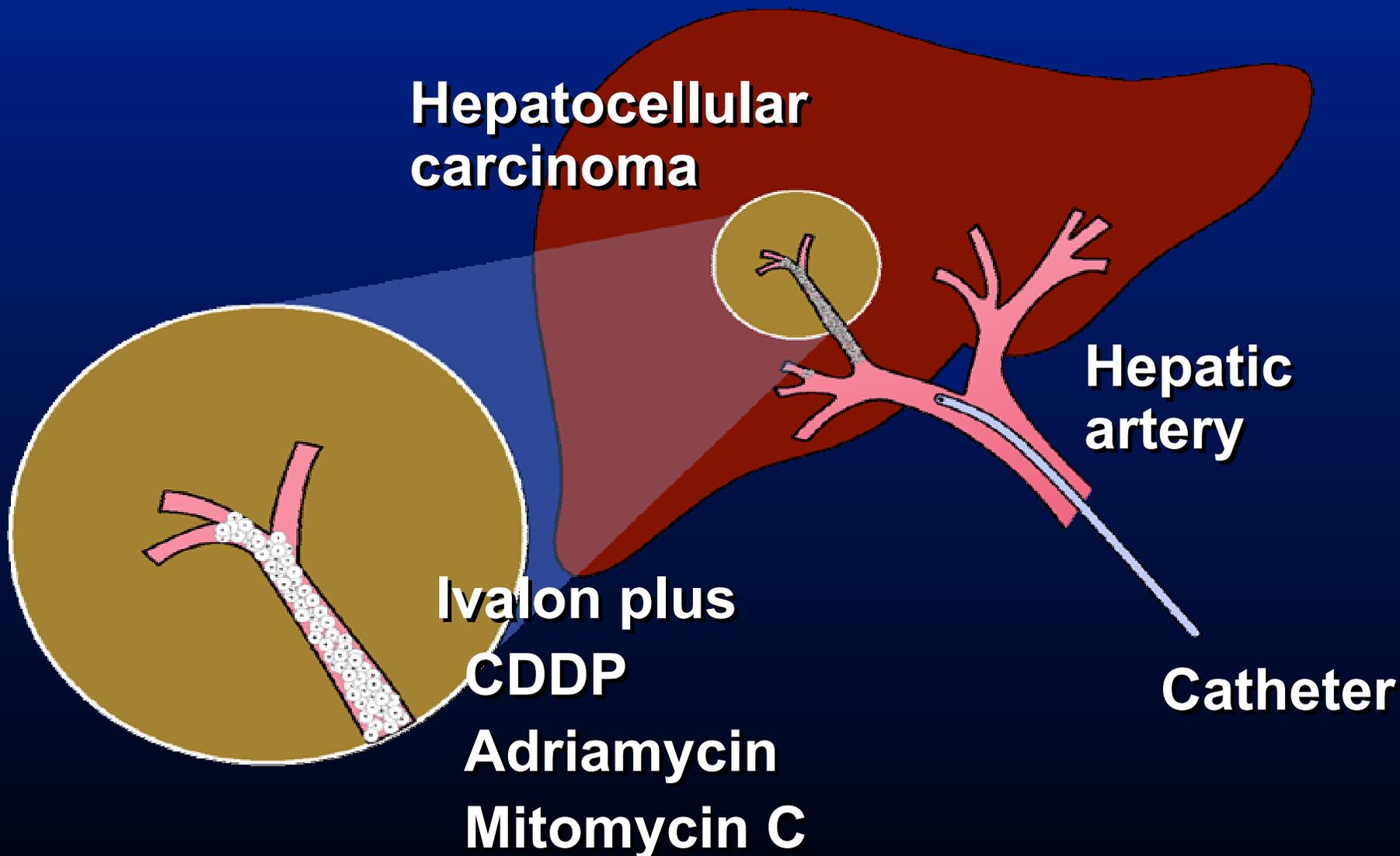
Initial Staging:

- **Triple Liver Imaging**
 - **Ultrasound**
 - **CT Scan (abd and chest)**
 - **Angiography**
 - **Bone Scan**
- **Re-staged: every 3 months**
 - **CT scan (chest and abd)**

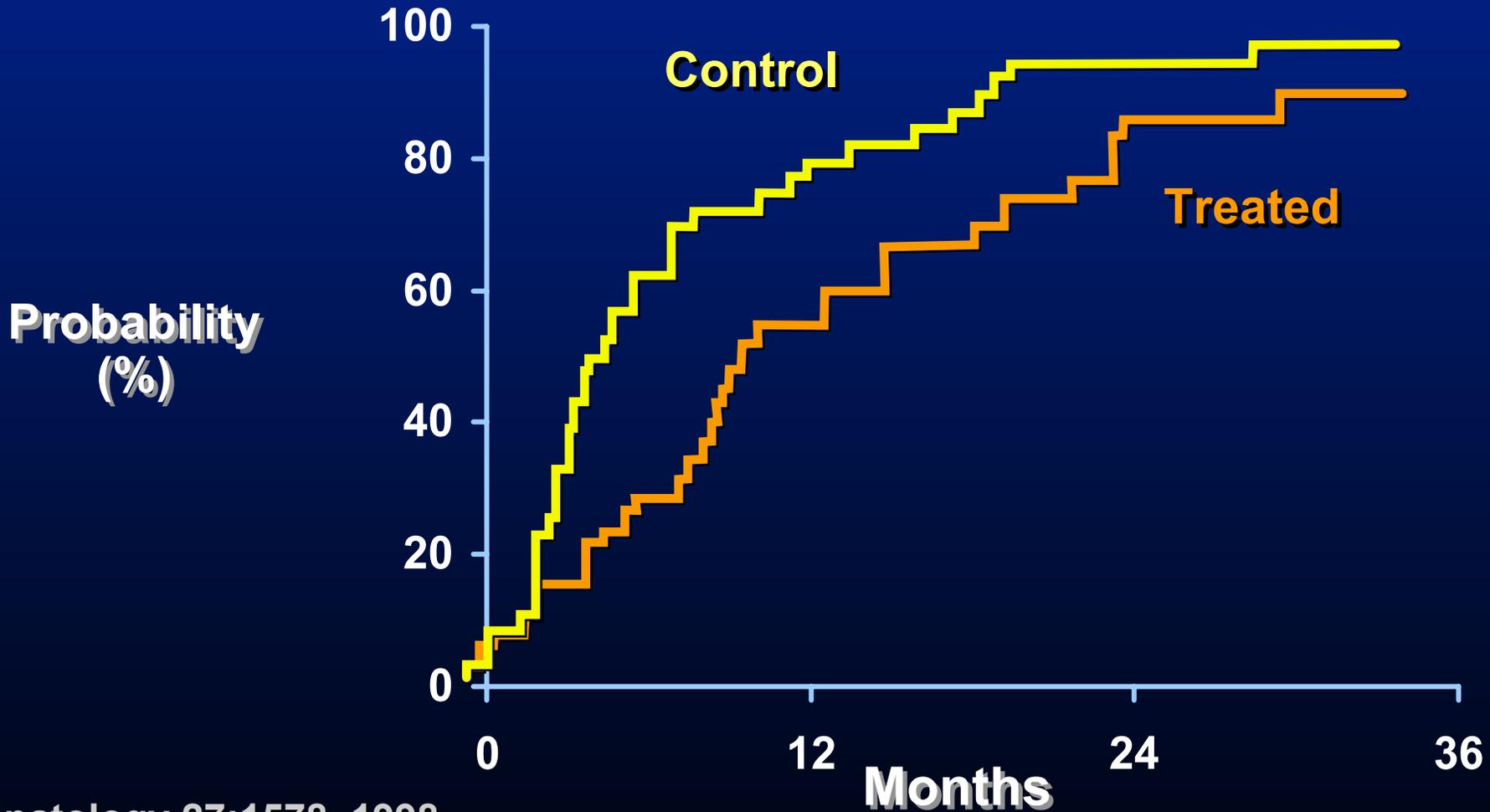
Staging Patients with HCC for OLT

- Size
 - largest size on any imaging study
- Number of Lesions
 - greatest number of lesions on any imaging study

