

Supplemental Material Table of Contents

Supplemental Table 1. Prognosis factors of proteinuria remission before treatment modification in the pooled NICE and GEMRITUX participants

Supplemental Table 2. Individual biological data of participants with membranous nephropathy relapses

Supplemental Figure 1. (A) Time from initiation of rituximab to remission of membranous nephropathy in participants according to epitope profile. (B) Time from initiation of rituximab to remission of membranous nephropathy in participants according to proteinuria level at baseline (T1: low tertile T2: medium tertile T3: high tertile) (C) Time from initiation of rituximab to remission of membranous nephropathy in participants according to PLA2R1 titer at baseline (T1: low tertile vs T2-T3: medium and high tertile)

Supplemental Figure 2. Correlation between Anti-PLA2R1 titer and epitope spreading.

Supplemental Figure 3: (A) Remission at month-6 according titer of PLA2R1 (T1: low tertile vs T2-T3: medium and high tertile) at baseline and rituximab protocol received. (B) Remission before treatment modification according to titer of PLA2R1 at baseline and rituximab protocol received.

Supplemental Figure 4: A) Remission at month-6 according titer of PLA2R1 (at baseline and rituximab protocol received. (B) Remission before treatment modification according to titer of PLA2R1 at baseline and rituximab protocol received.

Supplemental Table 1. Prognosis factors of proteinuria remission before treatment modification in the pooled NICE and GEMRITUX participants

Participants characteristics	No Remission at LFU N=13	Remission at LFU N=42
<i>Baseline characteristics</i>		
Age	48 [33; 63]	59 [47; 68]
Gender		
Male	10 (77)	31 (74)
Female	3 (23)	11 (26)
BMI (kg/m ²)	25.3 [23.3; 29.5]	25.7 [23.5; 27.2]
Proteinuria (g/g of Creat)	7.2 [4.5; 9.7]	6.6 [4.7; 10.0]
Serum Creatinine (mg/dl)	1.0 [0.9; 1.4]	1.1 [0.9; 1.3]
Serum albumin (g/dl)	1.8 [1.5; 2.2]	2.2 [1.7; 2.7]
Anti-PLA2R1 antibody (RU/ml)*	508.0 [144.9; 1620.0]	101.5 [35.9; 212.3]
Time to Rituximab (Months)	6.0 [5.5; 10.5]	8.0 [6.0; 12.5]
Spreading at M0**		
No	0	18 (43)
Yes	13 (100)	24 (57)
Rituximab dose and Spreading*		
GEMRITUX protocol without Spreading	0 (0)	7 (17)
NICE protocol without Spreading	0 (0)	11 (26)
GEMRITUX protocol with Spreading	9 (79)	11 (26)
NICE protocol with Spreading	4 (31)	13 (31)
<i>Characteristics at month-3</i>		
Anti-PLA2R1 antibody (RU/ml)**	58.0 [22.7; 133.8]	0.0 [0.0; 15.7]

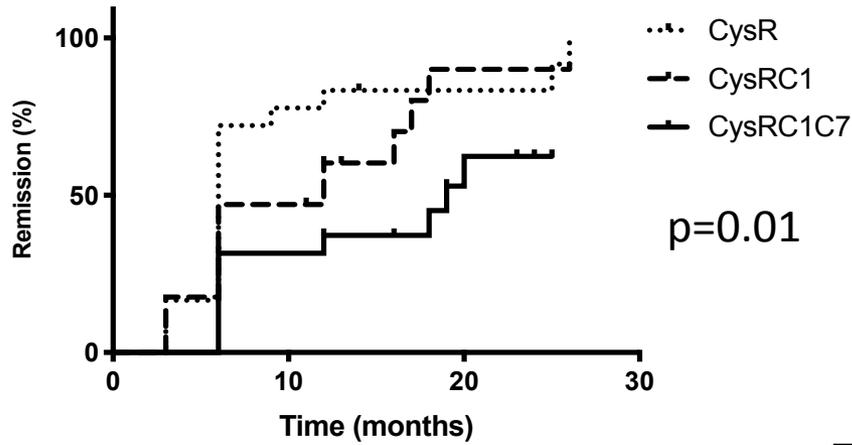
Participants characteristics	No Remission at LFU	Remission at LFU
	N=13	N=42
Rituximab $\mu\text{g/ml}^*$	0.0 [0.0; 0.0]	0.0 [0.0; 5.7]
CD19 *	16.0 [2.2; 58.2]	1.0 [0.0; 16.5]
<i>Characteristics at month-6</i>		
Anti-PLA2R1 antibody (RU/ml) **	75.5 [24.0; 160.6]	0.0 [0.0; 11.0]
CD19	42.0 [31.0; 130.0]	33.5 [7.0; 72.7]

