Abstract 88 Table 1 Performance statistics for clinical classification criteria-based algorithms for identifying sle in medical record data

Algorithm Criteria	True Positive	False Positive	True Negative	False Negative	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Value
ACR	323/472 (68%)	6/128 (5%)	122/128 (95%)	149/472 (32%)	68%	95%	98%	45%
SLICC	369/472 (78%)	5/128 (4%)	123/128 (96%)	103/472 (22%)	69%	98%	99%	55%
proposed EULAR/ACR	272/472 (58%)	5/128 (4%)	123/128 (96%)	200/472 (42%)	52%	96%	98%	35%

all three algorithms likely reflects undetected cases of SLE resulting from low detection of clinical and laboratory criteria (such as arthralgia and ANA tests) that are not consistently documented in structured data in the medical record. Use of structured data improves portability of the algorithms to other EHR datasets, but may have reduced the ability of the algorithms to detect important/highly weighted classification criteria that are documented primarily in free text notes. All three algorithms may improve through use of natural language processing (NLP) of physician notes for criteria that were difficult to detect using only diagnosis codes and labs, but may reduce portability as a result of the customization required for NLP to be effective.

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89 THE DIALATATION OF MAIN PULMONARY ARTERIAL MEASURED BY CHEST MULTISLICE COMPUTED TEMOGRAPHY PREDICT POOR LONG-TERM OUTCOME IN CONNECTIVE TISSUE DISEASE ASSOCIATED PULMONARY ARTERIAL HYPERTENSION

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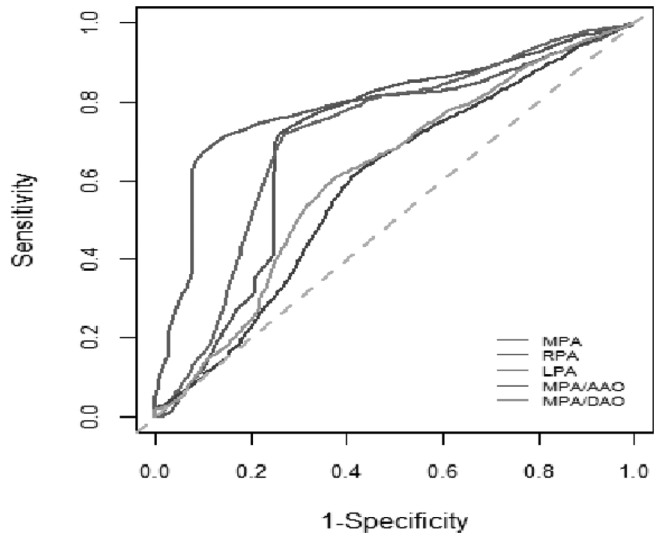
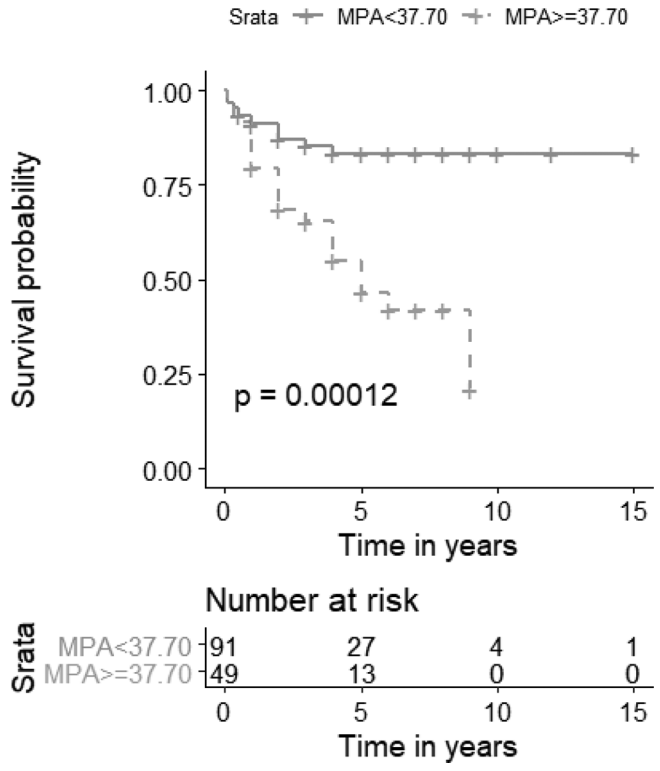
Background Pulmonary arterial dilatation is a common manifestation of chest multislice computed temography (MSCT) in patients with pulmonary arterial hypertension (PAH). The exact clinical significance of these phenomena has not been clarified in connective tissue disease (CTD) associated PAH. We want to observe whether the dilatation of pulmonary aterial was associated with poor outcome in patients with CTD-PAH.

