

SDC 2, Table. Associations of recipient, donor, and transplant case characteristics with liver transplant maintenance immunosuppression regimen use in months 7-12 post-transplant compared with triple therapy (reference regimen)

	Tac + MPA/AZA	Tac alone, Tac + Pred	mTORi-based	CsA-based	Other
Induction regimen					
No induction	0.98 (0.82,1.16)	1.00 (0.84,1.18)	0.76 (0.61,0.94)*	0.99 (0.80,1.22)	0.93 (0.72,1.22)
Thymoglobulin	1.05 (0.75,1.48)	1.12 (0.81,1.54)	1.11 (0.75,1.65)	0.96 (0.64,1.44)	1.00 (0.61,1.62)
IL-2 receptor antibody	Reference	Reference	Reference	Reference	Reference
Alemtuzumab	0.91 (0.32,2.59)	2.96 (1.14,7.71)*	1.25 (0.39,4.07)	0.69 (0.17,2.71)	0.91 (0.24,3.48)
Other induction	0.95 (0.52,1.73)	1.07 (0.61,1.87)	1.64 (0.78,3.48)	1.07 (0.54,2.13)	1.21 (0.52,2.82)
Recipient characteristic					
Recipient age, years					
19 to 30	Reference	Reference	Reference	Reference	Reference
31 to 45	0.76 (0.59,0.99)*	0.89 (0.69,1.14)	0.66 (0.45,0.96)*	0.85 (0.58,1.26)	0.90 (0.60,1.36)
46 to 60	1.26 (1.07,1.48)*	1.41 (1.20,1.66)‡	1.52 (1.22,1.89)‡	1.49 (1.19,1.87)†	1.28 (0.98,1.67)
>60	1.40 (1.15,1.70)†	1.72 (1.42,2.07)‡	2.10 (1.64,2.69)‡	1.49 (1.19,1.87)†	1.72 (1.27,2.33)‡
Male	0.98 (0.87,1.09)	0.87 (0.78,0.97)*	0.93 (0.81,1.07)	0.93 (0.80,1.07)	1.02 (0.86,1.21)
Race					
White	Reference	Reference	Reference	Reference	Reference
Black	0.69 (0.58,0.83)‡	0.66 (0.55,0.79)‡	0.69 (0.55,0.88)†	0.62 (0.49,0.80)‡	1.06 (0.81,1.38)
Hispanic	0.79 (0.67,0.94)*	0.72 (0.61,0.85)‡	0.61 (0.49,0.76)‡	0.78 (0.63,0.97)*	0.79 (0.60,1.03)
Other	1.22 (0.96,1.56)	0.82 (0.65,1.05)	0.94 (0.69,1.28)	0.78 (0.56,1.10)	0.85 (0.56,1.28)
Body mass index, kg/m ²					
<18.5	0.83 (0.57,1.22)	1.22 (0.86,1.74)	0.98 (0.60,1.59)	1.29 (0.80,2.09)	1.24 (0.70,2.19)
18.5 to 24.9	Reference	Reference	Reference	Reference	Reference
25 to 30	1.19 (1.04,1.36)*	1.23 (1.08,1.40)†	1.30 (1.10,1.54)*	1.14 (0.96,1.35)	1.29 (1.04,1.59)*
>30	1.16 (1.01,1.33)*	1.15 (1.01,1.32)*	1.15 (0.97,1.38)	1.02 (0.85,1.22)	1.19 (0.96,1.48)
Unknown	1.32 (0.86,2.01)	0.91 (0.60,1.38)	1.29 (0.78,2.13)	0.86 (0.47,1.58)	0.95 (0.50,1.79)
Cause of liver failure					
Hepatocellular carcinoma	1.33 (1.07,1.65)*	1.51 (1.22,1.86)‡	2.15 (1.64,2.80)‡	1.49 (1.13,1.96)*	1.03 (0.74,1.43)
Hepatitis C	1.23 (1.02,1.49)*	1.67 (1.39,2.01)‡	1.36 (1.07,1.74)*	2.16 (1.70,2.74)‡	1.07 (0.80,1.43)
Hepatitis B	1.07 (0.71,1.61)	1.48 (0.99,2.21)	1.33 (0.80,2.22)	1.49 (0.88,2.52)	0.92 (0.48,1.77)
Metabolic	0.87 (0.60,1.26)	1.00 (0.70,1.44)	1.21 (0.76,1.93)	1.04 (0.63,1.70)	0.85 (0.47,1.52)
Alcoholic	Reference	Reference	Reference	Reference	Reference
NASH	0.94 (0.73,1.20)	0.94 (0.73,1.21)	1.06 (0.78,1.45)	1.02 (0.74,1.41)	0.85 (0.58,1.25)

