Personal data

- NAME: 林X杰
- GENDER: male
- AGE: 42 y/o
- DATE OF ADMISSION: 941003
- Smoking(+) 1pack/ day；alcohol(+)；betel nut (+) for 10 yrs, and quitted 3 yr ago. Allergy(-)

History

- Chief complaint: right lateral epigastric pain for about 2 weeks
- Present illness: this 42 y/o male started to have epigastric fullness and dull pain 2 months ago, and no other specific symptoms. He started to have tea color urine, BW loss, and bleeding tendency 2 weeks ago. Then he went to LMD for evaluation, and found diffuse HCC with ascites. Thus he was transferred to our hospital for management.

History

- Past history

1. Medical history: HBV(+)
2. Surgical history: nil

- Family history: no contributory
- Review of system: Easy bleeding(+), loss of appetite(+), abdominal pain(+), tea color urine(+)

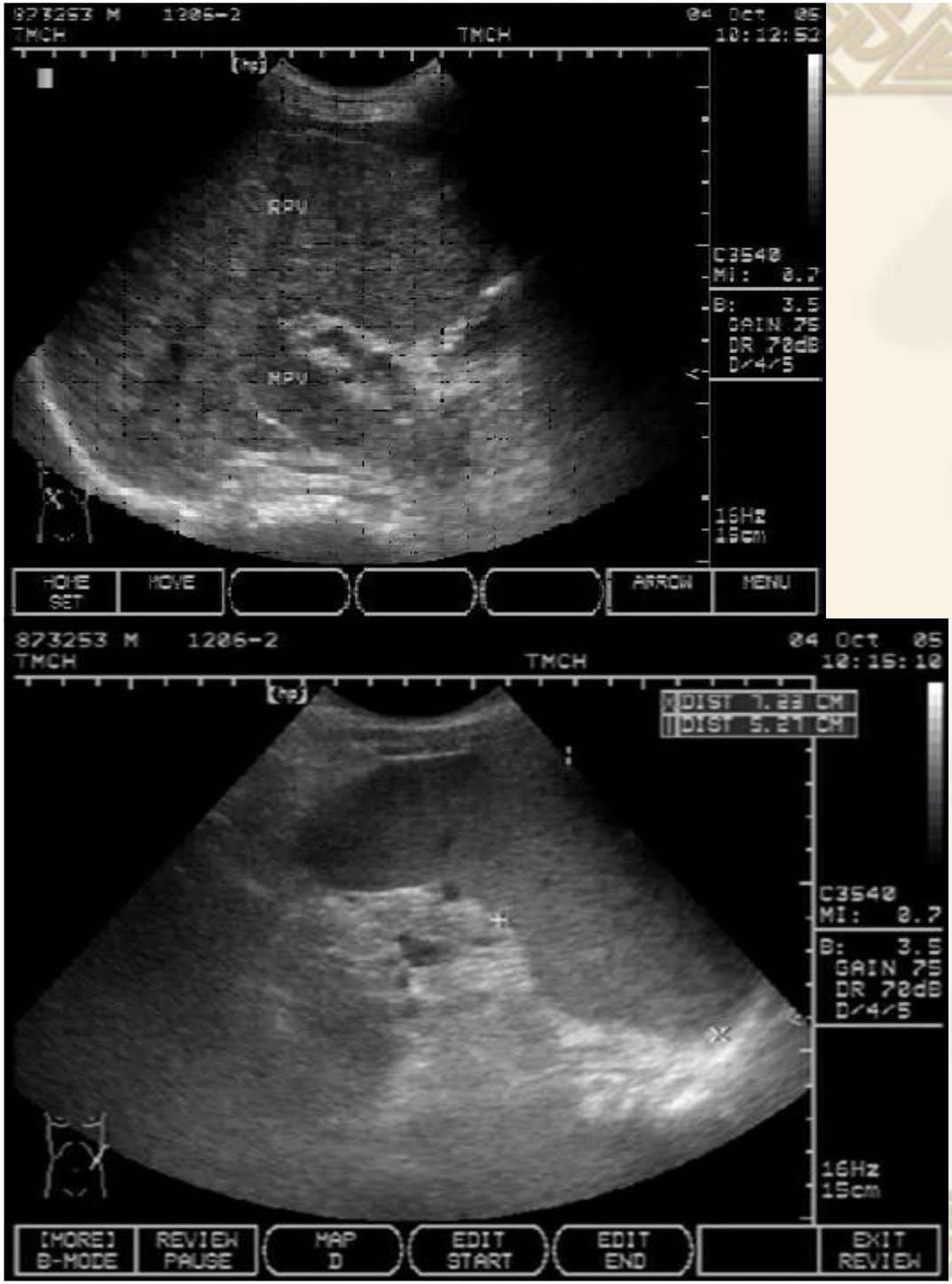
History

- PE: icteric sclera(+), spider angioma(+), abdominal tenderness(+), abdominal mass(+), shifting dullness(+), liver span:13 cm
- Lab:ALK-P:473, r-GT:379, AFP:679.30, CEA:2.04, GOT:130, GPT:107, Bilirubin D/T: 2.5 /4.6, Albumin:3.0, PT:13.85 sec

Image

- US finding:

1. multiple heterogenous nodular lesions over both lobes of liver
2. Portal vein thrombosis
3. Ascites
4. splenomegaly



