# **Supplementary Material**

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## 1

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## 2

## **Supplementary Methods**

## 2.1. Patient inclusion and exclusion criteria

#### **Inclusion criteria**

- Patients willing and able to read and correctly understand the patient's information sheet
  and give their consent for participation in the study (by correctly signing and dating the
  informed consent form document, which has been previously approved by an Ethics
  Committee / International Review Board), before initiating any protocol specific
  selection procedure.
- Patients able to understand study procedures and to comply with them for the entire length of the study.
- Age older than 18 years.
- Biopsy-proven primary membranous nephropathy. Patients with nephrotic syndrome relapse after remission (either spontaneous or induced by immunosuppression) can be included without a new renal biopsy, provided that they meet all the other inclusion/exclusion criteria.
- Estimated glomerular filtration rate (eGFR)  $\geq$  45 mL/min/1.73m<sup>2</sup> in one measurement performed within the screening period (in the 30 days after informed consent signature).
- Nephrotic-range proteinuria (>4 g/24 h and not decreasing >50% in the last 6 months) accompanied by hypoalbuminemia ≤ 3.5 g/dL during the screening period OR patients showing severe or disabling symptoms related to the nephrotic syndrome or severe hypoalbuminemia (<2 g/dL), that can be included before the completion of this 6-month observation period, at the investigator's discretion, independently of proteinuria values.</p>
- Treatment with an angiotensin converting enzyme inhibitors (ACEis) or angiotensin receptor blockers (ARBs) for at least 2 months before screening (unless intolerance to ACEis/ARBs, contraindications to their use or a low blood pressure that could induce

side effects at the investigator's discretion) with a controlled blood pressure for at least the last three months (mean systolic BP/ diastolic BP  $\leq$  150/90 mmHg in the last three months).

• Negative urine pregnancy test for potentially fertile female.

#### **Exclusion Criteria:**

- Diagnosis of secondary causes of membranous nephropathy: malignancy (cancer), systemic infections (including hepatitis B or C), systemic autoimmune diseases (e.g. systemic lupus erythematosus) or any other acute or chronic inflammatory disease.
- HIV infection.
- Moderate or severe liver disease (AST and ALT > 2.5 times the upper limit of normal [xULN] and total bilirubin > 1.5 x ULN).
- Patients taking part in any other study with an investigational drug and/or receiving or
  having received treatment with another investigational drug or intervention (within the
  first month prior to the signature of the informed consent).
- Suspected or known hypersensitivity, allergy and/or immunogenic reaction history to
  either rituximab, cyclosporine, tacrolimus, corticosteroids, cyclophosphamide or any of
  their ingredients (which include excipients) and of any other drug from the same
  pharmacotherapeutic group (i.e. calcineurin inhibitors, specific monoclonal antibodies or
  alkylating agents).
- Previous treatment with corticosteroids in the three months period before screening, or
  previous treatment with other immunosuppressive agent in the six months period before
  screening.
- Previous treatment with rituximab or any other biological agent in the two years period before screening.
- Patients who were non-responders to previous immunosuppressants.

- Women with a positive pregnancy test at screening or in lactation period or planning to become pregnant within the next 24 months. Women not willing to use contraceptive methods during the complete study period.
- Inability or unwillingness of individual or legal guardian/representative to give written informed consent.
- Any other medical unstable, uncontrolled, or severe condition or any other relevant laboratory test finding which, at the investigator's own discretion, could possibly increase the associated risk of the patient's participation in the study.
- Current drug or alcohol use or dependence that, in the opinion of the site investigator, would interfere with adherence to study requirements.

#### 2.2. Outcomes

#### **Primary Outcome**

The proportion of patients reaching Complete Remission (CR) or Partial Remission (PR) at 24 months of study period.

