Results of Neoadjuvant Hepatic Arterial Infusion Chemotherapy in Inoperable HCC Patients with Child-Pugh Class A

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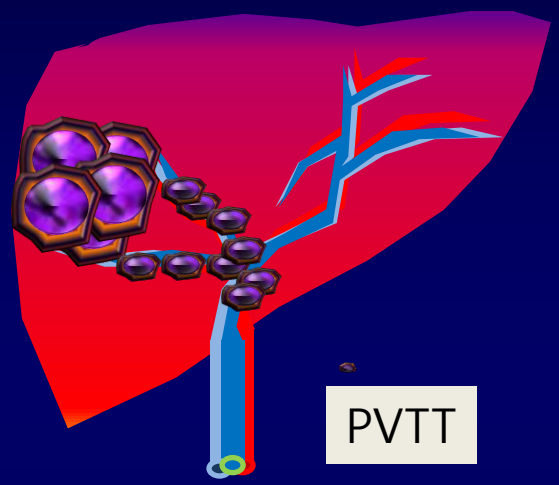
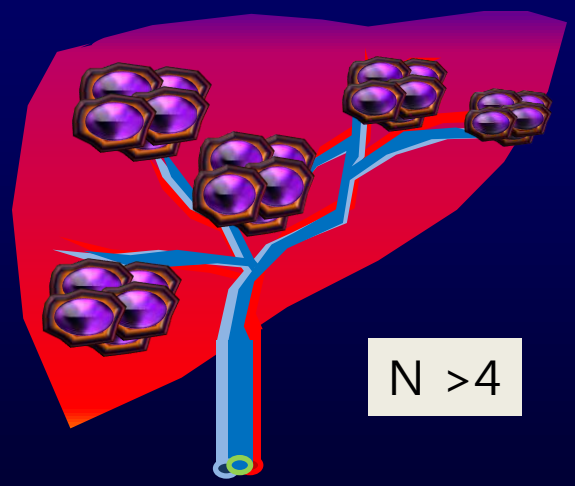
38th KHPBA Congress in Jeju

