

1 **Macrophage Mannose Receptor CD206 Predicts Prognosis in Community-acquired Pneumonia**

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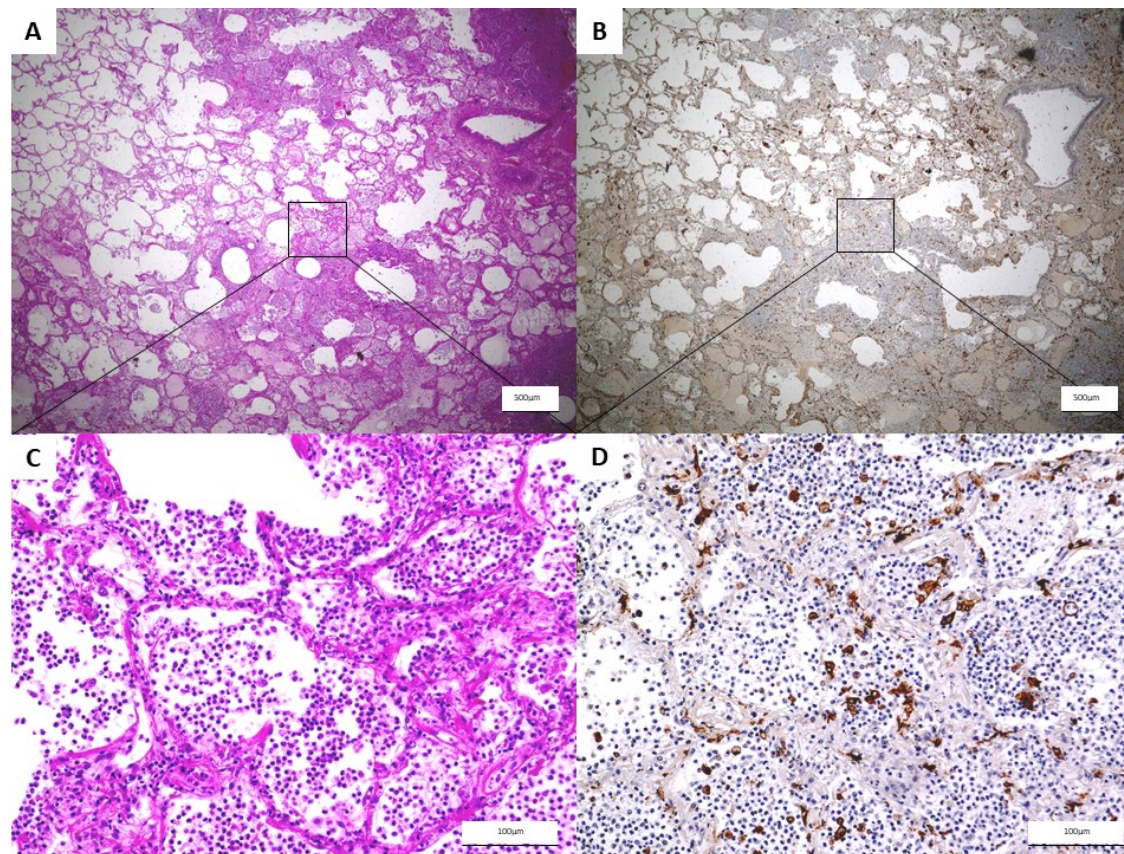
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11 **Supplement Results**

12 The following pathogens were detected: *Streptococcus pneumoniae* (n = 40; sputum culture = 31, blood culture = 10), *Staphylococcus aureus* (n
13 = 18; sputum culture = 15, blood culture = 3), *Haemophilus influenzae* (n = 15; sputum culture), *Pseudomonas aeruginosa* (n = 11; sputum
14 culture = 9, blood culture = 2), *Klebsiella pneumonia* (n = 5; sputum culture), *Mycoplasma pneumonia* (n = 2), *Legionella* spp. (n = 1),
15 *Moraxella catarrhalis* (n = 1; sputum culture), *Escherichia coli* (n = 1; sputum culture), *Acinetobacter baumannii* (n = 1; sputum culture), and an
16 unidentified gram-negative bacillus (n = 3; sputum culture) (Supplement Table 1).