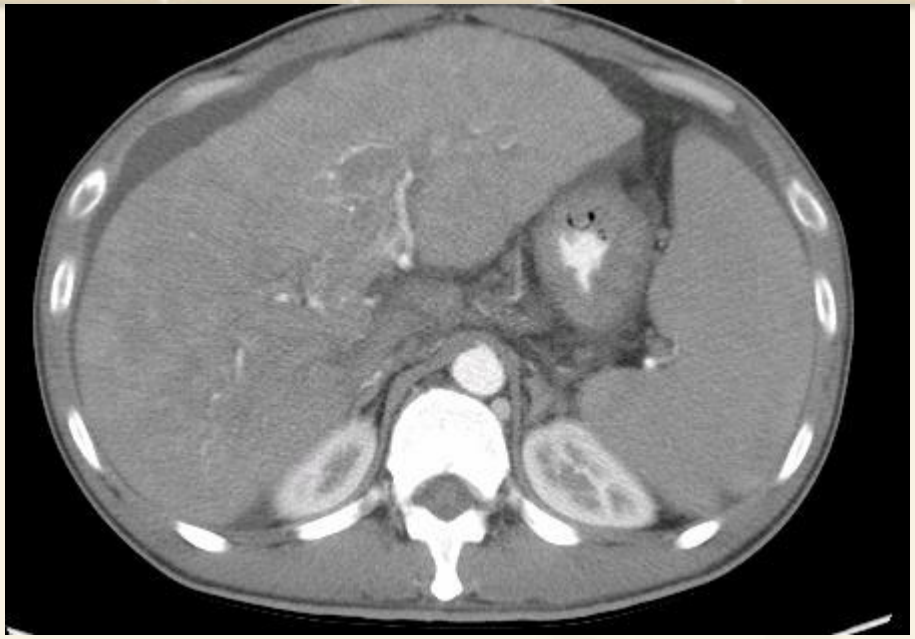
Portal vein with tumor thrombosis in it

splenomegaly

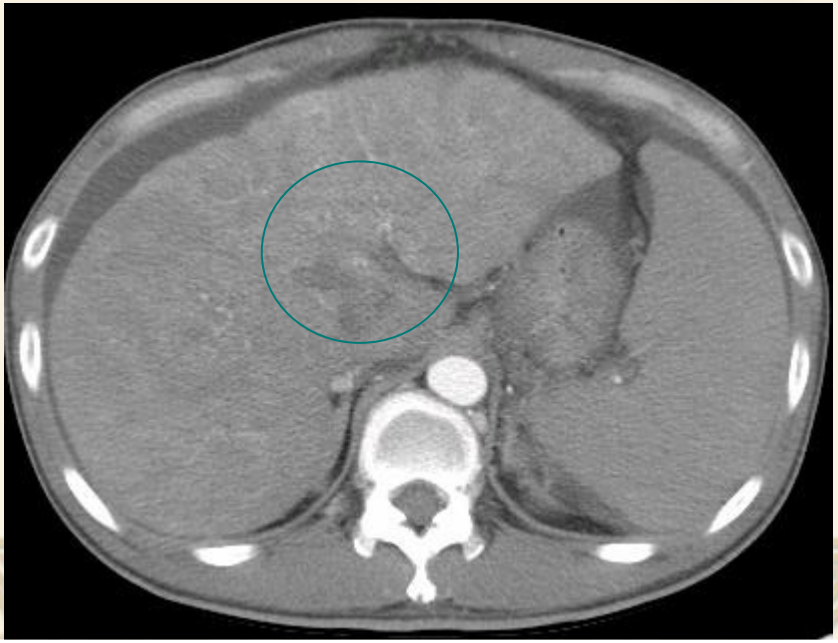
Image

- CT finding:

1. liver cirrhosis--- small and nodular
2. Splenomegaly and moderate ascites
3. infiltrative heterogeneous lesion over both lobes of the liver
4. Tumor thrombosis within right and left portal veins



Ill-defined liver surface which suggests liver cirrhosis; splenomegaly; ascites; multiple heterogenous lesion over both lobes



