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Briefing Series on the Role of Psychology in Health Care *Liver Transplantation*

- Liver transplantation is a life-saving intervention for an increasing number of patients with end-stage liver disease, often caused by cirrhosis secondary to chronic hepatitis or alcohol abuse.¹ Some hepatocellular carcinomas can also be successfully treated with transplantation.²
- Steady improvements in graft and patient survival have been achieved over the past two decades. In 2011, more than 5,800 adult liver transplants were performed in the United States. The expected, unadjusted 1-year survival for these patients is estimated at about 88%.³
- In the same year, nearly 2,500 patients died on the waiting list for a transplant, and nearly 500 were removed from the list because they became too sick for the procedure.³ The shortage of available livers necessitates careful selection of liver transplant candidates (and living liver donors).
- Liver recipients generally experience sustained improvement in their physical, social, and emotional well-being; however, a significant minority of patients do experience excess morbidity and should be targeted for additional supportive care and intervention.⁴

| *How Psychologists Can Help*

Pre-transplant assessment and care

- A psychologist's assessment can help interdisciplinary transplant teams determine who best will benefit from liver transplant surgery.
- The psychologist, in particular, is in a good position to assess a candidate's understanding of the procedure, general cognitive capacity (which may be impaired due to hepatic encephalopathy), awareness of alternatives, coping resources, likelihood of adherence, alcohol and drug use, and a presence of comorbid psychological diagnoses.⁵
- In some cases, psychological treatment for alcohol use, drug use, smoking cessation, or weight loss may be a pre-condition for candidacy.⁶

Post-transplant care

- Psychiatric comorbidity is not uncommon among liver recipients. More than half of patients experience at least one episode of significant anxiety or depression within the first 2 years post-transplantation.⁷
- Symptoms of posttraumatic stress disorder are also prevalent, with one study reporting nearly a quarter of patients displaying such symptoms.⁸
- Liver recipients with consistently high levels of depression may be more than twice as likely to die (all causes) compared to a low-depression group, even after controlling for relevant medical factors.⁹
- Liver recipients who experience no psychosocial improvement 6 months after their procedure may be at risk for continued decline for the subsequent 18 months.¹⁰
- Although additional longitudinal data are necessary to produce a robust predictive model, there appears to be a quality-of-life benefit conferred by male sex, being married, having higher levels of psychosocial support, attaining more education, and having private insurance coverage.⁴
- Psychological interventions can benefit postsurgical quality-of-life outcomes, as suggested by one trial of psychoeducational counseling and an exercise and diet trial.^{11, 12}

References

1. Starzl, T. E., Demetris, A. J., & Van Thiel, D. (1989). Liver transplantation. *New England Journal of Medicine*, 321(16), 1014-1022.
2. De Lope, C. R., Tremosini, S., Forner, A., Reig, M., & Bruix, J. (2012). Management of HCC. *Journal of Hepatology*, 56(1), S75-S87.
3. Organ Procurement and Transplantation Network (OPTN) and Scientific Registry of Transplant Recipients (SRTR). (2012). *OPTN/SRTR 2011 annual data report: Liver*. Rockville, MD: Department of Health and Human Services, Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation.
4. Butt, Z., Parikh, N. D., Skaro, A. I., Ladner, D., & Cella, D. (2012). Quality of life, risk assessment, and safety research in liver transplantation: New frontiers in health services and outcomes research. *Current Opinion in Organ Transplantation*, 17(3), 241-247.
5. Olbrisch, M. E., Benedict, S. M., Ashe, K., & Levenson, J. L. (2002). Psychological assessment and care of organ transplant patients. *Journal of Consulting and Clinical Psychology*, 70, 771-783.
6. Levenson, J. L., & Olbrisch, M. E. (1993). Psychosocial evaluation of organ transplant candidates: A comparative survey of process, criteria, and outcomes in heart, liver, and kidney transplantation. *Psychosomatics*, 34(4), 314-323.
7. Colis, I. Burroughs, A., Rolles, K., & Lloyd, G. (1995). Psychiatric and social outcome of liver transplantation. *British Journal of Psychiatry*, 166(4), 521-524.
8. Rothenhäusler, H. B., Ehrentraut, S., Kapfhammer, H. P., Lang, C., Zachoval, R., Bilzer, M., Schelling, G., & Gerbes, A. L. (2002). Psychiatric and psychosocial outcome of orthotopic liver transplantation. *Psychotherapy and Psychosomatics*, 71, 285-297.
9. DiMartini, A., Dew, M. A., Chaiffetz, D., Fitzgerald, M. G., Devera, M. E., & Fontes, P. (2011). Early trajectories of depressive symptoms after liver transplantation for alcoholic liver disease predicts long-term survival. *American Journal of Transplantation*, 11(6), 1287-1295.
10. Goetzmann, L., Ruegg, L., Stamm, M., Ambühl, P., Boehler, A., Halter, J., Muellhaupt, B., Noll, G., Schanz, U., Wagner-Huber, R., Spindler, A., Buddeberg, C., & Klaghofer, R. (2008). Psychosocial profiles after transplantation: A 24-month follow up of heart, lung, liver, kidney, and allogeneic bone-marrow patients. *Transplantation*, 86(5), 662-668.
11. Sharif, F., Mohebbi, S., Tabatabaee, H.-R., Saberi-Firoozi, M., & Gholamzadeh, S. (2005). Effects of psycho-educational intervention on health-related quality of life (QOL) of patients with chronic liver disease referring to Shiraz University of Medical Sciences. *Health and Quality of Life Outcomes*, 3, 81.
12. Krasnoff, J. B., Vintro, A. Q., Ascher, N. L., Bass, N. M., Paul, S. M., Dodd, M. J., & Painter, P. L. (2006). A randomized trial of exercise and dietary counseling after liver transplantation. *American Journal of Transplantation*, 6(8), 1896-1905.

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