#### **Secondary Outcomes**

The pre-specified secondary outcomes were as follows:

- Proportion of patients with CR or PR at 3, 6, 12 and 18 months after treatment.
- The proportion of patients with Limited Response (LR) at 12, 18 and 24 months of study treatment.
- Proportion of patients with relapse at 9, 12, 18 and 24 months after treatment.
- Time to relapse.
- Time to CR or PR

- Proportion of patients with preserved renal function (eGFR ≥45 mL/min/1.73m²) at 6,
   12, 18 and 24 months in both treatment arms.
- Proportion of patients with LR at 3, 6, 12, 18 and 24 months of study treatment.
- Proportion of patients free of ≥ 50% increases of serum creatinine from baseline at 24 months.
- Serum levels of anti-PLA2R at baseline and at 3, 6, 9, 12, 18 and 24 months in both treatment arms.
- Proportion of patients with drug-related adverse events and serious adverse events.

#### 2.3. Definitions

<u>Complete remission</u>: A reduction of proteinuria to  $\leq$ 0.3 g/24 h plus stable renal function (eGFR  $\geq$ 45 mL/min/1.73 m<sup>2</sup>).

<u>Partial remission</u>: A reduction of proteinuria to 0.3–3.5 g/24 h and 50% lower than baseline with stable renal function (eGFR  $\geq$ 45 mL/min/1.73 m<sup>2</sup>).

<u>Limited response</u>: A reduction of proteinuria >50% from baseline levels, but to a value > 3.5 g/24 h.

<u>Relapse</u>: Reappearance of proteinuria >3.5 g/24 h and at least 50% higher than the lowest post-treatment value in at least three consecutive visits in those who previously presented a partial or complete remission.

<u>Immunological response</u>: A level of anti-PLA2R  $\leq$ 14 RU/mL in patients positive for anti-PLA2R at baseline.

*No response:* A reduction of proteinuria <50% from baseline level.

<u>No responders</u>: Patients fulfilling criteria for non-response or limited response at 24 months. In addition, those who relapsed or switched to another immunosuppressive treatment other than the one assigned at any time during the follow-up.

## 2.4. Study Treatments and Concomitant Medications

#### **Treatment Groups**

Patients who fulfilled all the inclusion criteria and none of the exclusion criteria were randomized to one of the following treatment arms:

- First Arm: Cyclical Corticosteroid plus Cyclophosphamide (6 months)
  - o Month 1:
    - 1g IV methylprednisolone daily for three doses (days 1, 2, and 3)
    - Oral methylprednisolone (0.5 mg/Kg/day) for 27 days (days 4 to 30)
  - o Month 2:
    - o Oral cyclophosphamide for 30 days.
  - o Months 3 and 5: The same as in Month 1.
  - Months 4 and 6: The same as in Month 2.

Cyclophosphamide dose were adjusted by age and renal function, as follows:

- 2.0 mg/Kg/day in patients <60 years
- 1.5 mg/Kg/day in patients 60-75 years and
- 1.0 mg/Kg/day in patients elder than 75 years

In those patients with an eGFR <60 mL/min/1.73m², cyclophosphamide was reduced by 20-25%. Cyclophosphamide dose was also reduced in case of leukopenia (<3,500 leukocytes/mm3) Cyclophosphamide dose did not exceed 150 mg/day.

- Second Arm: Sequential Tacrolimus-Rituximab
  - Oral tacrolimus: Initial dose of 0.05 mg/Kg/day, adjusted to achieve target blood levels of 5-7 ng/mL, for six months. Starting at the end of month 6, (from day 181 on), tacrolimus dosage was reduced by 25% per month, resulting in a complete withdrawal at the end of month 9.

o Rituximab: 1 g IV dose was given after month 6 (at day 181, with a window of 15 days), coinciding with the beginning of tacrolimus dose reduction.

#### **Dosage Adjustments:**

In patients who showed a 50% increase in serum creatinine during the first 6 months of tacrolimus treatment, potential underlying conditions such as excessive diuretic therapy or non-renal volume depletion were first ruled out. When no alternative cause was found, the tacrolimus dose was reduced by 25% every two weeks. When serum creatinine persisted >50% from baseline values 2–4 weeks after a >75% dose reduction, tacrolimus was permanently discontinued and patient was treated according to standard clinical practice, although protocol visits were made whenever possible.

