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**BODY MASS INDEX AND MORTALITY IN KIDNEY TRANSPLANT RECIPIENTS: A META-ANALYSIS**

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While higher body mass index (BMI) is linked to survival advantage in certain populations such as chronic hemodialysis (HD) patients, the presence of this ‘obesity survival paradox’ has been controversial in kidney transplant recipients. Therefore, we systematically reviewed the literature on the possible effects of pre-transplantation BMI on all-cause mortality in this population.

We searched MEDLINE, EMBASE, Web of Science, CINAHL, and Cochrane CENTRAL for large longitudinal comparative studies. Two investigators independently selected the studies using predefined criteria, abstracted the data, and assessed the quality using the Ottawa-Newcastle Assessment Scale. In addition to the qualitative synthesis, we quantitatively pooled the results of the studies with clinical, methodological, and statistical homogeneity.

We initially retrieved 7,123 records, from which 11 studies (total ‘n’: 305,392) were finally included in our systematic review, and 4 studies (total ‘n’: 154,115) were included in our meta-analyses. Our re-analyses of the largest reported dataset showed pre-transplantation BMI to have a J-shaped relationship with mortality. Moreover, our meta-analyses showed that compared to normal BMI, ‘underweight’ (HR: 1.09; 95% CI: 1.02-1.20), overweight (HR: 1.07; 95% CI: 1.04-1.12), and obese (HR: 1.20; 95% CI: 1.14-1.23) are associated with higher mortality. However, our sensitivity analyses casted doubt on whether being ‘overweight’ is related to higher mortality.

Both extremes of pre-transplantation BMI are linked to higher mortality in kidney transplant recipients, and the presence of obesity survival paradox is unlikely in this population. However, our results should neither direct physicians to strictly select kidney transplantation candidates based on their BMIs, nor lead them to encourage waitlisted candidates to lose weight.