

Endothelial function biomarker bioactive Adrenomedullin (bio-ADM) enables triage of sepsis patients in the emergency department

- *Bio-ADM is a biomarker for the assessment of endothelial dysfunction, a hallmark of sepsis, and has been widely studied in intensive care units (ICU)*
- *Clinical trial in the emergency department (ED) shows that bio-ADM is predictive of ICU admission and may be used for early stratification of unselected sepsis patients*
- *The published data show that high levels of bio-ADM are predicting the risk for multiple organ failure and mortality, while low levels are associated with ED discharge*

Hennigsdorf, Germany, August 1, 2022 – The diagnostics company SphingoTec GmbH (SphingoTec) announces new findings that support the clinical value of the biomarker bio-ADM for triaging sepsis patients in ED, exceeding the prognostic performance of routine biomarkers. So far, the predictive potential of the innovative biomarker has been confirmed and used primarily in ICU. A new study, recently published, confirms its applicability in ED (1).

A severe infection can quickly progress to sepsis - a life-threatening situation. Unfortunately, sepsis is difficult to diagnose and treat because it has a high range of forms and intensities. However, successful treatment is primarily time-dependent (2): an early diagnosis can save lives! In ED, it is still difficult to identify sepsis patients early, and assigning the correct further treatment is thus challenging. Adrenomedullin, a hormone that has homeostatic and regulatory effects on various body systems (3,4), as well as playing a role in hemodynamic regulation, and is measurable via the biomarker bioactive Adrenomedullin (bio-ADM), may help to bridge this gap.

Biomarkers can provide information about the underlying causes of a disease and allow predictions about potential changes in patient condition in the next hours to days. Bio-ADM is an already known biomarker in intensive care units (5). Now, it has been tested in ED whether there was an association between bio-ADM and sepsis severity. Furthermore, it was examined whether bio-ADM would allow distinguishing between patients who could be discharged from ED from those who, for example, are at high risk for multiple organ failure due to sepsis and thus need to be transferred to the ICU.

Prof. Olle Melander, Professor and Senior Physician, Lund University and Skåne University Hospital in Sweden, explains: "The results of our study suggest that bio-ADM is potentially an important clinical biomarker in ED and could be used to allow early triage of sepsis patients. We demonstrated that bio-ADM allows a significantly better prediction of the sepsis severity than other biomarkers. Accordingly, high bio-ADM levels in ED are associated with mortality, as well as the development of severe multiple organ failure, while low levels indicate that patients may be discharged".

Dr. Andreas Bergmann, founder, and CSO of SphingoTec adds: "In ED, triage is of enormous importance to provide patients with the right treatment. The study results indicate that previous experiences with the biomarker bio-ADM in ICU could be transferred to ED. The ability of bio-ADM to identify high-risk patients thus could help ED physicians to optimize their decision-making and patient management."

References:

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About SphingoTec

SphingoTec GmbH ("SphingoTec"; Hennigsdorf near Berlin, Germany) develops and markets innovative in vitro diagnostic (IVD) tests for novel and proprietary biomarkers for the diagnosis, prediction and monitoring of acute medical conditions. SphingoTec's proprietary biomarker portfolio includes bioactive Adrenomedullin (bio-ADM), a biomarker for real-time assessment of endothelial function in conditions like sepsis, and Proenkephalin (penKid), a biomarker for real-time assessment of kidney function. Dipeptidyl Peptidase 3 (DPP3), a biomarker for cardiac depression. IVD tests for SphingoTec's biomarkers are made available as sphingotest[®] microtiter plate tests as well as point-of-care tests on the Nexus IB10 immunoassay platform by SphingoTec's subsidiary Nexus Dx Inc. (San Diego, CA, USA). The Nexus IB10 portfolio is complemented by established and commonly used biomarker tests for acute and critical care such as PCT, Troponin, NT-proBNP, D-Dimer, TSH and others.

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