To minimize infusion reactions with rituximab, patients received premedication with methylprednisolone 100 mg intravenously. Other additional drugs usually administered as premedication, were permitted according to usual care protocols, i.e.: oral acetaminophen/paracetamol (1g), diphenhydramine hydrochloride (50 mg), etc.

#### **Concomitant Medications**

Independently of the study arm they were assigned to, patients in both treatment groups received other medications considered as standard care in this context:

- Antibiotic prophylaxis with cotrimoxazole (trimethoprim/sulfamethoxazole 160/800 mg, orally) 3 times a week during the entire treatment period (6 months for the corticosteroid-cyclophosphamide group and 9 months for the tacrolimus-rituximab group).
- Non-immunosuppressant concomitant treatment (diuretics, antihypertensives) for an
  adequate clinical management of nephrotic syndrome, according to clinical guidelines
  and the clinical decision of investigators, on the basis of clinical characteristics of the
  patient.

## 2.5. Safety Monitoring

Safety and tolerability of both treatment arms were evaluated throughout the study period, and were part of the secondary outcomes. This task was carried out by and independent institution, the *Spanish Clinical Research Network (SCReN)*. A data safety monitoring board consisting of a Chairman, three clinicians and at least one biostatistician met periodically to review the emerging data from the trial.

All adverse events spontaneously reported by the patient and/or in response to an open question from study personnel or revealed by observation, physical examination, or other diagnostic procedures were recorded. Adverse events that were related with the study medications (adverse reaction and serious adverse reaction), or not related but serious adverse events were collected.

Adverse Reaction (AR) was defined as an untoward and unintended response to a medicinal product related to any dose administered, in which a causal relationship between the study medication and the adverse event was at least a reasonable possibility.

Serious Adverse Event (SAE) or Serious Adverse Reaction (SAR) were defined as any untoward medical occurrence that at any dose:

- o Resulted in death,
- Was life-threatening
- o Required inpatient hospitalization or prolongation of existing hospitalization,
- o Resulted in persistent or significant disability/incapacity, or
- O Was a congenital anomaly/birth defect.

All adverse events were monitored until they were resolved, stabilized, or until the absence of a causal relationship between the adverse event and the study intervention was determined. All adverse events that persist once the study was over were also monitored until their final evolution was determined.

Adverse event that happened in at least 5% of the patients, or any serious adverse event, are shown in Table 3.

## 2.6. Sample Size Estimation

For sample size calculation, the proportion of patients with proteinuria remission (complete or partial) after treatment at 24 months of follow-up were considered. Based on previous studies, we assumed a probability of remission of 60% for the corticosteroid–cyclophosphamide group (p0) (Goumenos DS et al.Am J Nephrol 2007; 27: 226-231; Ponticelli C et al. Am J Kidney Dis 2006; 47:233-40; Jha V et al. J Am Soc Nephrol 2007; 18: 1899–1904) and 85% for tacrolimus–rituximab group (p1) (Praga M et al. Kidney Int. 2007; 71: 924-930; Fervenza F et al. Clin J Am Soc Nephrol. 2010; 5: 2188-2198), a difference between groups of 25%, a statistical power 80%, and an alpha error 0.05. Due to p1>0.80 (group of tacrolimus-rituximab), the following formulas with the Fleiss' correction for binary outcomes were used:

$$n_{1} = \frac{\left[\left(z_{\alpha/2}\sqrt{(r+1)R(1-R)} + z_{\beta}\sqrt{p_{0}(1-p_{0}) + r(p_{1})(1-p_{1})}\right]^{2}}{r(p_{1}-p_{0})^{2}}$$

 $n_0 = r \times n_1$ 

$$R = \frac{p_1 + r(p_0)}{1 + r}$$

Fleiss correction:  $n1c = n1 + (r+1)/R(p_1 - p_0)$ 

Fleiss's correction: n1c = n1 + (r + 1) / R (|p1 - p0|)

Where,

p0: proportion of remission in control group (corticosteroid- cyclophosphamide),

p1: proportion of remission in experimental group (tacrolimus-rituximab),

n0: number of participants in group corticosteroid-cyclophosphamide,

n1: number of participants in group tacrolimus-rituximab,

r: ratio between groups  $(n_0/n_1)$ .

