

# COVERAGE OF ENERGY AND PROTEIN NEEDS IN PATIENTS WITH KIDNEY FAILURE OR LIVER FAILURE RECEIVING TOTAL PARENTERAL NUTRITION.

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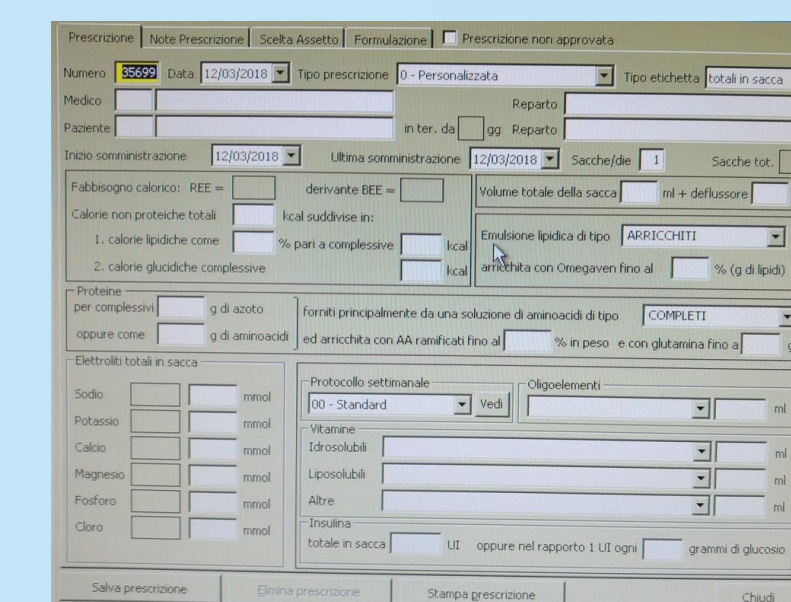
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## Background

Nutritional intervention in patients with kidney and liver failure requires a different protein intake when compared to patients without organ failure, according to National Guidelines. An analysis was performed to verify the real protein intake in this group of patients who received total parenteral nutrition (TPN).

## Purpose

The aim of the study is to evaluate whether energy and protein needs were satisfied for this group of patients in an oncology institute.

