

A French Cohort Study of Kidney Retransplantation after Post-Transplant Lymphoproliferative Disorders

Clin J Am Soc Nephrol, doi: <https://doi.org/10.2215/CJN.03790417>

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Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.

Patient		Transplantation with PTLD													Retransplantation																
Gender	Kidney disease	EBV serology	Age	Induction therapy	PTLD delay (months)	PTLD Localization	PTLD extension	EBV viremia	MG	EBV in tumor	Histological classification	PTLD therapy	graft failure delay (after PTLD, months)	PTLD - relisting (months)	PTLD - retransplantation (months)	Age (years)	PRA	EBV serology	EBNA IgG	VCA IgG	EBV viremia	Viral load (copies/ml)	MG	Induction therapy	Maintenance therapy	CNI Mtor inhibitor switch	Anti viral use	follow up (months)	Outcome		
M	GN	nk	29	OKT3	134	LN	M	pos	neg	pos	Monomorphic T cell	chemo	3	93	106	49	0	pos	pos	pos	pos	850	neg	ATG	TAC MMF STE	0	1	45	alive, no recurrence		
M	GN	pos	26	ATG	160	ORL	M	pos	neg	pos	nk	RTX	75	100	106	48	80	pos	pos	pos	neg	nk	neg	ATG IgIV PP	TAC SIRO STE	0	0	23	alive, no recurrence		
F	GN	pos	45	ATG	91	GIT	O	nk	nk	nk	nk	IS lowering	34	40	60	58	0	pos	pos	pos	pos	nk	neg	no	CsA MMF STE	0	0	134	alive, no recurrence		
M	TIN	pos	28	ATG	108	HO	M	pos	neg	neg	Monomorphic B cell	Chemo, RTX	29	65	101	45	57	pos	pos	pos	pos	0	neg	IL2RA RTX IgIV	TAC MMF STE	0	1	61	alive, no recurrence		
M	GN	pos	25	ATG	71	ORL	O	pos	neg	pos	Polymorphic B cell	RTX	19	70	77	38	90	pos	pos	pos	pos	440	neg	IL2RA	TAC MMF STE	0	0	54	graft loss		
M	GN	pos	7	nk	28	LN	M	nk	nk	pos	Monomorphic B cell	nk	73	105	159	23	35	pos	pos	pos	pos	4000	nk	IL2RA IgIV	TAC MMF STE	0	1	67	alive, no recurrence		
F*	TIN	pos	45	nk	1	HO	M	nk	nk	pos	nk	TX	0	nk	142	56	100	pos	pos	pos	pos	nk	nk	neg	IL2RA	TAC MMF STE	0	1	8	graft loss	
														186	1366	63	82	pos	pos	pos	neg	nk	neg	ATG	TAC MMF STE	0	0	38	alive, no recurrence		
M	APKD	pos	54	nk	114	GRAFT	O	nk	nk	nk	nk	TX	0	40	89	62	?	pos	pos	pos	pos	0	neg	no	CsA MMF STE	0	nk	172	alive, no recurrence		
F	GN	pos	35	ATG	27	GRAFT	O	nk	neg	nk	Polymorphic B cell	TX	6	7	93	45	0	pos	nk	nk	nk	nk	nk	IL2RA IgIV PP	CsA MMF STE	0	nk	67	Dead		
M	GN	pos	25	nk	1	GRAFT	O	nk	nk	pos	Monomorphic B cell	TX	1	71	81	32	100	pos	pos	pos	neg	nk	neg	IL2RA	CsA MMF STE	1	0	138	graft loss		
M	GN	pos	39	OKT3	16	GRAFT	O	nk	nk	nk	Monomorphic B cell	Surgery, chemo	20	148	167	54	40	pos	pos	pos	pos	200	neg	IL2RA	TAC MMF STE	0	0	81	alive, no recurrence		
M*	vasc	neg	45	ATG	105	LN	M	nk	nk	neg	Monomorphic B cell	Chemo, RTX	63	65	76	60	0	pos	pos	pos	pos	0	neg	ATG	TAC MMF STE	0	0	38	graft loss		
														128	1383	65	100	pos	pos	pos	pos	0	neg	IL2RA	TAC MMF STE	1	0	12	alive, no recurrence		
M	GN	pos	39	nk	126	LN	O	nk	nk	nk	Monomorphic B cell	nk	46	40	68	55	0	pos	pos	pos	neg	nk	neg	IL2RA	TAC MMF STE	0	1	43	alive, no recurrence		
F	GN	pos	47	nk	140	CNS	O	nk	nk	neg	nk	TX	0	19	57	63	48	pos	pos	pos	pos	1288	neg	IL2RA	TAC MMF STE	0	1	25	alive, no recurrence		