Abstract 89 Table 1 Baseline demographic and clinical characteristics of survivors and non-survivors with 140 CTD-PAH

	All Patients	Survivors	non-Survivors	P value
Subjects,n	140	104(74%)	36(36%)	----
Female,n	132(94%)	100(96%)	32(89%)	0.1055
Age,years	44.32±16.11	43.08±1.56	47.92±2.15	0.1234
Underlying CTD				
SLE,n	60(43%)	45(43%)	15(42%)	0.8670
pSS,n	27(19%)	22(21%)	5(14%)	0.3410
SSc,n	17(12%)	9(9%)	8(22%)	**0.0317**
Overlap Syndrome,n	16(11%)	12(12%)	4(11%)	0.9446
UCTD,n	9(6%)	7(7%)	2(6%)	0.8043
MCTD,n	6(4%)	5(5%)	1(3%)	0.6042
RA,n	4(3%)	3(3%)	1(3%)	0.9735
DM,n	1(1%)	1(1%)	0	0.5549
Duration of CTD,months	72.10±7.66	64.68±8.43	91.65±16.63	0.0640
Duration of PAH,months	10.83±1.92	10.16±2.24	12.77±3.73	0.0524
WHO FC				
I-II,n	63(45%)	34(33%)	7(19%)	**<0.0001**
III-IV,n	77(55%)	70(67%)	29(81%)	**----**
6MWD,m	359.90±21.81	385.80±19.62	278±57.16	**0.0239**
NT-proBNP,ng/l	2787±538.30	1628±35.56	6231±1842	**<0.0001**
PASP,mmHg	69.24±1.59	67.24±1.81	74.49±3.21	**0.0427**
MPA diameter,mm	35.52±0.43	34.72±0.48	37.84±0.86	**0.0012**
RPA diameter,mm	23.63±0.31	23.23±0.36	24.76±0.60	**0.0268**
LPA diameter,mm	18.95±0.30	18.46±0.34	20.36±0.57	**0.0065**
AAo diameter,mm	30.60±0.42	30.25±0.49	31.63±0.84	0.1492
DAo diameter,mm	22.33±0.27	22.05±0.31	23.14±0.55	0.0805
MPA/AAo	1.18±0.02	1.18±0.02	1.20±0.03	0.5656
MPA/DAo	1.62±0.02	1.61±0.03	1.64±0.05	0.7047