Introduction





Not Suitable for Liver Resection and Liver Transplantation

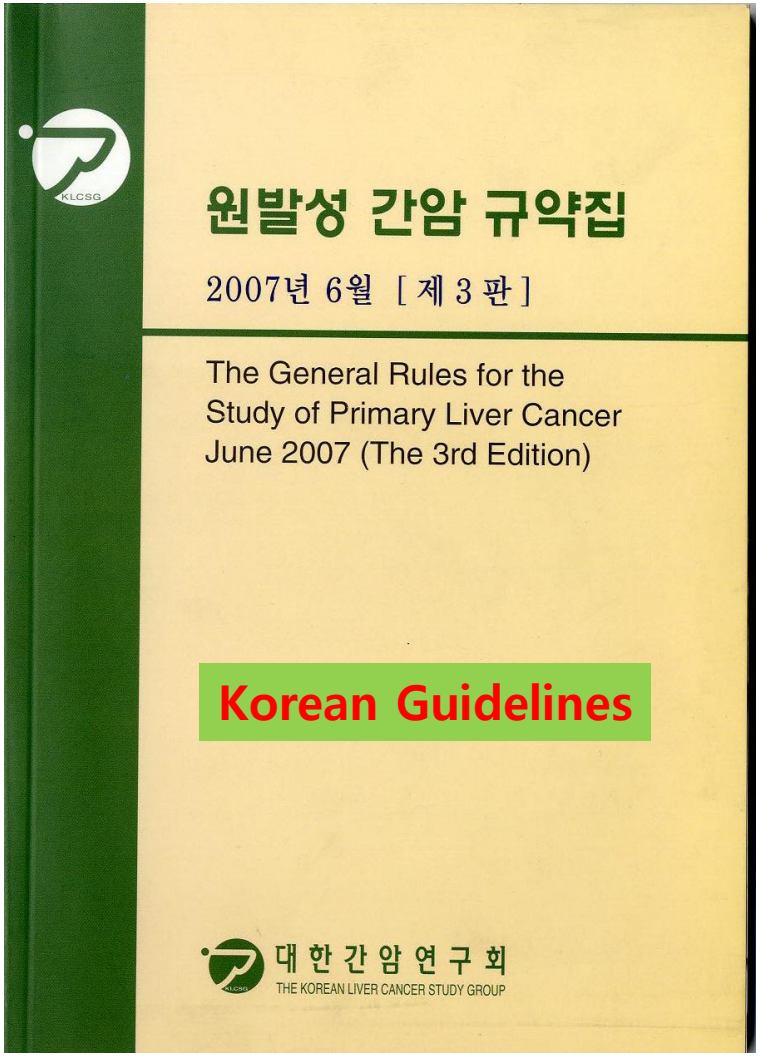
Different Thinking in Treatment of HCC

- ✓ Surgeon vs Hepatologist
- ✓ Eastern Country

  vs

  Western Country

Guidelines for the Diagnosis and Treatment of HCC in Asian Country



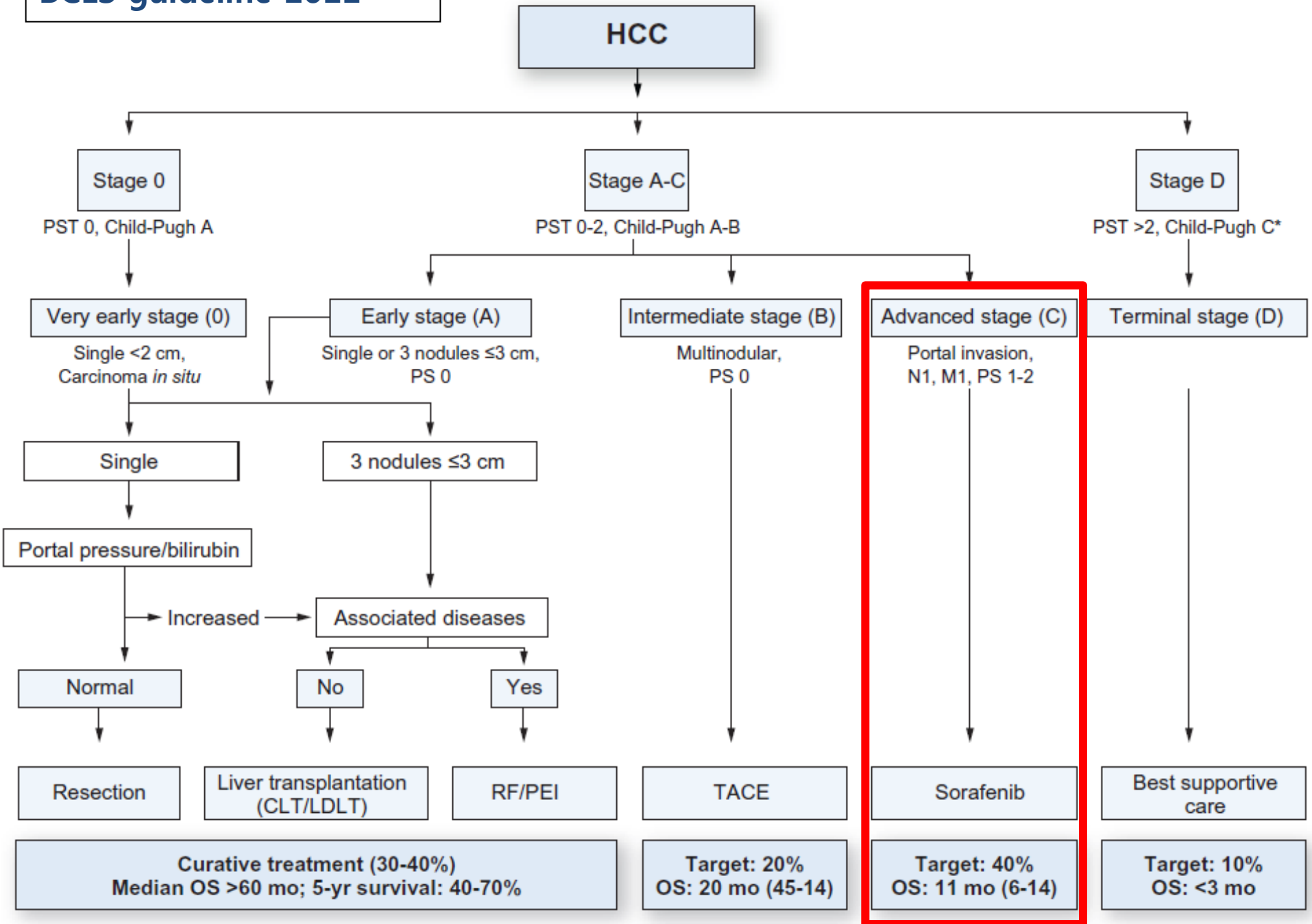
Korean Guidelines

Japan Guidelines

Guidelines for HCC in Western Country

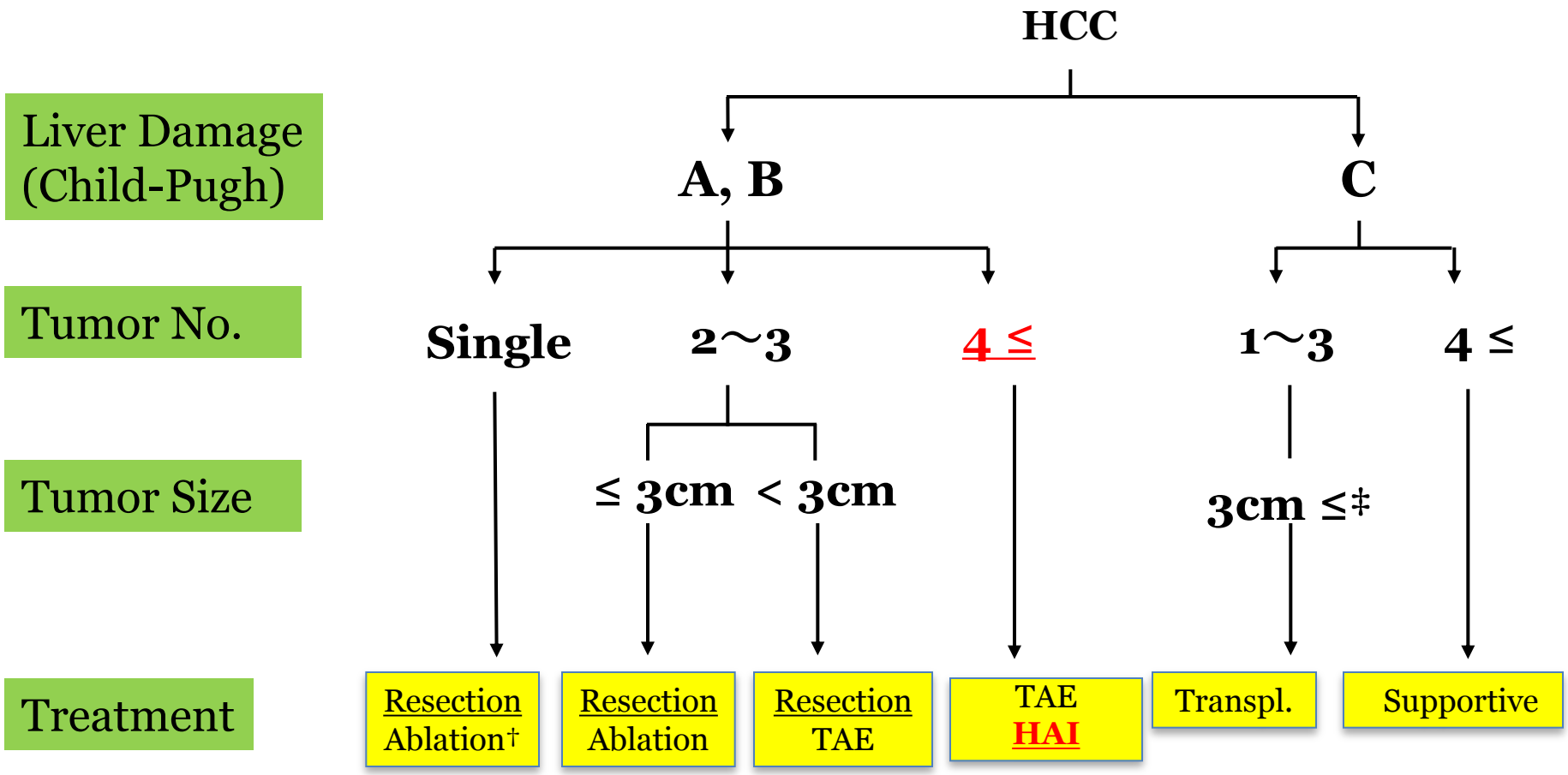
- **BCLC staging classification**
  - Llovet JM, Bruix J et al. 1999 Semin Liver Di s 19:329-
  - Bruix J, Llovet JM. 2009 Lancet 373: 614-
- **AASLD practice guidelines**
  - Bruix J, Sherman M. 2005 Hepatology 42:12 08-
- **British Society of Gastroenteology**
  - Ryder SD. 2003 Gut 52 (suppl. III):iii1-

