

A new score to predict outcome after liver transplantation

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Abstract

Background: An ideal liver allocation system should reduce waitlist mortality and also improve post-transplant survival. Aim: To identify a new scoring system that predicts recipient survival at 3 months following liver transplantation (LT) in the Romanian program. Methods: We included into analysis 242 adult patients (183 patients within the training set and 59 in the validation cohort) with liver cirrhosis consecutively transplanted between January 2012 and June 2014.

Results: Post-transplant overall survival was 84.2% at 3 months. Independent risk factors for survival following LT were: recipient age >53 years ($p=0.01$), serum albumin <2.7g/dl ($p=0.02$), diabetes mellitus ($p=0.14$), hyponatremia <130mmol/L, presence of non-malignant portal vein thrombosis ($p=0.01$), retransplantation ($p=0.0005$) and donor resuscitation following cardiac arrest ($p=0.03$). AUROC of RoSOFT score is 0.86 in both training and validation set. Diagnostic accuracy of RoSOFT for predicting 3 months mortality is 89.6%. Recipients with HCC outside Milan criteria had a significantly lower MELD score at LT compared to patients inside Milan ($p=0.008$) and received a higher proportion of marginal organs ($p=0.005$), but survival did not differ ($p=0.47$).

Conclusions: Combined recipient and donor risk factors can accurately predict 3-months survival following LT in our National LT Program and can be used to improve donor-recipient matching.

Key words: liver transplantation, marginal donor, MELD, outcome, scoring system

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