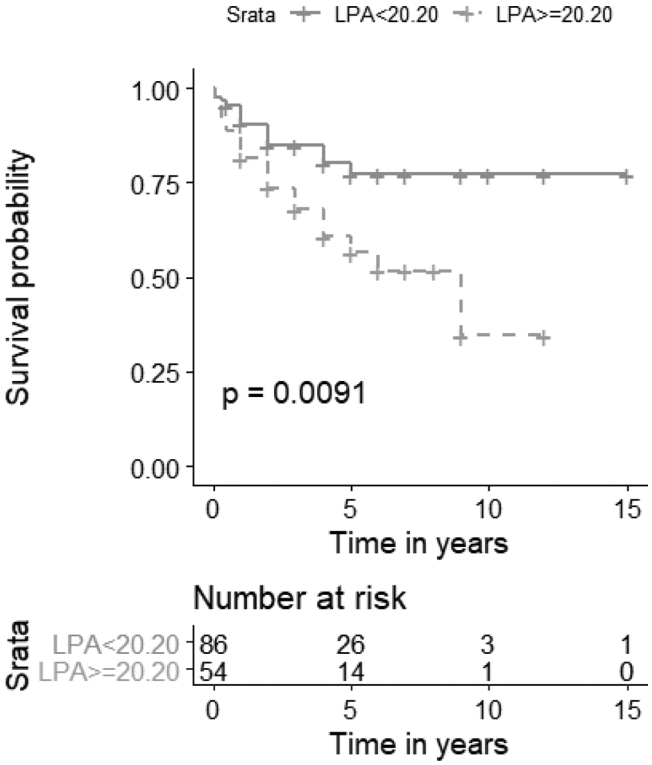


Abstract 89 Figure 2 Time-dependent ROC curve showing the 10-years prognostic value of MSCT parameters. These results suggest that MPA diameter, PRA diameter and LPA diameter may have prognositic value in CTD-PAH patients

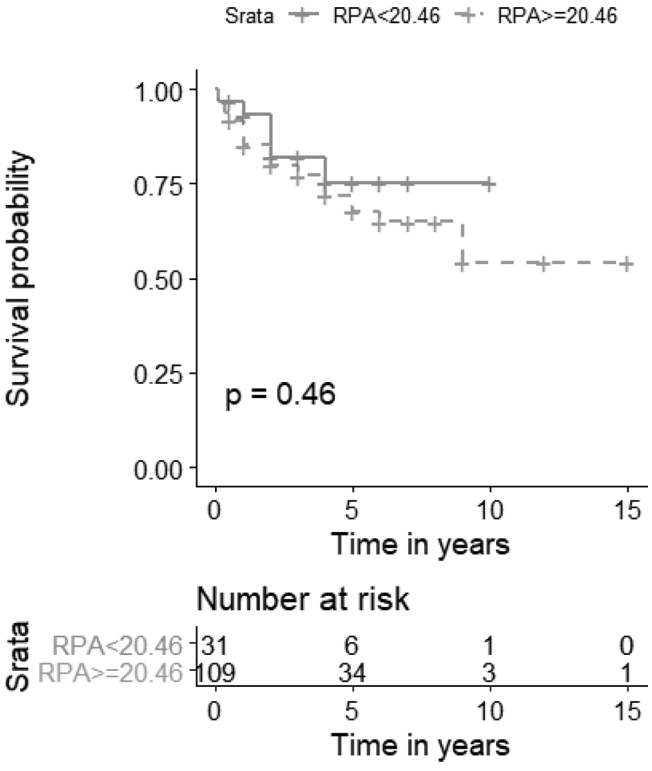


Abstract 89 Figure 3 Kaplan-Meier analysis of the long-term prognosis based on MSCT parameters. (A) Kaplan-Meier analysis showed significant differences in the prognosis between the patients with MPA diameter <37.70 mm and those with MPA diameter ≥37.70mm (Long-rank test p=0.00012).

Methods We retrospectively investigated 140 CTD-PAH patients diagnosed by echocardiography during 2010 and 2018 at the first affiliated hospital of Nanjing Medical University. Digital scout chest MSCT information was obtained. Main pulmonary arterial (MPA), right pulmonary arterial (RPA) branch, left pulmonary arterial (lPA) branch, ascending aorta (AAO) and descending aorta (DAO) diameters were



Abstract 89 Figure 3 (B) Kaplan-Meier analysis showed significant differences in the prognosis between the patients with LPA diameter <20.20mm and those with LPA diameter ≥ 20.20 mm (Long-rank test p=0.0091).



Abstract 89 Figure 3 (C) Kaplan-Meier analysis showed no significant differences in the prognosis between the patients with RPA diameter <20.46 mm and those with RPA diameter ≥ 20.46 mm (Long-rank test p=0.46).