BCLS guideline 2011



Japan Guidelines for HCC Treatment

Kokudo, Makuuchi. Gut. 2007 Jul;56(7):1020-1

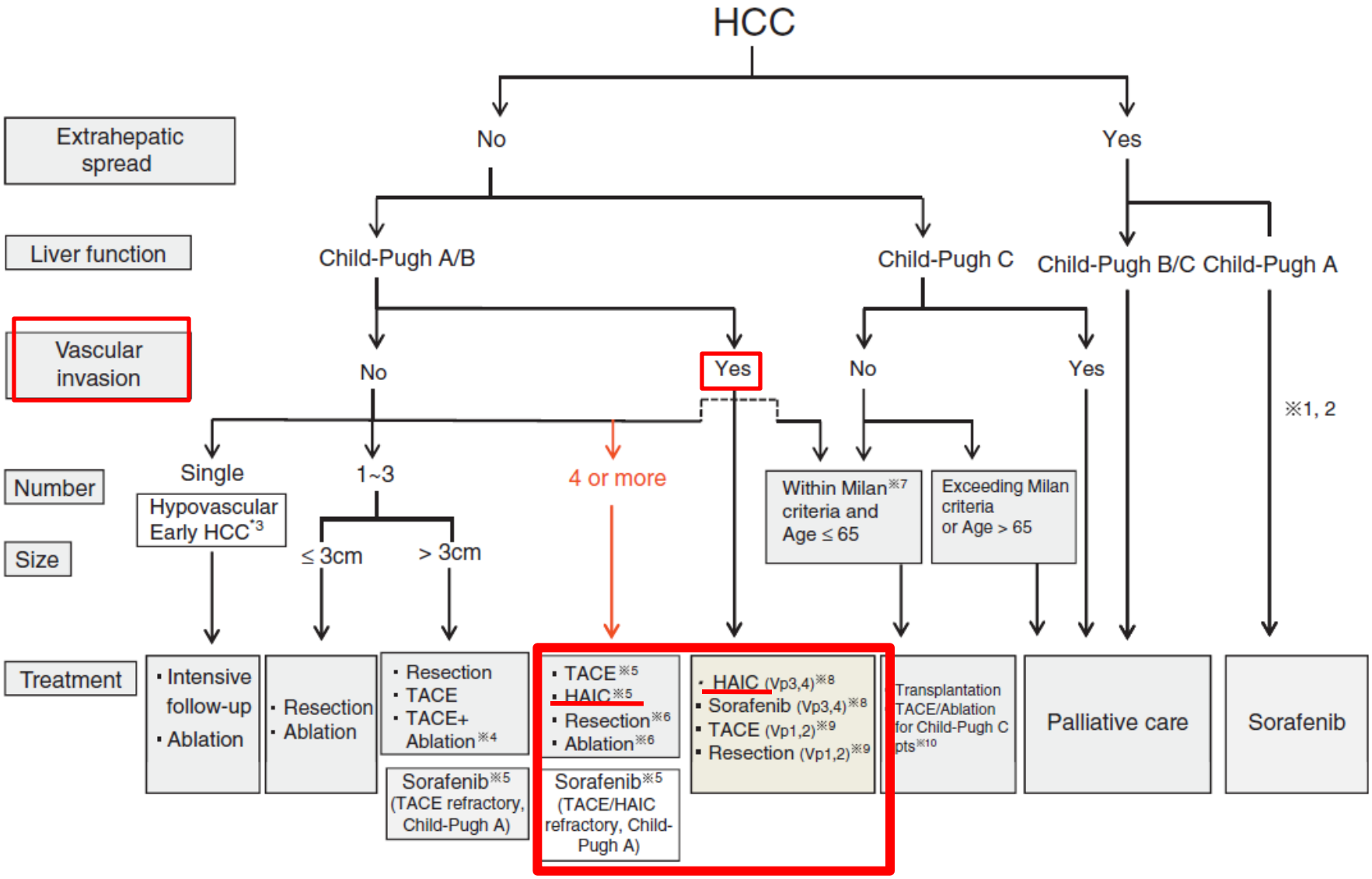


†Recommended for Child B, ‡≤ 5cm for solitary lesion

***Excluding patients with tumor thrombus or extrahepatic lesions**

Japan Guidelines for HCC Treatment

Consensus-based in Japan Hepatology 2010



Rationale of IA Chemo.

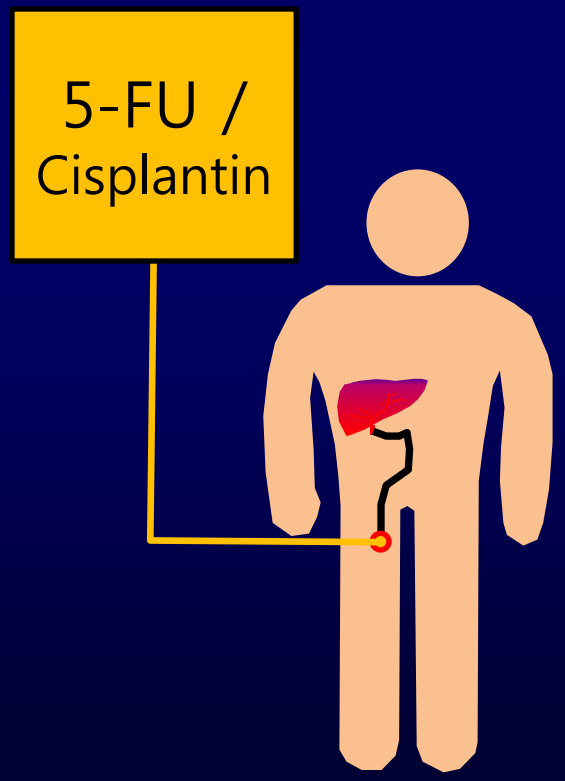
- ✓ IA chemo vs Systemic Chemo : 20~400 effective
- ✓ Less systemic toxicity

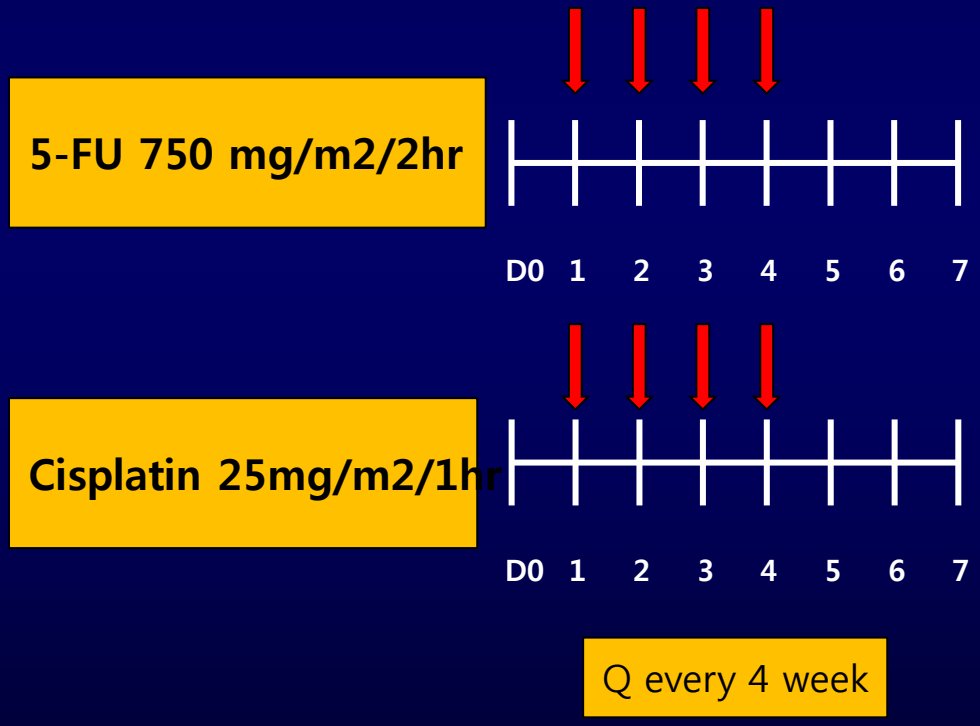
Purpose

To investigate the role of Neoadjuvant IA Chemotherapy in inoperable HCC patients with Child Pugh Class A

Material and Methods

1. From January 2003 to December 2012
2. 46 inoperable HCC patients with Child Pugh Class A





Results

Patient Characteristics

N=34

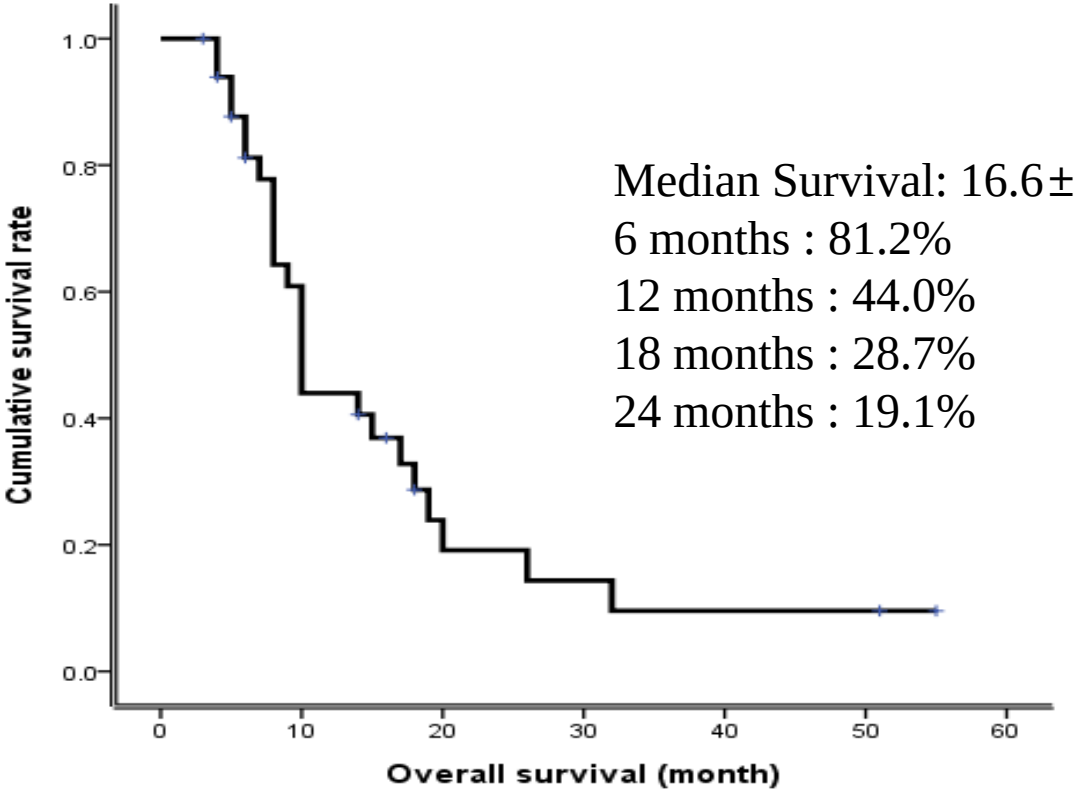
Sex(M:F)	28:6 (82.4:17.6)
Age	54±10
Portal vein thrombosis	
Main trunk	9(26.5)
Rt	12(35.3)
Lt	3(8.8)
Tumor morphology	
Multinodular	9(26.5)
Huge, massive	25(73.5)
AFP(ng/mL)	29067±90281
Treatment prior to Chemotherapy	
TACE	4(11.8)
Radiation and TACE	1(2.9)
No treatment	29(85.3)

