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SUPPLEMENTAL TABLE 1: Clinical characteristics associated with progression from low-grade proteinuria to urine protein-creatinine ratio (UPCR) ≥ 0.5 g/g*

Model 1, Outcome: progression to UPCR ≥ 0.5 g/g					
	N (%) events	Unadjusted HR, 95%CI	p-value	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	67 (50%)	0.97 (0.95, 0.99)	0.003	0.99(0.97, 1.0)	0.36
Duration of SLE at index date, per 1 year longer	67 (50%)	0.94 (0.90, 0.98)	0.004	0.96(0.92, 1.0)	0.07
Low C3 and/or C4	67 (50%)		<0.001		0.003
No		1 (reference)		1 (reference)	
Yes		3.3 (1.8, 6.1)		2.7(1.4, 5.2)	
Non-Imputed Model 2, Outcome: progression to UPCR ≥ 0.5 g/g within 2 years					
	N (%) events	Unadjusted HR, 95%CI	p-value	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	42 (31%)	0.97 (0.95, 0.99)	0.02	0.99(0.96, 1.0)	0.53
Duration of SLE at index date, per 1 year longer	42 (31%)	0.89 (0.82, 0.95)	0.002	0.91(0.84, 0.98)	0.02
Low C3 and/or C4	42 (31%)		0.001		0.02
No		1 (reference)		1 (reference)	
Yes		4.6 (1.8, 11.7)		3.1(1.2, 8.1)	

*Complete case analyses with N=134 participants with available data. All models were adjusted for race, sex and urine RBC>5 per HPF

SUPPLEMENTAL TABLE 2: Cox proportional hazard models for the sensitivity analyses*

Model 1, Outcome: progression to UPCR \geq 0.5 g/g for subset of patients with medication/comorbidity data		
N=106		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.97(0.95, 1.0)	0.05
Duration of SLE at index date, per 1 year longer	0.92(0.87, 0.99)	0.22
Low C3 and/or C4		0.04
No	1 (reference)	
Yes	2.2(1.1, 4.8)	
Baseline hypertension		0.001
No	1 (reference)	
Yes	3.8(1.7, 8.3)	
Model 2, Outcome: progression to UPCR \geq 0.5 g/g within 2 years for subset of patients with medication/comorbidity data		
N=106		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.96(0.93, 1.0)	0.05
Duration of SLE at index date, per 1 year longer	0.89(0.80, 0.99)	0.04
Low C3 and/or C4		0.05
No	1 (reference)	
Yes	0.47(1.0, 22)	
Baseline diabetes		0.001
No	1 (reference)	
Yes	32(4.3, 241)	
Baseline azathioprine use		0.07
No	1 (reference)	
Yes	0.26(0.06, 1.1)	
Model 3, Outcome: progression to UPCR \geq 0.5 g/g within 2 years for fast progressors vs. non-progressors		
N=110		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.99(0.96, 1.0)	0.53
Duration of SLE at index date, per 1 year longer	0.92(0.85, 0.99)	0.04
Low C3 and/or C4		0.02

No	1 (reference)	
Yes	3.4(1.3, 9.1)	
Model 4, Outcome: progression to UPCR \geq0.5 g/g within 1 years N=134		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.98(0.95, 1.0), 0.28	0.28
Duration of SLE at index date, per 1 year longer	0.89(0.81, 0.99)	0.03
Low C3 and/or C4		0.07
No	1 (reference)	
Yes	3.2(0.92, 11)	
Model 5, Outcome: progression to UPCR \geq0.5 for patients with baseline UPCR \geq0.25 and $<$0.5 N=84 patients with outcome		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.99(0.97, 1.0)	0.64
Duration of SLE at index date, per 1 year longer	0.95(0.90, 1.0)	0.1
Low C3 and/or C4		0.03
No	1 (reference)	
Yes	2.6(1.1, 6.1), 0.03	

* Complete case analyses were done. All models were adjusted for race, sex and urine RBC $>$ 5 per HPF

SUPPLEMENTAL TABLE 3: Baseline comparisons between progressors and non-progressors; fast progressors and slow/non-progressors with kidney biopsy as the outcome*

	Outcome: Clinically Indicated Kidney Biopsy		Outcome: Clinically Indicated Kidney Biopsy within 2 years from index date	
	Progressors (n= 44)	Non-Progressors (n=107)	Fast Progressors (n= 20)	Slow/Non- Progressors (n=131)
Demographics				
Age at index date, years, median (IQR)	25(20, 39)	36(27, 48)	24(20, 31)	35(26, 47)
Men, n(%)	5(11)	11(10)	4(20)	12(9)
Black or African-American, n(%)	19(43)	40(37)	8(40)	51(38)
Hispanic/Latino, n(%)	26(57)	60(56)	11(55)	74(56)
SLE diagnosis to low-grade proteinuria onset, years, median (IQR)	1(0, 6)	5(1, 11)	0.5(0, 3)	4(1, 11)
Comorbidities**				
History of hypertension, n(%)	6(18)	14(17)	2(11)	18(18)
History of diabetes, n(%)	3(9)	7(8)	2(11)	8(8)
Medications**				
Hydroxychloroquine, n(%)	20(59)	58(70)	10(56)	68(69)
Azathioprine, n(%)	2(6)	18(22)	1(6)	19(19)

