

Oral presentation3

時間：114年11月22日(星期六)09:40-10:10

地點：台中林酒店 3F 環球廳 摘要：

座長/Moderator	高雄榮民總醫院 林峻宇醫師 新北市立土城醫院 蔡秉翰醫師
09:40-09:52	Risk factors and Treatment strategy influencing <i>De Novo</i> Lupus Nephritis in Non-renal SLE 治療中的紅斑性狼瘡患者新發生狼瘡腎炎的危險因子 Shao-Yu Pai ³ , Tai-Ju Lee ¹ , Ting-Yuan Lan ¹ , Ioannis Parodis ² , Cheng-Hsun Lu ³ , Chieh-Yu Shen ³ , Ko-Jen Li ³ , Song-Chou Hsieh ³ , Y.K. Onno Teng ⁴ 1 National Taiwan University Hospital Hsinchu Branch, Taiwan. 2 Karolinska Institutet, Sweden. 3 National Taiwan University Hospital, Taiwan 4 Leiden University Medical Center, The Netherlands
09:52-09:55	Q & A
09:55-10:07	Reduced Platelet Count is a Significant Predictor of 3-Year Mortality in Connective Tissue Disease-Associated Pulmonary Arterial Hypertension: A Retrospective Cohort Study <u>Pei-Xuan Wang</u> ¹ , Jia-Feng Chen ^{1*} , Chung-Yuan Hsu ¹ , Tien-Tsai Cheng ¹ , Wen-Chan Chiu ¹ , Yu-Jih Su ¹ , Shan-Fu Yu ¹ , Han-Ming Lai ¹ , Ying-Chou Chen ¹ ¹ Division of Rheumatology, Allergy, and Immunology, Department of Internal Medicine, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan. * Corresponding author 血小板數值減少為結締組織疾病相關肺動脈高壓3年死亡率的重要預測因子：一項回溯性隊列研究 王珮璇, 陳嘉峰, 許鐘元, 鄭添財, 邱文燦, 蘇昱日, 尤珊富, 賴漢明, 陳英州 高雄長庚紀念醫院 風濕過敏免疫科
10:07-10:10	Q & A

Risk factors and Treatment strategy influencing *De Novo* Lupus Nephritis in Non-renal SLE

治療中的紅斑性狼瘡患者新發生狼瘡腎炎的危險因子

Shao-Yu Pai³, Tai-Ju Lee¹, Ting-Yuan Lan¹, Ioannis Parodis², Cheng-Hsun Lu³, Chieh-Yu Shen³, Ko-Jen Li³, Song-Chou Hsieh³, Y.K. Onno Teng⁴

¹ National Taiwan University Hospital Hsinchu Branch, Taiwan.

² Karolinska Institutet, Sweden.

³ National Taiwan University Hospital, Taiwan

⁴ Leiden University Medical Center, The Netherlands

Background: Lupus nephritis (LN) is one of the major complications in patients living with systemic lupus erythematosus (SLE). The impact of immunosuppressants on LN development remains unknown. We aimed to analyze the incidence and identify risk factors for LN development in non-renal SLE patients.

Materials and methods: This retrospective, single-center cohort study, we enrolled SLE patients who received at least one cycle of Rituximab (RTX) or a stable dose of azathioprine (AZA) for over one month for non-renal causes. The baseline disease activity and organ involvement, clinical and serological data, and medications including concomitant hydroxychloroquine and glucocorticoid use were recorded. Transient proteinuria was defined as proteinuria for less than one month at baseline. Rituximab was administered at 500-1000 mg at week 0 and week 2 every 6 months. The primary endpoint was the development of LN, defined as a biopsy-proven lupus nephritis or persistent UPCR > 0.5 g/g .

Results: From 2006 to 2022, 211 eligible patients were included (**Table 1**). During the follow-up period of 6 years, 27 patients (12.7%) developed LN. Multivariable analyses identified higher **baseline SLEDAI score, hypocomplementemia, and transient proteinuria** as independent risk factors for *de novo* LN development. Notably, **Rituximab treatment** was associated with a lower risk of developing LN compared to azathioprine (**Table 2**).