Tumor thrombosis

Treatment

- 94.10.7--- hepatic angiogram with chemoembolization with GM, adriamycin, and Lipiodol.
- Supportive care:

1. Diuretics for ascites
2. Tramadol for pain relief

Discussion

- Clinical presentation:

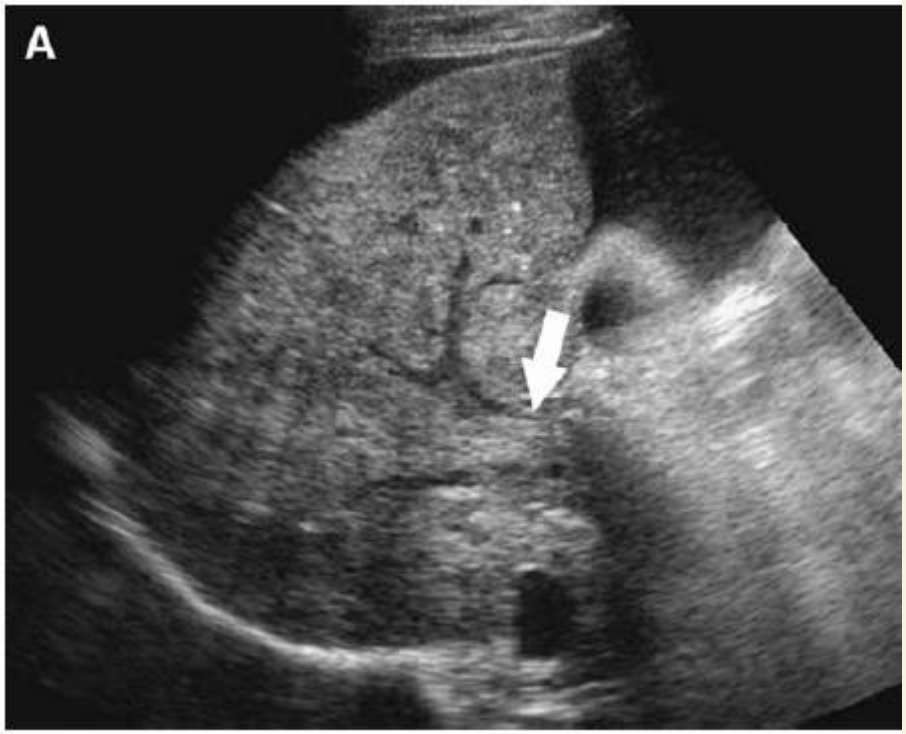
1. RUQ abdominal pain; sometimes radiates to the right shoulder (advanced)
2. a palpable mass
3. Nonspecific: anorexia, nausea, lethargy, and weight loss
4. Cirrhosis (especially induced by HBV/HCV)

