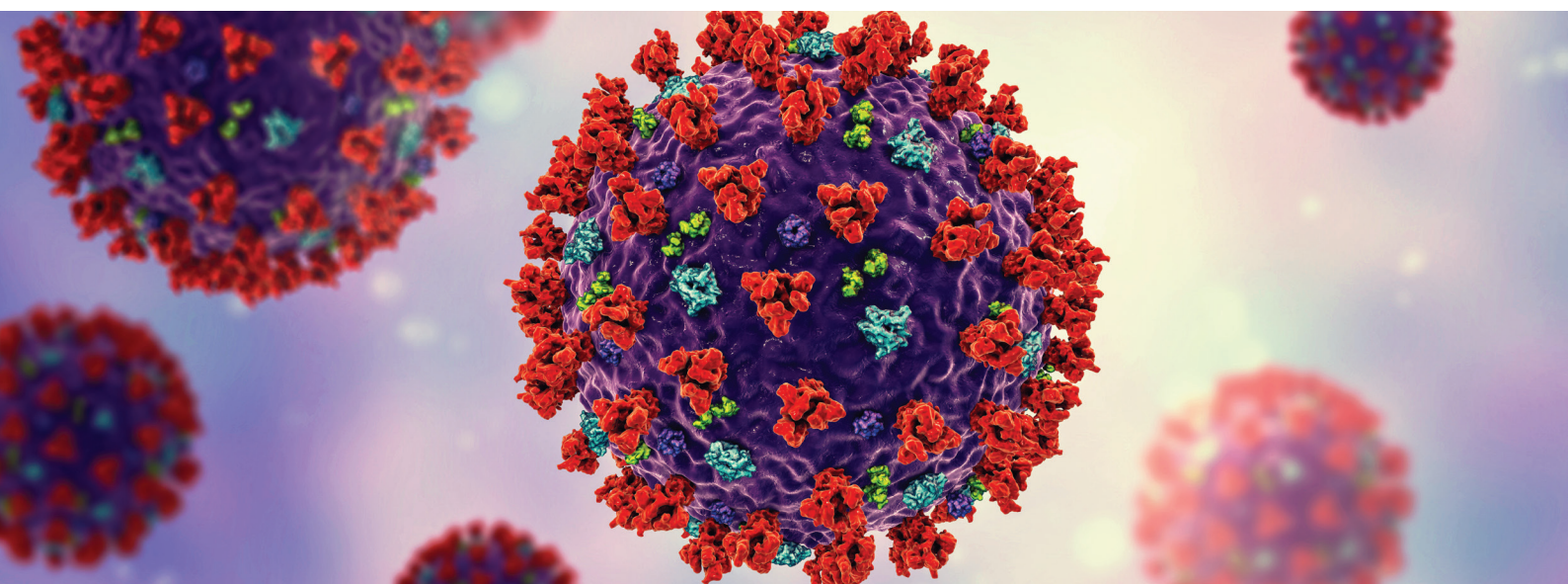


THE FIRST **COVID-19 SEVERITY** SCORE FACILITATING PATIENT TRIAGE



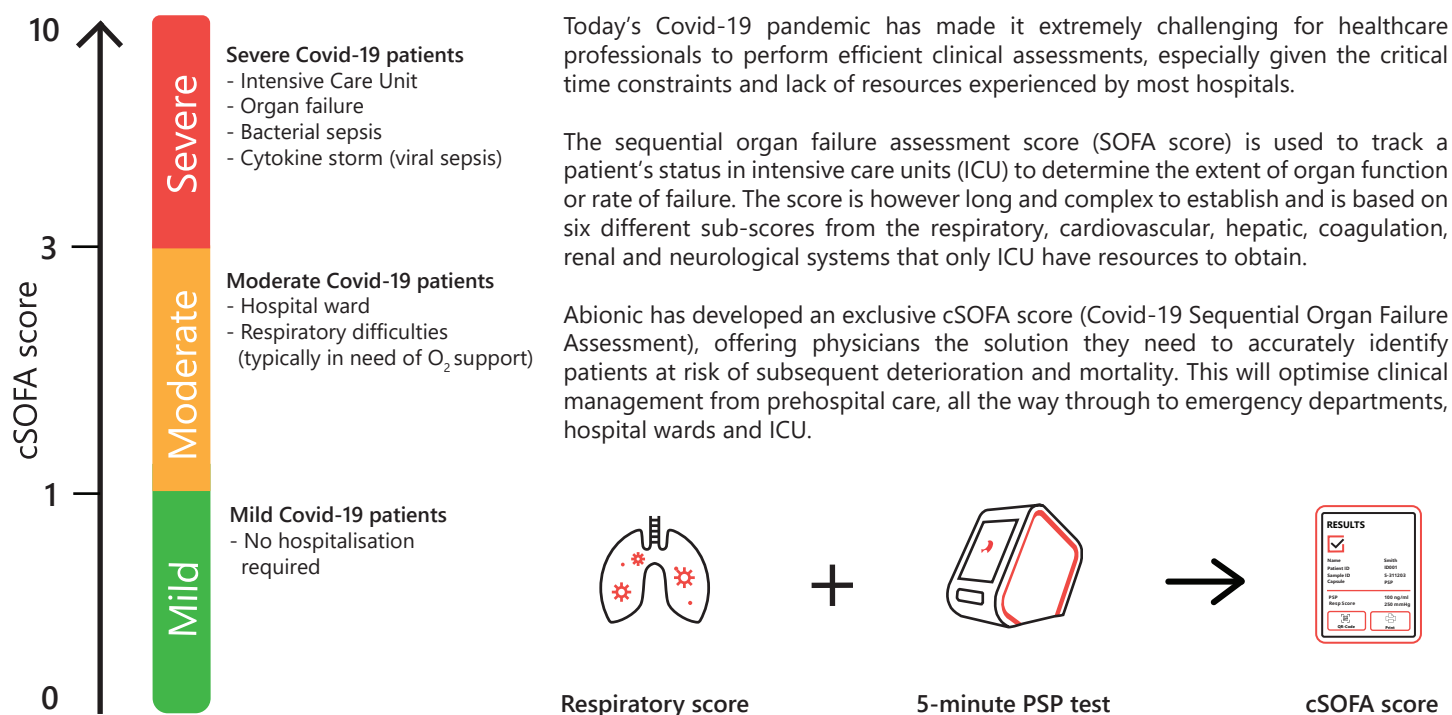
abioSCOPE®

**GET THE cSOFA SCORE IN 5 MINUTES
ASSESS COMPLICATIONS IN COVID-19 PATIENTS**



IDENTIFY COVID-19 PATIENTS AT RISK OF DETERIORATION

The clinical need to assess the SOFA score in Covid-19 patients: get the cSOFA score in 5 minutes