Conclusion: Higher baseline SLEDAI and a history of transient proteinuria were independent risk factors for LN development. Compared with azathioprine, rituximab was associated with a decreased rate of *de novo* lupus nephritis in patients with non-renal SLE.

Table 1: Baseline Characteristics

Baseline characteristics	RTX, N = 51	AZA, N = 160
Female sex	46 (90%)	141 (88%)
Age	38 (31 - 51)	37 (29 - 48)
Initial SLEDAI-2K score	10 (6 - 13)	7.5 (4 - 11)
Clinical SLEDAI score	6 (4 - 11)	4 (1 - 7)
Seropositivity	33 (65%)	137 (86%)
Anti-DNA positivity	24 (47%)	105 (66%)
Hypocomplementemia	22 (43%)	101 (63%)
Transient proteinuria	5 (9.8%)	9 (5.6%)
Median follow-up duration	5.8 (4.3 - 8.6)	6.1 (4.4 - 9.3)
Rituximab treatment		
Median cycles of RTX	6.0 (3.0 - 9.5)	-
RTX 1.0 g * 2 every 6 months	5	-
RTX 0.5 g * 2 every 6 months	46	-
Azathioprine treatment		
Median duration of AZA	-	6.7 (5.1 - 9.9)
Time-adjusted AZA dose (mg/day)	-	24 (12 - 43)
Time-adjusted PSL dose (mg/day)	6.7 (4.8 - 9.2)	5.8 (3.8 - 8.0)

Table 2 Univariable and multivariable Cox regression

Variables	Frequency	Univariable			Model 1: baseline predictors (SLEDAI-2K)			Model 2: baseline predictors (serology and clinical SLEDAI)			Model 3: baseline and treatment		
		HR	95% CI	p-value	HR	95% CI	p-value	HR	95% CI	p-value	HR	95% CI	p-value
RTX treatment (vs. AZA)		0.14	0.02 - 1.06	0.009	0.04	0.00 - 0.38	0.005	0.05	0.01 - 0.49	0.010	0.08	0.01 - 0.68	0.020
Initial SLEDAI-2K score		1.11	1.04 - 1.18	0.004	1.13	1.04 - 1.24	0.004						
Clinical SLEDAI score		1.06	0.99 - 1.15	0.12				1.10	1.01 - 1.21	0.033	1.04	0.95 - 1.15	0.4
Anti-DNA positivity	129 (61%)	3.24	1.22 - 8.58	0.009				2.30	0.82 - 6.49	0.11	1.88	0.66 - 5.37	0.2
Hypocomplementemia	123 (58%)	4.73	1.63 - 13.7	<0.001				3.60	1.23 - 10.5	0.019	2.95	0.99 - 8.82	0.053
Transient proteinuria	14 (6.6%)	6.14	2.56 - 14.7	<0.001	5.87	2.27 - 15.2	<0.001	4.87	1.82 - 13.0	0.002	7.66	2.66 - 22.0	<0.001
Treatments													
Total RTX cycles		1.02	0.74 - 1.41	>0.9									
Time-adjusted AZA dose		1.00	0.99 - 1.02	0.8									
Time-adjusted PSL dose		1.15	1.07 - 1.24	0.002							1.13	1.04 - 1.23	0.004

Reduced Platelet Count is a Significant Predictor of 3-Year Mortality in Connective Tissue Disease-Associated Pulmonary Arterial Hypertension: A Retrospective Cohort Study

Pei-Xuan Wang¹, Jia-Feng Chen^{1*}, Chung-Yuan Hsu¹, Tien-Tsai Cheng¹, Wen-Chan Chiu¹, Yu-Jih Su¹, Shan-Fu Yu¹, Han-Ming Lai¹, Ying-Chou Chen¹

¹ Division of Rheumatology, Allergy, and Immunology, Department of Internal Medicine, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.

* Corresponding author

血小板數值減少為結締組織疾病相關肺動脈高壓 3 年死亡率的重要預測因子：一項回溯性隊列研究

王佩璇, 陳嘉峰, 許鐘元, 鄭添財, 邱文燦, 蘇昱日, 尤珊富, 賴漢明, 陳英州
高雄長庚紀念醫院 風濕過敏免疫科

Background: Despite significant therapeutic advances, connective tissue disease-associated pulmonary arterial hypertension (CTD-PAH) remains associated with substantial morbidity and mortality. This study aimed to identify accessible prognostic biomarkers from standard laboratory tests to improve risk stratification in CTD-PAH patients.

