# LIVER TRANSPLANT ROADMAP

### Patient & Doctor Agree On Need for Transplant

### Select Transplant Center

Location
Wait time for transplant

Record of success

Can register at multiple centers

## Transplant Evaluation

 ${\sf Blood\ work}$ 

**Imaging** 

Mental readiness

Physical readiness Financial support

Support system

#### Placement on Transplant List

Transplant center receives notification from UNOS

Transplant center notifies patient

UNOS manages the process

MELD score determines priority

#### **Living Donor**

Eliminates timing uncertainty associated with waiting for a liver

Less than 10% of transplants are from living donors, but the number is growing

Once on the transplant list, allows the patient to receive a liver without regard to placement on the list

#### **Deceased Donor**

Notification will come from UNOS to the transplant center that a liver is available for transplant

Transplant center notifies patient

Uncertainty as to when a liver will become available

# Transplant Operation

Gallbladder removed
Operating typically lasts
6 to 12 hours

#### Surgery Recovery

Typically 1 to 3 days in the ICU Then moved to step-down unit

Typically discharged in 10-20 days

Complications result in longer hospital stay

#### First 3 Months Post-Transplant

Highest risk of complications & rejection

Frequent blood draws to test for signs of rejection

Regular clinic visits

Begin medications (see reverse page for more information)

Adjust dosages as required

Physical therapy to regain strength

## **3- Months Post-Transplant**

Gradual return to normal activities

Less frequent clinic visits

Medication is lifelong with continuing dosage adjustments

Maintain lifestyle changes to avoid recurrence



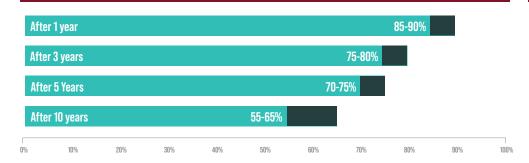


# **LIVER TRANSPLANT ROADMAP**

### MOST COMMONLY USED POST-TRANSPLANT MEDICATIONS

Medication	Description	Duration of Use After Transplant
Prednisone	Prevent rejection; used in combination with other rejection medications	Short duration
Cellcept (Myfortic)	Prevent rejection; used in combination with other rejection medications	Short duration or lifelong
Tacrolimus (Progaf, Envarus, Astagraf)	Prevent rejection; most commonly used anti-rejection drug	Lifelong
Cyclosporine (Neoral, Gengraf)	Prevent rejection; alternative to tacrolimus	Short duration or lifelong
Sirolimus (Rapamune)	Prevent rejection; alternative to tacrolimus	Lifelong
Everlimus	Prevent rejection; alternative to tacrolimus	Lifelong
Nystatin/Fluconazole	Prevent infection	Short duration
Bactrim	Prevent infection	Short duration
Valcyte	Prevent CMV or herpes	Short duration
Magnesium oxide	Prevent low magnesium	Could be lifelong

### TRANSPLANT SURVIVAL RATES



## **ORGAN REJECTION**

- Less than 30% of patients experience some form of rejection
- Can be mild and treatable with medication adjustments
- Chronic rejection may require a new transplant; happens about 5-7% of the time in the first year and 10-20% long-term

#### WHAT IS UNOS?

- UNOS is the United Network for Organ Sharing
- O UNOS manages the National Transplant Waiting List
- It operates the computer system that matches donor organs with waiting recipients across the country
- It is responsible for ensuring that organs are donated fairly and efficiently, based on medical need and location

### **MELD SCORE**

MELD is the acronym for Model for End-Stage Liver Disease. The score is calculated using five blood factors:

- O Bilirubin Indicates liver's ability to remove bile.
- INR (International Normalized Ratio) Measures blood clotting ability.
- Creatinine Reflects kidney function.
- Sodium Helps identify risk of complications like fluid buildup.
- Albumin Measures liver health by measuring a protein produced by the liver

MELD scores run from 6 (healthy) to 40. The median MELD score of patients receiving a transplant is 31 (as of May 2025). The MELD score determines the priority for receiving a liver for transplant. "Exception points" are granted to those with specified conditions, such as Hepatocellular Carcinoma, which moves patients higher on the priority list.

### **HOW ARE ORGANS ALLOCATED?**

Organs are offered to the sickest compatible patients within a defined distance from the hospital of the donor

- First 150 miles
- Than 250 and finally 500 miles

Compatibility determined

- Blood type
- O Body size
- Urgency status (usually MELD score)



