

# Protein-energy wasting (PEW) is present in hemodialysis patients across the all body-mass index groups and increases with dialysis vintage

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## Introduction

**Protein-energy wasting (PEW)** is one of the main non-traditional risk factors associated with poor prognosis in dialysis patients.

## Objectives

The aim of this study was

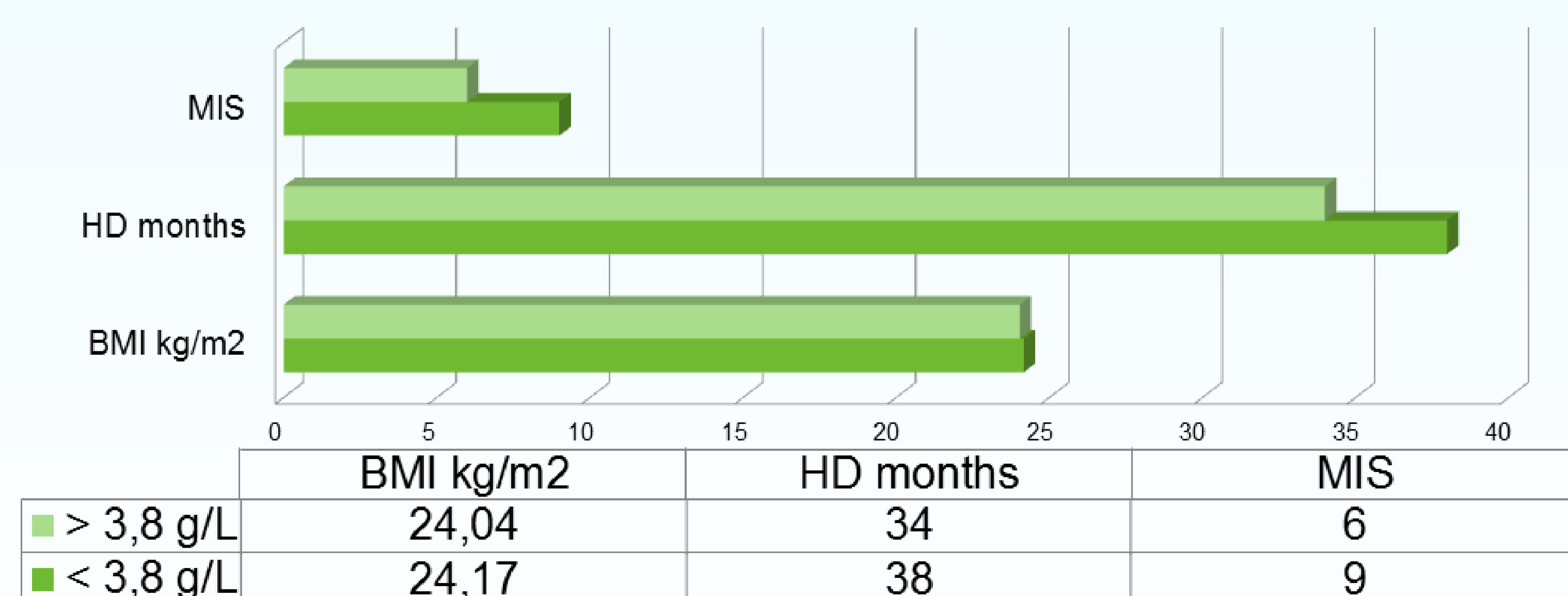
- to evaluate relationship between body mass index and serum albumins in hemodialysis population
- to investigate role of dialysis vintage in development of PEW

## Methods

**Laboratory and clinical data** were obtained from the medical records and charts. The **anthropometric measurements** were performed after dialysis session. **MIS** was individually taken.

Patients were divided into 4 groups regarding the body mass index (BMI) values.

