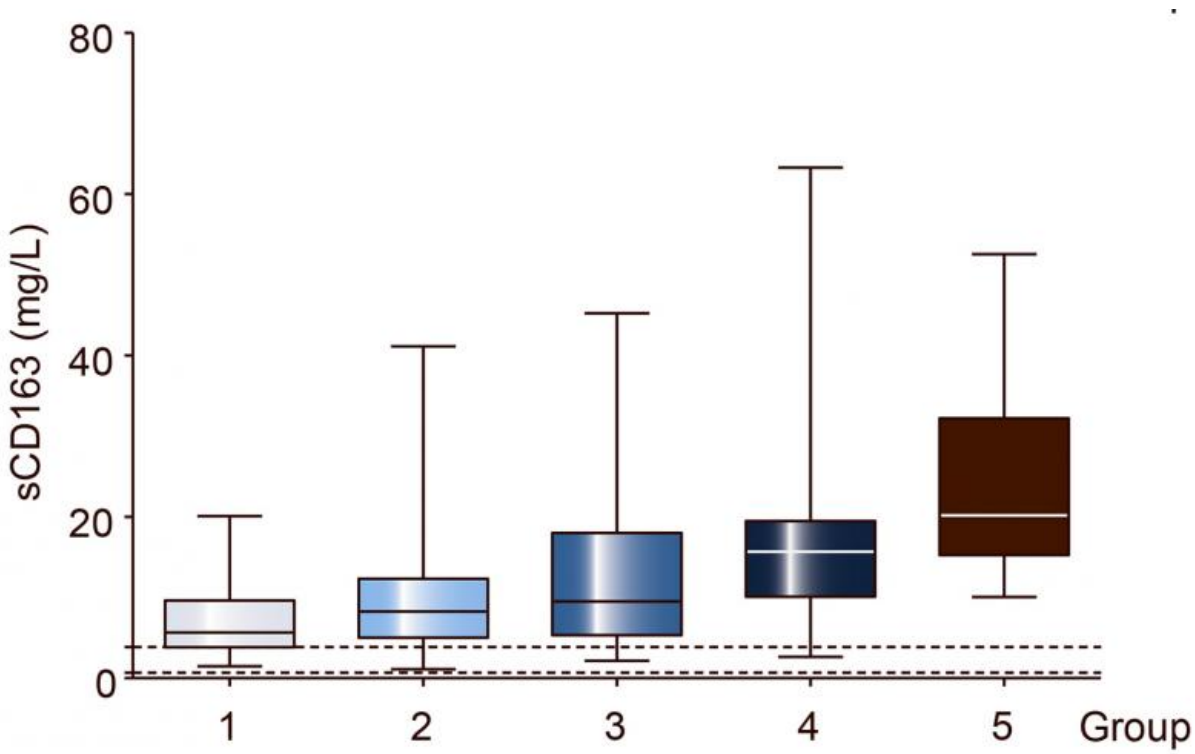
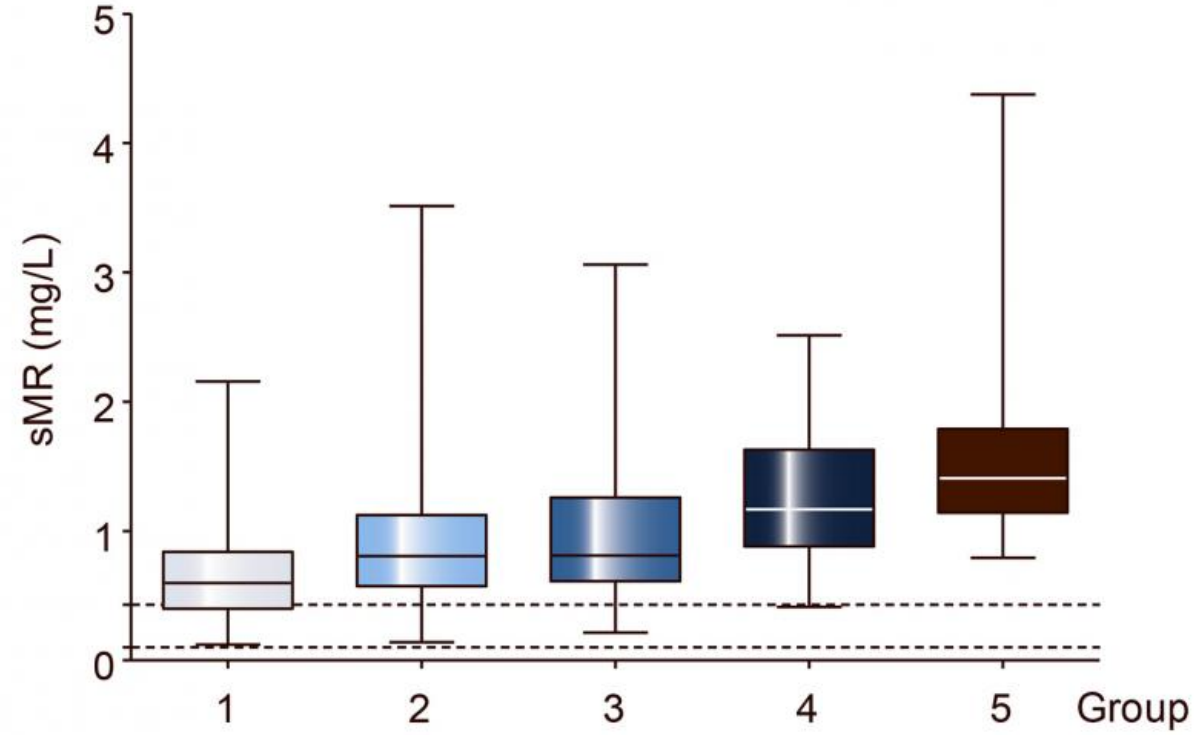
New test can predict death in patients with serious liver disease

April 1 2016


80
60
40
20
0
sCD163 (mg/L)
1
2
3
4
5
Group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sMR (mg/L)
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Acute-on-chronic liver failure (ACLF) is a sudden deterioration of the liver function in a patient with liver cirrhosis accompanied by failure of one or more organ systems. This liver disease has a serious prognosis and the four-week mortality rate is 20-30%.

This condition is often triggered by an infection, bleeding or other stressful events. Due to the severity of the disease it is important to develop a test to identify patients with the highest risk of developing this condition and thus the highest risk of a fatal outcome.

Macrophages are important cells of the immune system and widely represented in the liver and playing an active role in inflammation and formation of scar tissue in the liver. Researchers from Aarhus University Hospital and Aarhus University have studied how to measure activation of macrophages. When macrophages are activated they release the protein CD163, which together with the mannose receptor can be measured in a blood sample.

Together with a number of liver centres in Europe the Danish researchers have investigated a large group of patients with acute-on-chronic liver failure and demonstrated that CD 163 and the mannose receptor can predict death in this patient population.

Measuring these biomarkers stresses the importance of macrophages in acute-on-chronic liver failure but also in other acute and chronic liver diseases.

This new knowledge can lead to improved diagnostics in patients with liver disease and possibly direct treatment towards macrophages via CD163 in the future, says Henning Grønbæk, professor and consultant at Department of Hepatology and Gastroenterology at Aarhus University Hospital.

Medical Xpress

More information: Henning Grønbæk et al. Macrophage activation markers predict mortality in patients with liver cirrhosis without or with acute-on-chronic liver failure (ACLF), *Journal of Hepatology* (2016). DOI: 10.1016/j.jhep.2015.11.021

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