Table S1. The diagnostic performances of C3 or C4 levels with selected cut-off points, or parallel/serial combinations of potential biomarkers in discriminating lupus pleuritis from infection-related or malignant pleural effusion.

Sensitivity/Specificity	Lupus pleuritis vs. infection-related pleural effusion	Lupus pleuritis vs malignant pleural effusion
C3 (cut-off: < 23 mg/dl)	64%/82%	64%/94%
C3 (cut-off: < 24 mg/dl)	73%/82%	73%/94%
C4 (cut-off: < 3 mg/dl)	64%/100%	64%/100%
Parallel combinations		
C3 (cut-off: < 23 mg/dl) and ANA	64%/100%	64%/94%
C3 (cut-off: < 23 mg/dl) or ANA	91%/64%	91%/76%
C3 (cut-off: < 24 mg/dl) and ANA	64%/100%	64%/94%
C3 (cut-off: < 24 mg/dl) or ANA	100%/64%	100%/76%
C4‡ and ANA	64%/100%	64%/100%
C4‡ or ANA	91%/82%	91%/78%
C3 (cut-off: < 23 mg/dl) and C4‡	55%/100%	55%/100%
C3 (cut-off: < 23 mg/dl) or C4‡	73%/82%	73%/94%
C3 (cut-off: < 24 mg/dl) and C4‡	55%/100%	55%/100%
C3 (cut-off: < 24 mg/dl) or C4‡	82%/82%	82%/94%
Serial combinations		
ANA and C4‡	64%/100%	64%/100%
ANA or C4‡	91%/82%	91%/76%

‡cut-off: < 3 mg/dl

ANA, antinuclear antibodies titer ≧ 1:80; C3, complement 3; C4 , complement 4.

Table S2. Levels of HMGB1, sRAGE, pro-inflammatory cytokines and SLE-related markers in the pleural effusion of recruited SLE patients.

	Lupus pleuritis (n=11)	Malignant pleural effusion (n=1)	Fluid overload (n=4)
Characteristics			
Age (years)	28 (23, 44)	26	40 (30, 50)
Female sex (%)	9 (82%)	1 (100%)	3 (75%)
Disease duration (years)	3 (0, 8)	6	10 (3, 24)
Lupus nephritis*	3 (27%)	1 (100%)	4 (100%)
Disease activity (SLEDAI)	7 (3, 15)	0	19 (9, 25)
Active disease (SLEDAI≧4)	6 (55%)	0 (0%)	3 (75%)
Nephrotic-range proteinuria (≧3.5 gm/day)*	0 (0%)	0 (0%)	2 (50%)
Immunological markers			
HMGB1 (ng/mL)	0.48 (0.39, 18.02)	0.79	5.30 (2.95, 8.22)
sRAGE (pg/ml)	4232 (1256, 5096)	4457	3562 (2053, 4555)
Adenosine deaminase activity (U/l)	13 (7, 28)	11	6 (5, 12)
Cytokines			
IL-17A (pg/ml)	3.07 (1.54, 3.74)	1.64	2.20 (1.34, 2.39)
TNF-α (pg/ml)	5.99 (2.21, 21.56)	6.02	9.98 (6.35, 16.82)
SLE-related markers			
Antinuclear antibody (ANA) titer ≥ 1: 80, n (%)	10 (91%)	0 (0%)	3 (75%)
Pattern			
Fine speckled	9 (90%)	0 (0%).	3 (100%)
Homogeneous	6 (60%)	0 (0%)	3 (100%)
Coarse speckled	3 (30%)	0 (0%)	0 (0%)
ANA titer ≥ 1: 160, n (%)	9 (82%)	0 (0%)	3 (75%)

ANA titer ≥ 1: 320, n (%)	8 (73%)	0 (0%)	3 (75%)
PE/serum ANA ratio ≧1‡	4 (44%)	0 (0%)	3 (75%)
C3 (mg/dl)*	22.3 (17.1, 40.0)	42.5	12.2 (8.05, 14.6)
PE/serum C3 ratio	0.21 (0.18, 0.51)	0.31	0.21 (0.16, 0.45)
C4 (mg/dl)	2.5 (0.6, 6.0)	4.1	2.9 (2.0, 5.5)
PE/serum C4 ratio	0.22 (0.09, 0.34)	0.18	0.16 (0.11, 0.60)

C3, complement 3; C4, complement 4; HMGB1, high mobility group box 1; IL-17A, interleukin-17A; PE, pleural effusion; SLE, systemic lupus erythematosus; SLEDAI, Systemic Lupus Erythematosus Disease Activity Index; sRAGE, soluble receptor for advanced glycation end products; TNF-α, tumor necrosis factor-α

‡Two patients did not have serum ANA examinations.

*$p<0.05$ between lupus pleuritis and fluid overload as determined by the Mann-Whitney U test.