Results

- Twelve patients who could not receive more than 2 cycles HAI chemotherapy were excluded

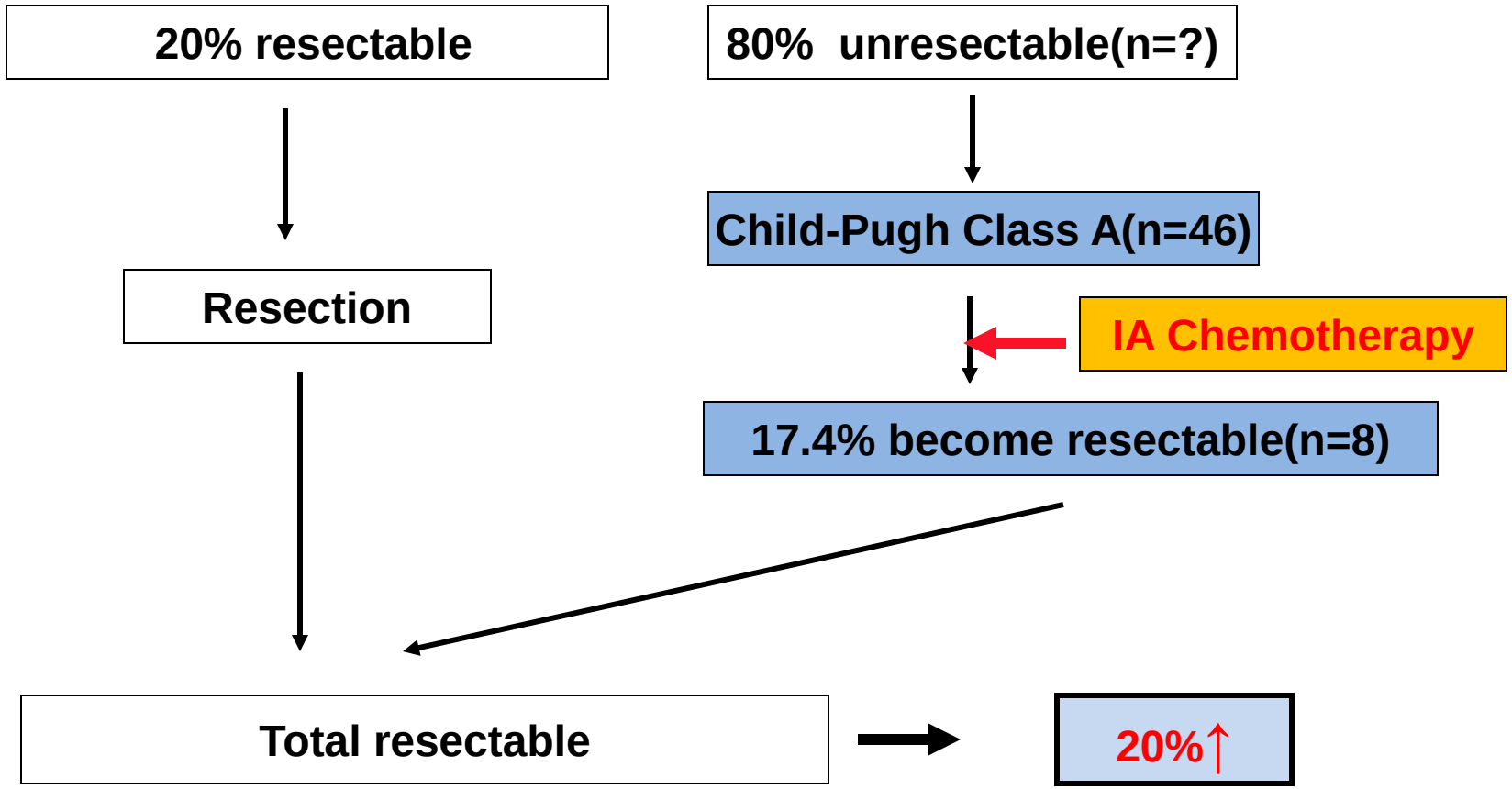
Tumor response	
CR	4(11.8%)
PR	9(26.5%)
SD	16(47.1%)
PD	5(14.7%)
Response rate	13(38.3%)

Overall Survival Rate



Median Survival: 16.6±2.8
6 months : 81.2%
12 months : 44.0%
18 months : 28.7%
24 months : 19.1%

IA Neoadjuvant Chemotherapy



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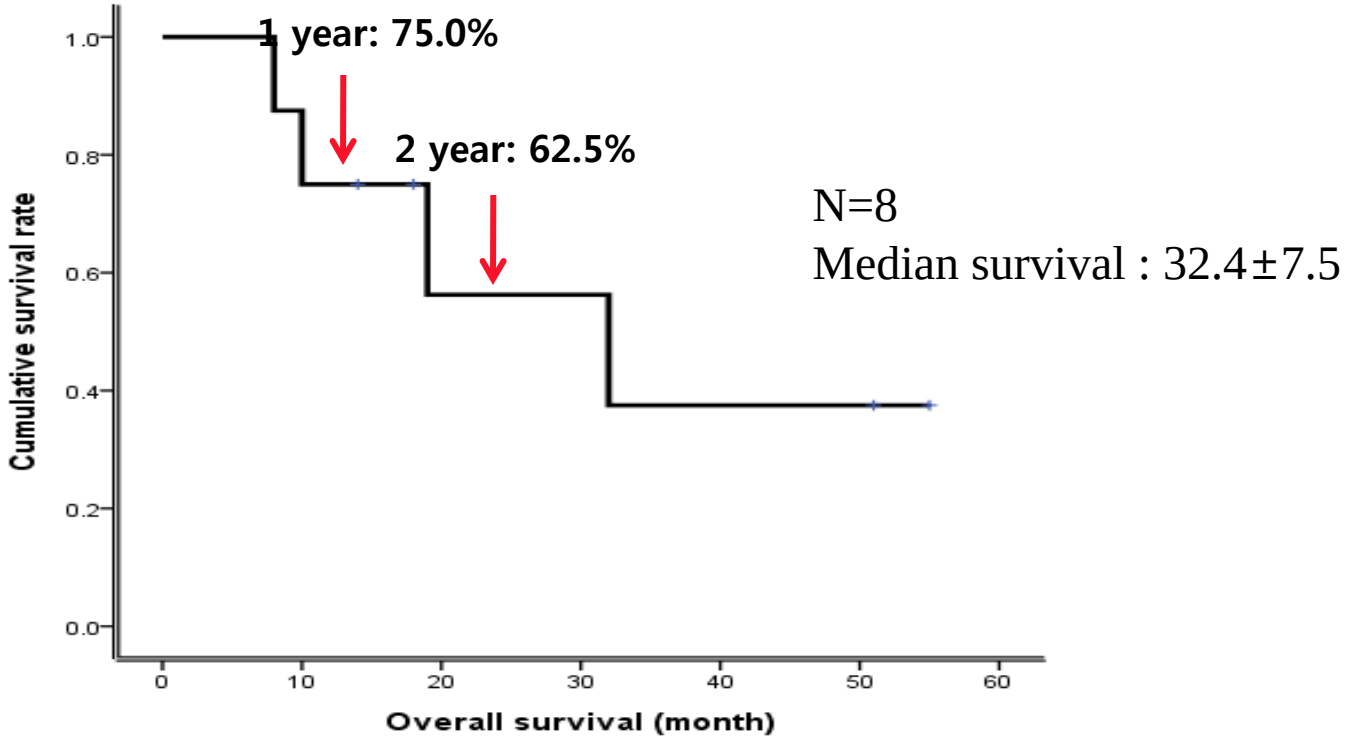
Overall Survival Rate after Resection