Mycophenolate Mofetil, n(%)	3(8)	2(2)	1(6)	4(4)
Other Immunosuppressives [‡] , n(%)	4(12)	6(7)	1(6)	10(10)
ACEI/ARB [€]	3(9)	2(2)	1(6)	4(4)
Corticosteroids, n(%)	23(68)	49(59)	11(61)	61(62)
Corticosteroid dose, median(IQR), mg of prednisone equivalent	7.5(0, 20)	5(0, 15)	10(0, 20)	5(0, 20)
Laboratory and Urine				
WBC, k/uL, median (IQR)	6.2(4.4, 7.9)	6.2(4.4, 7.1)	5.2(4.5, 7.1)	6.2(4.4, 7.7)
Absolute Neutrophil Count, k/uL, median (IQR)	4.4(2.8)	4.1(2.4, 5.6)	3.3(2.7, 5.1)	4.2(2.4, 5.5)
Absolute Lymphocyte Count, k/uL, median (IQR)	1.3(0.9, 1.6)	1.2(0.8, 1.7)	1.4(1.0, 1.7)	1.2(0.8, 1.7)
Platelet count, k/uL, median (IQR)	254(221, 321)	259(191, 336)	250(178, 319)	257(202, 336)
Glomerular filtration rate based on CKD-epi 2021 <=90ml/min, n (%)	11 (25%)	22 (20.6%)	6 (30%)	27 (20.6%)
Serum Albumin, g/dL, median (IQR)	3.7(3.3, 4.1)	3.9(3.4, 4.2)	3.7(3.3, 4.0)	3.9(3.4, 4.2)
Low complement (C3 and/or C4), n(%)	36(88)	55(57)	18(95)	73(62)

*Missing 14 (9%) patients				
dsDNA positive, n(%)	27(66)	49(52)	13(68)	63(54)
*Missing 15 (10%) patients				
UPCR at index date, g/g, median (IQR)	0.29(0.24, 0.39)	0.27(0.22, 0.34)	0.28(0.24, 0.28)	0.27(0.23, 0.36)
Urine RBC>5HPF, n(%)	23(52)	32(30)	12(60)	45(33)

*Statistically significant differences ($p < 0.05$) between groups are bolded.

**Medication and comorbidity data available for only 117 patients, 34 progressors and 83 non-progressors.

¥ Cyclophosphamide, Belimumab, Rituximab, Methotrexate, Leflunomide, IVIG

€ Angiotensin converting enzyme inhibitor (ACEI) /angiotensin receptor blockers (ARB)

SUPPLEMENTAL TABLE 4: Cox proportional hazard models for progressors vs. non-progressors and fast progressors vs. slow/non-progressors with clinically indicated kidney biopsy as the outcome*

Outcome: Clinically Indicated Biopsy N=134, 39 patients with outcome		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	0.96(0.93, 0.99)	0.03
Duration of SLE at index date, per 1 year longer	0.96(0.92, 1.0)	0.3
Low C3 and/or C4		0.02
No	1 (reference)	
Yes	3.3(1.3, 8.7)	
Outcome: Clinically Indicated Biopsy within 2 years N=134, 17 patients with outcome		
	Adjusted HR*, 95%CI	p-value
Age at Index Date, per 1 year older	N/A	N/A
Duration of SLE at index date, per 1 year longer	0.86(0.72, 1.0)	0.09
Low C3 and/or C4		0.11
No	1 (reference)	
Yes	5.4(0.68, 43)	
Urine RBC >5per HPF		0.06
No	1 (reference)	
Yes	2.6(0.95, 7.4)	

* Complete case analyses were done. All models adjusted for race, sex and urine RBC>5 per HPF

SUPPLEMENTAL TABLE 5: Comparison of progressors with normal versus low complement; progressors with normal complement vs non-progressors*

	Progressors with Normal complement N=12	Progressors with Low complement N=56	Progressors with Normal Complement N=12	Non- Progressors N=75
Demographics				
Age at index date, years, median (IQR)	41(29, 56)	28(21, 36)	41 (24, 56)	36 (28, 50)
Men, n(%)	1(8)	6(11)	1(8)	7(9)
Black or African- American, n(%)	7(58)	22(34)	5(42)	48(64)
Hispanic/Latino, n(%)	5(42)	32(57)	7(58)	32(43)
SLE diagnosis to low grade proteinuria onset, years, median (IQR)	6 (4, 13)	1(0, 5)	6 (4, 13)	6 (1, 12)
Comorbidities				
History of hypertension, n(%)	2(20)	9(21)	2 (20)	6 (10)
History of diabetes, n(%)	3(30)	1(2)	3 (30)	3 (5)
Medications				
Hydroxychloroquine, n(%)	7(70)	27(64)	7 (70)	43 (70)
Azathioprine, n(%)	2(20)	6(14)	2 (20)	12 (20)

Mycophenolate Mofetil, n(%)	2(20)	2(5)	2 (20)	1 (2)
Other Immunosuppressives‡, n(%)	0	6(14)	0	4 (7)
ACEI/ARB€, n(%)	1(10)	2(5)	1 (10)	2 (3)
Corticosteroids, n(%)	6(60)	31(74)	6 (60)	34 (56)
Laboratory and Urine Data				
eGFR CKD-epi 2021 <90ml/min, n(%)	3(25)	11(20)	3 (25)	16 (21)
dsDNA positive, n(%)	4(33)	37(70)	4 (33)	35 (51)
Urine RBC>5HPF, n(%)	5(42)	27(48)	5(42)	21(28)

* Statistically significant differences ($p < 0.05$) between groups are bolded

‡ Cyclophosphamide, Belimumab, Rituximab, Methotrexate, Leflunomide, IVIG

€ Angiotensin converting enzyme inhibitor (ACEI) /angiotensin receptor blockers (ARB)