* p<0.05

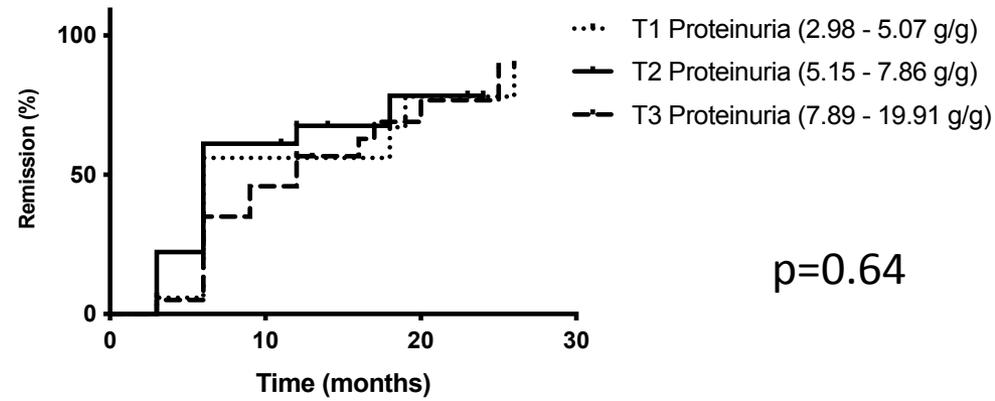
**p<0.001

Supplemental Table 2. Individual biological data of participants with membranous nephropathy relapses

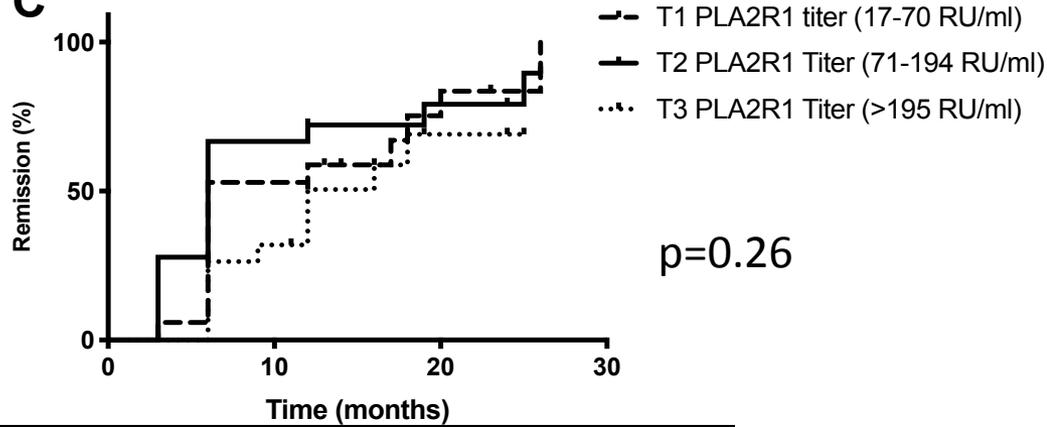
	Epitope profile at diagnosis	Proteinuria at month-6 (g/g)	Anti- PLA2R1 at month- 6 (RU/ml)	CD19 count at month 6 (/mm³)	Proteinuria at relapse (g/g)	Anti- PLA2R1 titer at relapse (RU/ml)	Time between treatment and relapse (months)
Patient 1	CysRC1C7	0.9	73.5	33	5.05	154	9
Patient 2	CysRC1	1.6	0	66	4.5	23	24
Patient 3	CysRC7	1.5	30	100	3.9	55	12
Patient 4	CysRC1C7	1.0	0	2	4.0	15	12
Patient 5	CysRC1	10.1	19	2	6.5	26	12
Patient 6	CysRC1C7	3.1	39	59	4.2	50	9
Patient 7	CysRC1	2.2	0	0	3.8	34	12
Patient 8	CysRC1	2.16	0	5	3.5	24	12

