

PROTEIN-CREATININE RATIO IN 24-HOUR URINE VERSUS SPOT URINE IN THE FOLLOW-UP OF PROTEINURIC CKD

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INTRODUCTION

Although the gold standard for the quantification of proteinuria is the 24-hour sample urine protein, due to its numerous limitations (inconvenience and errors in its collection), measurement of protein-creatinine ratio in spot urine sample was proposed by both the KDIGO and KDOQI guidelines as an alternative for follow-up of chronic kidney disease. However, in daily practice we have observed important differences in the values of 24-hour urine protein-creatinine ratio (24-UPC) and protein-creatinine ratio in spot urine sample (spot-UPC)

AIMS

- Analyze the concordance between 24-UPC and spot-UPC
- Analyze the correlation of both samples with 24-hour proteinuria

RESULTS

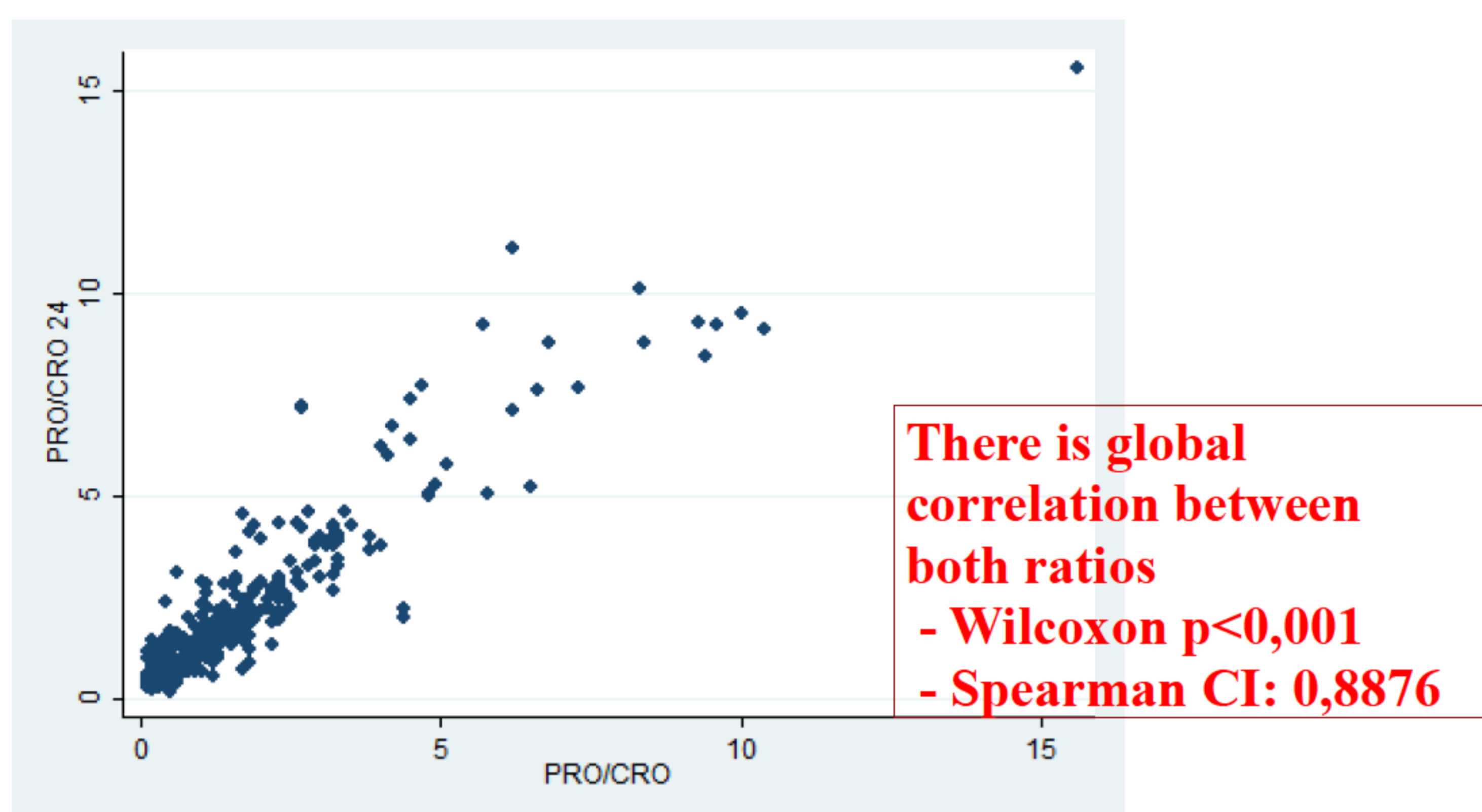
24-UPC has a tendency to be higher than spot-UPC (Interquartile range of variants difference= 0,09-0,58)

