suPARnostic®
by ViroGates

New paper published in Journal of Clinical Medicine:
suPAR in the Emergency Department: A Tool for the Assessment of Elderly Patients

Introduction:

The emergency departments are overcrowding and the current methods for the risk stratification are insufficient, especially in the elderly patient population. Thus, new methods for the assessment of these patients are needed.

suPAR is a nonspecific biomarker, and elevated suPAR values can be caused by chronic non-acute as well as acute diseases. The aim of this study was to determine if suPAR can predict negative outcomes in an unselected patient population with various chronic illnesses, especially in the elderly.

According to the study results, suPAR predicts mortality in this group, regardless of age. However, due to its unspecificity, suPAR is not a diagnostic tool. For that reason, suPAR should be used more as a directional prognostic tool alongside other clinical features and assessment methods such as clinical examination, scoring systems and other laboratory markers. Judging by previous study and the data presented in this manuscript, suPAR could thus be used in the decision to either admit or discharge the ED patient.

Conclusions:

The study results suggest that suPAR levels were clearly elevated in the ED patients, the elderly patients displaying the highest levels.

High suPAR concentrations were associated with higher mortality and lesser probability to be discharged from the ED.

Furthermore, as a nonspecific prognostic biomarker utilized in the ED, suPAR successfully predicts all-cause 30-day mortality in all age groups.

suPAR maintains its predictive value when it is used with other commonly used risk assessment tools. Low suPAR values can work as a support in discharging patients from the ED without increasing the risk of negative outcomes.

For all the patients arriving at the ED, the safest cut-off value for suPAR would be 4 ng/mL. On the other hand, a cut-off value of 5 ng/mL should be considered as a potential alternative in the elderly population. The cut-off value of 6 ng/mL should not be utilized.

The study confirmed that suPAR could successfully act as an addition to the risk assessment of elderly patients and the patients of which the current risk stratification methods fail to identify, especially as these patients are one of the most time- and resource-consuming patients of the ED.

References

Holstein, R.M.; Seppälä, S.; Kaartinen, J.; Hongisto, M.; Hyppölä, H.; Castrén, M. Soluble Urokinase Plasminogen Activator Receptor (suPAR) in the Emergency Department (Ed): A Tool for the Assessment of Elderly Patients. J. Clin. Med. 2022, 11, 3283. https://doi.org/10.3390/jcm11123283

ViroGates
suPARcharging triage