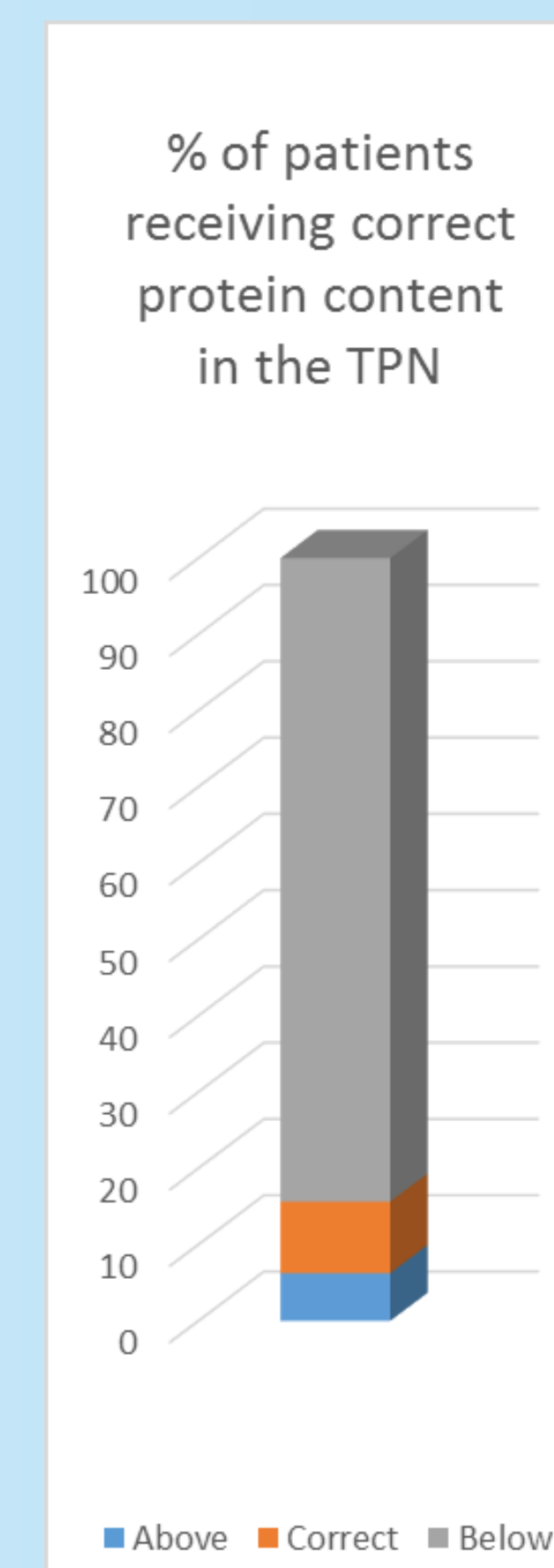
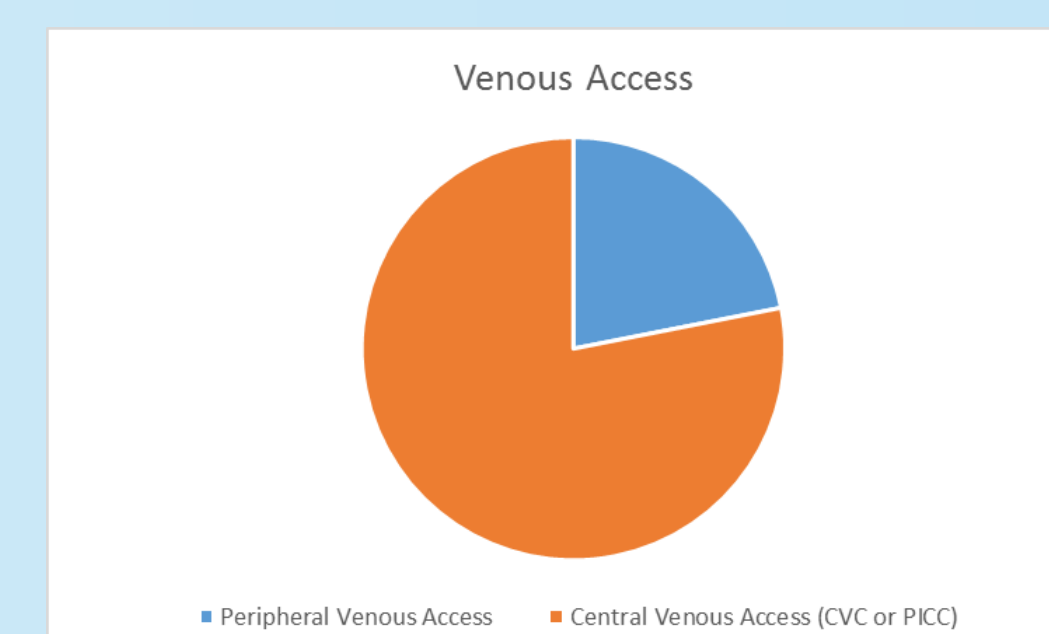
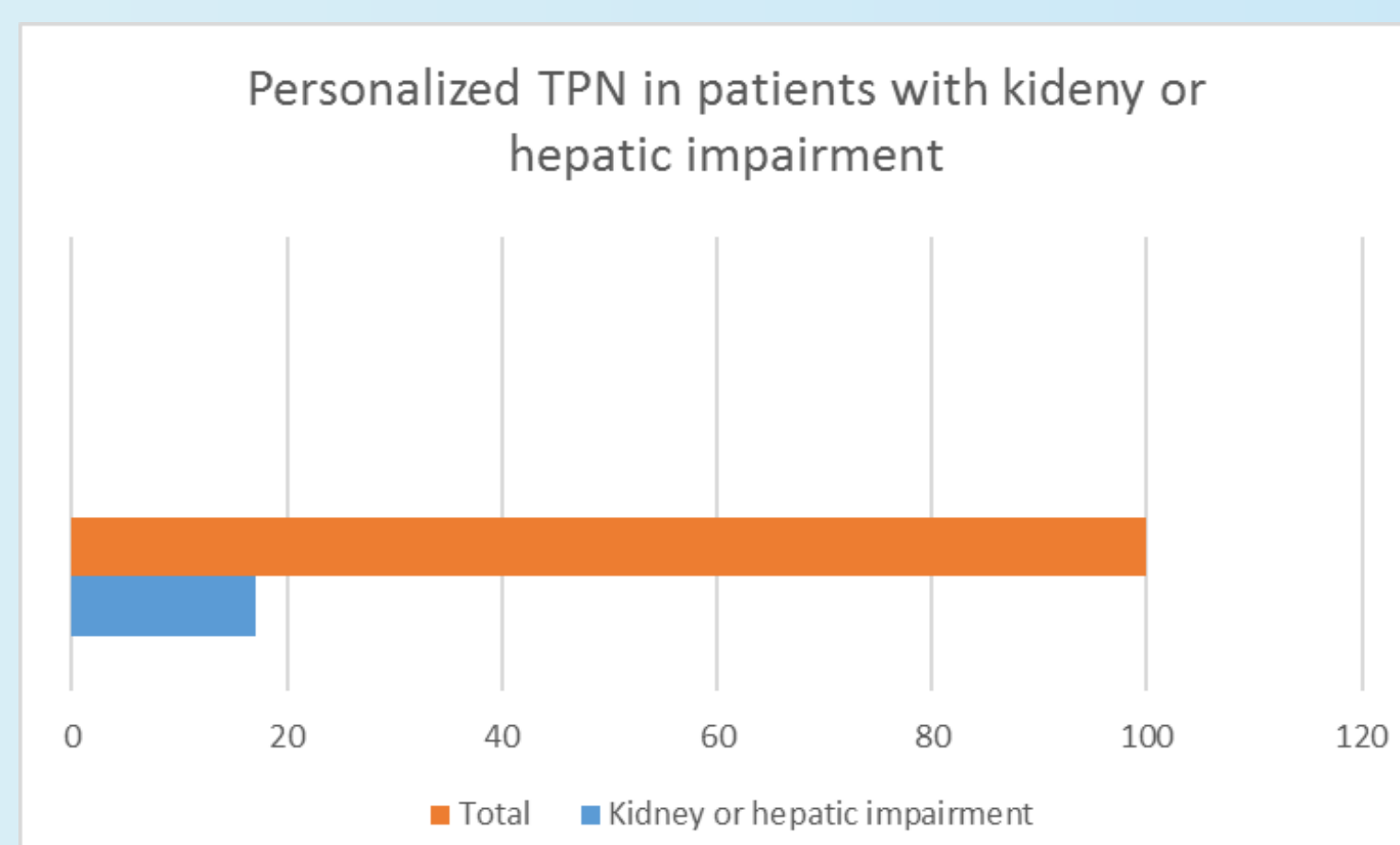


