Calprotectin

Early detection of the inflammatory response to infection and assessment of severity

The value of calprotectin in infection

- Differentiates between bacterial and viral infections[1-3]
- Distinguishes infection from sterile inflammation[4]
- Correlates with disease activity and severity[5,6]
- Predicts serious events in critically ill patients[3,4,6-9]

Severe events in infections

Calprotectin is a well described biomarker with several applications in bacterial infections. It can differentiate between bacterial and viral infection[1-3] and distinguish sterile inflammation, such as trauma[4]. This allows for more accurate and effective use of antibiotics. Early and rapid kinetics of calprotectin in bacterial infections[5,10], enable it to predict the need for antibiotics before onset of clinical symptoms.[5] This early detection can lead to significant cost savings and improved patient outcomes.[11] Elevated levels of calprotectin are also a valuable risk marker for severe events such as sepsis, septic shock, and mortality[3 4, 6-9] and improve classical risk scoring.[9] Early detection and risk stratification can thereby help to identify patients at risk for deterioration and guide decisions on course of treatment or necessary transfer of patients to ICU.[12]

Tool for patient management

- Sensitive and fast detection of infection in vulnerable patients
- Optimal and earlier use of antibiotics
- Identify patients at risk for sepsis and severe events
- Guide decisions on course of treatment and transfer of patients

Gentian Calprotectin GCAL® Immunoassay - early access to accurate results

GCAL® can be used for early detection and assessment of the inflammatory response to severe infections, where it is critical to get access to the results as soon as possible. Since GCAL® is a Particle-Enhanced Turbidimetric Immunoassay (PETIA), the assay is rapidly performed in only 10 minutes.

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CE 0123

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Immunoassay performance

GCAL® is a Particle-Enhanced Turbidimetric Immunoassay (PETIA) that is rapidly performed in only 10 minutes. The assay can be applied on a wide range of automated clinical chemistry analysers. GCAL® is CE-marked and IVDR certified.

Gentian Calprotectin Immunoassay Performance	
Sample type	Li-Heparin plasma, Serum
Assay type	PETIA
Format	Liquid reagents, ready to use
Precision (sample >1 mg/L)*	Total CV < 4.0 %
LoQ*	0.3 mg/L
Security zone*	Up to 95 mg/L
Measuring range*	0.4 - 20 mg/L
Calibration stability*	4 weeks

**Instrument dependent results achieved on Architect c4000 during validation*

Product range

Product no.	Product	Content
1201	Gentian Calprotectin Reagent Kit	R1 54 mL + R2 9 mL
1202	Gentian Calprotectin Reagent Kit S	R1 30 mL + R2 5 mL
1219	Gentian Calprotectin Control Kit	2 x 1 mL
1251	Gentian Calprotectin Calibrator Kit	6 x 1 mL

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References: 1. Havelka A et al. Scientific reports. 2020;10(1):4208- **2**.Siljan WW et al. ERJ Open Res. 2019;5(1**) 3.** Bartáková E et al. Diagn Microbiol Infect Dis. 2019;93(3):219-26 **4.** Larsson A et al. Scandinavian Journal of Clinical and Laboratory Investigation. 2019:1-6 **5.** Jonsson N et al. Crit Care Resusc. 2017;19(3):205-13 **6.** Gao S et al. Am J Emerg Med. 2015;33(9):1278-82 **7.** Parke Å et al. Critical Care. 2020;24(1):P477 **8.** Wirtz TH et al. Diagnostics (Basel). 2020;10(11):990 **9.** Dubois C et al. Scientific Reports. 2019;9(1) **10. F**ullerton J et al. Critical Care. 2020;24(1):P474 **11.** Havelka A et al, editor Health economic impact of use of GCAL® calprotectin immunoassay for early detection of infection in intensive care patients International Symposium on Intensive Care and Emergency Medicine (ISICEM) meeting; 2023; Brussels **12.** Parke Å et al. BMC Emerg Med. 2023;23(1):16

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