R: risk in total population

With this method, we would have needed 47 patients per group and a total sample size of 94 patients.

All these results were also reproduced with user's STATA command "db nsize" and with command "power two proportions" with correction for continuity.

The *a priori* hypothesis was based on the superiority of the treatment with tacrolimus and rituximab. However, the results were in the opposite direction, showing a significant greater proportion of complete and partial remissions among patients treated with corticosteroid and cyclophosphamide. Thus, the recalculated statistical power of the study, according to the percentage of remissions observed in each group, was 86%

## 2.7. Supplementary Statistical Methods

A Statistical Analysis Plan was written by the Statistics Assistant. Data was entered by the Principal Investigator (PI) at each center or their nominated deputies onto a central secure database. The primary analyses were conducted according to the principles of intention to treat (ITT) as outlined on the ICH E9 "Statistical Principles for Clinical Trials". Additionally, per protocol analyses were performed.

Results were reported with both analyses. Continuous variables were summarized by the number of observations, mean, standard deviation (SD) and, median, inter-quartile range (IQR) and range. Categorical variables were summarized by the number of observations, and number and percentage in each arm. Summaries were provided at baseline, at each subsequent time point and for the change from baseline by intervention group.

Primary outcome, complete or partial remission at 24 months, was analyzed estimating the relative risk (RR) with 95% confidence interval, with comparisons made with Pearson chi-squared or Fisher exact test. Hazards for complete or partial remission at 3, 6, 12 and 18 months were also estimated for the evaluation of secondary objectives. Subgroup analyses of the primary outcome were undertaken to determine whether the difference between treatments varied according to subgroups of baseline characteristics: sex, age, albumin, proteinuria, creatinine, eGFR and anti-PLA2R. Risk ratio and two side interaction p-value were calculated with multivariate modified Poisson regression models (Poisson regression with robust error variance) [Zou G. A Modified Poisson Regression Approach to Prospective Studies with Binary Data. Am J Epidemiol 2004; 159:702-706.]

For secondary outcomes, differences between the two groups in continuous variables were analyzed using the unpaired Student's t-test or the Wilcoxon's rank sum test, as appropriate. Differences between categorical variables were analyzed with likelihood chi-squared and Fisher's exact test, as appropriate.

Longitudinal data such as serum albumin, serum creatinine, eGFR and other repeated measures, from randomization until months 3, 6, 9, 12, 18, and 24, were analyzed using multivariate linear mixed models. The models included time, treatment and their interaction as fixed effect and subject as random effect, with unstructured covariance matrix. Proteinuria and anti-PLA2R titers were analyzed as median and interquartile range.

Time-to-event analyses (time to remission, time to nephrotic syndrome relapse) were performed with Kaplan-Meier curves, log-rang test and Cox proportional hazards regression models. Those patients who dropped out of the study without reaching the primary outcome were censored. To test the proportional hazards assumption a time-dependent covariate was defined as an interaction of the time variable and the covariate in question. The proportional hazards assumption was accepted as reasonable when the significance of the coefficient of the time dependent covariate was statistically significant. Baseline factors associated with major outcomes were determined with Cox proportional hazards regression model. The magnitude of association was reported as a hazard ratio with 95% confidence interval.

For handling of missing data, a multiple imputation method using mixed effects linear regression method was planned. However, since there were no missing data in the primary outcome of our study, no data imputation was undertaken.

For the statistical analyses, Stata version 13.0 for Windows (Stata Corp, Texas, USA) and SPSS version 25 for windows were used. A p value <0.05 was considered to be significant.

# **Supplementary Tables and Figure**

<u>Table S1</u>. Sensitivity analyses according to anti-PLA2R positivity\*.