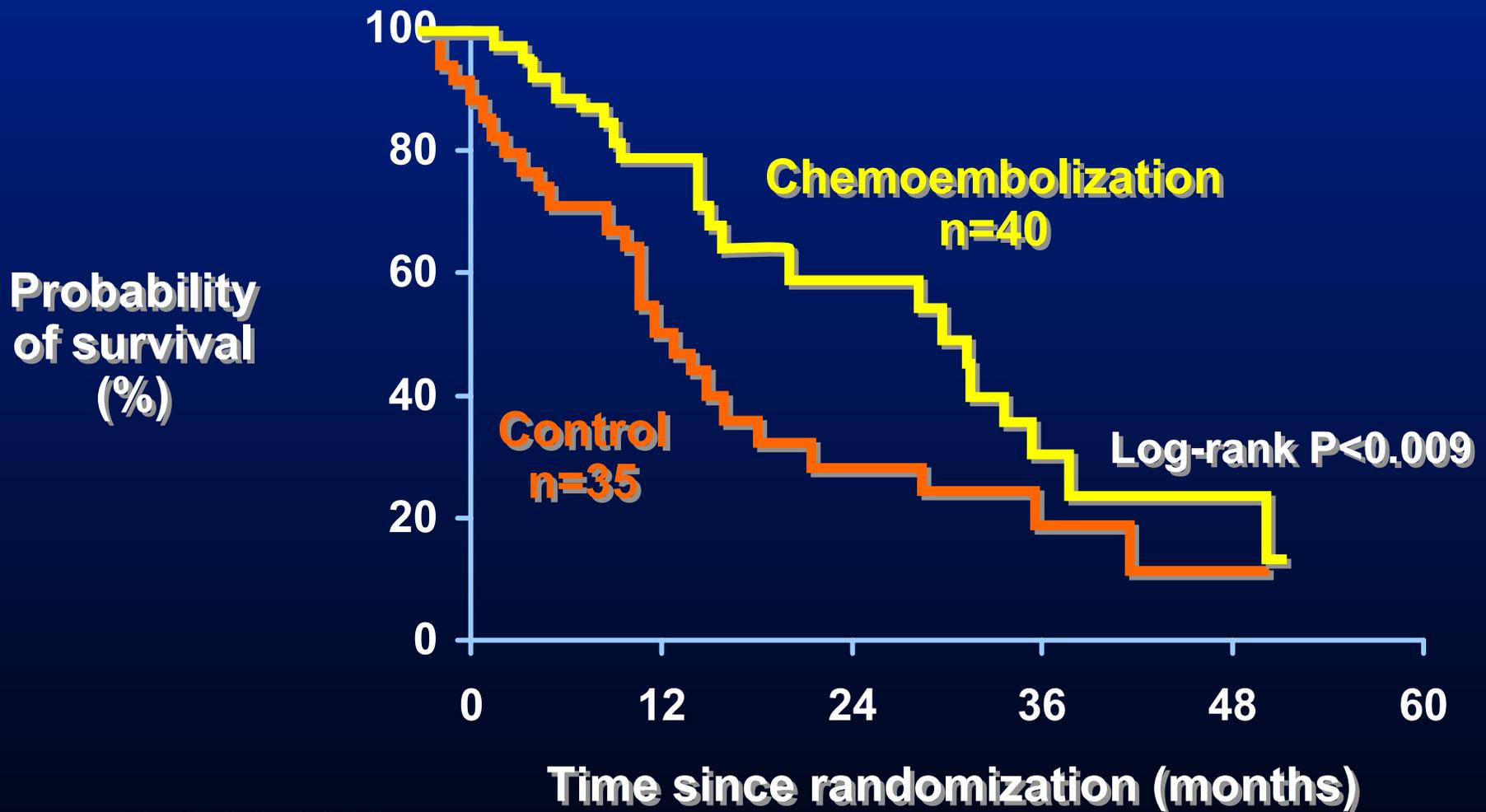
Chemoembolization



Tumor Progression Following Chemoembolization for HCC

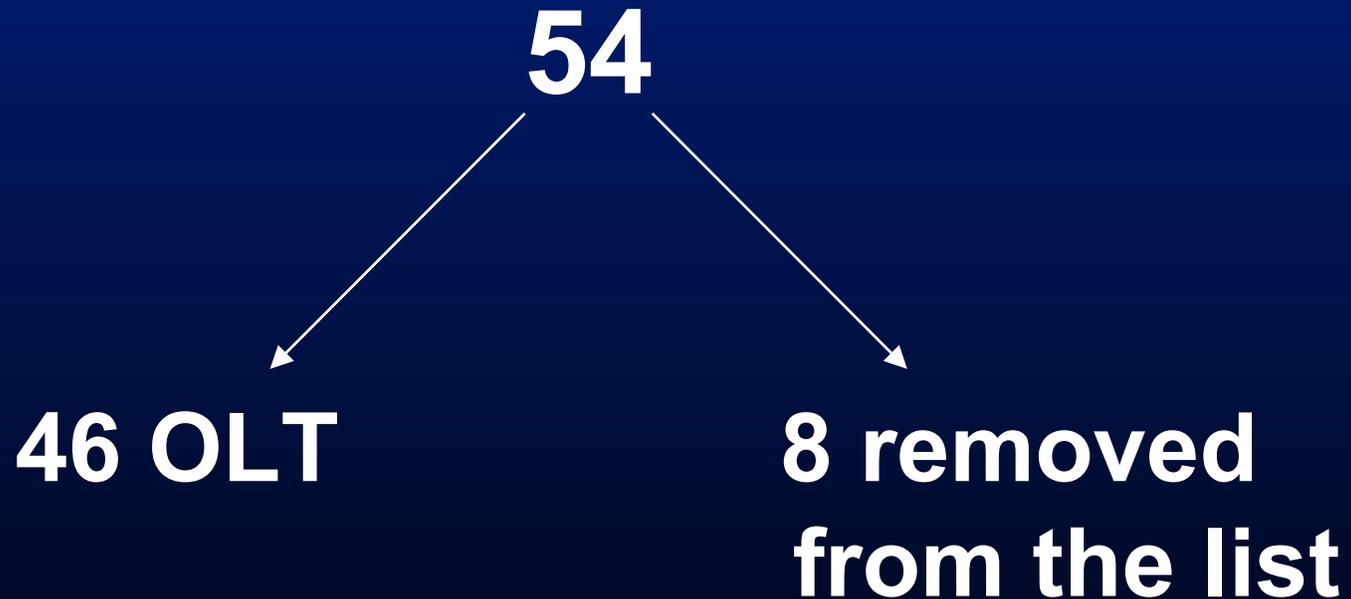


Survival Curves of the Chemoembolization and Control Groups



Lancet 18:1734, 2002

Outcome of Patients with HCC Listed for OLT



Medical Indications for delisting patients with HCC

8

6 progression
of HCC

1 death (subdural hematoma)
1 M.I.

UNOS classification for HCC

- Stage I, T₁ ⌚ 1.9 cm
- Stage II, T₂ 1 lesion 2-5 cm
 ⌚ 3 lesions all ⌚ 3 cm
- Stage III, T₃ 1 lesion >5 cm
 2-3 lesions, 1 > 3 cm

