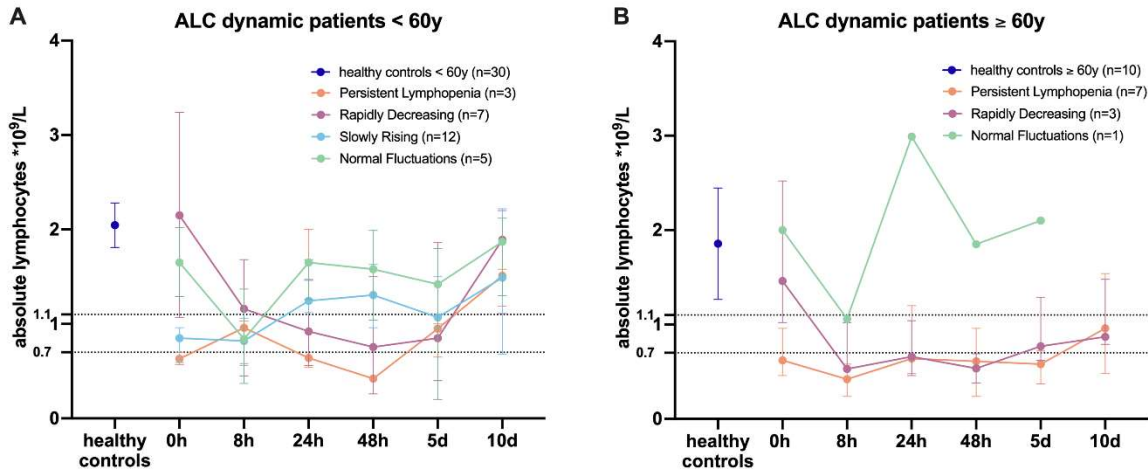
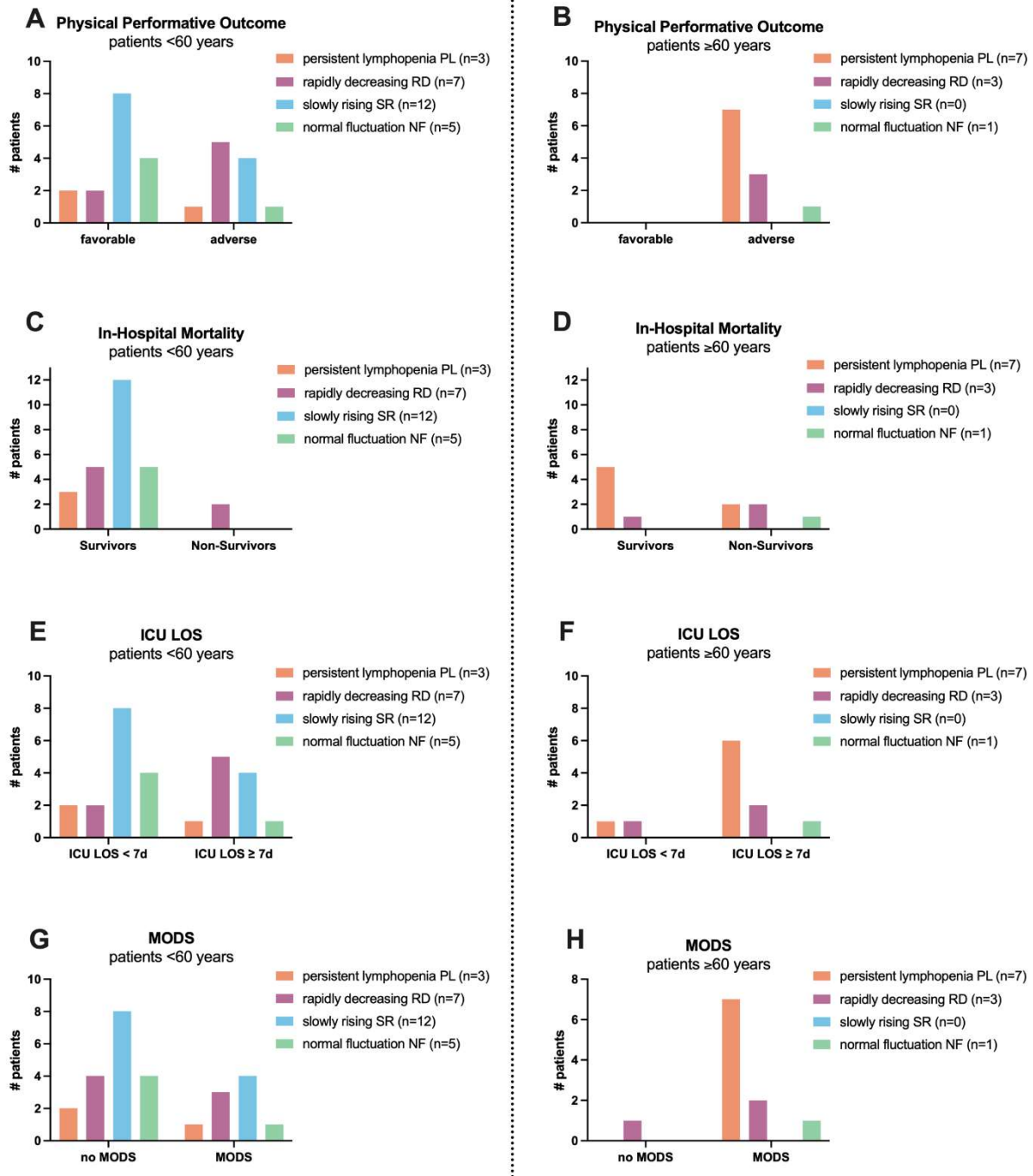