Abstract 89 Table 2 Area under the curve

Test result variables	Area	P value	Cut-off Value	Hazard ratio	Asymptotic 95% confidence interval	
					Lower bound	Upper bound
MPA diameter	0.81	0.003	37.70	1.13	1.05	1.22
RPA diameter	0.70	0.015	20.46	1.15	0.10	1.21
LPA diameter	0.72	0.020	20.20	1.10	1.04	1.27
MPA/AAo	0.59	0.455	1.12	3.95	0.58	26.94
MPA/DAo	0.62	0.378	1.61	3.68	0.88	15.46

Abstract 89 Table 3 Univariate and multivariate analyses for mortality

Prognosis factor	Univariate		Multivariate	
	Hazard ratio(95% CI)	P value	Hazard ratio(95% CI)	P value
Male		**0.051**	0.26(0.09-0.77)	**0.015**
SLE		0.477		
SSc		**0.066**		
Mild ILD		0.261		
Pericardial Effusion		**0.157**	0.40(0.19-0.89)	**0.020**
MPA d ≥37.70 mm	0.29(0.15-0.58)	**0.000**	0.28(0.14-0.58)	**0.019**
LPA d ≥20.20 mm	0.43(0.22-0.84)	**0.011**		
WHO FC III-IV	0.25(0.11-0.56)	**0.001**	3.74(1.61-8.71)	**0.001**
GCs Treatment		0.623		
IM Treatment		0.402		
PAH Targeted Drug treatment		0.883		

In multivariate analysis, MPA diameter ≥37.70mm, pericardial effusion, male and WHO functional class III-IV were independent predictors of poor prognosis in patients with CTD-PAH.

measured by professional radiologist. The ratio of MPA/AAO, MPA/DAO were also caiculated.

Results During the observational period of 3.44±0.23 years, 2 patients were died of serious infection, 1 patients was died of renal failuer and 33 patients were died of heart faliure. The time dependent receiver operating characteristic (ROC) curve suggested that MPA, PRA and LPA diameter may have the 10 year prognositic value in CTD-PAH patients, the corresponding cut-off values were MPA>37.70 mm, RPA >20.46 mm and LPA >20.20 mm. Kaplan-Meier analysis showed significant difference in the long-term prognosis between patients with MPA diameter <37.70 mm and MPA diameter 37.70 mm (Long-rank test p=0.00012) and between patients with LPA diameter <20.20 mm and LPA diameter 20.20 mm (Long-rank test p=0.0091). The multivariate analyses suggested that MPA 37.70 mm was the independent risk factor of poor outcome of CTD-PAH patients (HR: 0.28; 95% CI: 0.14–0.58 p=0.01).

Conclusions Main pulmonary arterial dilatation measured by MSCT was associated with the poor prognosis in patients with CTD-PAH.

Funding Source(s): None

90 SOCIOECONOMIC DISPARITIES IN LUPUS NEPHRITIS: FINDINGS FROM THE SOUTHERN CALIFORNIA LUPUS REGISTRY

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Background Systemic Lupus Erythematous (SLE) is a chronic multi-systemic autoimmune disease. Despite therapeutic advancements, lupus nephritis (LN), which occurs in 25%–75% of individuals with SLE, remains a major cause of mortality. Prior studies have demonstrated poor outcomes in SLE occurring more frequently in both ethnic minority groups as well as in those with low socioeconomic status (SES). Factors attributing to greater mortality rates in these populations include patient resistance to treatment, compliance, low SES and genetics.

Methods Subjects were selected from SCOLR, a prospective registry enrolling all-comers with SLE. Inclusion criteria were LN subjects with available biopsy report. Subjects with renal transplant and unknown LN class were excluded. Data collected included demographics, insurance information, clinical and serologic variables specifically to establish an SLE disease activity index (SLEDAI). Subjects were categorized by self-reported ethnicity: White Hispanic, White non-Hispanic, Black, and Asian/Pacific Islander. Further sub-analysis was carried out on individuals with public vs. private insurance. Insurance and ethnicity were used as surrogates for socioeconomic status and descriptive statistical analyses were calculated to determine if observed differences were statistically significant.

Results One hundred and sixty-two medical charts were reviewed. Of those, 50% of subjects were White Hispanic, 31.8% White non-Hispanic, 8.7% Black, and 6.6% Asian/Pacific Islander. After adjusting for age, sex, and BMI, public insurance was independently associated with the prevalence of LN (p=0.038).

We performed a subgroup analysis of the 35 LN subjects to observe the association between SES with treatment outcomes. Proteinuria was higher in subjects with public insurance at baseline and this difference was statistically significant