
Hepatocellular carcinoma (HCC) is a common indication for liver transplantation (LT). Recent data suggest that body composition features strongly affect post–LT mortality. We examined the impact of body composition on post–LT mortality in patients with HCC. Data on adult LT recipients who received Model for End–Stage Liver Disease exception for HCC between February 29, 2002, and December 31, 2013, and who had a computed tomography (CT) scan any time 6 months prior to LT were reviewed (n = 118). All available CT scan Digital Imaging and Communication in Medicine files were analyzed using a semiautomated high throughput methodology with algorithms programmed in MATLAB. Analytic morphomics measurements including dorsal muscle group (DMG) area, visceral and subcutaneous fat, and bone mineral density (BMD) were taken at the bottom of the eleventh thoracic vertebral level. Thirty-two (27%) patients died during the median follow-up of 4.4 years. The number of HCC lesions (hazard ratio [HR], 2.81; P < 0.001), BMD (HR = 0.90/Hounsfield units [HU]; P = 0.03), pre–LT locoregional therapy (HR = 0.14; P < 0.001), and donor age (HR = 1.05; P < 0.001) were the independent predictors of post–LT mortality. DMG area did not affect post–LT survival. In conclusion, in addition to number of HCC lesions and pre–LT locoregional therapy, low BMD, a surrogate for bone loss rather than DMG area, was independently associated with post–LT mortality in HCC patients. Bone loss may be an early marker of deconditioning that precedes sarcopenia and may affect transplant outcomes. Liver Transplantation 22 1092–1098 2016 AASLD.