Appendix. Supplementary materials

Supplemental Table 1. Univariate and multivariate analyses (logistic regression) of the predictors for stringent CR

	Univariate analysis		Multivariate analysis	
Variable	OR (95% CI)	*P*	OR (95% CI)	*P*
Age	1.005 (0.971–1.040)	0.773		
Hypertension	1.674 (0.542–5.176)	0.371		
DM	0.491 (0.030–8.147)	0.620		
SLEDAI	1.036 (0.960–1.118)	0.362		
Proteinuria at LN diagnosis	0.870 (0.739–1.023)	0.092	0.886 (0.754–1.042)	0.143
ARB or ACEI[a]	1.073 (0.435–2.649)	0.878		
HCQ	1.829 (0.632–5.287)	0.265		
Statin	1.123 (0.350–3.605)	0.845		
Class III or Class III+V[b]	1.000 (0.405–2.472)	1.000		
Class IV or Class IV+V[b]	1.000 (0.405–2.472)	1.000		
Initial GC pulse	0.799 (0.259–2.466)	0.696		
Prednisolone > 0.5 mg/kg/day during first 6 months	1.351 (0.505–3.615)	0.549		
IVCY induction	0.237 (0.064–0.882)	0.032		
MMF induction	8.089 (1.003–65.264)	0.050	7.268 (0.894–59.089)	0.064
AZA maintenance	1.589 (0.550–4.595)	0.392		
MMF maintenance	1.604 (0.607–4.239)	0.341		

[a]Continuous use from first LN episode.

[b]LN classification was based on the International Society of Pathology/Renal Pathology Society (ISN/RPS) classification or the 1995 modified WHO classification.

Abbreviations: OR, odds ratio; CI, confidence interval; DM, diabetes mellitus; SLEDAI, SLE disease activity index, LN, lupus nephritis; ARB, angiotensin II receptor blocker; ACE, angiotensin-converting enzyme; HCQ, hydroxychloroquine; GC, glucocorticoid; IVCY, intravenous cyclophosphamide; MMF, mycophenolate mofetil; AZA, azathioprine.

Supplemental Table 2. Comparison of baseline characteristics between patients with stringent and non-stringent CR with propensity score-matched patients

Baseline characteristics	Treatment response		*P*
	Stringent CR (n = 29)	Non-stringent CR (n = 29)	
Age (years)	34.83 (±13.39)	33.86 (± 12.47)	0.777
Women, no. (%)	25 (86.2)	23 (79.3)	0.728
BMI (kg/m^2)	22.24 (± 3.17)	22.05 (± 2.16)	0.798
Hypertension (mm/Hg), no. (%)	10 (34.5)	5 (17.2)	0.23
DM, no. (%)	1 (3.4)	1 (3.4)	1.000
Dyslipidemia, no. (%)	6 (20.7)	5 (17.2)	1.000
APS, no. (%)	0 (0)	2 (6.89)	0.491
SLEDAI	12.72 (9–15)	11.48 (9–14)	0.415
SDI [median (IQR)]	0 (0–1)	0 (0–1)	0.607
eGFR (mg/dl)	103.76 (±2 7.37)	97.76 (±29.11)	0.422
Proteinuria at LN diagnosis (g/g)	2.916 (1.1–3.9)	3.92 (1.1–3.93)	0.645
UPCR method	18 (62.1)	11 (37.9)	0.193
Proteinuria > 2 g/24 h	4 (36.3)/11	9 (50.0)/18	0.599
Proteinuria > 3.5 g/24 h	3 (27.2)/11	7 (38.8)/18	0.675
C3 (mg/dL)	49.08 (29.6–59)	46.82 (32.5–61.6)	0.816
C4 (mg/dL)	9.04 (5.2–12.7)	10.58 (6.1–13.5)	0.445

