Background: Undernutrition is more frequent in hospitals and in elderly people. Malnutrition assessment at hospital admission is particularly important to signal and to intervene early in order to decrease malnutrition cases.

Aims: To characterize a sample of elderly patients in a unit of Internal Medicine, in a central hospital. To relate different tools of nutritional risk assessment with hospital length of stay, post-hospitalization destination (hospital discharge or death), sex, age, anthropometric measurements and biochemical data.

Methods: Retrospective cohort study including all patients admitted between November 2015 and April 2016, aged over 65 years, in Medicine A and B, both belonging to the Internal Medicine Unit of Hospital São João Centre, EPE, Oporto.

Results and Discussion: We assessed 78.4% of 1322 patients, according to the Mini Nutritional Assessment Short Form (MNA-SF), 68.3% in risk of malnutrition or malnourished. Patients at risk of undernutrition or undernutrition had a longer period of hospital stay and higher frequency of death. We found that patients had lower possibility of being malnourished when they had lower levels of c-reactive protein and higher levels of albumin, hemoglobin and BMI, had kidney disease, hypertension, were not fed by nasogastric tube, were not given a food plan at hospital discharge and had no liver disease.

Conclusions: There is a high prevalence of undernutrition at the moment of hospital admission. Hence, there should be protocol procedures for early assessment of the nutritional status, including BMI and albumin data, in order to allow timely nutritional intervention when required.