

## STUDY REGARDING THE AGE INFLUENCE ON SERUM PHOSPHORUS LEVEL IN FELINE CHRONIC KIDNEY DISEASE

REU I.N.<sup>1,\*</sup>, GHIȚĂ M., PETCU C., NICOLAE S., CODREANU I.

<sup>1</sup> University of Agronomic Sciences and Veterinary Medicine Bucharest, Faculty of Veterinary Medicine, 050097, Independentei Street, District 5, Bucharest, Romania

\*Corresponding author: ioanareu@yahoo.com

**Summary:** Chronic kidney disease (CKD) is the progressive loss of kidney function and its prevalence has been estimated to be between 1% and 3% in felines. The purpose of this study is to evaluate from biochemical point of view (the level of serum phosphorus, urea and creatinine), patients of different ages who present symptoms that lead to the diagnosis of chronic kidney disease and to investigate the possible correlation between feline aged 10 years or aging over 10 years.

### Introduction

Healthy kidneys perform a number of essential physiological functions, including blood filtration and urine production. Chronic kidney disease represents a common diagnosis in geriatric feline patients. According to the specialty literature, the prevalence of chronic kidney disease increases with 30% to 40% in patients over 10 years old.

Hyperphosphatemia is an electrolytic disorder characterized by abnormally elevated blood levels of phosphate. It can occur at any age, but, according to specialty literature, it has a higher prevalence in felines with various kidney pathologies.

### Materials and method

This study was conducted over a two-year period (2020-2022) at the University Emergency Hospital Prof. Univ. Dr. Alin Birțoiu in Bucharest and at the Vietatis – The Vets Clinic, Bucharest, on a total number of 20 feline patients suspected of chronic kidney disease. A group of ten patients, older than 10 years of age, were selected for this research.

Each patient was examined by clinical and paraclinical methods, using both general and specialized techniques, such as biochemical investigations (for dosing the creatinine and phosphorus blood levels).

### Acknowledgement:

The present research was carried out as part of an extensive study, the preliminary results being part of the PhD Thesis: "Study on correlations between serum phosphorus level and different stages of feline chronic kidney disease".

### Results and discussions

It was made a comparative analysis between the phosphorus level and the creatinine level for the 3 age groups (12, 15 and 18 years old) – Figure 1. The average creatinine values for 12-years-old patients was 6.92mg/dl and average phosphorus values was 11.5mg/dl.

For patients aged 15-years-old, the average of creatinine values was 4.76 mg/dL and the average of phosphorus value was 7.53 mg/dL.

For the last age group, 18 years old, the average creatinine values was 8.05 mg/dL and average phosphorus values was 9.7 mg/dL.

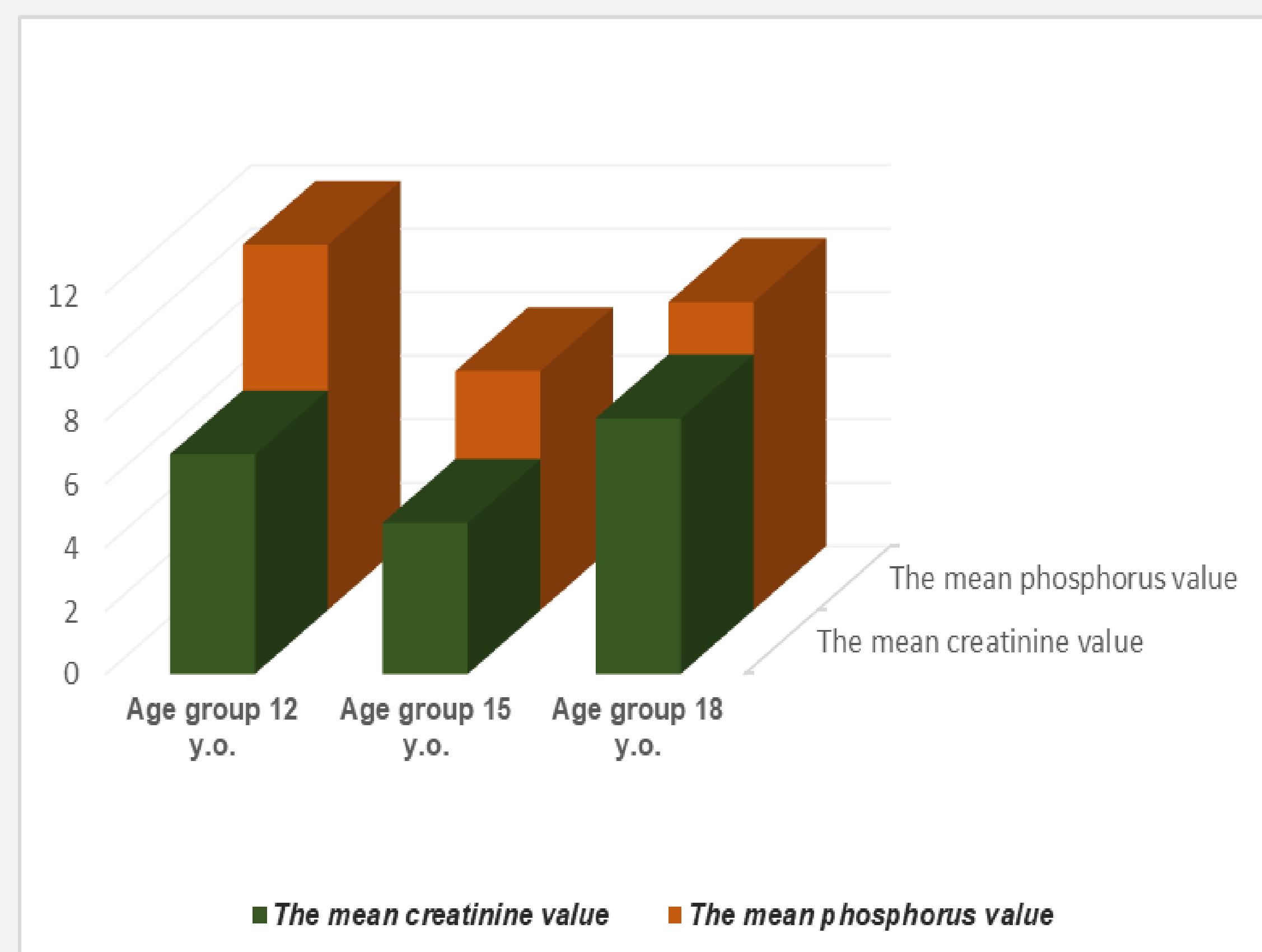


Figure 1

### Conclusions

The advanced age, especially over 10 years represents a very important factor in the occurrence of chronic kidney disease in felines and in its progression.

The phosphorus values are increased in all studied patients, all presenting hyperphosphataemia due, most likely, to the advanced age.