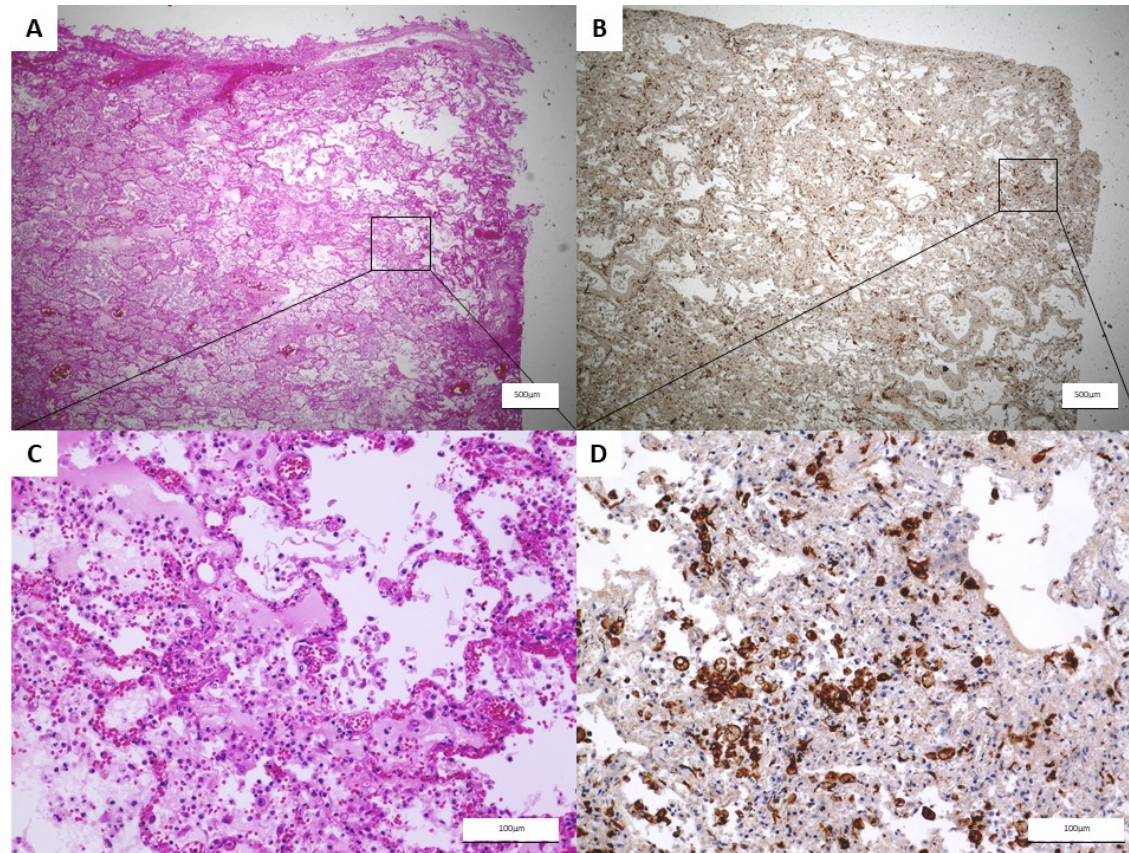
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18 **Supplemental Fig 1. Immunohistochemical staining of CD206 in 69-year-old female autopsy case with community-acquired pneumonia.**



19 69-year-old female autopsy case, who was dead in two days from onset of pneumonia. (A: $\times 20$, C: $\times 200$) HE stain shows marked inflammatory
20 cell infiltration and macrophages in alveolar. (B: $\times 20$, D: $\times 200$) CD206 positive macrophages were observed in immunohistochemical staining.