M	TIN	pos	16	OKT3	98	CNS	O	nk	nk	nk	nk	chemo	15	35	38	27	50	pos	neg	pos	pos	520	neg	IL2RA	CsA MMF STE	1	1	110	alive, no recurrence		
M	APKD	pos	48	ATG	105	GIT	O	neg	neg	nk	Monomorphic B cell	Chemo, RTX	90	89	95	65	0	pos	pos	pos	pos	0	neg	ATG	TAC MMF STE	0	1	46	alive, no recurrence		
M	TIN	pos	45	nk	5	LUNG	M	nk	nk	neg	Monomorphic B cell	nk	149	159	166	59	60	pos	pos	pos	pos	7500	neg	ATG	TAC MMF STE	1	0	70	alive, no recurrence		
M	GN	pos	29	0	1	GRAFT	O	neg	neg	pos	Monomorphic B cell	RTX	135	132	166	43	10	pos	nk	nk	nk	nk	nk	ATG RTX IgIV PP	TAC MMF STE	0	nk	40	alive, no recurrence		
F	ND	pos	48	ATG	4	GRAFT	O	nk	neg	pos	Monomorphic B cell	RTX, TX	2	56	112	58	20	pos	pos	pos	nk	nk	neg	IL2RA	TAC MMF STE	0	0	99	alive, no recurrence		
F	GN	pos	37	ATG	9	GRAFT	O	nk	nk	pos	Monomorphic B cell	chemo	2	57	69	43	91	pos	pos	pos	pos	0	neg	ATG	TAC MMF STE	0	0	143	alive, no recurrence		
F	TIN	pos	52	ATG	13	GRAFT	O	neg	neg	pos	Polymorphic B cell	Chemo, RTX	117	117	121	64	0	pos	pos	pos	pos	0	pos	IL2RA	TAC MMF STE	0	1	86	alive, no recurrence		
F	GN	pos	50	ATG	2	GRAFT	O	nk	neg	pos	Monomorphic B cell	TX	2	30	34	53	10	pos	nk	nk	nk	nk	nk	IL2RA	TAC MMF STE	0	1	180	alive, no recurrence		
M*	GN	neg	32	0	2	GRAFT	O	pos	nk	pos	Monomorphic T cell	TX	1	58	72	38	81	pos	nk	nk	nk	nk	nk	IL2RA IgIV	CsA MMF STE	0	1	0	graft loss		
														85	1269	40	100	pos	nk	nk	pos	2600	nk	IL2RA RTX IgIV PP	TAC MMF STE	0	0	125	alive, no recurrence		
F	APKD	neg	61	ATG	10	GRAFT	O	nk	nk	neg	Monomorphic B cell	TX	0	20	28	64	100	neg	neg	neg	nk	nk	neg	no	CsA MMF STE	0	1	21	PTLD relapse and died		
F	Diabetic	pos	51	IL2RA	31	GRAFT	O	neg	pos	nk	Polymorphic B cell	Chemo, RTX	22	58	68	60	100	pos	pos	pos	neg	nk	neg	no	TAC MMF STE	0	0	82	alive, no recurrence		
F	TIN	neg	19	ATG	128	GIT	O	pos	neg	pos	Monomorphic B cell	Chemo, RTX	83	109	149	42	100	pos	nk	nk	nk	nk	nk	RTX IgIV	TAC MMF STE	0	nk	37	alive, no recurrence		
F	TIN	pos	21	ATG	225	ORL	O	nk	nk	pos	Monomorphic B cell	RTX	17	29	62	45	85	pos	pos	pos	pos	0	neg	IL2RA RTX	TAC MMF STE	0	1	32	alive, no recurrence		
M	TIN	pos	26	ATG	110	GRAFT	M	neg	neg	neg	Polymorphic B cell	Chemo, RTX	49	151	190	51	100	pos	pos	pos	neg	nk	neg	IL2RA	TAC MMF STE	0	0	8	alive, no recurrence		
M	TIN	pos	6	nk	152	LN	M	nk	nk	pos	Monomorphic B cell	TX	25	48	49	23	60	pos	neg	pos	neg	nk	nk	IL2RA	TAC MMF STE	1	1	151	alive, no recurrence		
M	GN	pos	41	0	116	LN	O	neg	neg	pos	Monomorphic B cell	chemo	16	66	123	61	100	pos	pos	pos	pos	0	neg	ATG RTX	CsA MMF STE	0	1	27	Dead		
F	TIN	pos	31	ATG	194	CNS	O	nk	nk	pos	Monomorphic B cell	IS lowering	0	35	68	53	70	pos	pos	pos	pos	0	neg	ATG	TAC MMF STE	1	1	82	Dead		
M	GN	pos	31	ATG	147	LN	O	neg	neg	neg	Polymorphic B cell	IS lowering	153	149	165	57	0	pos	nk	nk	nk	nk	nk	no	TAC MMF STE	1	nk	17	alive, no recurrence		
M	GN	pos	42	ATG	28	GRAFT	M	nk	neg	pos	Monomorphic B cell	chemo	138	145	149	57	28	pos	pos	pos	neg	nk	neg	ATG	TAC MMF STE	0	0	33	alive, no recurrence		
