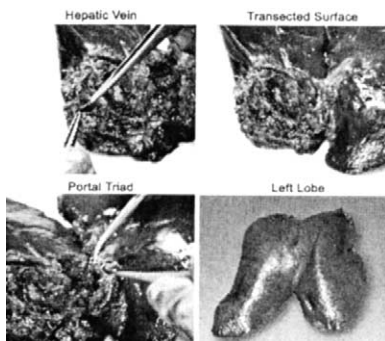


vascular occlusion techniques were utilized. The vascular structures were stapled and sectioned just prior to removal of the specimen. Results: Hepatic lobectomies were successfully performed laparoscopically. Parenchymal tissue viability was demonstrated by histologic and clinical examination. Vascular and biliary structures were preserved in order to allow for subsequent transplantation. Operative time from establishment of pneumoperitoneum to lobe procurement was under 4 hours. Conclusions: This study demonstrates the feasibility of laparoscopic living donor procurement for liver transplantation, both from a technical and a physiological perspective.



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Liver Transplantation for Hepatocellular Carcinoma: Should Patients With Stage III Disease Receive Allocation Priority?

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Introduction: Recent reports suggest that liver transplantation may provide an effective treatment strategy for carefully selected patients with unresectable hepatocellular carcinoma (HCC). Under guidelines adopted in February, 2002 by the United Network for Organ Sharing allocation schema, patients with stages I or II HCC receive priority for transplantation, but not patients with higher tumor staging. The current study was undertaken to investigate long-term outcomes for transplantation based on HCC tumor staging in a single center. **Methods:** From 1985 to 2001, 48 (8%) out of 605 primary liver transplants were performed in our center in patients with HCC. Data was prospectively collected and retrospectively reviewed. Transplant procedures for HCC were evenly distributed over the 16-year period of review. Chemoembolization and tumor ablation were performed while patients were awaiting transplantation, however the effect of neoadjuvant therapy was not assessed as part of the current study. Tumor staging was based on TNM classification from pathologic data obtained from the explanted specimen. Kaplan-Meier survival curves were generated for purposes of this analysis. **Results:** The majority of patients undergoing transplantation during the period of study were male (40 patients, 83%), with a mean age of 52.2 years (range 22-68). Median follow-up was 4.7 years. Overall patient survival rates are shown below. No statistically significant survival differences were noted for patients with stages I, II, and III tumors compared with patients undergoing liver transplantation during the same time interval but without HCC. Similarly, patients with stage III HCC had a similar outcome to patients with less advanced disease. However, patients with stage IV HCC had a significantly worse survival compared with patients with stages I-III HCC. **Conclusions:** Liver transplantation is an effective treatment for patients with unresectable HCC. In this single-center report with long-term follow-up, transplantation for stage III disease appears to yield results that are similar to stages I and II. While the current MELD-based liver allocation algo-

rithm gives extra priority to those with stages I and II disease, consideration should be given to including patients with stage III disease.

Survival rates by stage of disease

Pathological stage	N	Survival		
		1-year	3-year	5-year
I	12	80%	70%	70%
II	11	75%	55%	55%
III	9	78%	78%	52%
IV**	16	56%	31%	25%

**p<0.05 compared with I-III.

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Methoxypolyethylene Glycol Modified-Albumin Enhanced the Cold Preservation Properties of Uw Solution in Liver Grafts

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Liver grafts preserved in cold undergo changes mainly manifested by morphological changes of the sinusoidal endothelium. Swollen and fragmented cytoplasm translates into poor portal blood flow, increase release of liver enzymes and low bile production upon liver reperfusion. Studies were performed to determine if the addition of higher molecular weight polyethylene glycol modified albumin to the University of Wisconsin (UW) preservation solution ameliorates the cold preservation injury of liver grafts. Methoxypolyethylene glycol 5000 activated with cyanuric chloride was covalently coupled to human albumin (Peg-Alb) at multiple sites. The Isolated Perfused Rat Liver model was used (IPRL).

IPRL results of grafts preserved with UW solution and UW solution plus Peg-Alb. Values are given after 60 minutes of perfusion with a sanguineous perfusate.

Group (n=4) (preservation time in h)	Portal Blood flow ml/g of liver/min	AST units/g of liver	Bile production ml/g of liver
Control neg UW (1h) Mean±SD	0.93±0.033**	2.1±1.08**	10.5±5.97
Control pos UW (30 h)	0.19±0.010	14.4±0.34	0±0
PEG-Alb & UW (30 h)	0.98±0.005**	28.4±1.03	3.5±7.54
Alb & UW (30 h)	0.05±0.007	26.9±2.45	0±0

**p<0.05 by ANOVA.

The addition of high molecular albumin to UW preservation solution appears to ameliorate endothelial injury of cold preserved liver grafts as judged by both better portal vein blood flow and bile production. However, further morphological and molecular studies are needed to define its role.

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The Role of Platelets in Murine Hepatic Ischemia/Reperfusion Injury

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Ischemia Reperfusion(I/R) Injury is a leukocyte mediated event that results in tissue infiltration by the leukocytes with a resultant increase in the inflammatory mediators and tissue damage. The mechanism of injury is initial sequestration in the vasculature, transendothelial migration and injury to the parenchymal cells. This process uses several cellular events that involve cell adhesion molecules and chemical mediators. Sev-