A

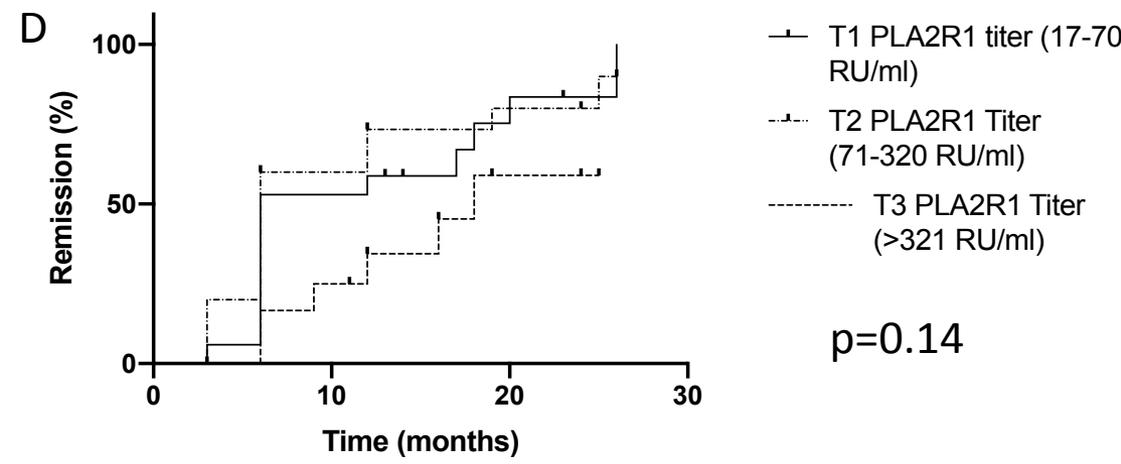
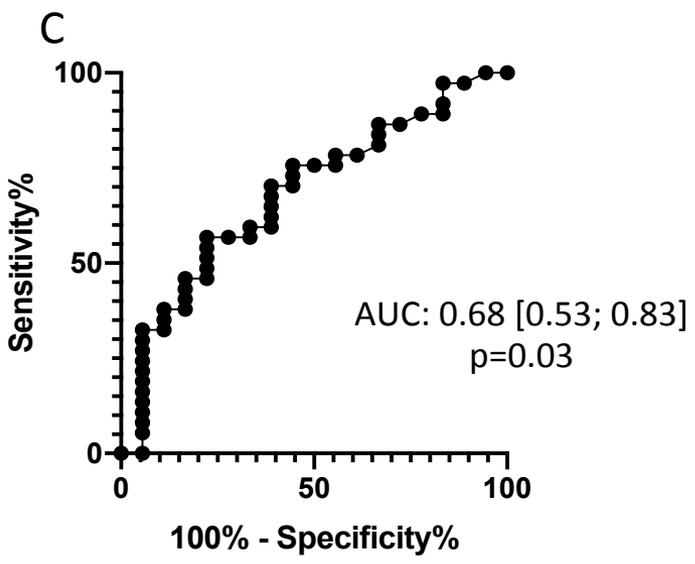
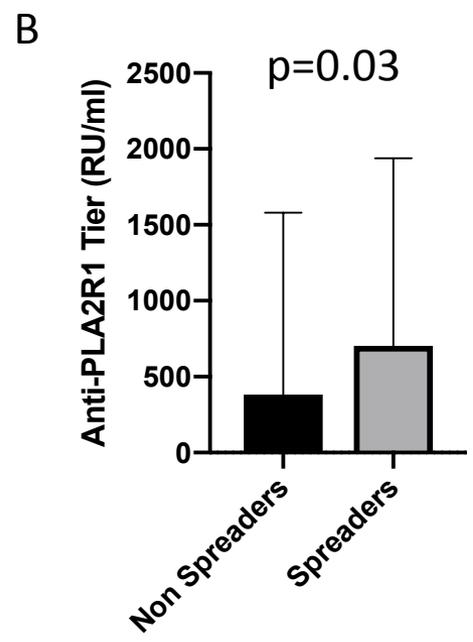
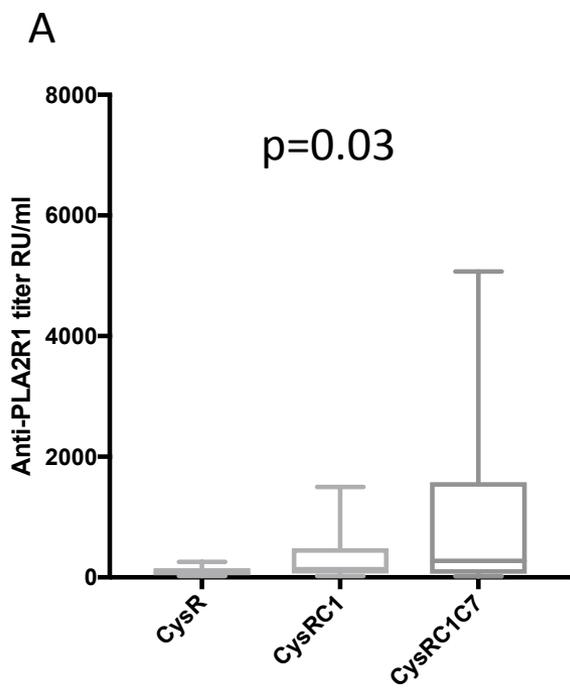
	M0	M6	M12	M18	M24	M30
CysR	20	7	4	3	3	0
CysRC1	14	7	7	4	4	4
CysRC1C7	21	15	13	12	11	11