M	GN	neg	41	ATG	176	LN	O	pos	neg	pos	Monomorphic B cell	RTX	92	53	92	64	20	pos	pos	pos	pos	50000	pos	ATG	TAC MMF STE	0	0	27	alive, no recurrence		
F	TIN	pos	36	ATG	248	OTHER	O	neg	neg	nk	Monomorphic B cell	Chemo, RTX	11	82	84	64	40	pos	pos	pos	pos	0	neg	ATG	TAC MMF STE	0	1	22	alive, no recurrence		
M	Vasc	neg	21	ATG	67	HO	M	pos	pos	pos	Monomorphic B cell	Chemo, RTX	35	80	85	34	?	pos	pos	nk	nk	nk	nk	no	TAC MMF STE	0	nk	7	Dead		
M	GN	pos	50	ATG	76	GIT	M	nk	neg	neg	nk	Surgery	113	136	143	68	0	pos	pos	nk	neg	nk	neg	no	TAC MMF STE	1	nk	39	Dead		
F	TIN	pos	12	nk	276	LN	M	nk	nk	pos	Monomorphic B cell	nk	40	28	56	40	?	pos	pos	pos	pos	1250	neg	IL2RA IgIV	TAC MMF STE	0	1	37	alive, no recurrence		
F	ND	pos	45	nk	97	GIT	O	nk	nk	nk	Monomorphic B cell	nk	77	104	169	67	?	pos	pos	pos	nk	nk	neg	IL2RA IgIV	TAC MMF STE	0	1	104	alive, no recurrence		
M	GN	nk	48	0	101	ORL	M	nk	nk	neg	Monomorphic B cell	chemo	5	105	127	67	60	pos	pos	pos	nk	nk	neg	ATG IgIV	TAC MMF STE	0	1	73	alive, no recurrence		
M	TIN	pos	46	ATG	109	LN	M	nk	neg	neg	Monomorphic B cell	RTX	91	106	113	64	5	pos	pos	nk	nk	nk	neg	IL2RA	TAC MMF	0	nk	86	alive, no recurrence		
F	GN	pos	44	ATG	90	GIT	O	neg	nk	pos	Polymorphic B cell	IS lowering	16	44	55	56	36	pos	pos	nk	nk	nk	neg	IL2RA	TAC MMF	0	nk	146	alive, no recurrence		
M	GN	pos	20	ATG	244	HO	M	nk	pos	pos	Monomorphic B cell	chemo	52	34	53	44	5	pos	neg	pos	pos	77625	neg	IL2RA	TAC MMF STE	1	0	48	alive, no recurrence		
M	GN	pos	54	ATG	8	GRAFT	O	neg	neg	neg	Polymorphic B cell	Surgery	24	50	137	67	10	pos	pos	pos	nk	nk	nk	ATG IgIV	TAC MMF STE	0	nk	16	alive, no recurrence		
M	ND	pos	39	ATG	7	GRAFT	O	nk	nk	pos	Monomorphic B cell	TX	0	30	63	45	45	pos	nk	nk	nk	nk	nk	IL2RA	TAC STE	0	1	102	alive, no recurrence		
M	Vasc	neg	38	ATG	84	GIT	O	neg	neg	neg	Monomorphic T cell	chemo	55	83	89	52	40	pos	pos	pos	neg	nk	neg	IL2RA	TAC MMF STE	0	0	27	alive, no recurrence		
F	GN	pos	22	IL2RA	57	HO	M	nk	nk	pos	Monomorphic B cell	chemo	9	66	76	33	90	pos	neg	pos	pos	0	neg	ATG	TAC MMF STE	0	0	186	alive, no recurrence		
M	Vasc	pos	58	IL2RA	3	GRAFT	O	nk	neg	pos	Polymorphic B cell	TX	3	38	41	62	0	pos	neg	pos	neg	nk	neg	IL2RA	CsA MMF STE	0	0	143	alive, no recurrence		
M	Diabetic	pos	42	ATG	28	LN																									

GN : glomerulonephritis, TIN : tubulo-interstitial nephropathy, APKD : autosomal polycystic kidney disease, vasc : vascular nephropathy, ND : not determined, nk : not known, pos : positive, neg : negative, PTLD : post transplant lymphoproliferative disease, ATG : anti thymoglobulin, AntiIL2R : Interleukin2 receptor antagonist, LN : lymph nodes, HO : hematopoietic organs, CNS : central nervous system, GIT : gastro intestinal tract, M : multiple sites localization, O: one site PTLD localization, MG : monoclonal gammopathy, PRA : panel reactive antibody, CNI : calcineurin inhibitors, RTX : Rituximab, PP : plasmapheresis, TAC : tacrolimus, , MMF : mycophenolate mofetil, STE : steroids, CsA : cyclosporin.