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Table 1 Baseline variables associated with LLDAS achievement based on multivariable Cox models

Characteristics	Model 1		Model 2		Model 3	
	HR (95% CI)	p value	HR (95% CI)	p value	HR (95% CI)	p value
Age at disease onset, years	1.010 (1.003-1.016)	0.005	1.009 (1.002-1.016)	0.010	1.010 (1.003-1.017)	0.004
Treatment-naïve	1.346 (1.105-1.641)	0.003	1.425 (1.161-1.749)	0.001	1.484 (1.204-1.830)	<0.001
Nephritis	0.776 (0.641-0.939)	0.009	1.066 (0.820-1.385)	0.634	0.925 (0.737-1.160)	0.498
SLEDAI			0.968 (0.950-0.987)	0.001		
PGA					0.685 (0.551-0.853)	0.001
Daily prednisone (or equivalent) dose, mg/d			1.003 (0.998-1.007)	0.266	1.005 (0.999-1.010)	0.093
HQC	1.638 (1.263-2.123)	<0.001	1.713 (1.318-2.225)	<0.001	1.664 (1.284-2.157)	<0.001

Time to LLDAS (months)				Age at disease onset
Treatment-naïve	Yes	12.9 (6.6-27.8)	15.9 (13.3-24.1)	
	No	13.3 (11.0-22.6)	18.0 (13.0-32.9)	
	Yes	17.2 (11.7-52.5)	18.5 (12.7-30.9)	
	No	20.7 (9.4-50.2)	27.5 (16.3-63.0)	
PGA				
0-1.0				
1.1-2.0				
2.1-3.0				

Figure 1 Matrix model for time to LLDAS.

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THU0248 **GLOMERULAR AND TUBULOINTERSTITIAL LESIONS IN PER-PROTOCOL REPEAT BUT NOT BASELINE KIDNEY BIOPSY PORTEND RELAPSE AND LONG-TERM RENAL FUNCTION IMPAIRMENT, RESPECTIVELY, IN INCIDENT CASES OF PROLIFERATIVE LUPUS NEPHRITIS**

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Background: In patients with lupus nephritis (LN), clinical response to treatment and renal histopathology have been shown to be discordant. No clinical or laboratory markers have to date been shown to reliably portend renal prognosis, in particular renal function impairment.
Objectives: To investigate whether per-protocol repeat renal biopsies are predictive of LN relapses and long-term impairment of renal function.
Methods: Forty-two patients with an incident biopsy-proven active proliferative (class III/IV ± V) LN from the LN database of the Université catholique de Louvain were included in the present retrospective study. Per-protocol repeat kidney biopsies were performed in all patients after a median time of 24.3 (IQR: 21.3–26.2) months. The NIH activity index (AI) and chronicity index (CI) scores were assessed in both baseline and repeat biopsies. We defined acute glomerular lesions as cellular proliferation, fibrinoid necrosis or karyorrhexis, cellular crescents, hyaline thrombi or wire loops, and leucocyte infiltration, and chronic glomerular lesions as glomerular sclerosis and fibrous crescents, in alignment with the NIH activity and chronicity indices. Similarly, we defined acute

tubulointerstitial lesions as mononuclear cell infiltration and chronic tubulointerstitial lesions as interstitial fibrosis and tubular atrophy.
Results: Despite a moderate correlation between urinary protein/creatinine (U-P/C) ratios and AI scores at repeat biopsy ($r=0.48$; $P=0.001$), ten patients (23.8%) with U-P/C ratios <1.0 g/g still had a high degree of histological activity (AI score >3). High AI scores in repeat (but not baseline) kidney biopsies were associated with an increased probability and/or shorter time to renal relapse ($N=11$) following the repeat biopsy (HR: 1.2; 95% CI: 1.1–1.3; $P=0.007$), independently of proteinuria levels. This association remained significant for the NIH activity index items within the glomerular but not the tubulointerstitial compartment of the kidney biopsies. High NIH CI scores in repeat (but not baseline) kidney biopsies were associated with a sustained increase in serum creatinine levels corresponding to $\geq 120\%$ of the baseline value (HR: 1.8; 95% CI: 1.1–2.9; $P=0.016$) through a median follow-up time of 131.5 (IQR: 73.8–178.2) months, being the case also for acute and chronic tubulointerstitial lesions in repeat but not baseline kidney biopsies.
Conclusion: Our results highlight the usefulness of per-protocol repeat biopsies as an integral part of the treatment evaluation, also in patients who have shown adequate clinical response. Glomerular lesions consistent with active renal disease portend LN relapses, while tubulointerstitial lesions consistent with active disease and chronic damage portend long-term renal function impairment.
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THU0249 **CLINICAL FEATURES AND RENAL PROGNOSIS IN LUPUS NEPHRITIS PATIENTS UNDERGOING A REPEATED BIOPSY: RESULTS OF 103 RE-BIOPSIES IN 438 PATIENTS**

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Background: Indications to repeat renal biopsy (RB) in lupus nephritis (LN) are not unanimously acknowledged.
Objectives: To evaluate the renal outcome of patients with LN undergoing a second RB.
Methods: We retrospectively analyzed prospectively collected data of patients with LN followed up in four Italian referral centres for systemic lupus erythematosus. Serological and clinical information were retrieved according to a shared database. RB were classified according to ISN/RPS 2003 classification; chronicity (CI) and activity indexes (AI) were defined according to Austin et al. The primary renal outcome was renal failure, defined as serum creatinine (Scr) >1.0 mg/dL with eGFR <60 ml/min. Non-parametric tests were used for statistics. Patients repeating RB due to renal remission were excluded from the analysis.
Results: Four-hundred and thirty-eight patients were recruited. One-hundred and three patients repeated RB after 6.1 ± 4.7 (mean $\pm$ SD) years from the first due to: protocol biopsy due to renal remission (Group 1, $n=8$); proteinuric flare (Group 2, $n=51$); worsened renal function (Group 3, $n=26$); partial renal response (Group 4 $n=18$). Patients undergoing a second RB were younger ($p<0.001$), had lower serum C3 at LN diagnosis ($p<0.001$) and displayed more frequently class IV and higher AI at first RB ($p=0.0038$ and $p=0.043$, respectively). At the end of follow-up, patients who repeated RB had more frequently renal failure ($p=0.003$). At the second RB, the histological class was unchanged in 55% of patients. CI increased at second RB compared to the first (3.6 ± 2.4 vs. 1.7 ± 1.7 ; $p<0.001$). Overall, 26 out of 103 patients (25%) developed renal failure: 0 from group 1, 10 from group 2, 14 from group 3, 2 from group 4 ($p<0.001$). Uncontrolled hypertension at LN diagnosis, increased Scr and increased proteinuria at second RB predicted renal failure (Table).
Conclusion: Patients undergoing a repeated RB had more aggressive clinical and histological features already at first RB and developed renal failure more frequently. Among baseline features, uncontrolled hypertension had the strongest association with renal failure, thus suggesting that control of blood pressure since early stages is highly advisable.
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