

Appendix A

Supplementary table 1 – Overview of positive blood cultures

Blood culture result	Number of blood cultures positive
Staphylococcus capitis	2
Staphylococcus epidermidis	4
Staphylococcus hominis	2
CNS, not otherwise specified	1
Staphylococcus hominis and staphylococcus epidermidis	1
Bacillus species	1

CNS: coagulase negative staphylococcus

Supplementary table 2 – Odds ratios for biomarkers, PSI and severe outcome in hospitalized patients only

	Odds ratio	95% C.I.	Adjusted OR	Adjusted 95% C.I.
Odds ratio for biomarkers†				
PCT*	1,6	1,2 - 2,1	1,5	1,1 - 2
CRP [§]	1,6	1,1 - 2,3	1,5	1,1 - 2,2
Lymphocytes [§]	0,6	0,4 - 1,1	0,8	0,4 - 1,4
Ferritin [§]	1,2	0,9 - 1,6	1,3	0,9 - 1,8
PCT in groups				
PCT <0.10 ng/mL	Ref	Ref	Ref	Ref
PCT 0.10 -0.25 ng/mL	5,3	1,4 - 20	4,8	1,2 - 18,5
PCT 0.25-0.50 ng/mL	7,5	1,6 - 35,3	7,3	1,4 - 37,1
PCT >0.50 ng/mL	13,5	3,2 - 57,1	11,1	2,6 - 48,2
Odds ratio for PSI groups				
PSI group 1	Ref	Ref		
PSI group 2	0,7	0,1 - 3,6		
PSI group 3	2,5	0,6 - 11,2		
PSI group 4	3,9	0,9 - 16		
PSI group 5	6,1	1,1 - 33,2		

* Adjusted for age and severe kidney disease (On dialysis, creatinine >270 µmol/L, uremia, history of kidney transplant)

§ Adjusted for age

Supplementary table 3 – AUC of the ROC curves for biomarkers and PSI score for severe disease course in hospitalized patients only

	AUC	95% C.I.
PCT	0,72	0,63 - 0,81
CRP	0,64	0,54 - 0,74
Ferritin	0,59	0,47 - 0,71
Lymphocyte count	0,59	0,47 - 0,7
PSI score	0,71	0,61 - 0,81

Appendix B

Summary of two patients with a bacterial co-infection

Patient 1

This 73-year-old man with a medical history of chronic obstructive pulmonary disease (COPD) GOLD III, gout, and progressive renal failure due to microscopic polyangiitis for which he received prednisone and azathioprine, presented to our ED with dyspnoea since 10 days. He had already received treatment with amoxicillin. At presentation, his breathing frequency was 34/min with a peripheral oxygen saturation of 93% at 6 litres of oxygen per minute. Lab results showed a WBC of $9.9 \times 10^9/L$, CRP 305 mg/L and PCT 0.55 ng/mL. In addition to a positive PCR test taken at the ED for SARS-CoV-2, this patient had a bacterial co-infection based on a positive urine antigen-test for pneumococcus and a right sided lobular opacity on chest X-ray. Treatment consisted of prednisone for an exacerbation of COPD, hydroxychloroquine and ceftriaxone, which was later switched to amoxicillin. After 6 days of treatment, his clinical condition improved and the patient was discharged to a rehabilitation centre.

Patient 2

This 75-year-old woman had a medical history of COPD GOLD III and type 2 diabetes. She had recently been admitted to the hospital with an exacerbation COPD due to a respiratory infection, with a sputum culture demonstrating *P. aeruginosa*. At presentation, she suffered from dyspnoea for 11 days with an up and down fever. Her vital parameters showed a breathing frequency of 22/min and a saturation of 93% with 3 litres of oxygen per minute. Laboratory results showed a WBC of $7.7 \times 10^9/L$, lymphocytes $1.16 \times 10^9/L$, CRP 58 mg/L, PCT 0.13 ng/mL, ferritin 215 $\mu\text{g/L}$ and D-dimer 1.83 mg/L. A chest CT was done which ruled out pulmonary embolism, showing bilateral suggestive for bacterial pneumonia as judged by the radiologist, but COVID-19 could not be excluded. With her medical history taken into account, this led to a working diagnosis of COVID-19 with a bacterial (co-)infection for which treatment with prednisolone, amoxicillin and ciprofloxacin was started. The nasopharyngeal swab taken at presentation was positive for SARS-CoV-2, a sputum culture was indeed positive for *P. aeruginosa*. Treatment was switched to prednisolone and ciprofloxacin and after 6 days she could be discharged home in good condition.