Discussion

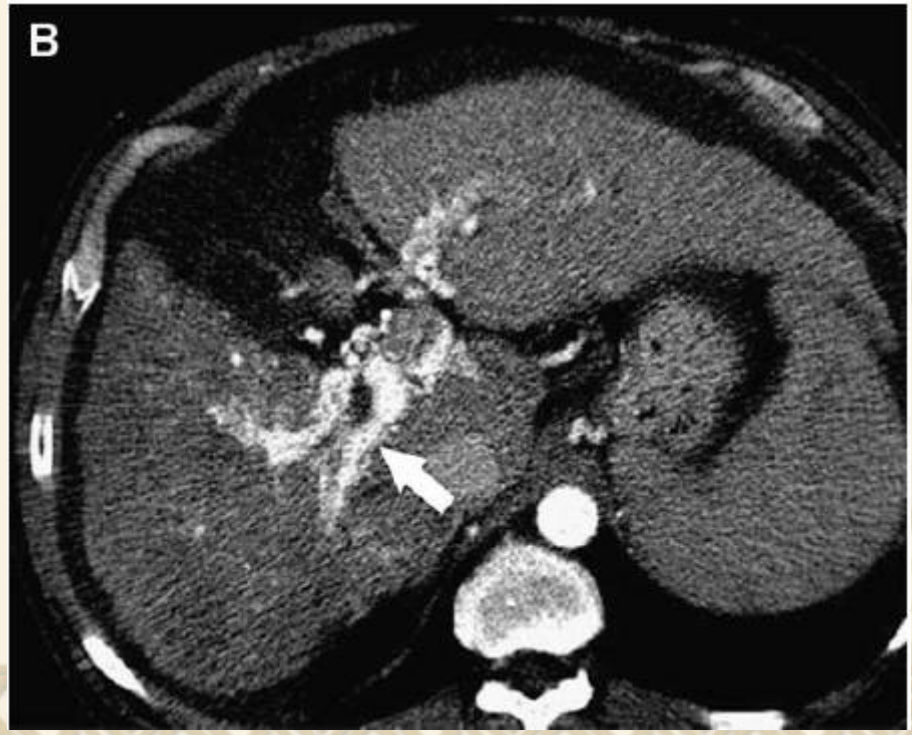
- Clinical presentation (less common)

1. sudden onset of abdominal pain followed by hypovolemic shock (rupture induced intraperitoneal bleeding)
2. hepatic vein occlusion (Budd-Chiari syndrome), obstructive jaundice, or FUO
3. paraneoplastic syndrome (<1%) : hypercalcemia, hypoglycemia, and erythrocytosis

