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Introduction:
The aging of the population is a fact. The subgroup of very old (≥ 80 years (ys)) is the one that increases the most rapidly. Intensive Care Unit (ICU) admission of these patients is an ongoing discussion worldwide. Our ICU has designed the VOOLCAno aiming its characterization and reviewing outcomes, to find some predictive indicators. The purpose of this first analysis is to evaluate specifically the group of very old patients (VOLDs) admitted to a tertiary portuguese hospital ICU.

Methods:
Retrospective observational study was performed, included all VOLDs admitted in ICU during 15 years (2002-2016). Demographic data, admission diagnosis, severity scores, Charlson comorbidity index, length of stay and outcomes were considered. Data analysis used SPSS software.

Results:
We found a total of 460 admissions. The median age was 83.0 ys with IQR 4; Mostly male with medical admission diagnosis (sepsis and respiratory failure due to infection). There was a median Acute Physiology and Chronic Health Evaluation II of 18 (IQR 8) and Simplified Acute Physiology Score II of 49 (IQR 16). Median Charlson comorbidity index was 6.0 (IQR 2). Median length of stay was 3,9 days (IQR 8,2). Concerning outcomes, we found intra-ICU mortality of 36%; intra-hospital after ICU discharge mortality of 12% and mortality after hospital discharge of 41%. Identified as predictors of intra-hospital mortality the use of mechanical ventilation (p < 0.001), urgent surgical admission or medical admission versus schedule surgical admission (p < 0.001) and the absence of oncologic disease (p = 0.024). On multivariate analysis, only mechanical ventilation (p = 0.002, HR 0.35, 95% C.I. 0.18-0.68) and urgent surgical admission versus schedule surgical admission (p = 0.002, HR 0.29, 95% C.I. 0.14-0.63) remain significant.

Conclusion:
Recognizing the need to understand what is the biologic|funcional age (opposed to chronologic age) would be beneficial in the selection of VOLDs to ICU admission.