

**Supplementary Table 1 Subanalysis of patients with overlap syndrom
PSC/AIH and PSC-only**

Characteristic	Overlap PSC/AIH (<i>n</i> = 33)	PSC-only (<i>n</i> = 98)	<i>P</i> value
Age at LT, median (IQR)	36.0 (28.0–43.0)	39.5 (30.2–48.8)	ns ^a
Male sex	21 (63.6%)	75 (76.5%)	ns ^b
IBD			
UC, no. (%)	15 (45.5%)	72 (73.5%)	p = 0.0052 ^b
CD, no. (%)	2 (6.1%)	4 (4.1%)	ns ^b
Liver cirrhosis prior LT, no. (%)	30 (90.9%)	79 (80.6%)	ns ^b
Decompensation prior LT, no. (%)	21 (63.6%)	37 (37.8%)	p = 0.0144 ^b
CPS at LT, median (IQR)	7.0 (6.0–9.0)	6.0 (5.0–8.0)	p = 0.0079 ^a
MELD at LT, median (IQR)	15.0 (13.0–20.0)	15.0 (11.0–18.0)	ns ^b
Indication - ESLD, no. (%)	24 (72.7%)	48 (49.0%)	p = 0.0254 ^b
Full liver graft, no. (%)	31 (93.9%)	89 (90.8%)	ns ^b
DBD-ECD, no. (%)	14 (42.4%)	18 (18.4%)	p = 0.0092 ^b
Donor - recipient sex mismatch, no. (%)	10 (30.3%)	41 (41.8%)	ns ^b
Cyclosporine, no. (%)	2 (6.1%)	16 (16.3%)	ns ^b
Duct-to-duct anastomosis, no. (%)	22 (66.7%)	31 (31.6%)	p = 0.0008 ^b
Episode of ACR, no. (%)	11 (33.3%)	45 (45.9%)	ns ^b
Multiple episodes of ACR, no. (%)	3 (9.1%)	9 (9.2%)	ns ^b
CMV infection, no. (%)	6 (18.2%)	21 (21.4%)	ns ^b
BT after LT, no. (%)	3 (9.1%)	14 (14.3%)	ns ^b
Colectomy prior LT, no. (%)	2 (6.1%)	4 (4.1%)	ns ^b

Colectomy after LT, no. (%)	4 (12.1%)	10 (10.2%)	ns ^b
Length of hospitalization (d)	20.0 (14.0–30.0)	21.0 (15.0–31.0)	ns ^a
reLT, no. (%)	5 (15.2%)	14 (14.3%)	ns ^b

^aMann-Whitney test.

^bFisher's exact test.

ACR: Acute cellular rejection, AIH: Autoimmune Hepatitis, BT: Biologic therapy, CPS: Child-Pugh score, DBD: Donor after brain death expanded donor criteria, ESLD: End-Stage Liver Disease; LT: Liver Transplantation; MELD: Model For End-Stage Liver Disease, ns: not significant, PSC: Primary Sclerosing Cholangitis, IBD: Inflammatory Bowel Disease, UC: Ulcerative Colitis, CD: Crohn's Disease, rPSC: Recurrence Of Primary Sclerosing Cholangitis

Supplementary Table 2 Comparison of patients with rPSC with and without graft failure

Characteristic	Graft failure	rPSC-only	P value
Male sex	15 (83.3%)	18 (69.2%)	ns ^b
Overlap PSC/AIH, no. %	4 (22.2%)	9 (34.6%)	ns ^b
IBD	11 (61.1%)	21 (80.8%)	ns ^b
Indication - ESLD, no. (%)	9 (50.0%)	14 (53.8%)	ns ^b
Full liver graft, no. (%)	18 (100.0%)	21 (80.8%)	0,07 ^b
DBD-ECD, no. (%)	3 (16.7%)	8 (30.8%)	ns ^b
Donor - recipient sex mismatch, no. (%)	8 (44.4%)	11 (42.3%)	ns ^b
Cyclosporine, no. (%)	4 (22.2%)	1 (3.8%)	ns ^b
Duct-to-duct anastomosis, no. (%)	3 (16.7%)	13 (50.0%)	0,03 ^b
Episode of ACR, no. (%)	11 (61.1%)	11 (42.3%)	ns ^b
Multiple episodes of ACR, no. (%)	6 (33.3%)	2 (7.7%)	0,047 ^b
CMV infection, no. (%)	8 (44.4%)	8 (30.8%)	ns ^b
BT after LT, no. (%)	1 (5.6%)	3 (11.5%)	ns ^b
Age at LT, median (IQR)	31	38	ns ^a
Time to dg. rPSC	4,816667	5,647222	ns ^a

^aMann-Whitney test.

^bFisher's exact test.

ACR: Acute cellular rejection, AIH: Autoimmune Hepatitis, BT: Biologic therapy, CMV: Cytomegalovirus, DBD: Donor after brain death expanded donor criteria, ESLD: End-Stage Liver Disease, IBD: Inflammatory Bowel Disease, LT: Liver Transplantation; MELD: Model For End-Stage Liver Disease, ns: not significant, PSC: Primary Sclerosing Cholangitis, rPSC: Recurrence Of Primary Sclerosing Cholangitis