57 ± 11	5.4 + 1.1	
	$54 \pm 11$	0.34
10 (62)	31 (58)	0.70
$78 \pm 16$	$79 \pm 17$	0.84
123 ± 19 75 ± 8	$127 \pm 15$ $77 \pm 10$	0.38 0.61
$1 \pm 0.4$	$1 \pm 0.2$	0.51
$78.3 \pm 21.1$	$77.2 \pm 27.2$	0.15
2.8 2.3 – 3	2.6 2.3 – 2.9	0.12
$243 \pm 63$	$270 \pm 62$	0.12
6.8	8.4	0.12
	$123 \pm 19$ $75 \pm 8$ $1 \pm 0.4$ $78.3 \pm 21.1$ $2.8$ $2.3 - 3$ $243 \pm 63$	$123 \pm 19  75 \pm 8$ $127 \pm 15  77 \pm 10$ $1 \pm 0.4$ $1 \pm 0.2$ $78.3 \pm 21.1$ $77.2 \pm 27.2$ $2.8$ $2.6$ $2.3 - 3$ $2.3 - 2.9$ $243 \pm 63$ $270 \pm 62$ $6.8$ $8.4$

Anti-PLA2R: Anti-Phospholipase A2 receptor antibodies. eGFR: Estimated glomerular filtration rate.

<sup>\*</sup> Plus-minus values are means  $\pm$  SD

<sup>†</sup> eGFR was calculated according to the CKD-EPI equation.

<sup>‡</sup> Anti-PLA2R–positive defined by a value >14 RU/ml.

<u>Table S2</u>. Sensitivity analyses in patients with or without anti-PLA2R\* determination at baseline.

Characteristics	No anti-PLA2R determination at baseline (N=17)	Anti-PLA2R determination at baseline (N=69)	P Value
Age, years	55 ± 13	56 ± 11	0.69
Male sex, n (%)	10 (62)	31 (58)	0.70
Weight, kg	$76 \pm 14$	$79 \pm 17$	0.41
Blood pressure, mm Hg Systolic Diastolic	$136 \pm 13$ $75 \pm 11$	$126 \pm 16$ $76 \pm 10$	0.03 0.71
Serum creatinine, mg/dL	$1.1 \pm 0.3$	$1 \pm 0.3$	0.22
eGFR, mL/min per 1.73 m <sup>2</sup> †	$77 \pm 27$	$81 \pm 23$	0.63
Serum albumin, g/dL Median Interquartile range	2.2 $1.8 - 2.9$	2.6 2.3 – 2.9	0.09
Serum cholesterol, mg/dL	$265 \pm 71$	$264 \pm 63$	0.12
Urinary protein, g/24 h Median Interquartile range	7.3 6.3 – 11.6	8.1 5.2 – 11.4	0.96

Anti-PLA2R: Anti-Phospholipase A2 receptor antibodies. eGFR: Estimated glomerular filtration rate.

<sup>\*</sup> Plus-minus values are means  $\pm SD$ 

<sup>†</sup> eGFR was calculated according to the CKD-EPI equation.

<u>Table S3.</u> Mean doses and mean blood levels of tacrolimus in the tacrolimus-rituximab group\*

	Time from	D ( / I )	District Control	_
* Plus–minus values	randomization	Doses (mg/day)	Blood levels (ng/mL)	are means $\pm$ standard
deviation	1 mo	$3.7 \pm 1.6$	$6.3 \pm 3.2$	
	2 mo	$3.9 \pm 0.7$	$5.6 \pm 2.3$	
	3 mo	$4.1 \pm 1.2$	$6.0 \pm 2.7$	
	4 mo	$4.7 \pm 2.5$	$6.3 \pm 2.5$	
	5 mo	$4.7 \pm 2$	$6.6 \pm 2.7$	
	6 mo	$4.9 \pm 2.3$	$5.2 \pm 2.5$	
	7 mo	$4.6 \pm 2.5$	$5.8 \pm 3.2$	
	8 mo	$3.7 \pm 2.1$	$3.5 \pm 1.9$	
	9 mo	$2.6 \pm 1.3$	$2.4 \pm 1.5$	

<u>Table S4</u>. Baseline characteristics of patients who achieved complete or partial remission at any time of the study, and non-responder patients.\*