The 6, 12, 18 and 24-month cumulative survival rate
87.5%, 75.0%, 62.5%, and 62.5.%, respectively

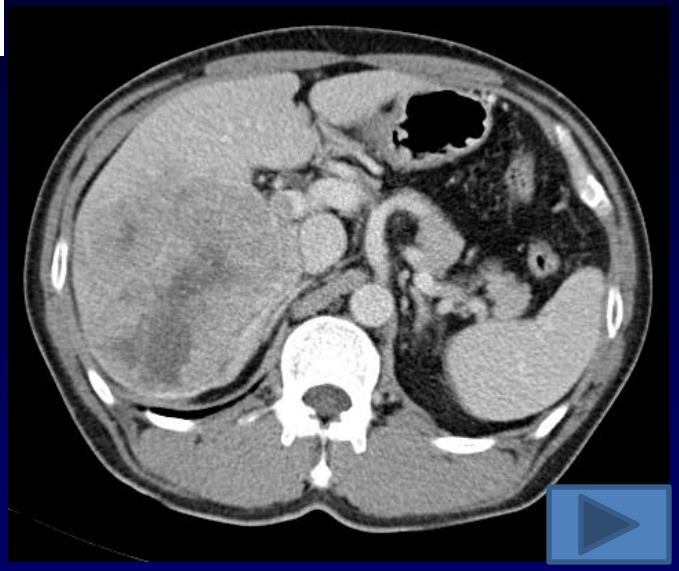
Summary

1. Response Rate : 13/34(38.3%)

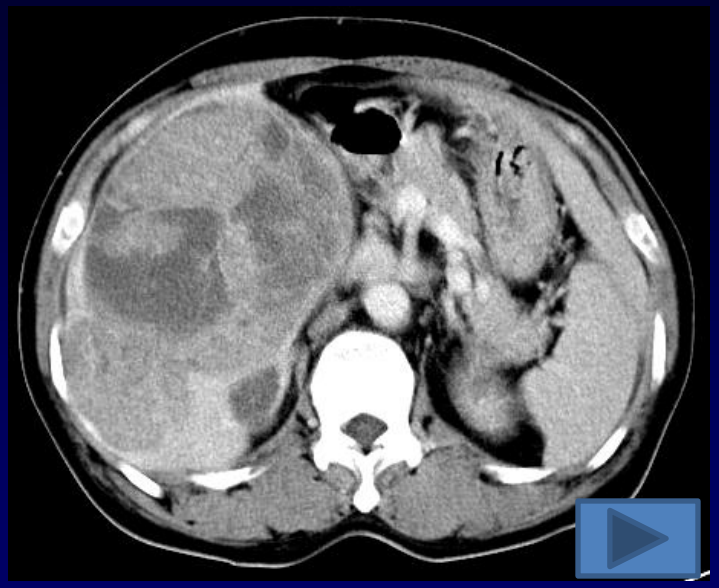
   - CR: 4/34(11.8%), PR: 9/34(26.5%)

2. The 6, 12, 18 and 24-month cumulative survival rate are 80.2%, 44.0%, 28.7% and 19.1%, respectively

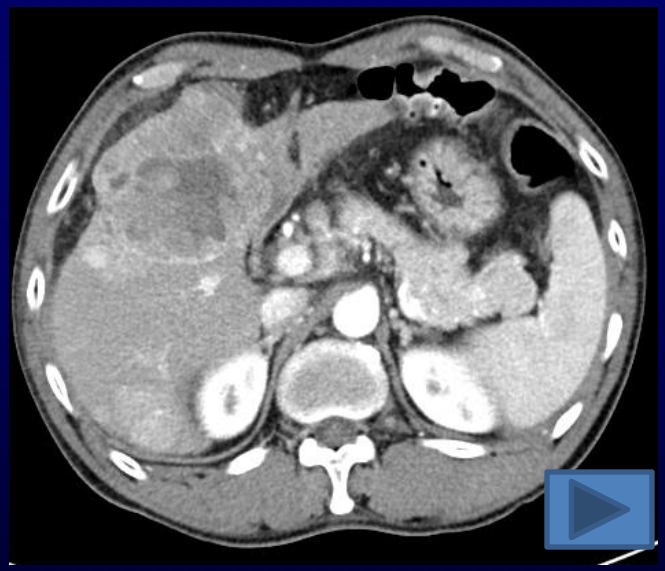
3. Liver resection in 8 patients(17.3 %) and the median survival was 32.4±7.5 months