21 **Supplemental Fig 2. Immunohistochemical staining of CD206 in 63-year-old male autopsy case with community-acquired pneumonia.**

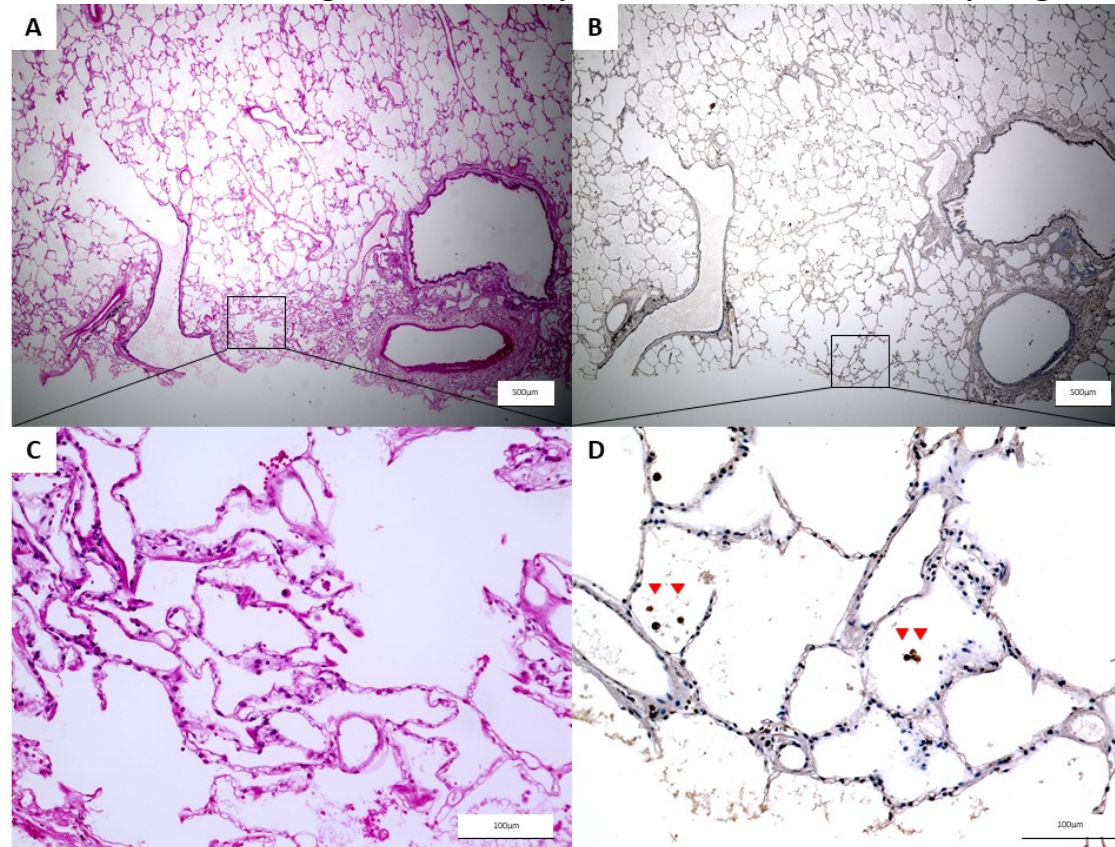


22 63-year-old male autopsy case, who was dead in five days from onset of pneumonia.

23 (A: $\times 20$, C: $\times 200$) HE stain shows macrophage infiltration, pulmonary congestion, and deposition of fibrin in the alveolar. (B: $\times 20$, D: $\times 200$)

24 CD206 positive macrophages were strongly observed in immunohistochemical staining.

25 **Supplemental Fig 3. Immunohistochemical staining of CD206 in 55-year-old female case with early lung cancer.**



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27 Lung section from a patient with early lung cancer, who was underwent partial resection.

28 (A: $\times 20$, C: $\times 200$) HE stain shows macrophages in the alveolar spaces. (B: $\times 20$, D: $\times 200$) CD206 positive macrophages (arrow head) were

29 observed in immunohistochemical staining.