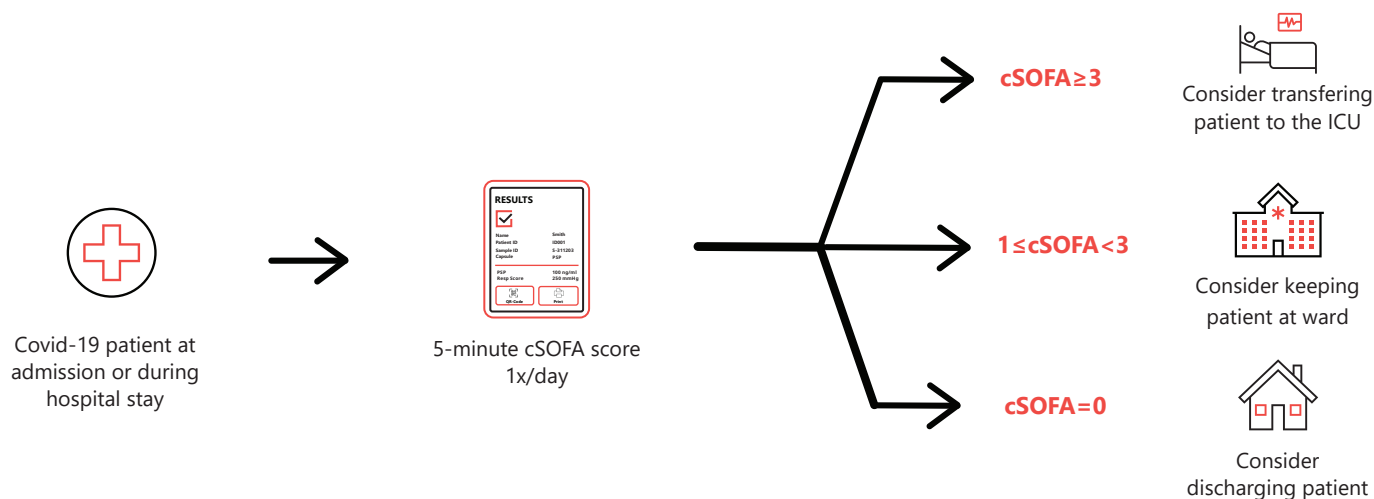


The cSOFA score is a 5-minute Covid-19 severity score to immediately assess your patient's clinical deterioration and to support your medical decision. The combination of a simple respiratory score (RESP) along with the blood biomarker Pancreatic Stone Protein (PSP), defines the cSOFA score, allowing for the severity assessment of an ongoing SARS-CoV-2 infection.

