

Adult Liver Transplant Selection Criteria

Policy

To identify appropriate candidates for liver transplant. Generally liver transplantation is indicated in adults suffering from end-stage liver disease. Liver transplantation is a possible treatment for selected patients with acute or chronic liver disease, or some of its complications, for whom there is no equally or more efficacious and safe medical or surgical therapy.

Indications

- 1) End-stage liver disease due to cirrhosis caused by non-cholestatic or cholestatic liver injury
- 2) fulminant hepatic failure (FHF)
- 3) Small primary hepatocellular carcinoma with low metastatic potential
- 4) A small number of possible candidates for liver transplantation have good liver function but:
 - Life-threatening complications of well-compensated cirrhosis (e.g. hepatopulmonary syndrome)
 - Large benign space-occupying liver lesions causing poor quality of life
 - Metabolic liver disorders that cause life-threatening extrahepatic disease
 - Life-threatening infections restricted to the hepatobiliary system
 - Intractable complications of portal hypertension (i.e. gastrointestinal bleeding and/or ascites)
 - Severe impairment of quality of life

Absolute Contraindications

- 1) Malignancy
 - Malignant conditions outside the hepatobiliary system
 - Primary hepatocellular carcinoma that exceeds UNOS criteria for liver transplantation (see UNOS policy), and who have not been successfully downgraded to a size within Milan criteria following ablative therapy
 - Cholangiocarcinoma (unless part of an IRB-approved experimental protocol)
 - Prior malignancy will entail an observation period to ensure an acceptable disease-free interval, according to Israel Penn Registry recommendations and other evidence-based guidelines
- 2) Infections outside of the hepatobiliary system that are either active or have not yet been shown to be eradicated for a time period recommended by a infectious disease consultant
- 3) Advanced cardiac disease, which includes any reduction in cardiac output, marked elevations of filling pressures, as yet uncorrected reversible myocardial ischemia, pulmonary hypertension with mean pulmonary artery pressure greater than 35 mm Hg or pulmonary vascular resistance greater than 400 dynes/cm/sec, and constrictive or restrictive disease
- 4) Advanced primary pulmonary or thoracic disease including obstructive or restrictive airway disease with FEV₁ less than 1.5 L/sec, FEV₁/FEC ratio less than 65% of predicted, pO₂ less than 70 mm Hg (not due to hepatopulmonary syndrome), bronchiectasis and unstable asthma — or hepatopulmonary syndrome with pO₂ less than 50 and/or systemic shunting in excess of 20%
- 5) HIV infection, irrespective of viral load or CD₄ count
- 6) Sickle cell disease, irrespective of lack of extrahepatic complications
- 7) Evidence of poor compliance with medical therapy for any reason and unwillingness or inability to sign or affirm the MUSC Liver Transplant Compliance Statement (minors excluded)

- 8) Obesity with BMI greater than 40
- 9) Unstable psychiatric disorder, especially one likely to interfere with compliance
- 10) Moderate to severe social deprivation
- 11) Absence of funding for any part of the transplant process, including post-transplant housing, medication and ancillary support as determined by the MUSC Transplant Program
- 12) Active alcohol or other substance abuse, or prior alcohol or other substance abuse of less than six months abstinence and without successful rehabilitation and continuing aftercare
- 13) Prior extensive deforming abdominal surgery, especially multiple operations, gastrointestinal resection and/or bypass, portal-systemic shunt surgery
- 14) Hemochromatosis with cardiac involvement
- 15) Refusal to be given blood products in peri-operative period and/or life-threatening complications of liver disease

Relative Contraindications

- 1) Longstanding diabetes, especially insulin-dependent and/or with evidence of poor diabetes control and/or longstanding cigarette smoking
- 2) Longstanding severe hypertension, especially with evidence of poor hypertension control and/or with cigarette smoking
- 3) Mild pulmonary or thoracic disease as defined under Absolute Contraindications 3) and 4) above
- 4) Pulmonary hypertension with mean pulmonary artery pressure 30-35 and/or pulmonary vascular resistance of 250-400
- 5) Prior ischemic heart disease, including myocardial infarction and/or mechanical treatment (stent or PTCA) of coronary artery stenosis
- 6) Intrinsic renal failure with creatinine > 2 that is not solely due to correctable volume depletion
- 7) MELD score in excess of 40
- 8) Severe malnutrition, especially with evidence of poor wound healing and/or risk of cutaneous infection
- 9) Age > 65