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31 **Supplemental Table1. Bacterial pathogen in community acquired pneumonia**

	Cohort1 (n=127)	Cohort2 (n=125)	p-value
<i>Streptococcus pneumoniae</i>	24 (6)	16 (4)	0.228
<i>Staphylococcus aureus</i>	10 (1)	8 (2)	0.796
<i>Hemophilus influenzae</i>	7	8	0.808
<i>Pseudomonas aeruginosa</i>	5 (1)	6 (1)	0.768
<i>Klebsiella pneumoniae</i>	3	2	1.000
<i>Mycoplasma pneumoniae</i>	2	—	0.498
<i>Legionella spp.</i>	—	1	0.496
<i>Moraxella catarrhalis</i>	—	1	0.496
others	9	8	1.000
unknown (normal flora or not cultured)	68	75	0.312

32 Bacterial pathogens were detected from sputum culture and/or blood culture. The number shows positive sputum culture in the supplemental
33 table1. The number in round bracket shows positive blood culture.

34 **Supplemental Table2. Correlation between the soluble CD206 and clinical parameters in patients with community-acquired pneumonia**

	Cohort 1		Cohort 2		Cohort 1 + Cohort 2	
	R	<i>p</i> -value	R	<i>p</i> -value	R	<i>p</i> -value
Age	0.3541	<0.001	0.06337	0.4827	0.2514	<0.0001
P/F ratio, mmHg	-0.1895	0.0425	-0.3253	0.0003	-0.3072	<0.0001
TP, g/dl	-0.1406	0.1178	-0.2540	0.0046	-0.2343	0.0002
Alb, g/dl	-0.3956	<0.0001	-0.4324	<0.0001	-0.4721	<0.0001
BUN, mg/dl	0.3164	0.0003	0.2327	0.0090	0.3055	<0.0001
Cre, mg/d	0.07897	0.3775	0.1325	0.1406	0.1730	0.0059
CRP, mg/dl	0.2401	0.0066	0.2304	0.0097	0.2412	0.0001
PCT, ng/ml	ND	ND	0.3159	0.0048	0.3159	0.0048
WBC, / μ l	0.2320	0.0087	0.0906	0.3150	0.1482	0.0186
Ht, %	-0.2024	0.0225	-0.1564	0.0909	0.2036	0.0014
Plt, x 10 ⁴ / μ l	0.0084	0.3506	-0.0537	0.5522	0.0146	0.8183
PSI (score)	0.4369	<0.0001	0.2802	0.0015	0.4035	<0.0001
CURB65 (score)	0.3386	<0.0001	0.3962	<0.0001	0.3516	<0.0001

35 P/F ratio; ratio of partial pressure arterial oxygen and fraction of inspired oxygen (PaO₂/FiO₂), TP; total protein, Alb; albumin, BUN; blood urea
36 nitrogen, Cre; creatinine, CRP; C-reactive protein, PCT; procalcitonin, WB; white blood cell count, HB; hemoglobin, Ht; hematocrit, Plt;
37 platelets, PSI; pneumonia severity index.
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39 **Supplemental Table3. Receiver operator curve analysis for predicting mortality in patients with community-acquired pneumonia**
 40 **(CAP).**

Variable	AUC	Sensitivity (%)	Specificity (%)	Cut -off
WBC	0.542	27.3	89.6	17510
PCT	0.637	66.7	78.6	6.03
CRP	0.674	63.6	73.9	19.77
PSI	0.770	77.3	73.9	118
CURB65	0.747	77.3	57.0	1
CD206	0.856	86.4	79.1	1413

41 WBC, white blood cell count; PCT, procalcitonin; CRP, C-reactive protein; AUC, area under the curve

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43 **Supplemental Table4. Receiver operator curve analysis for predicting mortality in each cohort.**

Variable	Cohort1				Cohort2			
	Cut-off	AUC	Sensitivity (%)	Specificity (%)	Cut-off	AUC	Sensitivity (%)	Specificity (%)
WBC	15700	0.539	38.5	81.7	10740	0.541	66.7	56.0
PCT	ND	ND	ND	ND	6.03	0.603	57.1	78.9
CRP	19.77	0.780	69.2	78.3	21.94	0.551	55.6	79.3
PSI	118	0.844	84.0	80.9	120	0.674	66.7	67.2
CURB65	3	0.744	38.5	95.7	1	0.773	88.9	55.2
CD206	1386.3	0.860	84.6	86.0	1868.5	0.876	77.8	87.9

44 WBC, white blood cell count; PCT, procalcitonin; CRP, C-reactive protein; AUC, area under the curve

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