Materials and Methods: We retrospectively analyzed a cohort of patients with CTD-PAH diagnosed by right heart catheterization (RHC) at a single center from January 2016 to December 2024. Patients were stratified according to the four-stratum COMPERA 2.0 risk model. Baseline demographic, laboratory, echocardiographic, and hemodynamic data were collected. The prognostic utility of these parameters for predicting 3-year mortality was assessed using receiver operating characteristic (ROC) curve analysis. Survival outcomes were analyzed using Kaplan-Meier methods.

Results: The study cohort comprised 34 patients with CTD-PAH (mean age 56.0 ± 13.6 years; 88.2% female), with the majority (52.9%) classified as intermediate-high risk. 3-year mortality rate was 20.6% (n=7). Non-survivors exhibited significantly lower baseline platelet counts compared to survivors (134.0 [78.0-157.0] vs. 189.0 [139.0-256.0], $p=0.043$). ROC analysis confirmed that platelet count had moderate predictive accuracy for 3-year mortality (AUC=0.75, 95% CI 0.58-0.92; $p=0.005$) (Fig. 1). Using an optimized cut-off of $160 \times 10^9/L$, Kaplan-Meier analysis revealed that a lower platelet count was significantly associated with worse survival (log-rank $p=0.037$) (Fig. 2). Other parameters were not significant predictors of mortality.

Conclusion: This study demonstrates that a reduced platelet count is significantly associated with an increased risk of 3-year mortality in patients with CTD-PAH. As a routinely measured and inexpensive parameter, platelet count is a promising and accessible prognostic biomarker.

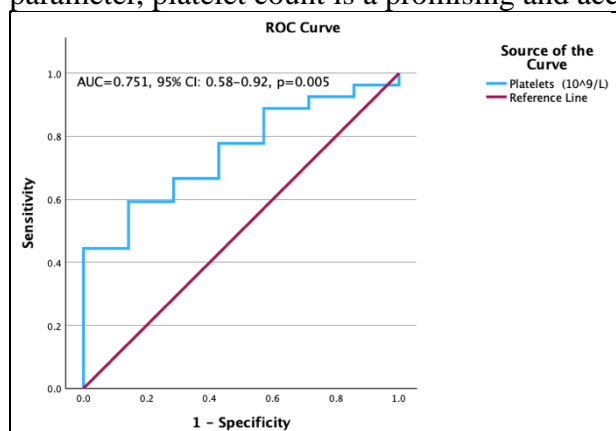


Fig. 1 Receiver operating characteristic (ROC) curve of platelet count for 3-year mortality prediction. AUC=0.751, 95% CI: 0.58-0.92, $p=0.005$

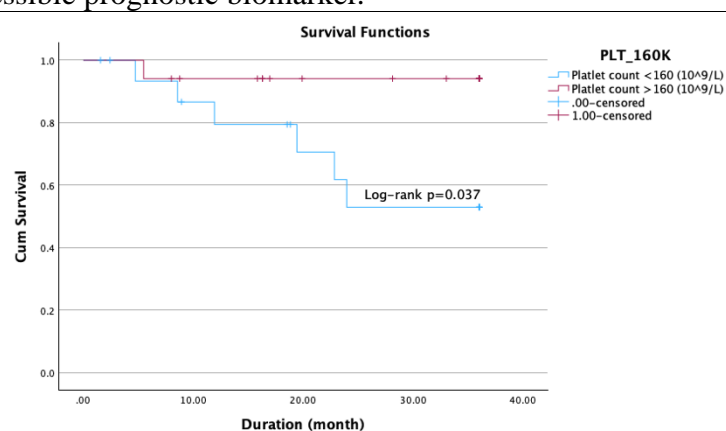


Fig. 2 Kaplan-Meier survival curves for 3-year mortality stratified by platelet count. Log-rank $p=0.037$