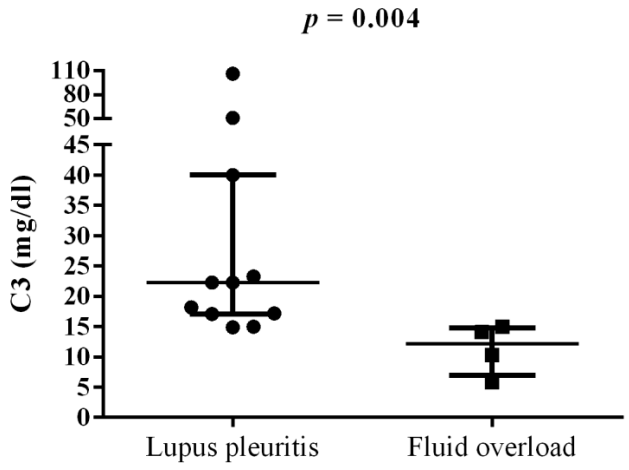
Table S3. Diagnostic performances of the potential biomarkers in patients with exudative pleural effusion‡.

	Lupus pleuritis vs. infection-related pleural effusion	Lupus pleuritis vs malignant pleural effusion
The area under the receiver operating characteristic (95% CI) for numerical variables		
Immunological markers		
HMGB1	0.64 (0.33, 0.90)	0.51 (0.18, 0.87)
sRAGE	0.69 (0.40, 0.91)	0.76 (0.50, 0.98)
ADA activity	0.73 (0.44, 0.93)	0.58 (0.30, 0.87)
Pro-inflammatory cytokines		
IL-17A	0.80 (0.49, 0.95)	0.50 (0.16, 0.86)
TNF-α	0.50 (0.21, 0.80)	0.52 (0.18, 0.81)
SLE-related markers		
Complement 3	0.78 (0.48, 1.00)	0.75 (0.47, 1.00)
Complement 4	0.81 (0.49, 1.00)	0.80 (0.51, 1.00)
The sensitivity/specificity for binary variables		
ANA titer ≥ 1: 80	100%/82%	100%/76%
ANA titer ≥ 1: 160	88%/82%	88%/88%
ANA titer ≥ 1: 320	75%/91%	75%/94%

‡Data are presented as AUC and 95% confidence interval;

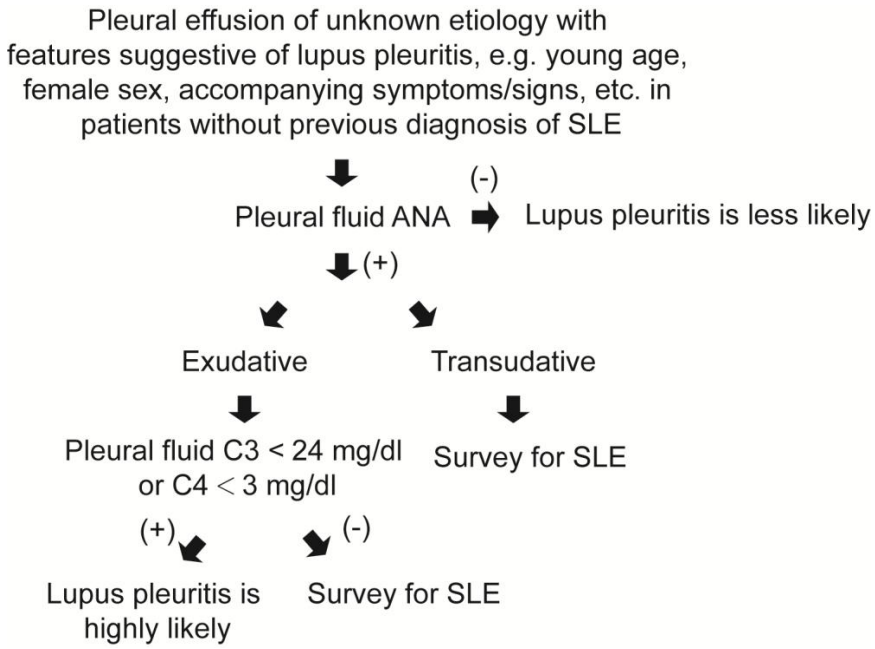
ADA, adenosine deaminase; ANA, antinuclear antibody; AUC, the area under the receiver operating characteristic curve; HMGB1, high mobility group box 1; IL-17A, interleukin-17A; SLE, systemic lupus erythematosus; sRAGE, soluble receptor for advanced glycation end products; TNF-α, tumor necrosis factor-α.

Figure S1. Pleural fluid levels of C3 in SLE patients with lupus pleuritis and fluid overload.



C3, complement 3, SLE, systemic lupus erythematosus.

Figure S2. The proposed diagnostic algorithm in patients with suspected lupus pleuritis.



SLE, systemic lupus erythematosus.