Patients' characteristics due to albumin values

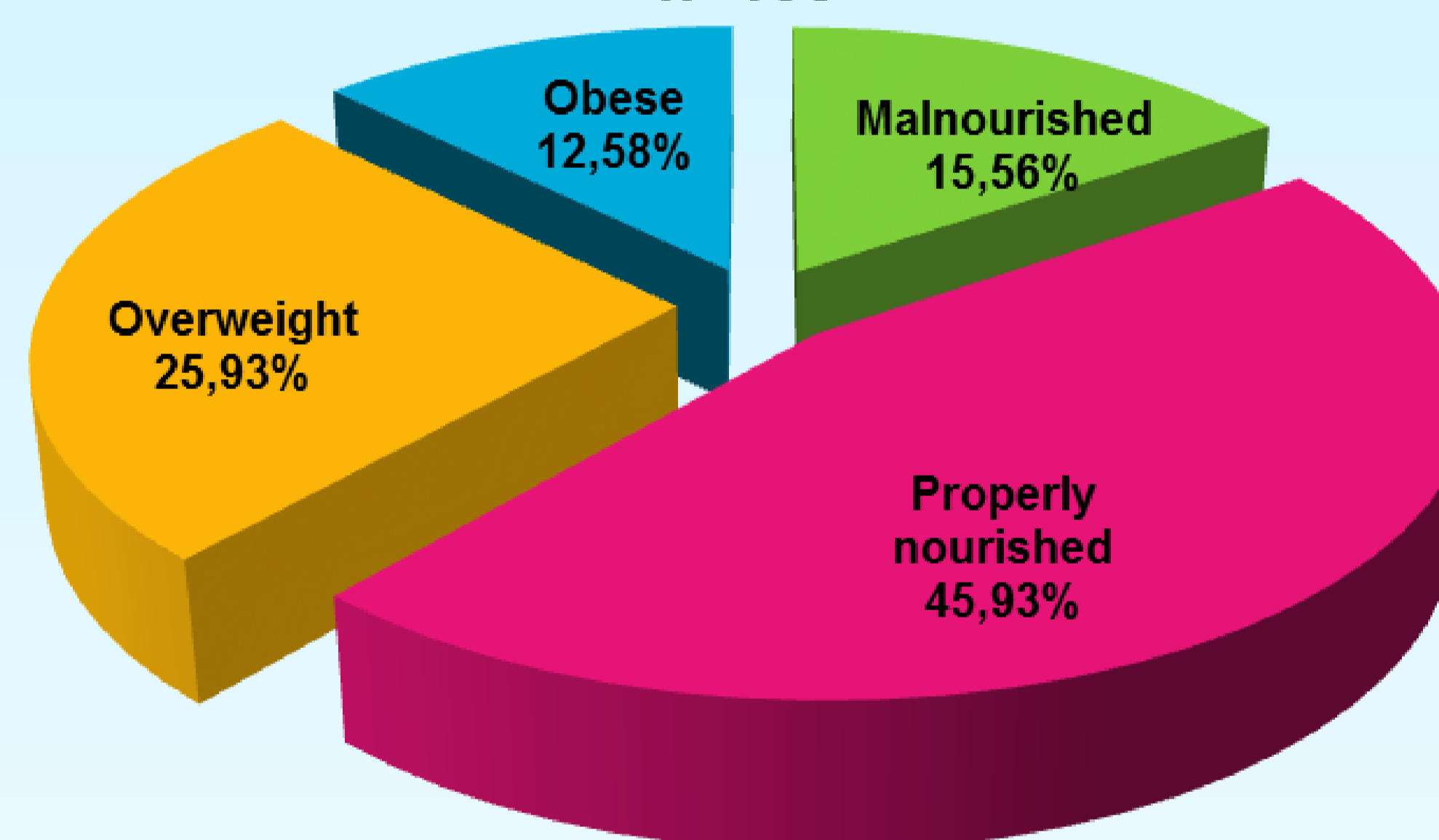


## Results

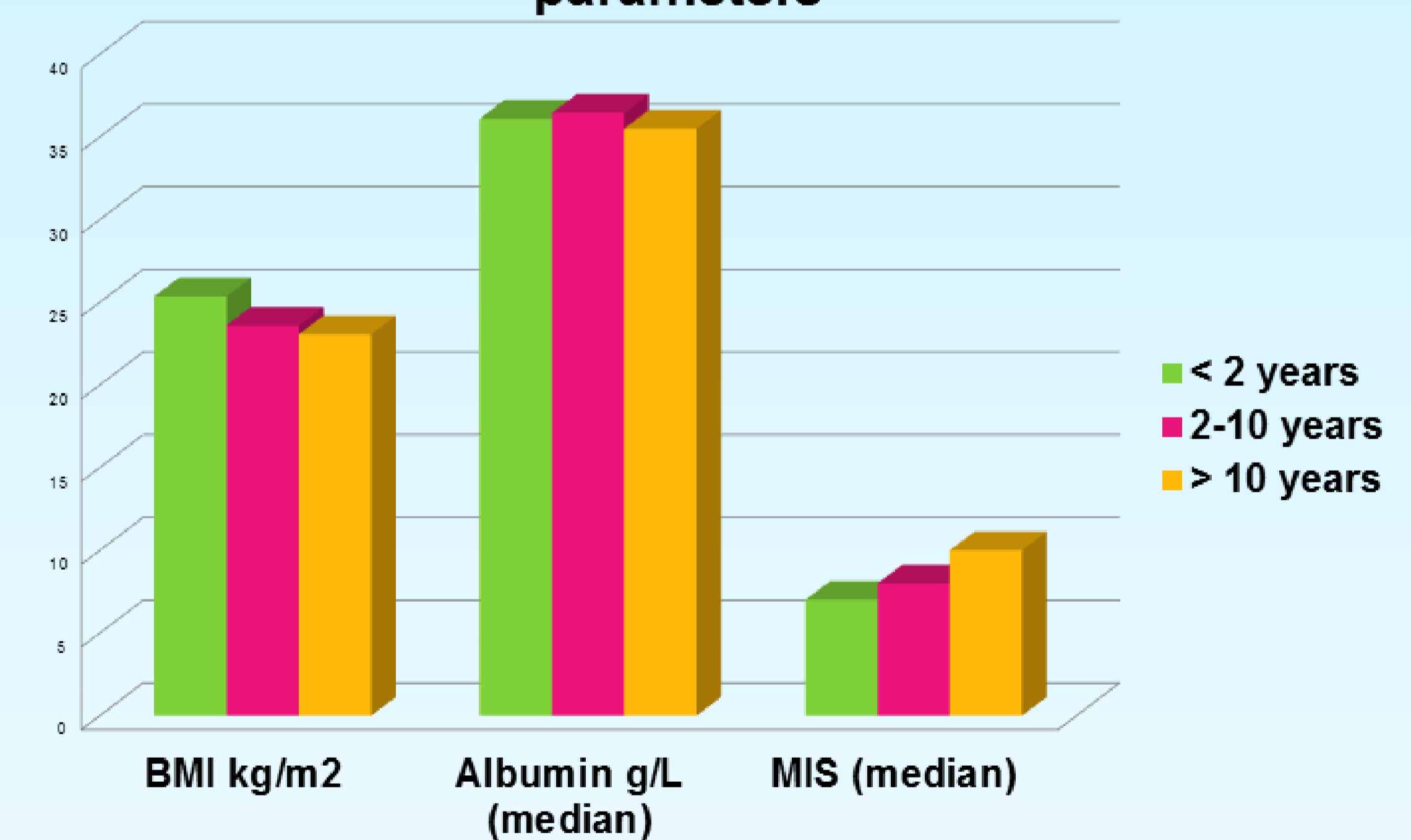
Patients' characteristics	Value
Sex M:W (n)	78:57
Age (years)	65 (20-91)
Hemodialysis vintage (months)	34 (2-413)
Main diagnosis (n)	
Diabetic nephropathy	36
Nephroangiosclerosis	20
Glomerulonephritis	20
Other	76
Weight (kg)	68.8 (36.9-158)
Hight (cm)	168 (156-191)
Body mass index (kg/m <sup>2</sup> )	24.1 (13.4-57.1)

- 15.56 % of our patients were nutritionally malnourished
- median values of serum albumin were lower than 3.8 g/dl in all 4 analyzed groups
- serum albumin was the highest in the group of malnourished patients. On the other hand, the lowest values were recorded in the group of overweight.
- as time spent on maintenance hemodialysis was longer, BMI was lower and MIS had significantly increased
- MIS was considerably higher in the group which measured lower albumin values