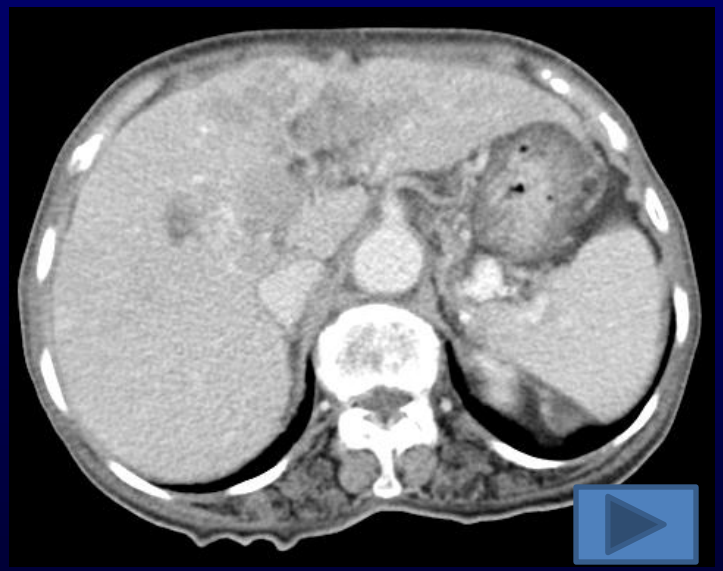
CR case 1



CR case 2

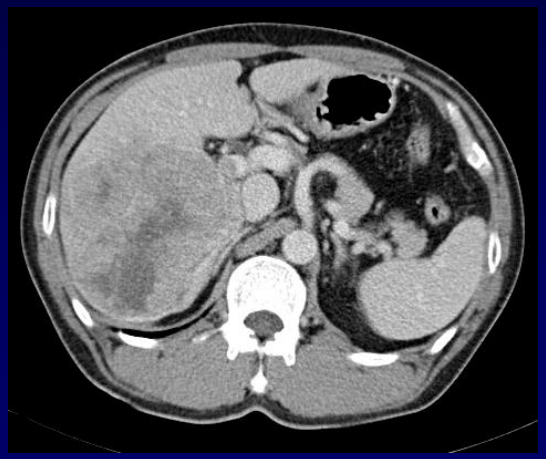


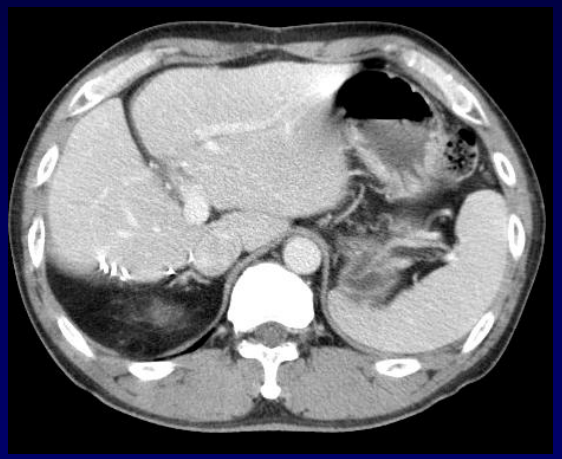
CR case 3



CR case 4

M/ 53





Rt/ main portal vein invasion

AFP 950ng/mL

After 6 cycle

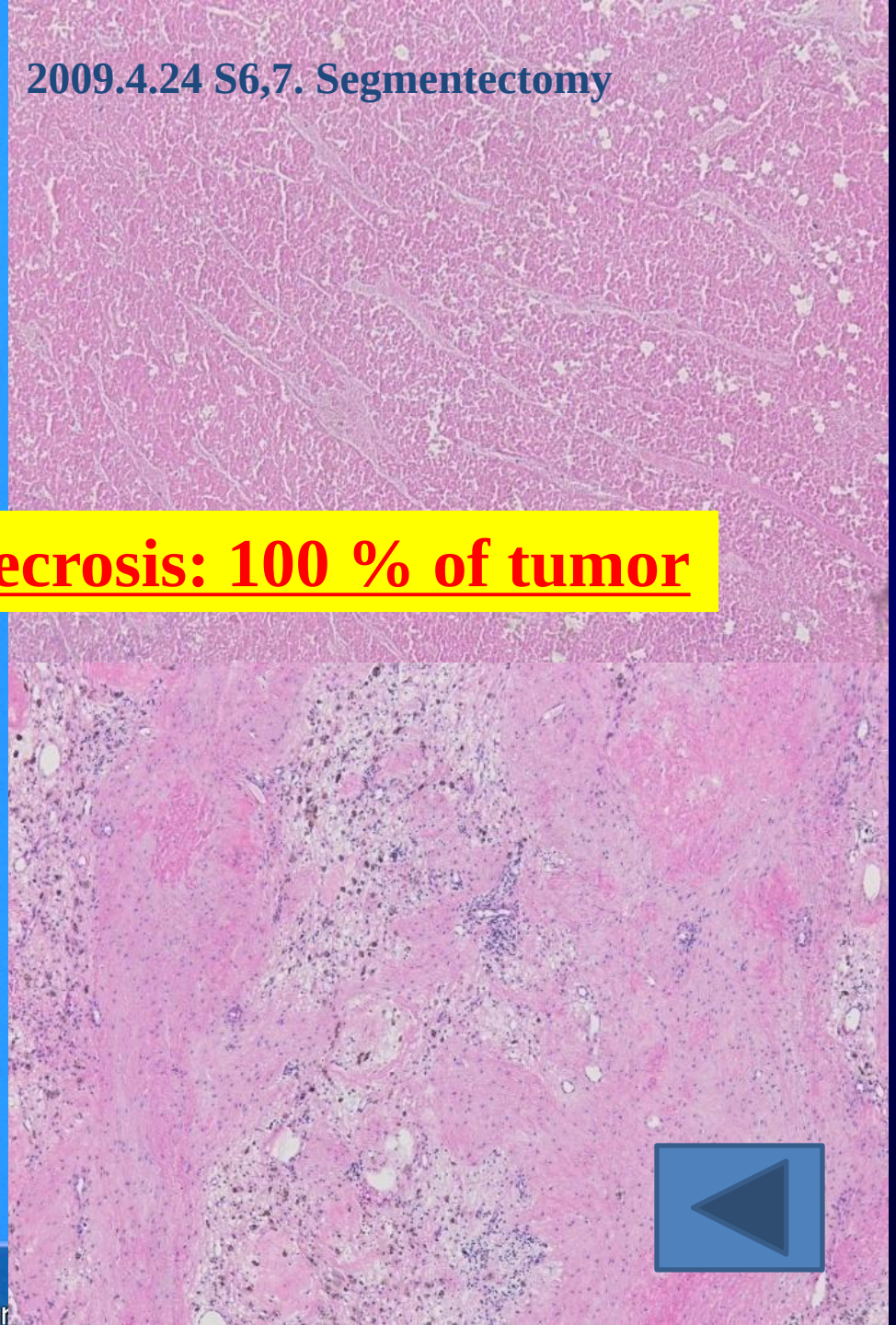
AFP 19.29ng/mL

S#6, 7 segmentectomy

Postop: 50 months

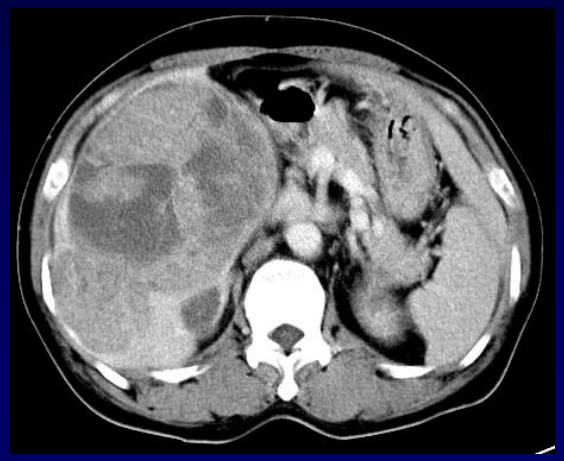
AFP 2.56ng/mL

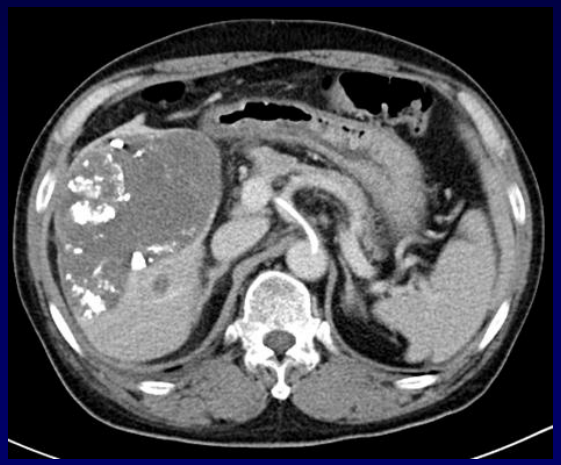
2009.4.24 S6,7. Segmentectomy

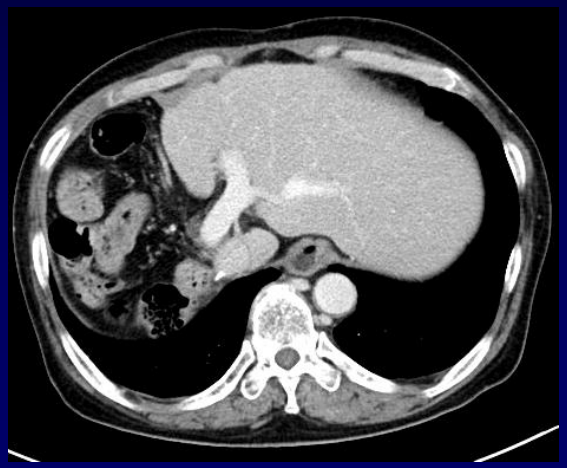


Tumor necrosis: 100 % of tumor

M/52







Rt lobe huge HCC with PVTT

AFP 5066ng/mL

TACE + RTx After 6 cycle

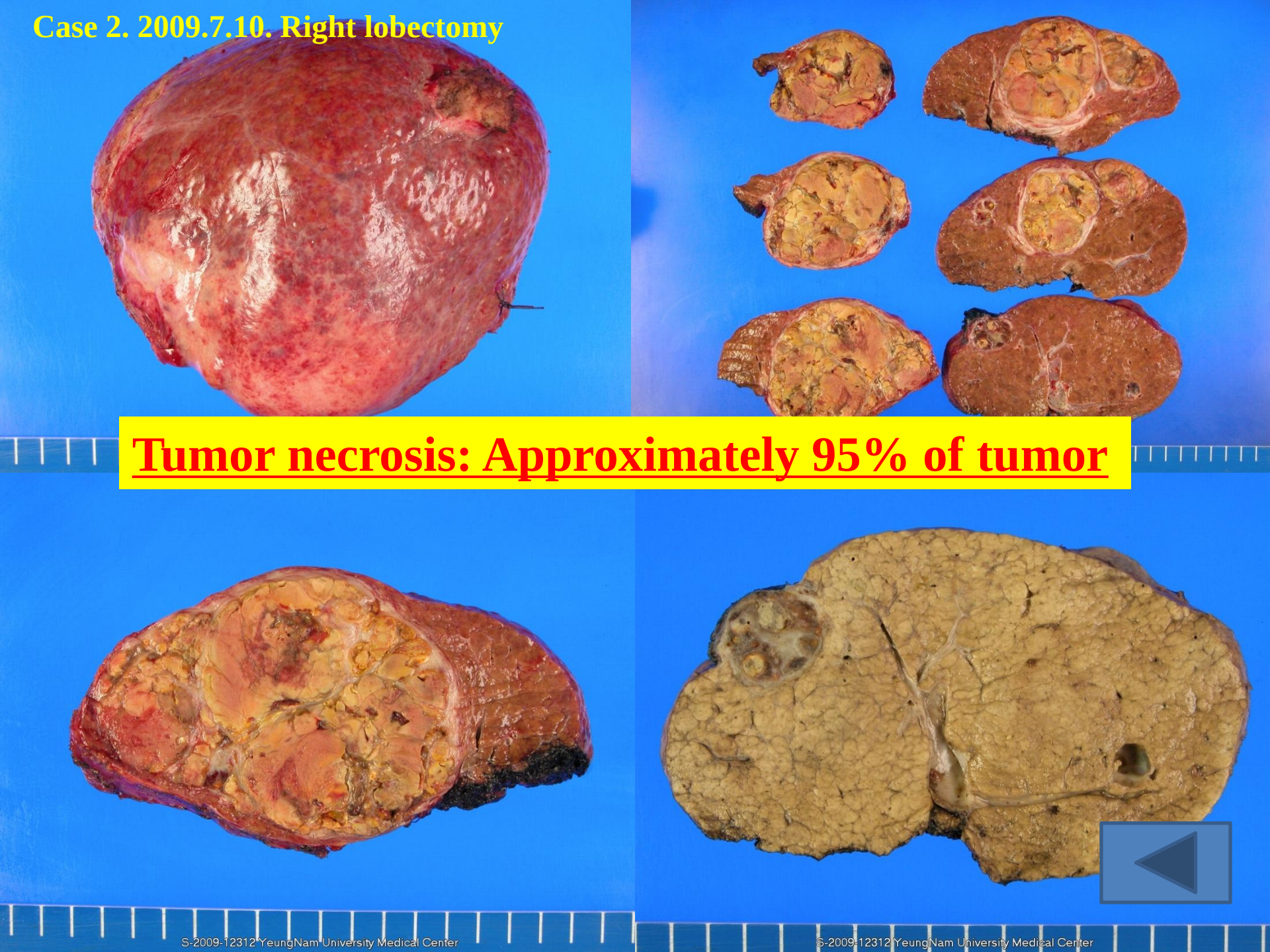
AFP 3955ng/mL

Rt lobectomy

Postop: 46months

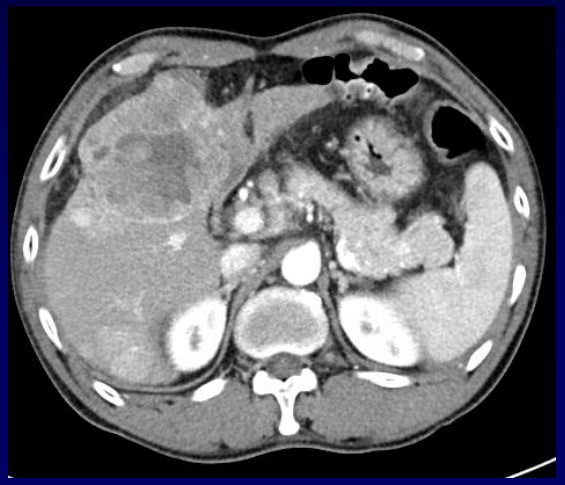
AFP 2.24ng/mL

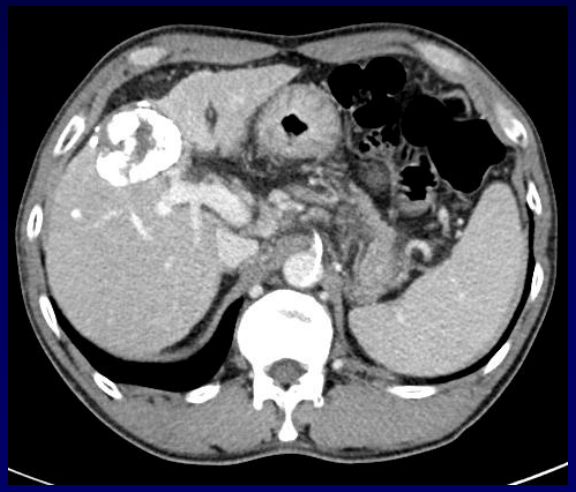
Case 2. 2009.7.10. Right lobectomy

