Background: Cardiogenic shock (CS) complicating acute myocardial infarction (AMI) still reaches excessively high mortality rates. This analysis is aimed to develop a new easily applicable biomarker-based risk score.

Methods and Results: A biomarker-based risk score for 30-day mortality was developed from 458 patients with CS complicating AMI included in the randomised CULPRIT-SHOCK trial. The selection of relevant predictors and the coefficient estimation for the prognostic model were performed by a penalized multivariate logistic regression analysis. Validation was performed internally, internally-externally as well as externally in 163 patients with CS included in the randomised IABP-SHOCK II trial. Blood samples were obtained at randomisation. The two trials are registered with ClinicalTrials.gov, NCT01927549 and NCT00491036, are closed to new participants, and follow-up is completed.

Out of 58 candidate variables, the 4 strongest predictors for 30-day mortality were included in the CLIP-score (Cystatin C, Lactate, Interleukine-6, and NT-ProBNP). The score was well calibrated and yielded high c-statistics of 0.82 (95% confidence interval [CI]: 0.78-0.86) in internal validation, of 0.82 (95% CI 0.75-0.89) in internal-external (temporal) validation, and 0.73 (95% CI: 0.65-0.81) in external validation. Notably, it outperformed the Simplified Acute Physiology Score II and IABP-SHOCK II risk score in prognostication (0.82 vs 0.63; $p<0.001$ and 0.82 vs 0.76; $p=0.03$, respectively).

Conclusions: A biomarker-only score for 30-day mortality risk stratification in infarct-related CS was developed, extensively validated and calibrated in a prospective cohort of contemporary patients with CS after AMI. The CLIP-score outperformed other clinical scores and may be useful as an early decision tool in CS.