Introduction:
The nutritional requirements of the critically ill patient have been a topic of intense discussion in recent years. If, in one hand, experts seek to optimize the patient’s nutritional support by following the international guidelines, which recommends giving the patients 25kcal/kg of body weight each day, some authors recommend an underfeeding protocol in the first week of hospital stay. This discrepancy revolves around the evolution of medical care, with better management of multiple organ dysfunction, hyperthermia, anxiety, pain and sedation, that could have reduced the nutritional needs of this highly consumptive and hypercatabolic patient.

Objective: To evaluate if the nutritional requirements of critically ill patients in their first week of hospital stay are in line with the international guidelines and the Harris-Benedict equation.

Methods:
A transversal prospective study was developed to evaluate the energy requirements of the patients, using the indirect calorimetry method and the Harris-Benedict equation, over a period of four months. Stress variables like pathology group, hemodynamic support, sedation, body temperature, outcome and SOFA score were also evaluated.

Results:
46 patients were included in this study, with a mean energy expenditure of 19.22 ± 4.67 kcal/kg of body weight per day. 63% of these had energy expenditure values below 20kcal/kg per day assess by indirect calorimetry. Harris-Benedict and indirect calorimetry values for energy requirements were concordant (±10%) in only 33% of patients. Of the stress variables, only the SOFA score had any significant impact on the measured energy expenditure.

Conclusion:
The nutritional requirements of the critically ill patient in the first week of intensive care stay are well below the values recommended by ESPEN guidelines. Indirect calorimetry is still the gold standard in the evaluation of energy requirements.