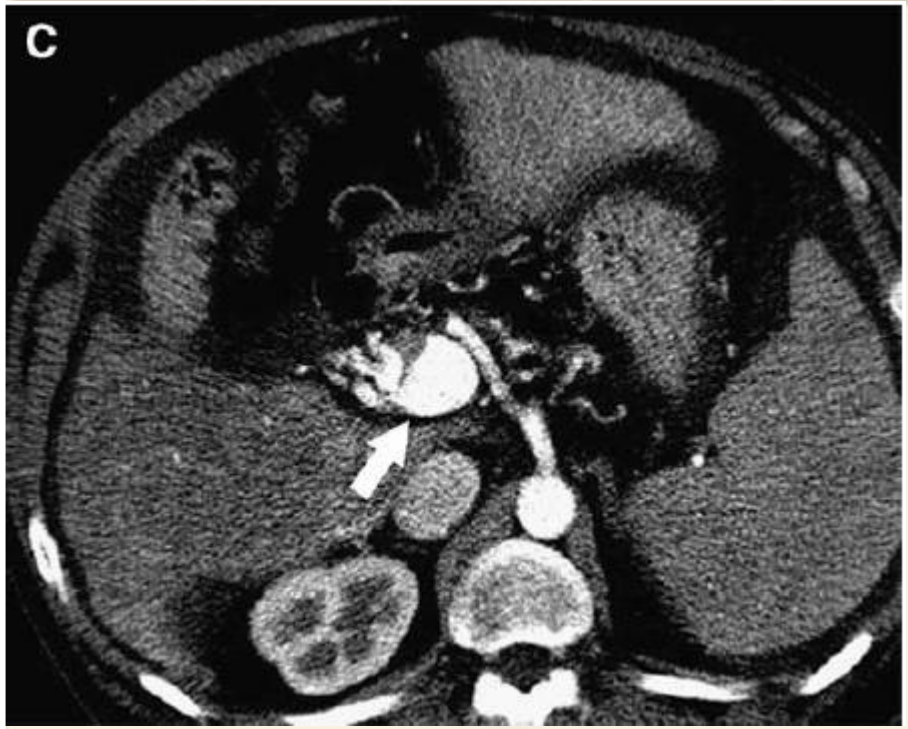
Discussion---Typical imaging



Heterogeneous soft tissue echo replacing and expanding the lumen of the right portal vein (arrow).→ sagittal US

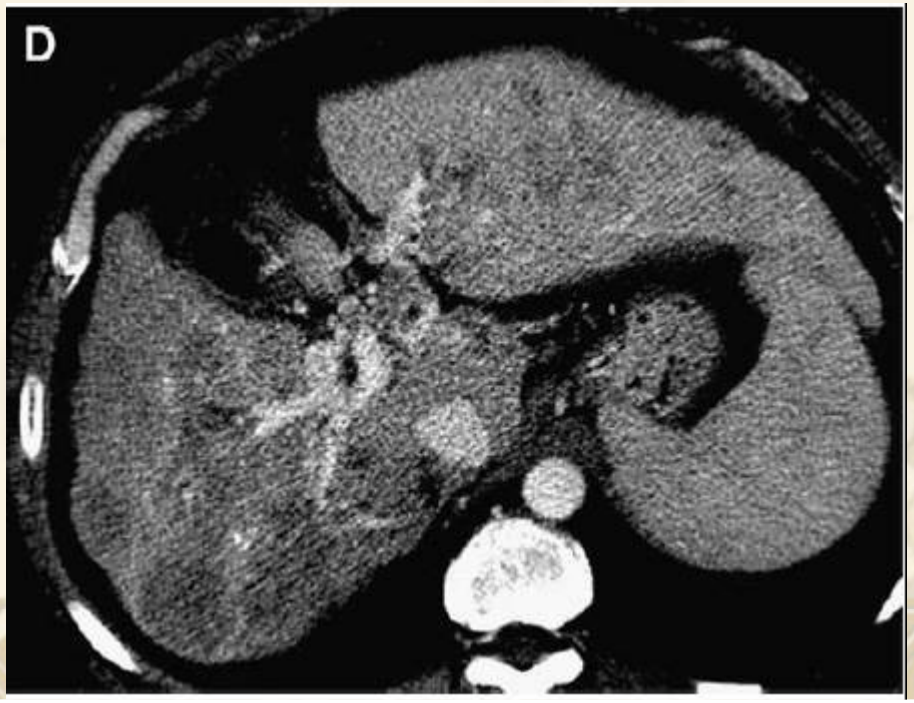


heterogeneous enhancing thrombus in the portal venous lumen with thick peripheral enhancement as high as that of the aorta (arrow).



An AP CT scan at the level of the main portal vein shows strong enhancement of the main portal vein (arrow)

A portal venous phase CT scan demonstrates ill-defined areas of negative enhancement in the right hepatic lobe and Segment 3, representing infiltrative HCC contiguous to the portal venous thrombi.