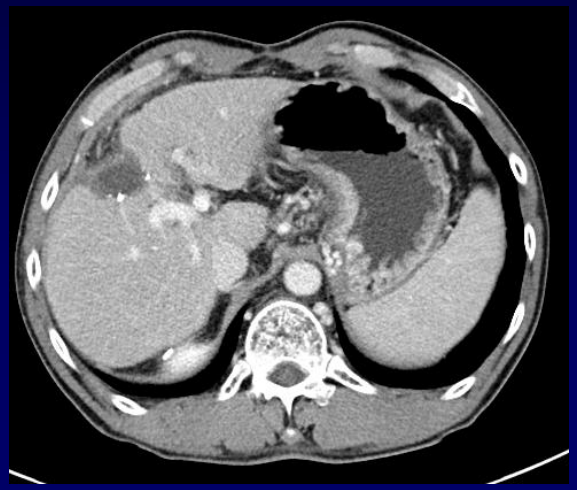


Tumor necrosis: Approximately 95% of tumor

M/ 58







Ruptured multiple bilobar HCC

PIVKA 75000mAU/mL

After TACE
After 6 cycle

PIVKA 111mAU/mL

S# 4,5 Segmentectomy
S#6 wedge resection

Post op : 6 months

PIVKA 21mAU/mL

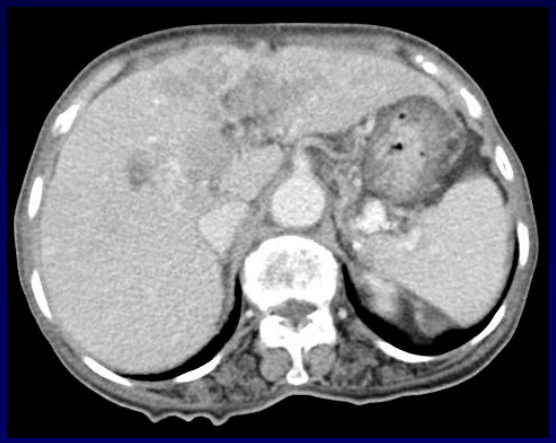
Pathology report (I)

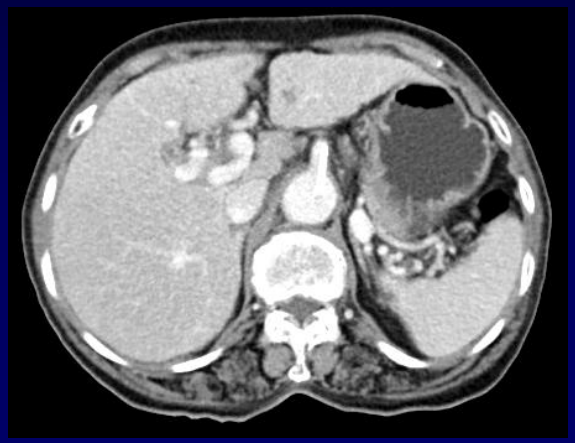
Liver, segment 4b and 5, segmentectomy:

No viable tumor

with 1) tumor number: One
2) satellite nodule: Absent
3) gross type: Expanding nodular
4) tumor location: Segment 4b and 5
5) tumor size: 4.3 cm
6) Histologic grade (Edmondson-Steiner grade): Cannot be assessed
7) histologic type: Cannot be assessed
8) cell type: Cannot be assessed
9) tumor necrosis: Approximately 100% of tumor
(preoperative thearpy administered)
10) fatty change: Cannot be assessed
11) fibrous capsule formation: Complete capsule