PSP is easily quantified in 5 minutes from a single drop of blood using the CE marked IVD test on the abioSCOPE®.¹

THE FASTEST COVID-19 SEVERITY SCORE FACILITATING PATIENT TRIAGE

cSOFA as Covid-19 Sequential Organ Failure Assessment



**FIRST COVID-19 SEVERITY SCORE
FACILITATING PATIENT TRIAGE**



CLINICAL EVIDENCES

The cSOFA score is composed of two easy-to-measure parameters and correlates well with SOFA



A simplified respiratory component (RESP)

The RESP component is derived from the more complex SOFA score, which is used to track the status of a patient in the ICU and to determine the extent of organ function or rate of failure. However, this score is based on six different sub-scores making it complex to obtain and inaccessible outside of the ICU.



PSP blood biomarker on the abioSCOPE device

PSP is characterised by its diagnostic accuracy in predicting sepsis and/or multiple organ dysfunction in various types of critically ill patients². As of today more than 20 publications demonstrate that PSP correlates well with several sub-scores of SOFA. Preliminary data from the first European wave of SARS-CoV-2 infections shows a strong link between PSP concentration and the severity of these patients.

Respiratory System	RESP score		PSP ng/ml	PSP score	cSOFA score
Mechanically ventilated	3	+	>600	7	10 ↑ 0
Need O ₂ support	2		≤600	6	
Difficulties to breathe	1		≤500	5	
			≤400	4	
No breathing problem	0		≤300	3	
		≤200	2		
		≤170	1		
			≤120	0	

Table 1. Score table combining RESP score with PSP score to obtain cSOFA. An increasing score correlates with increasing severity, up to a maximum of 10.

The combination of **PSP** and the **RESP** component, gives the **cSOFA** score which enables a **rapid** and **accurate** assessment of the **severity** of the patient.

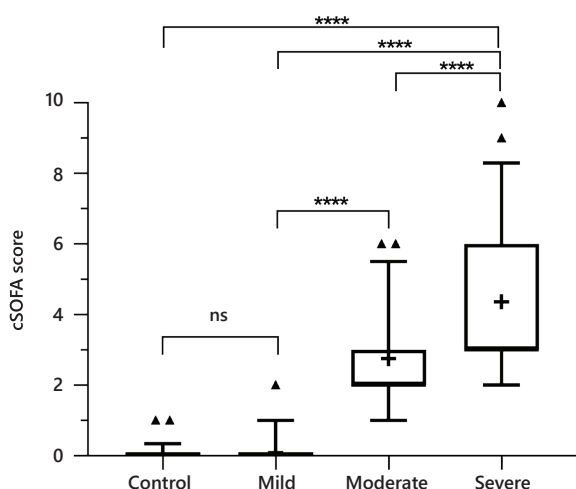


Figure 1. Distribution of control (healthy non-Covid-19 patients), mild, moderate, and severe Covid-19 patient groups against cSOFA scores, computed from the PSP values and the RESP score.

Cut-off	SN (95 %CI)	SP (95 %CI)
Non-hospitalised patient cSOFA=0	100 (96.4 to 100)	94.8 (88.5 to 97.8)

Table 2. Diagnostic performances of cSOFA at a cut-off of 0 to determine patient non-hospitalisation. SP stands for specificity, SN for sensitivity.

