# Promoting Research with Organ Transplant Patients

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### Table 1.
### Samples of Unanswered Research Questions in Liver Transplantation

| Research domain | Study questions |
|---|---|
| **Patient selection** | Which biomarkers and genomic factors predict long-term patient and graft survival? <br> Should patients with acute alcoholic hepatitis be accepted as liver transplantation candidates? <br> Does HCV treatment while patients are on the waitlist reduce the need for liver transplantation? |
| **Patient education** | Does early education improve patient understanding of the need for posttransplant follow-up and improve adherence? <br> Do psychiatric interventions improve medication adherence? <br> Does group discussion improve patient understanding of the need for research and increase rates of informed consent to studies? |
| **Pretransplant** | Do pretransplant biopsies of HCC detect biomolecular markers that predict HCC natural history and recurrence after liver transplantation? <br> Does pre-treating HCV or HBV in extended-criteria donors (those who would be ineligible by standard donor criteria) improve graft outcomes? <br> What is the long-term outcome for patients with HIV who undergo liver transplantation? |
| **Surgical** | Can novel strategies to prevent and treat ischemia reperfusion increase the donor pool? <br> Does perioperative CMV prophylaxis improve graft outcomes? <br> Which organ and recipient factors increase the likelihood of surgical risk and of graft failure after liver transplantation? |
| **Posttransplant** | Is there an immunosuppressant-weaning protocol that can reduce toxicity without compromising graft survival? <br> Does treatment of fatty liver disease with caspase inhibitors, PPAR, FXR agonists, or antifibrotics prevent posttransplant fat deposition and improve post-liver transplantation outcomes? <br> Does the microbiome play a role in liver transplantation rejection or success? |

HCC = hepatocellular carcinoma, HCV = hepatitis C virus, HBV = hepatitis B virus, CMV = cytomegalovirus, PPAR = peroxisome proliferator-activated receptors, FXR = farnesoid X receptor