F/74





Main portal vein invasion and multiple bilobar tumor

AFP 3170ng/mL

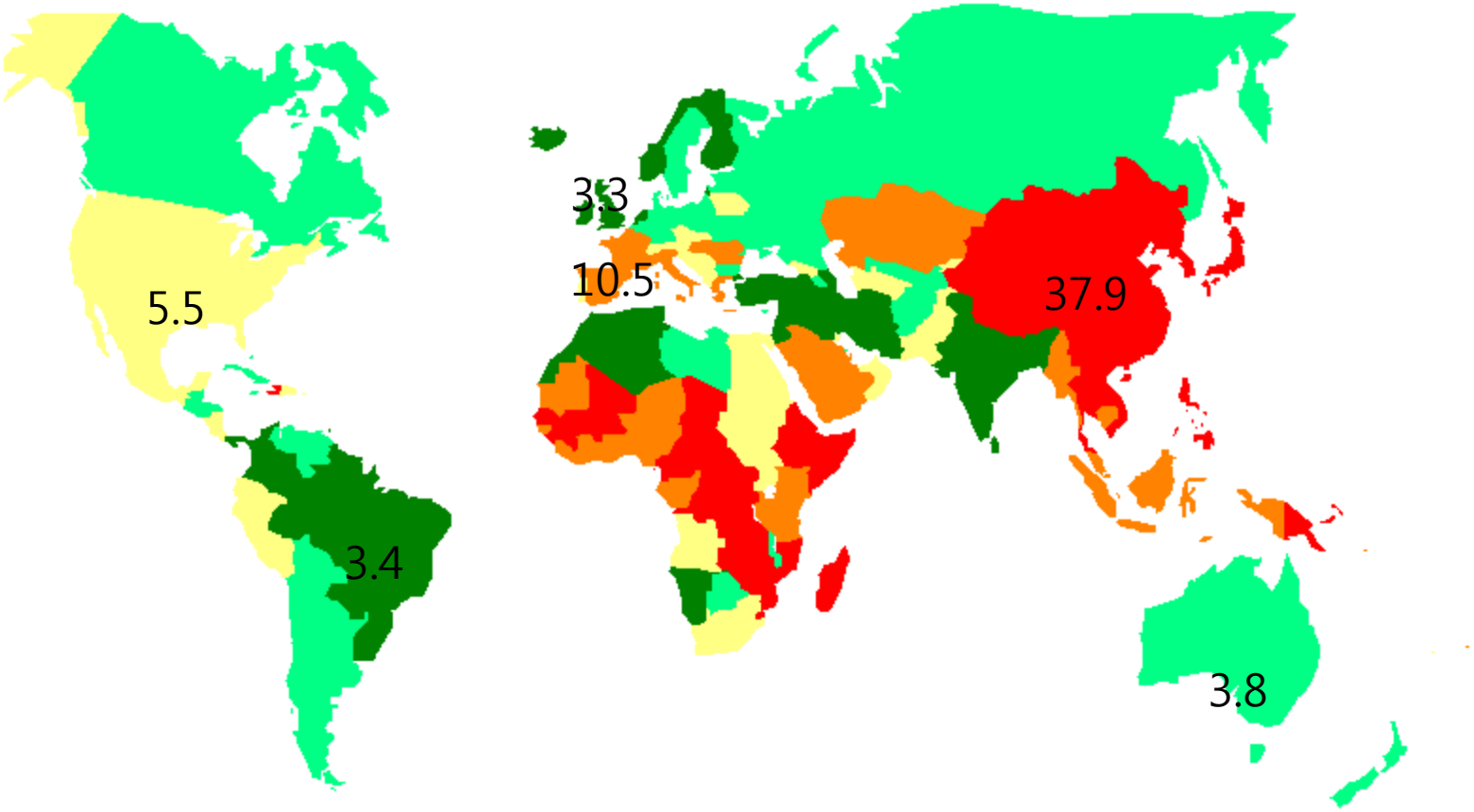
After 2 cycle

AFP 19.07ng/mL

No recurrence 15 months After 6 cycle

AFP 11.92ng/mL

Liver, Males
Age-Standardized incidence rate per 100,000



< 3.4 < 4.9 < 8.5 < 18.5 < 98.9

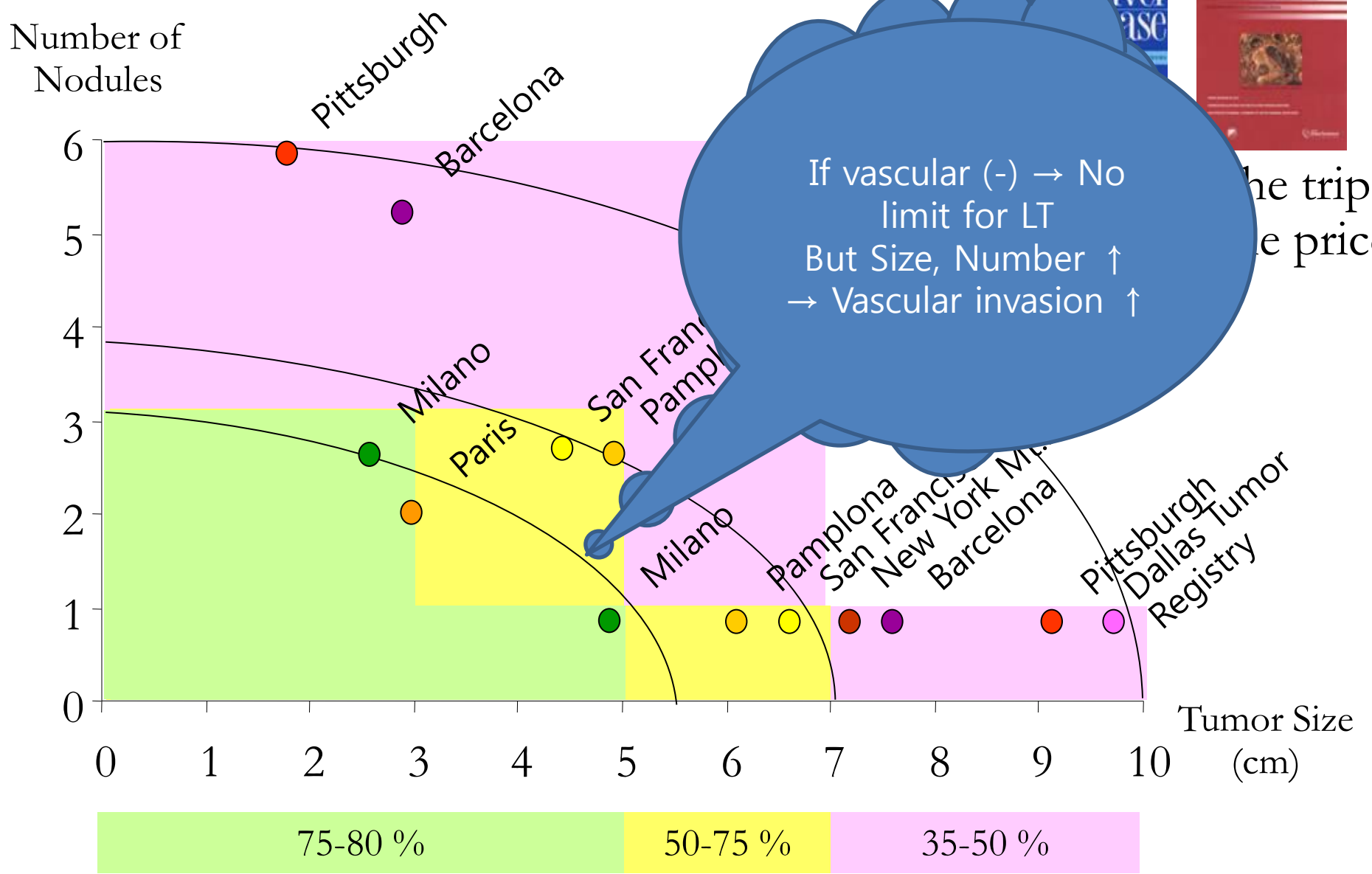
GLOBOCAN 2002, IARC

Donor Organ Shortage in Asian Country

子曰 身體髮膚 受之父母
不敢毁傷 孝之始也

Confucianism
: Don’t touch our body even after death..

The metroticket paradigma



If vascular (-) → No limit for LT
But Size, Number ↑
→ Vascular invasion ↑

he trip
e price

Conclusion

Neoadjuvant HAI chemotherapy can be another good option to treat HCC patients with good liver function, not suitable for liver resection and transplant.

Thank You for Your Attention