UNOS Stage

OLT Progression or Death

T₁

6

1

T₂

36

5

T₃

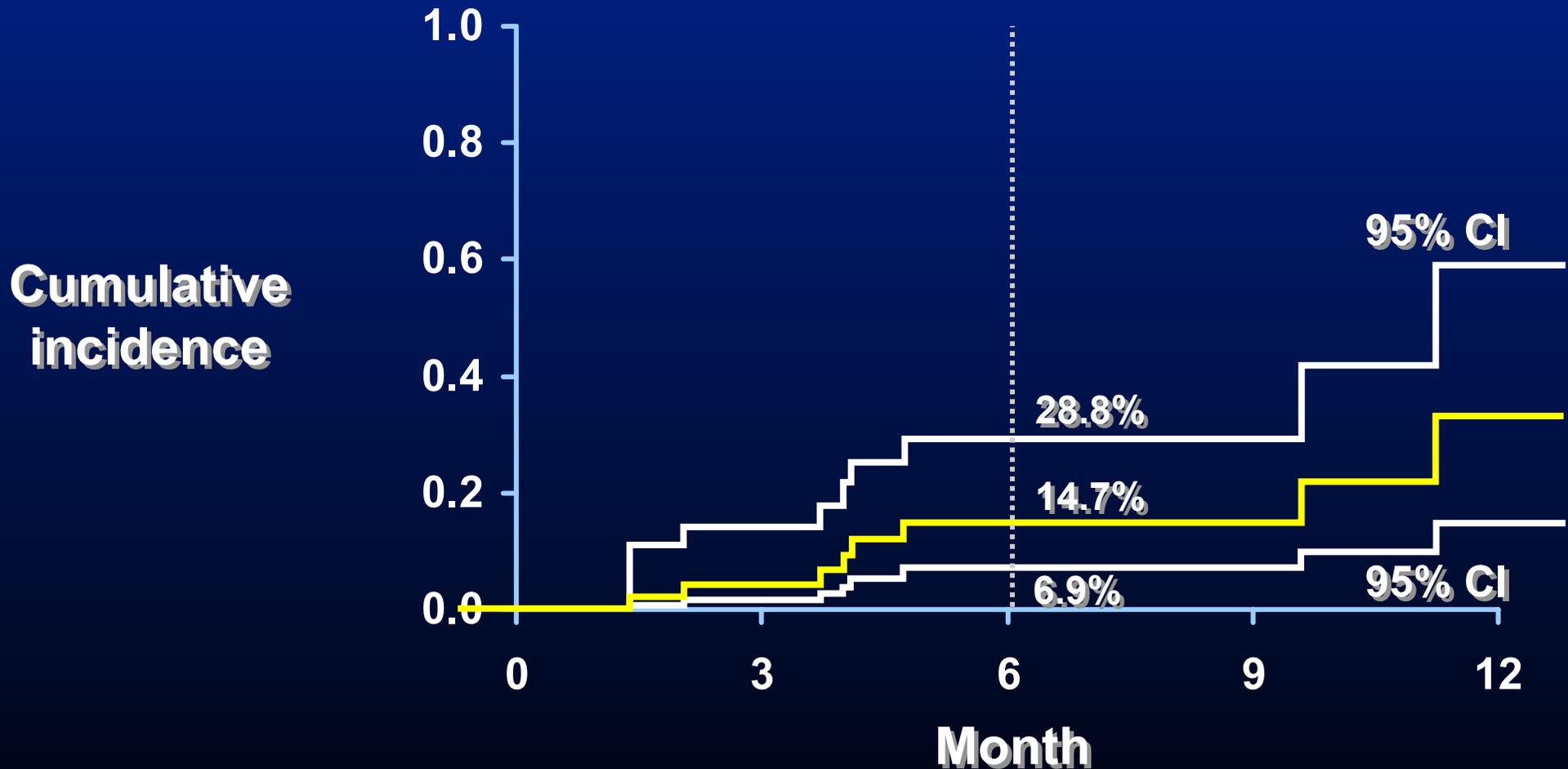
4

2

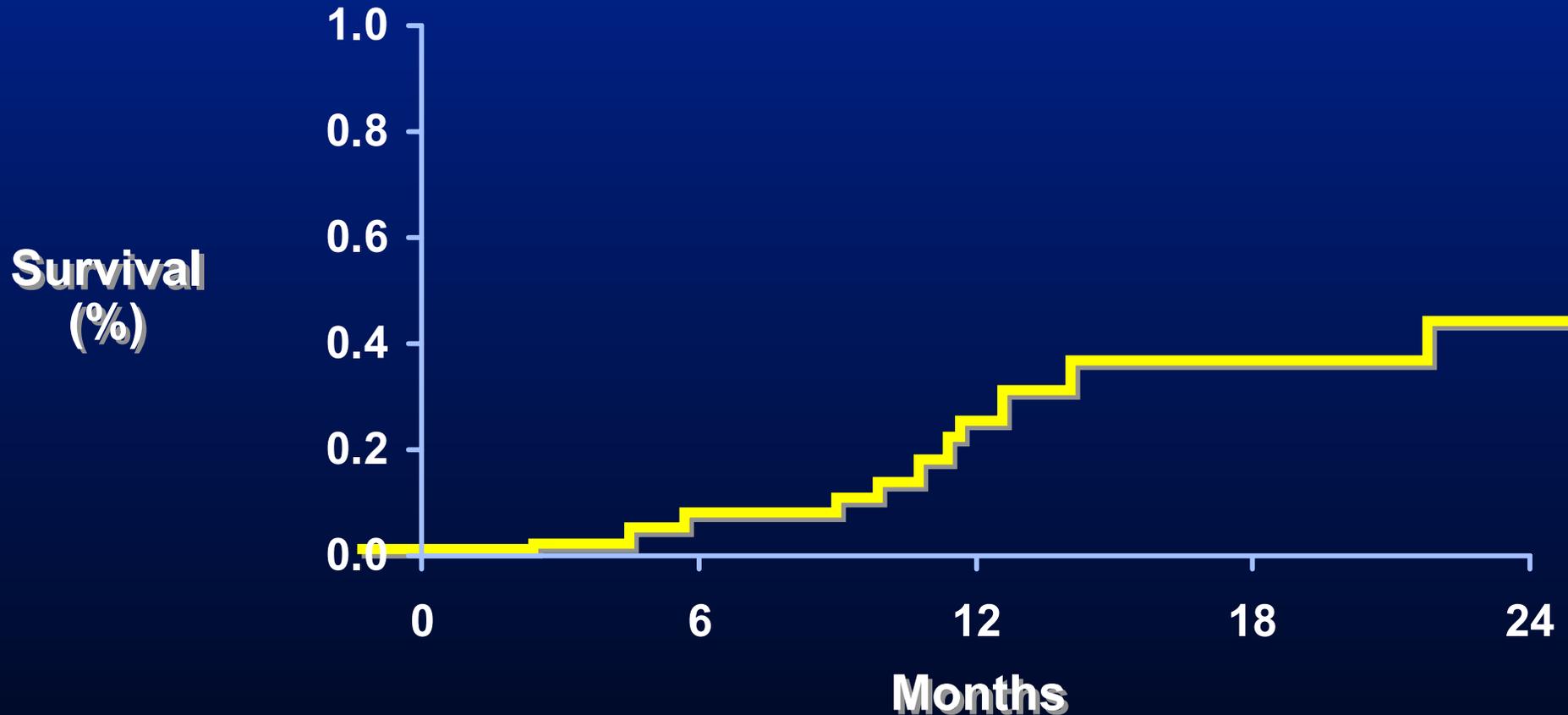
Waiting Time Until OLT

- Median time 211 days
(range 28-1099 days)

Kaplan-Meier Estimate of Tumor Progression or Death on the Waiting List



Drop Out on the Waiting List Due to HCC Progression



Patients (no.)

46

35

20

11

5

Liver Transplantation 8:873, 2002

6 Month MELD Equivalent Score

- 19.5 (14.4 - 24.3)

Recommendations

Consensus Criteria for Diagnosis of HCC

- Lesion >2 cm
 - two coincident imaging studies
 - contrast enhancement
- Lesion <2 cm
 - pathology via biopsy

MELD Score Equivalent for HCC

- T2 lesions: Meld of 20
 - if not transplanted in 4-6 months, ✓24