Discussion---staging

Table 1

American Joint Committee on Cancer (AJCC) TNM Staging for Liver Tumors (Including Intrahepatic Bile Ducts)*

Primary Tumor (T)

TX Primary tumor cannot be assessed
T0 No evidence of primary tumor
T1 Solitary tumor without vascular invasion
T2 Solitary tumor with vascular invasion or multiple tumors none more than 5 cm
T3 Multiple tumors more than 5 cm or tumor involving a major branch of the portal or hepatic vein(s)
T4 Tumor(s) with direct invasion of adjacent organs other than the gallbladder or with perforation of visceral peritoneum

Regional Lymph Nodes (N)

NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastasis
N1 Regional lymph node metastasis

Distant Metastasis (M)

MX Distant metastasis cannot be assessed
M0 No distant metastasis
M1 Distant metastasis

Stage Grouping

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage IIIA	T3	N0	M0
IIIB	T4	N0	M0
IIIC	Any T	N1	M0
Stage IV	Any T	Any N	M1

Histologic Grade (G)

G1 Well differentiated
G2 Moderately differentiated
G3 Poorly differentiated
G4 Undifferentiated

Fibrosis Score (F)

The fibrosis score as defined by Ishak is recommended because of its prognostic value in overall survival. This scoring system uses a 0-6 scale.

F0 Fibrosis score 0-4 (none to moderate fibrosis)
F1 Fibrosis score 5-6 (severe fibrosis or cirrhosis)

Discussion

- Staging:

1. tumor thrombus was noted in main, left and rigth-PV → T3
2. No LN involvement→ N0
3. No metastasis→M0

Thus the cancer staging of the patient was **stage IIIA**

Discussion--- treatment

CHILD-PUGH SCORE

Chemical and Biochemical Parameters	Scores (Points) for Increasing Abnormality		
	1	2	3
Encephalopathy (grade)[1]	None	1-2	3-4
Ascites	None	Slight	Moderate
Albumin (g/dL)	> 3.5	2.8-3.5	< 2.8
Prothrombin time prolonged (sec)	1-4	4-6	> 6
Bilirubin (mg/dL) • For primary biliary cirrhosis	1-2 1-4	2-3 4-10	> 3 > 10

Class A = 5–6 points; Class B = 7–9 points; Class C = 10–15 points.

The patient's Child-Pugh score was 10 → Child B-C

Discussion--- treatment

Table 4. World Health Organization Performance Status grades

Stage 0	Fully active, normal life, no symptoms.
Stage 1	Minor symptoms, able to do light activity.
Stage 2	Capable of self-care but unable to carry out work activities. Up for more than 50% waking hours
Stage 3	Limited self care capacity. Confined to bed or chair > 50% waking hours.
Stage 4	Completely disabled. Confined to bed or chair.