Anti-dsDNA [(IU/mL, median [IQR])	231.0 (14.2–594)	86.2 (16.4–622.0)	0.503
Lupus anticoagulant, no. (%)	8 (27.6)	5(17.2)	0.765
ACA IgG positive, no. (%)	9 (31.0)	6 (20.7)	0.804
ACA IgM positive, no. (%)	4 (13.7)	5 (17.2)	1.000
β2 GPI IgG positive, no. (%)	4 (13.7)	6 (20.6)	1.000
β2 GPI IgM positive, no. (%)	2 (6.89)	4 (13.7)	0.684
ISN/RPS or WHO classification			
Class III or Class III + V, no. (%)	14 (48.3)	12 (41.4)	0.791
Class IV or Class IV + V, no. (%)	15 (51.7)	17 (58.6)	0.791
HCQ, no. (%)	23 (79.3)	21 (72.4)	0.758
ARB or ACE inhibitor, no. (%)	9 (31.0)	12 (41.4)	0.584
Statin, no. (%)	6 (20.7)	5 (17.2)	1.000
Induction therapy			
Glucocorticoid pulse, no. (%)	6 (20.6)	2 (6.89)	0.252
Doses of glucocorticoid (mg/day during induction therapy)	22.92 (16.67–30.56)	18.89 (14.44–28.33)	0.913
Prednisolone > 0.5 mg/kg/day during first 6 months, no. (%)	8 (27.6)	8 (27.6)	1.000
Prednisolone dose during first 6 months (mg/kg/day, median [IQR])	0.385 (0.24–0.53)	0.37 (0.27–0.50)	0.902
IV CYC, no. (%)	26 (89.7)	26 (89.7)	1.000
MMF, no. (%)	1 (3.4)	2 (6.89)	1.000
Tacrolimus, no. (%)	0 (0.0)	1 (3.4)	1.000
MMF + Tacrolimus, no. (%)	1 (3.4)	0 (0.0)	1.000

*Values are presented as mean ± SD, except where indicated otherwise.

Abbreviations: CR, complete renal response; SD, standard deviation; IQR, interquartile range; BMI, body mass index; DM, diabetes mellitus; APS, antiphospholipid syndrome; SLEDAI, SLE disease activity index; eGFR, estimated glomerular filtration rate; SDI, SLICC/ACR Damage Index; UPCR, urine protein/ creatinine ratio; ACA, anticardiolipin antibodies; B2 GPI, beta-2 glycoprotein I; ISN/RPS, International Society of Pathology/Renal Pathology Society; HCQ, hydroxychloroquine; ARB, angiotensin II receptor blocker; ACE, angiotensin-converting enzyme; IV CYC, intravenous cyclophosphamide; MMF, mycophenolate mofetil

Supplemental Table 3. Comparison of maintenance therapy and renal outcomes between stringent and non-stringent CR groups with propensity score-matched patients

	Treatment response		*P*
	Stringent CR (n = 29)	Non-stringent CR (n = 29)	
Maintenance therapy			
AZA, no. (%)	10 (34.4)	6 (20.7)	0.378
MMF, no. (%)	9 (31)	8 (27.6)	1.000
MMF + Tacrolimus, no. (%)	1 (3.4)	1 (3.4)	1.000
Tacrolimus, no. (%)	2 (6.89)	1 (3.4)	1.000
Follow-up duration (years, median [IQR])	4.26 (3.0–11.07)	8.01 (3.05–12.2)	0.448
Duration of sustained CR (months, median [IQR])	38.3(36-91.20)	28.8 (7-47.80)	0.002
5-year sustained CR, no. (%)*	9/10 (91.3)	7/14 (50.0)	0.019
3-year sustained CR, no. (%)*	26/28 (90.0)	11/21 (52.4)	<0.001
CKD, no. (%)	2 (6.89)	7 (24.1)	0.144
ESRD, no. (%)	1 (3.4)	1 (3.4)	1.000

*Missing values were excluded from the analysis.

Abbreviations: CR, complete renal response; IQR, interquartile range; AZA, azathioprine; MMF, mycophenolate mofetil; CKD, chronic kidney disease; ESRD, end-stage renal disease.

Supplemental Table 4. Univariate and multivariate Cox proportional hazard regression analyses of the predictors for 5-year flare rate with propensity score-matched patients

