Correlates and outcomes of alcohol use after single solid organ transplantation: A systematic review and meta-analysis


BACKGROUND
Reviews on alcohol use in transplant recipients focus on liver recipients and their risk of post-transplant rejection, but do not assess alcohol use in kidney, heart, or lung transplant recipients. This systematic review and meta-analysis aims to synthesize the evidence on correlates and outcomes of any alcohol use and at-risk drinking after solid organ transplantation (Tx).

METHODS
We searched 4 databases for quantitative studies in adult heart, liver, kidney and lung Tx recipients, investigating associations between post-Tx alcohol use and correlates and/or clinical, economic or quality of life outcomes. Paper selection, data extraction and quality assessment were performed by 2 reviewers independently. A pooled odds ratio (OR) was computed for each correlate/outcome reported ≥5 times.

RESULTS
Of the 5331 studies identified, 76 were included in this systematic review (93.3% on liver Tx; mean sample size 148.9 (SD = 160.2); 71.9% male; mean age 48.9 years (SD = 6.5); mean time post-Tx 57.7 months (SD = 23.1)). On average, 23.6% of patients studied used alcohol post-transplant. Ninety-three correlates of any post-Tx alcohol use were identified, and 9 of the 19 pooled ORs were significantly associated with a higher odds for any post-Tx alcohol use: male gender, being employed post-transplant, smoking pre-transplant, smoking post-transplant, a history of illicit drug use, having first-degree relatives who have alcohol-related problems, sobriety <6 months prior to transplant, a history of psychiatric illness, and having received treatment for alcohol-related problems pre-transplant. On average 15.1% of patients had at-risk drinking. A pooled OR was calculated for 6 of the 47 correlates of post-Tx at risk drinking investigated, of which pre-transplant smoking was the only correlate being significantly associated with this behavior. None of the
outcomes investigated were significantly associated with any use or at-risk drinking.

CONCLUSION
Correlates of alcohol use remain under-investigated in solid organ transplant recipients other than liver transplantation. Further research is needed to determine whether any alcohol use or at-risk drinking is associated with poorer post-transplant outcomes. Our meta-analysis highlights avenues for future research of higher methodological quality and improved clinical care.

PROTOCOL REGISTRATION
PROSPERO protocol CRD42015003333.