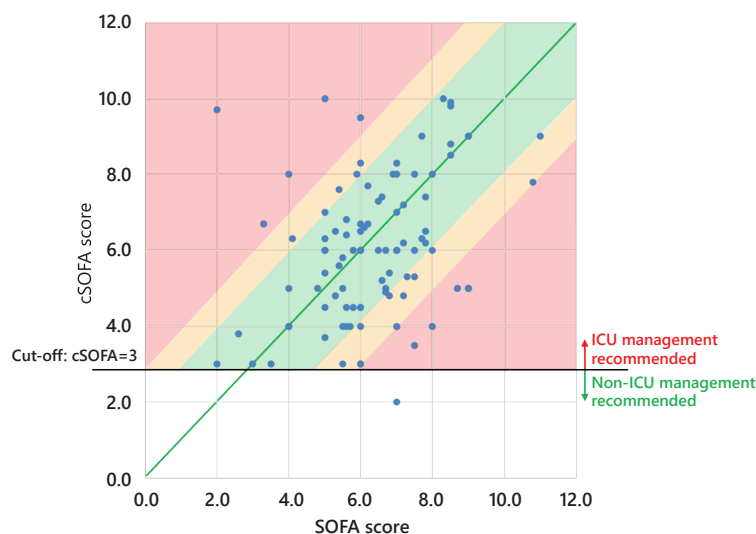


Figure 2. The cSOFA and SOFA score demonstrate a good correlation on 96 Covid-19 patients admitted to the ICU between March and April 2020. Each point is the average of the cSOFA and SOFA score over the entire length of stay.

Cut-off	SN (95 %CI)	SP (95 %CI)
Transfer patient to the ICU cSOFA≥3	95.3 (84.3 to 98.8)	84.9 (78.1 to 90.3)

Table 3. Diagnostic performances of cSOFA at a cut-off of 3 to determine Covid-19 patients' severity. SP stands for specificity, SN for sensitivity.

The PSP test and the RESP score combined into the cSOFA score, enables the discrimination between non-severe and severe SARS-CoV-2 infection among adults, with a p-value <0.0001.

FIRST COVID-19 SEVERITY SCORE
FACILITATING PATIENT TRIAGE

The cSOFA is a great tool to help predict these possible clinical deteriorations and to guide patients through the hospital system, which is certainly very useful in these times of healthcare system overload.



Dr. François Ventura, MD, MBA

In the case of Covid-19, better understanding and predicting Covid-19 disease severity [...] are essential to effectively combatting this deadly respiratory pandemic. There are calls for a multitiered, Covid-19 diagnostic strategy incorporating rapid, point-of-care host immune testing to identify patients at risk of disease and progression.³

The Lancet Global Health

THE LANCET
Global Health

Overall, the **fast and highly accurate severity cSOFA score** enables healthcare professionals to efficiently assess **Covid-19 patients within 5 minutes** to measure the likelihood of **clinical deterioration**. This facilitates patient triaging and assignment to the appropriate level of care right from admission, whilst also liberating vital clinical resources, **key to optimising patient management**.

DISRUPTIVE NANOTECHNOLOGY BASED PLATFORM

5-minute PSP test on the abioSCOPE®



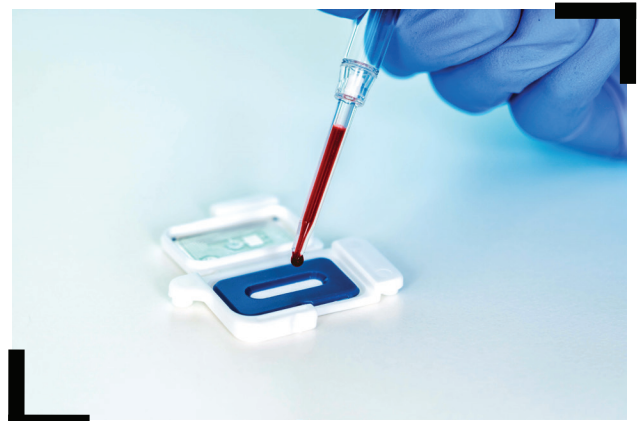
Rapid turnaround time
5 minutes from blood sampling to actionable results



Easy to use
Simple 4 steps with a blood volume of 50 µl from a fingerstick



No maintenance
Contamination-free device, no washing step required



Laboratory quality results
Laboratory equivalent performances



Connectivity options
HL7, Ethernet to HIS/LIS, barcode scanner and QR code



Complementary menu in development
Available tests: allergy, ferritin
Coming soon: D-Dimer, CRP among others

References:

1. Putallaz L, van den Bogaard P, Laub P, Rebeaud R. Nanofluidics Drives Point-of-care Technology for on the Spot Protein Marker Analysis with Rapid Actionable Results. J Nanomed Nanotech. 2019 Oct;10(5):536
2. Eggimann P, Que YA, Rebeaud F. Measurement of pancreatic stone protein in the identification and management of sepsis. Biomark Med. 2019 Feb;13(2):135-145
3. Ginsburg A S, Klugman K P. COVID-19 pneumonia and the appropriate use of antibiotics. The Lancet Global Health. 2020 Nov; Volume 8, Issue 12, E1453-E1454.

