

## Supplementary Material

### Attainment of EULAR/ERA-EDTA targets of therapy with current immunosuppressive regimens and adjustments in treatment – A multicenter, real-life observational study

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**Supplementary Table S1:** Initial treatment regimens received by patients (n, %)

Cyclophosphamide-high dose (modified NIH) regimen	61 (43.5)
Cyclophosphamide- low-dose (EuroLupus) regimen	11 (7.8)
Mycophenolate mofetil	45 (32.1)
Rituximab/ Mycophenolate mofetil	5 (3.6)
Azathioprine	4 (2.9)
Rituximab	2 (1.4)
Cyclosporine	3 (2.1)
Belimumab/ Mycophenolate mofetil	3 (2.1)
Belimumab/ Cyclophosphamide	1 (0.7)
Rituximab/ Cyclophosphamide	1 (0.7)
Azathioprine/ Cyclosporine	1 (0.7)
Mycophenolate mofetil/ Cyclosporine	1 (0.7)

**Supplementary Table S2: Baseline characteristics of patients who received CYC and MMF**

	CYC (n=72)			MMF (n=45)	p*
	iv CYC (n=72)	High dose (n=61)	Low dose (n=11)		
Age (yr), median (IQR)	39 (21)	42 (20)	29 (9)	33 (21)	<b>0.021</b>
Gender (female), n (%)	59 (82)	49 (80.3)	10 (90.9)	32 (80)	0.606
Time from SLE diagnosis to LN (months), median (IQR)	9 (110)	5 (107)	65 (114)	15 (95)	0.849
SLEDAI- 2K score, median (IQR)	16 (8)	16 (8)	16 (11)	13 (10)	<b>0.012</b>
Low C3, n (%)	62 (88.6)	53 (86.9)	9 (81.8)	36 (81.8)	0.314
Low C4, n (%)	49 (70)	40 (65.6)	9 (91.8)	25 (56.8)	0.153
High anti-dsDNA antibodies titer, n (%)	51 (71.8)	43 (70.5)	8 (72.7)	30 (68.2)	0.678
Proteinuria (g/24hr), median (IQR)	2.2 (3.5)	2.2 (4)	2.0 (2.2)	2.0 (2.2)	0.208
Active urine sediment, n (%)	52 (72.2)	45 (73.8)	7 (63.6)	22 (55.0)	0.053
Hypertension, n (%)	34 (48)	30 (49.2)	4 (36.4)	2 (4.5)	<b>&lt;0.001</b>
Serum albumin (mg/dl), median (IQR)	3.3 (0.6)	3.2 (0.8)	3.3 (0.6)	3.6 (0.9)	<b>0.011</b>
Serum creatinine (mg/dl), median (IQR)	1.03 (0.9)	1.1 (0.9)	1.0 (0.9)	0.7 (0.3)	<b>0.007</b>
eGFR (ml/min/1.73m <sup>2</sup> ), median (IQR)	73 (62)	71 (61)	78 (58)	111 (43)	<b>0.001</b>
Presence of crescents <sup>#</sup> , n (%)	17 (24.3)	15 (24.6)	2 (18.2)	4 (9.1)	<b>0.049</b>
NIH Activity Index, median (IQR)	8 (8)	10 (7)	3 (1)	7 (6)	0.195
NIH Chronicity Index, median (IQR)	3 (3)	3 (3)	2 (1)	1 (3)	0.173

*IQR, Interquartile range; SLEDAI- 2K, Systemic Lupus Erythematosus Disease Activity Index 2000; anti-dsDNA antibodies, antibodies against double stranded DNA; eGFR, estimated glomerular filtration rate; NIH, National Institutes of Health.*

*\*p value refers to all patients who received iv CYC (n=72) vs all patients who received MMF (n=45)*

*<sup>#</sup> Refers to presence of >50% crescents in glomeruli in baseline kidney biopsy*

**Supplementary Table S3:** Baseline characteristics of patients who achieved complete/partial renal response and no response at 12 months