Supplemental Figures



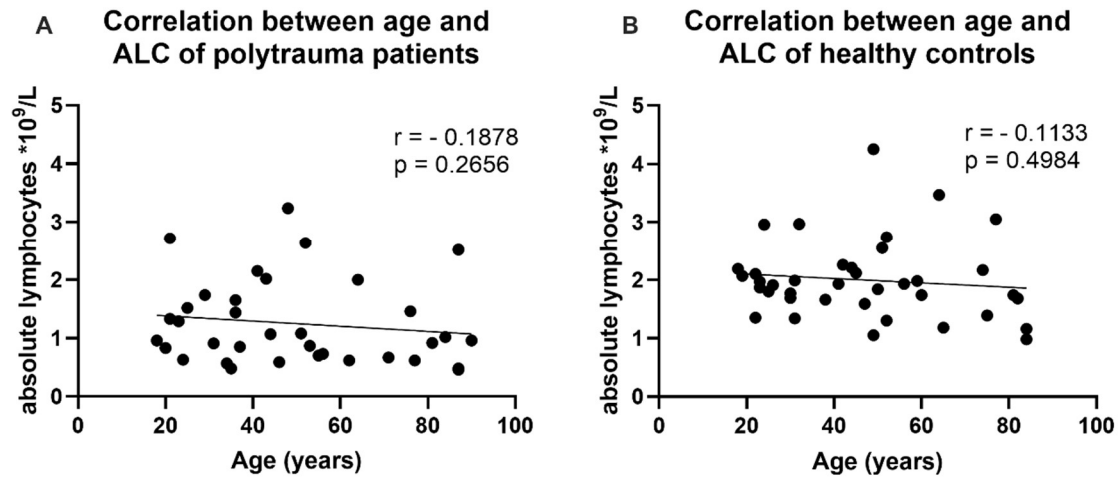
Supplemental Figure 1: Dynamic course of Absolute Lymphocyte Count in young and elderly individuals

Absolute lymphocyte count (ALC) measured in whole blood over a ten-day period in A) polytrauma patients and healthy controls younger than 60 years and B) polytrauma patients and healthy volunteers 60 years old or older. Median is presented with $\pm 95\%$ confidence interval (CI). Lymphopenia was defined as an $ALC \leq 1.1 \times 10^9$ lymphocytes per liter of whole blood. Severe Lymphopenia was defined as an $ALC \leq 0.7 \times 10^9$ lymphocytes per liter of whole blood. Group definitions whereby a 10% variance was accepted: persistent lymphopenia = severe lymphopenia for a minimum of 48 hours; rapidly decreasing = initial normal ALC ($ALC > 1.1 \times 10^9$ lymphocytes per liter of whole blood), rapidly decreasing to lymphopenia latest at 48 hours following the initial trauma, slowly rising = initial lymphopenia that decreases to normal ALC values ($ALC > 1.1 \times 10^9$ lymphocytes per liter of whole blood) latest at 48 hours following the initial trauma, normal fluctuation = ALC values remaining within the normal range ($ALC > 1.1 \times 10^9$ lymphocytes per liter of whole blood) during the entire observation period.



Supplemental Figure 2: Different outcome endpoints within each ALC subgroup in young and elderly individuals

Patients were divided by age into younger (< 60 years old) and older (≥ 60 years old). Different outcomes within the four characteristics ALC groups are demonstrated in an age-comparison manner, including A,B) physical performative outcome at discharge, C,D) in-hospital mortality, E,F) intensive care unit (ICU) length of stay (LOS) and G,H) multi-organ dysfunction syndrome (MODS). The upper graphs present the absolute numbers. The Fisher's exact test was employed to assess the statistical difference between the groups. These results are presented in the tables. Threshold for significance $p < 0.05$



Supplemental Figure 3: Correlation of age and absolute lymphocyte count

Correlation between age and absolute lymphocyte count (ALC) in whole blood of A) polytrauma patients at the 0-hour time point and B) healthy individuals. Results of Spearman-Correlation test assuming a nonparametric distribution. Threshold for significance $p < 0.05$