## Material and methods

A retrospective analysis was performed using data from patients receiving TPN in the period between November 2016 and June 2017. The data were extrapolated from Abamix Software, medical records and a laboratory database in Excel. The cases of kidney and liver failure were identified through a reevaluation of creatinine clearance, bilirubin value and clinical evaluation reported in electronic records. Energy, protein and non-protein needs were estimated on the basis of anthropometric parameters according to National and European Guidelines.

## Results

36 patients with kidney or liver failure were identified (17% of all patients receiving TPN), with an average 69 years of age. Four patients were excluded due to incomplete data. In this group of patients, daily protein needs are between 0,05 g/kg and 0,15 g/kg, so the difference between prescribed and ideal supply of nitrogen was calculated. On average, prescriptions were 6 g less than the maximum and 1 g more than the minimum protein needs. Considering the possible increment steps of nitrogen, we calculated that the average protein needs on the last day of TPN was equal to 0,13 gN/kg/die, with only 9,38 % of patients obtaining the correct protein needs. Instead 6,25% obtained too much and 84,38% obtained too little protein. The average difference between calculated and prescribed non-protein kilocalories was +216 kcal per day (SD ± 289), probably due to use of peripheral access devices (21,9%) and to simultaneous organ failures that required a further reduction of non-protein kilocalories according to guidelines.



## Conclusion

In this group of patients with organ failure limiting supply of nitrogen, the prescriptions of parenteral nutrition frequently contained a lower protein supply than defined in the guidelines, probably due to an overly cautious approach.

References and/or Acknowledgements  
Sarah J. Liptrott

