Introduction:
Malnutrition in elderly subjects can be an additional risk in emergency surgery.

Methods:
We performed a study on patients in Intensive Care of Sant’Andrea Hospital, Rome, Italy. 56 patients (33M/23F, mean age 85.6 years, BMI 25.39) undergoing emergency surgery were recruited in the period from May 2016 to July 2017. ASA, SOFA, body mass index, preoperative albumin and lymphocyte count were recorded. All patients were subjected to enteral nutrition. We analyzed need for mechanical ventilation, surgical site infection, multiorgan failure (MOF), length of stay in ICU. Statistical data analysis studied correlation between predictors and outcome of patients.

Results:
Patients included in the study were ASA IV. Four patients died in the first few days after surgery (2–16 days). Mean length of stay in ICU was 5.2 ±3.4 days. Univariate analysis showed a correlation between hypoalbuminemia and the onset of MOF (p = 0.004); reduction of the lymphocyte count and risk of MOF (p = 0.008). SOFA score showed a significant correlation with occurrence of pneumonia (p = 0.035) and MOF (p = 0.04). Including the 30-day mortality among confounders, albumin and lymphocyte count were the strongest predictors of MOF. Length of stay in ICU and ventilation days did not have statistical significance. BMI showed no predictive value of any outcome.

Conclusion:
Our sample was poor but results of our study seem to indicate malnutrition as an independent risk factor for elderly patients undergoing emergency surgery.