	Tac + MPA/AZA	Tac alone, Tac + Pred	mTORi-based	CsA-based	Other
Other	0.55 (0.46,0.66)‡	0.62 (0.52,0.74)‡	0.71 (0.57,0.90)*	0.58 (0.46,0.74)‡	0.63 (0.48,0.83)†
Comorbidity					
Diabetes	1.20 (0.50,2.88)	0.72 (0.30,1.73)	1.28 (0.43,3.79)	0.80 (0.26,2.46)	0.93 (0.23,3.67)
Coronary artery disease/Angina	0.91 (0.61,1.37)	0.97 (0.66,1.44)	0.77 (0.47,1.24)	0.72 (0.43,1.22)	1.26 (0.73,2.18)
COPD	0.95 (0.64,1.40)	0.70 (0.48,1.04)	0.72 (0.43,1.21)	0.83 (0.50,1.37)	0.67 (0.34,1.33)
Hypertension	0.96 (0.83,1.10)	0.87 (0.75,1.00)*	0.94 (0.79,1.12)	0.90 (0.75,1.09)	0.84 (0.67,1.05)
Cerebral vascular disease	0.84 (0.42,1.69)	1.05 (0.55,2.01)	1.30 (0.57,2.95)	0.97 (0.42,2.23)	1.21 (0.47,3.11)
Peripheral vascular disease	1.26 (0.69,2.29)	0.85 (0.46,1.56)	0.41 (0.18,0.95)*	0.84 (0.39,1.77)	1.09 (0.45,2.64)
Lab MELD score					
10 to 14	1.03 (0.89,1.19)	1.24 (1.07,1.43)*	1.14 (0.94,1.37)	0.96 (0.79,1.15)	1.06 (0.85,1.33)
15 to 19	Reference	Reference	Reference	Reference	Reference
20 to 24	1.06 (0.88,1.27)	1.13 (0.95,1.35)	1.20 (0.95,1.52)	0.98 (0.77,1.24)	0.82 (0.61,1.10)
25 to 29	1.17 (0.94,1.45)	1.06 (0.85,1.30)	1.29 (0.98,1.69)	0.97 (0.73,1.28)	0.96 (0.69,1.35)
30 to 34	0.93 (0.74,1.18)	1.00 (0.79,1.25)	1.09 (0.81,1.46)	0.80 (0.59,1.09)	0.98 (0.68,1.41)
35 to 39	0.85 (0.65,1.11)	0.93 (0.72,1.20)	0.93 (0.65,1.31)	0.92 (0.65,1.29)	1.26 (0.87,1.84)
≥40	0.99 (0.75,1.31)	0.96 (0.72,1.27)	1.29 (0.91,1.84)	0.97 (0.67,1.40)	0.92 (0.58,1.44)
Primary insurance					
Private	1.26 (1.12,1.41)‡	1.12 (1.00,1.25)	1.11 (0.96,1.28)	1.05 (0.91,1.22)	1.10 (0.92,1.32)
Public	Reference	Reference	Reference	Reference	Reference
Self/Other	0.87 (0.40,1.88)	1.71 (0.90,3.25)	1.15 (0.52,2.52)	0.54 (0.18,1.68)	1.45 (0.55,3.79)
Previous transplant	0.57 (0.47,0.70)‡	0.78 (0.65,0.93)*	0.69 (0.53,0.88)*	0.92 (0.72,1.18)	0.84 (0.62,1.13)
eGFR at discharge					
≥90	Reference	Reference	Reference	Reference	Reference
60 to 89	0.99 (0.85,1.15)	0.98 (0.85,1.14)	0.78 (0.64,0.95)*	1.11 (0.90,1.36)	1.09 (0.86,1.38)
30 to 59	0.84 (0.71,0.99)*	0.81 (0.69,0.95)*	1.13 (0.93,1.38)	1.24 (1.00,1.53)	0.97 (0.75,1.25)
0 to 29	0.67 (0.50,0.89)*	0.72 (0.54,0.95)*	1.98 (1.44,2.72)‡	1.50 (1.07,2.10)*	0.88 (0.57,1.36)
Missing	0.83 (0.56,1.23)	0.90 (0.63,1.31)	0.93 (0.57,1.52)	1.28 (0.78,2.10)	1.22 (0.67,2.20)
Function status at 6 months after transplant					
Severe impairment	0.62 (0.39,0.99)*	1.18 (0.77,1.80)	1.03 (0.62,1.70)	1.96 (1.25,3.09)*	0.96 (0.50,1.82)
Moderate impairment	0.68 (0.53,0.86)	1.07 (0.85,1.35)	1.20 (0.91,1.58)	1.33 (1.01,1.74)*	1.03 (0.73,1.46)
Mild impairment	Reference	Reference	Reference	Reference	Reference
Unknown	0.94 (0.77,1.16)	0.98 (0.80,1.20)	0.88 (0.67,1.15)	0.95 (0.72,1.24)	0.91 (0.66,1.27)
Malignancy history	1.04 (0.90,1.21)	0.99 (0.86,1.15)	1.18 (0.99,1.42)	0.91 (0.75,1.10)	1.03 (0.81,1.30)