B

	M0	M6	M12	M18	M24	M30
T1 Proteinuria	18	10	10	9	6	5
T2 Proteinuria	18	7	6	5	5	5
T3 Proteinuria	19	13	11	9	6	5

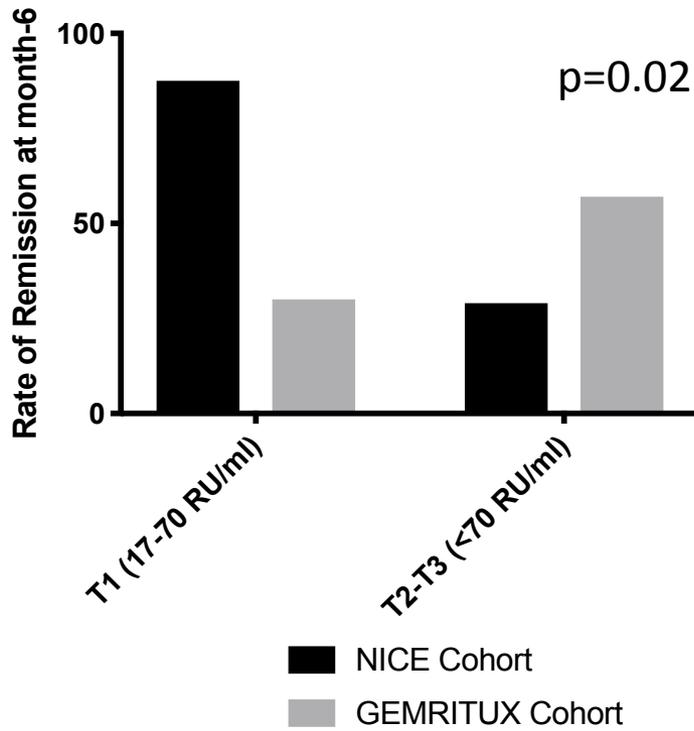
C

	M0	M6	M12	M18	M24	M30
T1 PLA2R1	18	8	7	5	4	3
T2 PLA2R1	18	6	5	5	4	3
T3 PLA2R1	19	14	11	10	10	9



	M0	M6	M12	M18	M24	M30
T1 PLA2R1	17	8	7	5	4	3
T2 PLA2R1	25 6	9	6	5	4	3
T3 PLA2R1	13	11	8	7	7	6

Supplemental Figure 2

A**B**