Characteristic	Complete + Partial Remission (N=61)	No response (N=25)	P Value
Age, years	56 ± 10	54 ± 14	0.37
Male sex, n (%)	35 (57)	20 (80)	0.04
Weight, kg	$77 \pm 15$	$83 \pm 18$	0.13
Blood pressure, mm Hg Systolic Diastolic Serum creatinine, mg/dL	$129 \pm 17$ $76 \pm 9$ $1.0 \pm 0.3$	$127 \pm 13$ $77 \pm 11$ $1.1 \pm 0.2$	0.59 0.56 0.29
eGFR, mL/min per 1.73 m <sup>2</sup> †	$80 \pm 24$	$80 \pm 23$	0.90
Serum albumin, g/dL Median Interquartile range	2.6 $2.3 - 2.9$	2.6 1.9 – 2.8	0.221
Anti-PLA2R-positive patients, n (%)‡	38 (78) <sup>§</sup>	15 (75) ¶	0.93
Anti-PLA2R, RU/mL Median Interquartile range Urinary protein, g/24 h	69 44 – 141	100 60 – 174	0.35
Median Interquartile range	7.1 4.9 – 10.1	10 6.1 – 13.1	0.03

Anti-PLA2R: Anti-Phospholipase A2 receptor antibodies. eGFR: Estimated glomerular filtration rate.

<sup>\*</sup> Plus-minus values are means ±SD

 $<sup>\</sup>dagger$  eGFR was calculated according to the CKD-EPI equation.

<sup>‡</sup> Anti-PLA2R-positive defined by a value >14 RU/mL.

<sup>§</sup> In 12 cases anti-PLA2R were not determined at baseline.

<sup>¶</sup> In 5 cases anti-PLA2R were not determined at baseline.

 $\underline{\textbf{Table S5}}$ . Proteinuria and serum albumin by group and time from randomization \*

Proteinuria – g/24 h				Serum albumin –	g/dL	
Time from randomization	Corticosteroid- Cyclophosphamide (N=43)	Tacrolimus- Rituximab (N=43)	P Value	Time from randomization	Corticosteroid- Cyclophosphamide (N=43)	Tacrolimus- Rituximab (N=43)
Baseline	7.4 (4.8–11.3)	7.4 (6.7–11.6)	0.29	Baseline	2.6 (0.07)	2.6 (0.07)
1 mo	4.2 (1.8–7.7)	6.1 (4.8–8.1)	0.03	1 mo	2.9 (0.08)	2.8 (0.09)
2 mo	2.9 (1.7–5.7)	5.6 (3.7–8.4)	0.02	2 mo	3.1 (0.1)	2.9 (0.10)
3 mo	2.9 (1.7–5.7)	4.3 (2.2–7.3)	0.14	3 mo	3.2 (0.08)	3.2 (0.09)
4 mo	1.8 (1.1–4.4)	4.7 (2.1–6.9)	0.001	4 mo	3.6 (0.08)	3.2 (0.09)
5 mo	2.1 (1.3–4.8)	3.8 (2.1–6.2)	0.02	5 mo	3.5 (0.08)	3.2 (0.10)
6 mo	1.2 (0.6–3.3)	3 (2–5.1)	0.02	6 mo	3.7 (0.08)	3.3 (0.08)
12 mo	0.7 (0.3–1.9)	3.7 (1.6–6.7)	0.001	12 mo	4.0 (0.09)	3.7 (0.09)
18 mo	0.6 (0.2–1.4)	2.9 (0.9–6.1)	< 0.0001	18 mo	4.1 (0.08)	3.6 (0.09)
24 mo	0.4 (0.2–0.9)	1 (0.3–3.3)	0.005	24 mo	4.2 (0.08)	3.9 (0.08)

<sup>\*</sup> Data is presented as median (interquartile range)

<sup>\*</sup> Data presented as median (Std Error)

P for interaction=0.22

<u>Table S6</u>. Serum creatinine and eGFR by group and time from randomization\*

