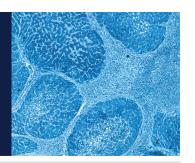
# Nonalcoholic fatty liver disease: a growing indication for transplant





As the prevalence of obesity increases in the United States, the incidence of nonalcoholic fatty liver disease, and liver transplantation, is also rising.\*

## What is nonalcoholic fatty liver disease?

Nonalcoholic fatty liver disease (NAFLD), also known as nonalcoholic steatohepatitis, is a metabolic syndrome. Weight loss and liver transplantation are currently the only cures for NAFLD.

- NAFLD typically presents as an unexpected abnormality in liver function tests, usually the alanine aminotransferase (ALT) test, in people who otherwise feel well.
- The underlying cause is usually one or all of the following:
  - Obesity
  - High blood lipids in nonobese people
  - Diabetes
  - Genetic factors
- In people over the age of 50, the first indication of NAFLD may be a sign of cirrhosis.
- Studies are underway to determine the precise risk of progression of NAFLD to cirrhosis; at this time, it is estimated at 20 percent.

# Evaluation and criteria for transplant

- If the cause of NAFLD, such as obesity or diabetes, is not treated, the condition may progress to liver failure and/or liver cancer and require liver transplantation.
- The evaluation for a transplant is complex and generally requires several months.
- Even patients who are feeling well should be evaluated for a liver transplant at the first sign of liver failure.
- The work of the research team at UCSF in downstaging of liver cancer, led by Francis Yao, MD,† allows patients with initial tumor burden exceeding conventional criteria to be eligible for liver transplant.



<sup>\*</sup> National Institute of Diabetes and Digestive and Kidney Diseases.

<sup>†</sup> Yao FY, Mehta N, Flemming JA, Dodge J, Hameed B, Fix O, Hirose R, Fidelman N, Kerlan RK, Roberts JP. Downstaging of hepatocellular cancer before liver transplant: long-term outcome compared to tumors within Milan criteria. *Hepatology*. 2015;61:1968-1977.

### UCSF Liver Transplant Program

www.ucsfhealth.org/livertransplant

With high patient volumes and outstanding survival rates, UCSF Health is a leader in liver transplantation.

- Our program's one-year survival rate is 96.11 percent, among the highest in the country.\*
- More liver transplants are performed here than at any other hospital in California.<sup>†</sup>
- Our researchers are leading and participating in several clinical trials to discover new treatments for NAFLD.

#### **ONE-YEAR SURVIVAL RATES\***

UCSF			96.11%
National A	verage	92.33%	
30%	85%	90%	95%

### ADULT LIVER TRANSPLANTS AT UCSF, 2017†

Deceased Donor			151	
	Living Donor 29			
0	50	100	150	200

### **OUR TEAM**

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<sup>\*</sup> Scientific Registry of Transplant Recipients, University of California San Francisco Medical Center SRTR Program-Specific Report, January 5, 2018. One-year survival rates are for living donor and deceased donor transplants combined.

<sup>&</sup>lt;sup>†</sup> Organ Procurement and Transplantation Network (OPTN), 2017 Center Data.