

## Early and Safe rule-out of myocardial infarction

Copeptin, a 39-amino acid glycopeptide that comprises the C-terminal part of the arginine vasopressin (AVP) precursor is a stable and sensitive surrogate marker for circulating AVP or anti-diuretic hormone (ADH).

As a marker of acute endogenous stress, Copeptin is increased immediately after onset of Acute Myocardial Infarction and then steadily decreases.<sup>1</sup>

## Combined Copeptin and Troponin strategy:

In contrast, Troponin is a specific marker for myocardial necrosis. Because of its delayed increase after Acute Myocardial Infarction (AMI) onset ("Troponin-blind" period) a prolonged patient monitoring including serial blood sampling is necessary.

A dual marker strategy combining Copeptin and Troponin (whether conventional or high-sensitivity) benefits from the integration of complementary information provided by pathophysiologically different processes and results in the highest Negative Predictive Value (NPV) for the diagnosis of AML<sup>2</sup>

### Safety and Efficacy of the Strategy:

As demonstrated in the Biomarker in Cardiology (BIC)-8 interventional clinical trial, combining the biomarkers Thermo Scientific<sup>TM</sup> B·R·A·H·M·S<sup>TM</sup> Copeptin proAVP and Troponin provides a safe and effective procedure to rule out AMI after the first blood draw and better manage overcrowded emergency departments.<sup>3</sup>

This strategy is now recommended in the 2015 ESC guidelines<sup>3</sup> for the management of acute coronary syndrome in patients presenting without persistent ST-segment elevation.<sup>4</sup>

The suggested Copeptin cut-off to minimize the number of false negative patients and obtain the highest NPV for the diagnosis of AMI is 10 pmol/L.<sup>3</sup>

#### References:

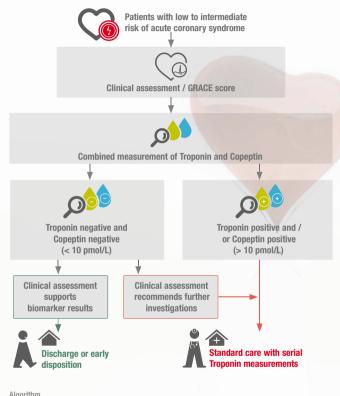
1) Morgenthaler NG et al., Clin Chem 2006;52:112-119

- 2) Lipinski MJ., et al. Am J Cardiol 2014;113:1581e1591
- 3) Möckel M et al., Eur Heart J 2014:DOI:10.1093/eurheartj/ehu178
- 4) Roffi et al., Eur Heart J. 2015 Aug 29; doi: http://dx.doi.org/10.1093/eurheartj/ehv320





# B·R·A·H·M·S™ Copeptin proAVP



### Algorithm

Fast Rule-Out of ACS at the Berlin Charité Hospital. modified from Möckel M and Searle J, Curr Atheroscler Rep. 2014 Jul;16(7):421.

### thermoscientific.com

© 2015 Thermo Fisher Scientific Inc. All rights reserved.

Thermo Fisher Scientific products are distributed worldwide; not all intended uses and applications mentioned in this printing are registered in every country.

### Clinical Diagnostics Thermo Fisher Scientific

B-R-A-H-M-S GmbH Neuendorfstr. 25 16761 Hennigsdorf Germany

+49 (0)3302 883 0 +49 (0)3302 883 100 fax info.brahms@thermofisher.com www.thermoscientific.com/brahms www.thermoscientific.com/copeptin



A Thermo Fisher Scientific Brand