# RELATIONSHIP BETWEEN NUTRITIONAL SCREENING AND BIOCHEMICAL PARAMETERS IN PATIENTS ADMITTED FROM THE EMERGENCY DEPARTMENT

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## Background and aims

Nutritional risk and malnutrition are highly prevalent among hospitalized patients. The main objective our study was to evaluate the prevalence of and the risk for malnutrition, as identified by using nutritional screening tests, and to evaluate how the biochemical parameters vary according to the to these test scores.

## Methods

This single-center observational study included was conducted since September 2017 to December 2018 and included 240 patients admitted from the emergency department for hospitalization in either the internal medicine or surgery units of Medicine and Surgery wards of the Federico II University Hospital coming from the Emergency Unit of Antonio Cardarelli Hospital. Nutritional Risk Screening (NRS-2002) and the Subjective Global Assessment (SGA) to evaluate the malnutrition's prevalence among this patient sample and a routine biochemical analyses were consecutively administered within 72 h of admission.

## Results

According to the NRS-2002, 93% of the patients were at no risk or at low nutritional risk (NRS score < 3), and 7% were at a high nutritional risk (NRS score ≥ 3). On the other hand, according to the SGA, 46.3% of the patients were well- nourished (SGA-a), 49.8% were moderately malnourished (SGA-b), and 3.9% were severely malnourished (SGA-c). Hematologic data showed that hemoglobin concentration is changed in severely malnourished patients according to SGA (score a vs b,c; $p<0.05$) and NRS (score <3 vs ≥3; <0.05). Most of the commonly used indexes of malnutrition (prealbumin, transferrin, and cholesterol) were normal; but serum albumin changed in severely malnourished patients according to score ($p<0.05$). Blood cholinesterase was significantly lower in patients with NRS score ≥3 (8071 vs 3807 U/l; p< 0.05).

## Conclusions

Our study describe changes of biochemical data in a large sample of hospitalized patients; these results were strictly related to protein energy malnutrition and often masked by haemoconcentration of dehydration. Our data suggest that SGA and NRS scores appear to be valuable tools for the screening and assessment of nutritional status.