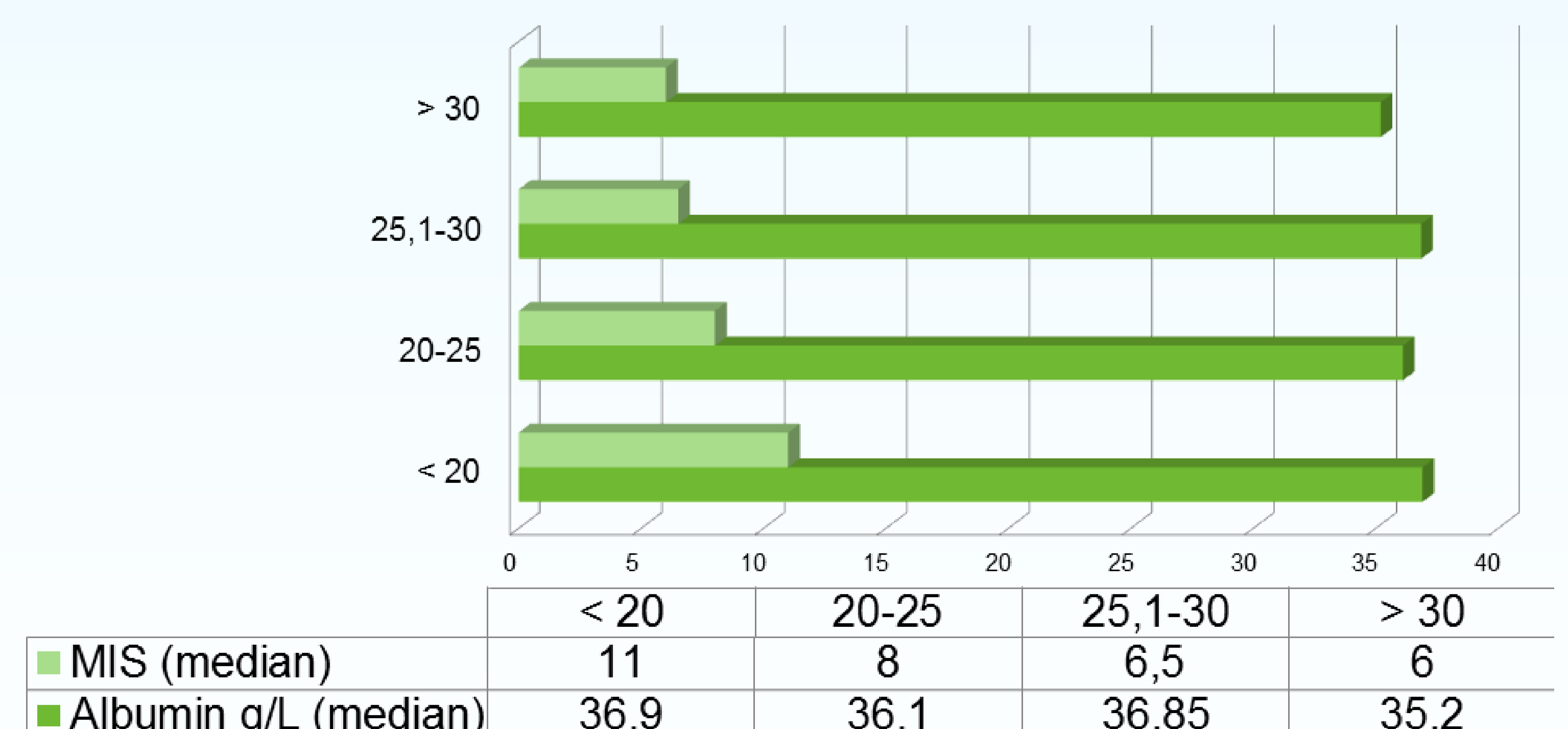
Nutritional status estimated with BMI; n=135



Hemodialysis vintage and nutritional parameters



Albumin values and malnutrition-inflammation score in different BMI groups



## Conclusion

**PEW** cannot be exclusively linked to malnourished patients - **it extends to all patients, regardless of the BMI.**

Complex analysis like is MIS should be used to estimate malnutrition instead of the single parameter like is albumin or BMI.