	Univariate analysis		Multivariate analysis	
Variable	HR (95% CI)	*P*	HR (95% CI)	*P*
Age	0.997 (0.960–1.036)	0.898		
Stringent CR	0.107 (0.024–0.472)	0.003	0.018 (0.001–0.218)	0.001
Hypertension	0.756 (0.215–2.656)	0.663		
DM	2.705 (0.354–20.62)	0.337		
SLEDAI	0.991 (0.899–1.093)	0.864		
Proteinuria at LN diagnosis	1.053 (0.959–1.156)	0.280		
> 2 g/24 h	1.778 (0.397–7.95)	0.451		
> 3.5 g/24 h	1.306 (0.291–5.844)	0.726		
eGFR at remission	1.007 (0.982–1.032)	0.584		
ARB or ACEI[a]	1.522 (0.563–4.1)	0.406		
HCQ[a]	0.496 (0.179–1.37)	0.176	0.026 (0.001– 0.597)	0.022
Statin[a]	0.604 (0.137–2.667)	0.506		
Class III or Class III+V[b]	0.795 (0.296–2.138)	0.650		
Class IV or Class IV+V[b]	1.257 (0.467–3.377)	0.650		
Initial GC pulse	1.508 (0.428–5.305)	0.522		
Doses of glucocorticoid (mg/day during induction therapy)	0.984 (0.949–1.021)	0.395		

Prednisolone > 0.5 mg/kg/day during first 6 months	0.45 (0.127–1.589)	0.215
IV CYC induction	0.699 (0.158–3.083)	0.637
MMF induction	0.048 (0–109342.232)	0.684
AZA maintenance	0.764 (0.246–2.372)	0.642
MMF maintenance	1.532 (0.555–4.226)	0.410

[a]Continuous use from first LN episode

[b]LN classification were based on International Society of Pathology/Renal Pathology Society (ISN/RPS) classification or the 1995 modified World Health Organization (WHO) classification.

Abbreviations: HR, hazard ratio; CI, confidence interval; CR, complete renal response; DM, diabetes mellitus; SLEDAI, SLE disease activity index; eGFR, estimated glomerular filtration rate; ARB, angiotensin II receptor blocker; ACE, angiotensin-converting enzyme; HCQ, hydroxychloroquine; GC, glucocorticoid; IV CYC, intravenous cyclophosphamide; MMF, mycophenolate mofetil; AZA, azathioprine.

Supplemental Table 5. Univariate and multivariate Cox proportional hazard regression analyses of the predictors for development of CKD in patients with proliferative LN in propensity score-matched data

	Univariate analysis		Multivariate analysis	
Variable	HR (95% CI)	*P*	HR (95% CI)	*P*
Age	1.060 (1.000–1.119)	0.035		
Stringent CR	0.309 (0.064–1.492)	0.143	0.0003 (0.000–0.534)	0.034
Hypertension	3.084 (0.816–11.650)	0.096		
DM	14.32 (2.590–79.040)	0.002		
Dyslipidemia	1.254 (0.147–10.700)	0.835		
SLEDAI	1.085 (0.932–1.263)	0.292		
Proteinuria at LN diagnosis	1.042 (0.879–1.235)	0.634		
> 2 g/24 h	1.886 (0.314–11.340)	0.488		
> 3.5 g/24 h	3.415 (0.567–20.570)	0.180		
eGFR at CR	0.962 (0.927–0.998)	0.040		
ARB or ACEI	1.126 (0.279–4.536)	0.867		
HCQ	0.848 (0.172–4.178)	0.839		
Statin	1.254 (0.147–10.70)	0.835		
Class III or Class III+V[a]	0.874 (0.215–3.543)	0.850		
Class IV or Class IV+V[a]	1.144 (0.282–4.636)	0.850		
Initial GC pulse	0.871 (0.108–6.977)	0.896		
Doses of glucocorticoid (mg/day during induction	0.966 (0.9129–1.021)	0.219		

therapy)		
Prednisolone > 0.5 mg/kg/day during first 6months	0.219 (0.027–1.760)	0.153
IV CYC induction	0.708 (0.087–5.725)	0.746
MMF induction	1.084 (0.178–3.454)	0.998
AZA maintenance	1.237 (0.307–4.976)	0.765
MMF maintenance	1.073 (0.219–5.255)	0.930

[a]LN classification was based on the International Society of Pathology/Renal Pathology Society (ISN/RPS) classification or the 1995 modified World Health Organization (WHO) classification.

Abbreviations: HR, hazard ratio; CI, confidence interval; CR, complete renal response; DM, diabetes mellitus; SLEDAI, SLE disease activity index; eGFR, estimated glomerular filtration rate; ARB, angiotensin II receptor blocker; ACE, angiotensin-converting enzyme; HCQ, hydroxychloroquine; GC, glucocorticoid; IV CYC, intravenous cyclophosphamide; MMF, mycophenolate mofetil; AZA, azathioprine