The patient's performance status grade was stage 1

Discussion---Treatment

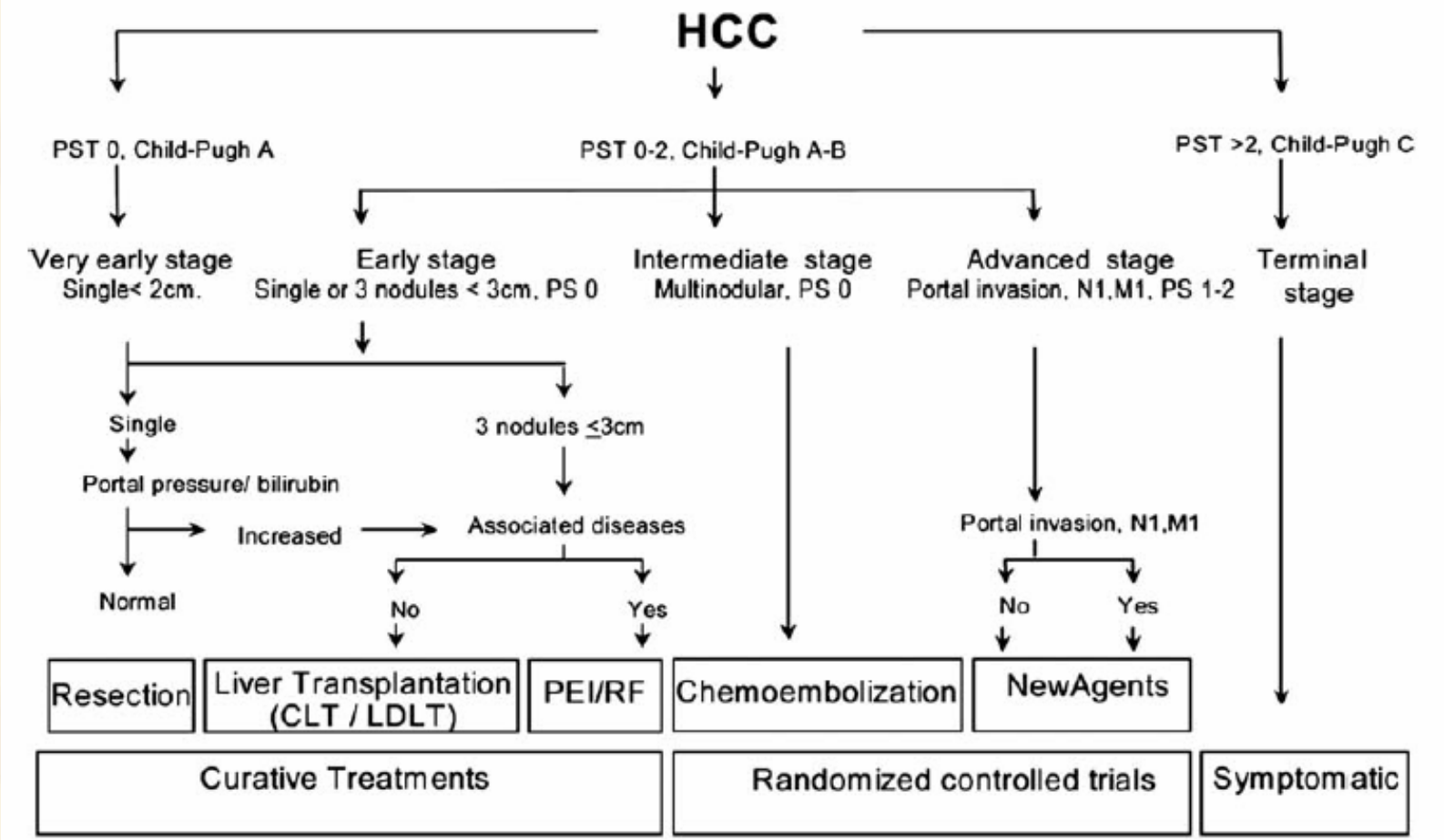


Fig. 2. The Barcelona staging and treatment classification. PST, performance status; CLT, cadaveric liver transplant; HCC, hepatocellular carcinoma; LDLT, living-donor liver transplant; PEI, percutaneous ethanol injection; PS, prognostic score; RF, radiofrequency. (*From* Bruix J, Sherman M. Management of hepatocellular carcinoma. Hepatology 2005;42:1218.)

Discussion

- Prognosis

1. In liver transplantation recipients, 5-year survival has been reported to be as high as 75%
2. A recent survey in Japan found that operative mortality was 0.9% and the 5-year survival rate after surgery was52%

Reference

- Jorge A. Marrero, MD, MSa,*, Shawn Pelletier, MD, Hepatocellular Carcinoma Clin Liver Dis 10 (2006) 339–351
- Jordi Bruix1 and Morris Sherman2, Management of Hepatocellular Carcinoma *American Association for the Study of Liver Diseases.*
- Bruix J, Sherman M. Management of hepatocellular carcinoma. Hepatology 2005;42:1218.
- Tae Kyoung Kim, MD*, Hyun-Jung Jang, MD,Stephanie R. Wilson, MD. Imaging Diagnosis of Hepatocellular Carcinoma with Differentiation from Other Pathology
- NCCN hepatobiliary cancer treatment guideline