	Tac + MPA/AZA	Tac alone, Tac + Pred	mTORi-based	CsA-based	Other
Malignancy incident through 6 months	0.83 (0.42,1.63)	1.59 (0.88,2.88)	6.07 (3.26,11.27)‡	1.69 (0.80,3.56)	1.83 (0.75,4.43)
Acute reject at 6 months	0.32 (0.26,0.38)‡	0.33 (0.27,0.39)‡	0.72 (0.58,0.89)*	0.49 (0.39,0.62)‡	0.64 (0.48,0.84)†
Donor and transplant factors					
Donor Risk Index score	Reference	Reference	Reference	Reference	Reference
0 to <1.5	0.95 (0.84,1.09)	0.93 (0.82,1.05)	0.91 (0.78,1.08)	1.00 (0.85,1.19)	1.13 (0.93,1.39)
1.5 to <2.0	0.87 (0.74,1.02)	0.99 (0.84,1.15)	0.90 (0.74,1.10)	1.01 (0.82,1.24)	1.01 (0.79,1.30)
2.0 to <2.5	0.98 (0.79,1.22)	0.87 (0.71,1.08)	0.77 (0.58,1.02)	0.86 (0.65,1.14)	0.92 (0.65,1.31)
≥2.5	0.85 (0.63,1.14)	0.94 (0.71,1.25)	0.61 (0.40,0.93)*	0.60 (0.40,0.90)*	1.49 (0.97,2.28)
LVD	Reference	Reference	Reference	Reference	Reference
Transplant year					
2006 to 2009	Reference	Reference	Reference	Reference	Reference
2010 to 2012	1.01 (0.86,1.20)	0.84 (0.72,0.99)*	0.80 (0.66,0.98)*	1.00 (0.81,1.23)	0.86 (0.68,1.09)
2013 to 2014	1.01 (0.85,1.20)	0.75 (0.63,0.88)†	0.88 (0.71,1.09)	0.68 (0.54,0.85)†	0.52 (0.40,0.68)‡

P-values: * $0.02 \leq p < 0.05$; † $0.0001 \leq p < 0.01$; ‡ $p < 0.0001$

Abbreviations: AZA, azathioprine; BMI, body mass index; CsA, cyclosporine; eGFR, estimated glomerular filtration rate; Hepatocellular carcinoma, hepatocellular carcinoma; Hepatitis C, hepatitis C virus; Hepatitis B, hepatitis B virus; COPD, chronic obstructive pulmonary disease, LVD, living donor; mTOR: mammalian target of rapamycin inhibitor; MPA, mycophenolate acid; NASH, non-alcoholic steatohepatitis; Pred, prednisone; Tac, Tacrolimus.