	<b>Complete/partial response (n=101)</b>	<b>No response (n=19)</b>	<b>p-value</b>
Age (years), median (IQR)	37 (22)	43 (21)	0.157
Female sex, n (%)	87 (86.1)	12 (63.2)	<b>0.016</b>
Time from SLE diagnosis to LN (months), median (IQR))	18 (96)	14 (115)	0.758
SLEDAI- 2K score, median (IQR)	14 (7)	16 (4)	0.363
Low C3, n (%)	88 (87.1)	11 (57.9)	<b>0.014</b>
Low C4, n (%)	64 (63.4)	7 (36.8)	0.075
High anti-dsDNA antibodies titer, n (%)	73 (72.3)	10 (52.6)	0.155
Proteinuria (g/24hr), median (IQR)	2.2 (3.3)	2.3 (3.7)	0.860
Active urine sediment, n (%)	67 (66.3)	12 (63.2)	0.789
Hypertension, n (%)	27 (26.7)	9 (47.4)	0.076
Serum albumin (mg/dl), median (IQR)	3.3 (1.0)	3.1 (1.2)	0.542
Serum creatinine (mg/dl), median (IQR)	0.8 (0.6)	0.95 (0.8)	0.058
eGFR (ml/min/1.73m <sup>2</sup> ), median (IQR)	97 (64)	79 (67)	0.288
Presence of crescents*, n (%)	19 (18.8)	-	-
NIH Activity Index, median (IQR)	8 (8)	6 (9)	0.363
NIH Chronicity Index, median (IQR)	2 (2)	4 (5)	<b>0.004</b>

*IQR, Interquartile range; SLEDAI- 2K, Systemic Lupus Erythematosus Disease Activity Index 2000; anti-dsDNA antibodies, antibodies against double stranded DNA; eGFR, estimated glomerular filtration rate; NIH, National Institutes of Health.*

*\*Refers to presence of >50% crescents in glomeruli in baseline kidney biopsy*

**Supplementary Table S4:** Uni- and multivariate regression analysis between the association of baseline clinical and histologic parameters and failure to achieve either complete or combined complete/ partial renal response at 12 months in patients with proliferative LN classes.

<i>Parameters</i>	<b>Failure of complete response</b>				<b>Failure of complete or partial response</b>			
	<i>Univariate</i>		<i>Multivariate</i>		<i>Univariate</i>		<i>Multivariate</i>	
	<b>OR</b>	<b>p</b>	<b>OR</b>	<b>95% CI</b>	<b>OR</b>	<b>p</b>	<b>OR</b>	<b>95%CI</b>
<b>Clinical</b>								
Age	1.01	0.55			1.03	0.16		
Male sex	1.60	0.40			3.16	<b>0.09</b>	<b>6.84</b>	<b>0.96- 48.70</b>
Hypertension	1.67	0.27			2.67	0.13		
eGFR	0.99	0.14			0.99	0.36		
Albumin	0.67	0.26			0.61	0.25		
Low C3	0.44	0.20			0.32	0.13		
Low C4	0.39	<b>0.052</b>	0.46	0.14- 1.50	0.41	0.17		
High anti- dsDNA	0.61	0.34			0.50	0.31		
UPr >3gr/24hr	3.05	<b>0.019</b>	1.79	0.56- 5.73	1.22	0.70		
Hematuria	0.80	0.67			1.47	0.63		
Presence of casts	3.35	<b>0.020</b>	<b>3.50</b>	<b>0.99-12.29</b>	2.28	0.22		
<b>Histologic</b>								
NIH AI	1.07	0.16			0.98	0.81		
NIH CI	1.59	<b>0.002</b>	<b>1.58</b>	<b>1.14- 2.19</b>	2.29	<b>0.001</b>	<b>2.36</b>	<b>1.45- 3.84</b>
Crescents >50%	2.38	0.10				NA		
Interstitial inflammation	1.83	0.20			1.06	0.92		
Interstitial fibrosis	2.03	0.45			2.68	0.22		
Tubular atrophy	1.46	0.43			2.54	0.25		