Serum Creatinine – mg/e	dl	
Time from randomization	Corticosteroid-Cyclophosphamide (N=43)	Tacrolimus-Rituximab (N=43)
Baseline	1.0 (0.05)	1.0 (0.05)
1 mo	1.0 (0.07)	1.3 (0.07)
2 mo	1.0 (0.06)	1.2 (0.06)
3 mo	0.9 (0.05)	1.2 (0.05)
4 mo	0.9 (0.06)	1.3 (0.06)
5 mo	0.9 (0.05)	1.2 (0.05)
6 mo	0.9 (0.06)	1.2 (0.06)
12 mo	0.9 (0.09)	1.2 (0.09)
18 mo	0.9 (0.12)	1.1 (0.13)
24 mo	0.9 (0.11)	1.1 (0.12)

<sup>\*</sup> Data presented as median (Std Error)

$eGFR - ml/min/1.73 m^2$		
Time from randomization	Corticosteroid-Cyclophosphamide (N=43)	Tacrolimus-Rituximab (N=43)
Baseline	80.1 (3.8)	78.6 (3.9)
1 mo	78.7 (4.4)	67.7 (4.5)
2 mo	81.3 (4.1)	68.8 (4.3)
3 mo	84.0 (3.8)	69.2 (3.9)
4 mo	82.8 (4.1)	69.5 (4.3)
5 mo	84.7 (3.9)	68.2 (4.1)
6 mo	83.9 (3.9)	68.4 (4.1)
12 mo	85.0 (3.8)	74.5 (3.9)
18 mo	82.3 (3.6)	70.3 (3.7)
24 mo	81.6 (3.6)	74.2 (3.7)

<sup>\*</sup> Data presented as median (Std Error)

P for interaction=0.26

P for interaction=0.63

<u>Table S7</u>. Evolution of anti-PLA2R and development of immunological response in non-responder patients\*.

Anti-PLA <sub>2</sub> R antibodies (RU/mL)				Immunol	ogical Response	
Time from Randomization	Non-responders median (IQR)	Responders median (IQR)	P Value	Non-Responders (%)	Responders (%)	P Value
Baseline	106 (67–251)	64 (42–142)	0.69			
3 mo	72 (16–93)	1.5 (1.3–36)	0.006	17	66	0.04
6 mo	28 (1.8–60)	1.4 (0–1.6)	0.2	25	85	0.05
12 mo	9.4 (0–157)	1.5 (0–6)	0.6	33	83	0.03

IQR: interquartile range

<sup>\*</sup> Data is only shown up to the 12<sup>th</sup> month of treatment. Beyond month 12, the majority of non-responder patients had already been switched to a non-study intervention.

<sup>\*</sup>Differences of median were compared with Mann-Whitney test

<u>Table S8</u>. Evolution of proteinuria and anti-PLA2R in patients who presented a relapse\*.

	e from mization	Baseline	Month 3	Month 6	Month 9	Month 12	Month 18	Month 24
Patient #1								
	Proteinuria	4.9	4.8	3.7	2	6	4.2	3
	Anti-PLA2R	_	_	_	_	_	_	_
	Treatment	Tacrol	imus 9 months +	Rituximab 1 gram	at month 6		Rituximab 500	mg at month 21
Patient #2								
	Proteinuria	15.8	8.3	1.8	0.7	5.8	3	3.4
	Anti-PLA2R	174	_	2.1	1.9	1.9	2	2.1
	Treatment	Tacrol	imus 9 months +	Rituximab 1 gram	at month 6	Tacrolim	us was resumed at	month 12
Patient #3								
	Proteinuria	17.5	3.6	3.3	3	5.2	4.8	0.8
	Anti-PLA2R	22.4	_	0	_	0	2.3	1.7
	Treatment	Tacrol	imus 9 months +	Rituximab 1 gram	at month 6	Tacrolim	us was resumed at	month 15
Patient #4								
	Proteinuria	19	6	1.6	5.5	6.6	2.4	2.4
	Anti-PLA2R	42	2.5	4.1	42	38	7	7.5
	Treatment	nt Corticosteroid + Cyclophosphamide (6 months)				Tacrolim	us was initiated at	month 15

<sup>\*</sup> Dash lines represent data not available

**<u>Figure S1</u>**. Subgroup analyses of the primary composite outcome (complete/partial remission) at 24 months by non pre-specified characteristics of patients at baseline

