Invited Commentary

The Risk of Risk Stratification in Liver Transplant

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In an article in this issue of *JAMA Surgery*, Panayotova and colleagues[1] describe the development of the Liver Immune Frailty Index (LIFI). The goal of this tool is to provide an objective measurement that refines assessment of liver transplant candidacy, guides perioperative management, and improves transplant outcomes.

Related article

The overarching problem driving the development of predictive tools for liver transplant is that current tools are incomplete. For example, the Model for End-Stage Liver Disease (MELD), as well as its refinements, MELD-Na and MELD-3.0, are designed to predict short-term end-stage liver disease survival but not to predict posttransplant outcomes.[2] The Liver Frailty Index is designed to identify patients with physical frailty and is predictive of waitlist mortality in liver transplant candidates.[3] In general, these tools can be "1-dimensional," focusing on laboratory test results or physical performance alone, but it is well known that the clinical picture of decompensated cirrhosis is multidimensional and dynamic.

As tools like the LIFI are developed, we need to temper our excitement about having found the panacea for risk assessment in liver transplant and approach their implementation with caution. First, we should avoid using any single tool to categorically deny access to listing for transplant. If a potential liver transplant patient has a high frailty score,[3] psychosocial risk score,[4] or LIFI, we need to assess the risk factors that contribute to the high score to determine if they are absolute contraindications to listing. Second, rather than use the outcomes of risk assessment to limit access to transplant, we should use them to identify barriers to listing and determine intervention pathways that can overcome these barriers. For example, if a patient is determined to be physically frail, providing a prehabilitation and nutrition plan with regular follow-up gives this patient a better chance of survival to liver transplant. Finally, tools like the LIFI can help us tailor postoperative management of liver transplant patients to optimize outcomes. Perhaps, we will find that patients with high LIFI scores can be managed with less immunosuppression because they have lower rates of rejection, which allows their immune systems to recover posttransplant.

We believe that the concept of the LIFI is valuable and provides promise for better risk stratification of candidates for liver transplant. We hope to see it and other tools developed to identify barriers to transplant where intervention can optimize candidacy rather than deny listing for transplant. However, we recognize that not every patient will be a transplant candidate and that we will encounter patients who are too frail physically, psychosocially, or immunologically to successfully undergo transplant. This should be the last resort of risk stratification rather than the first instinct.

ARTICLE INFORMATION

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