METHODS

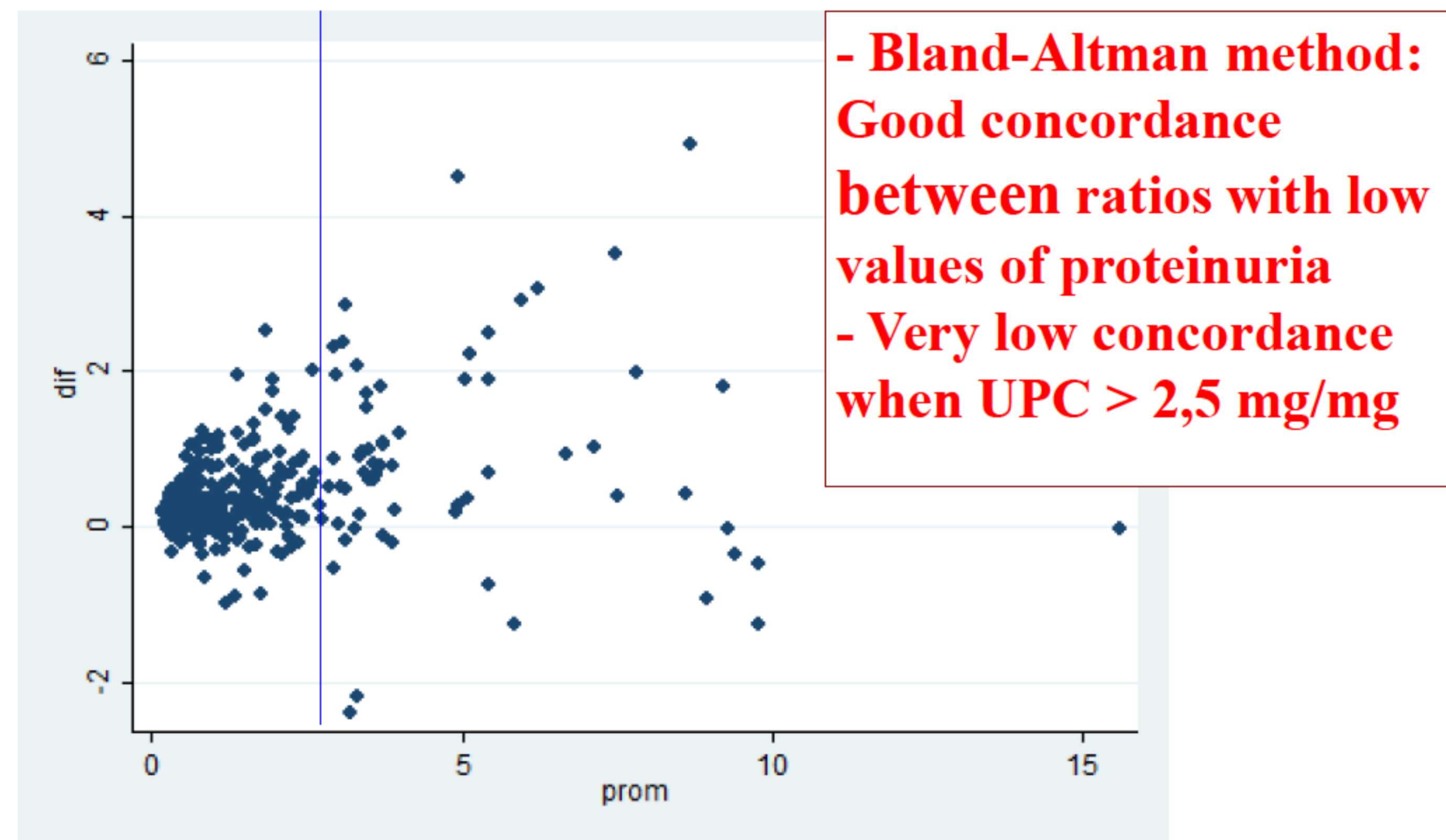
- Retrospective study
- Period March 2009-March 2014
- N: 409 samples from 149 patients
- Simultaneous 24-hour and spot urine samples at the same visit.

Exclusion criteria:

- Patients with urine protein < 0,3 g/24h
- Patients with monoclonal gammopathy
- Renal transplant patients

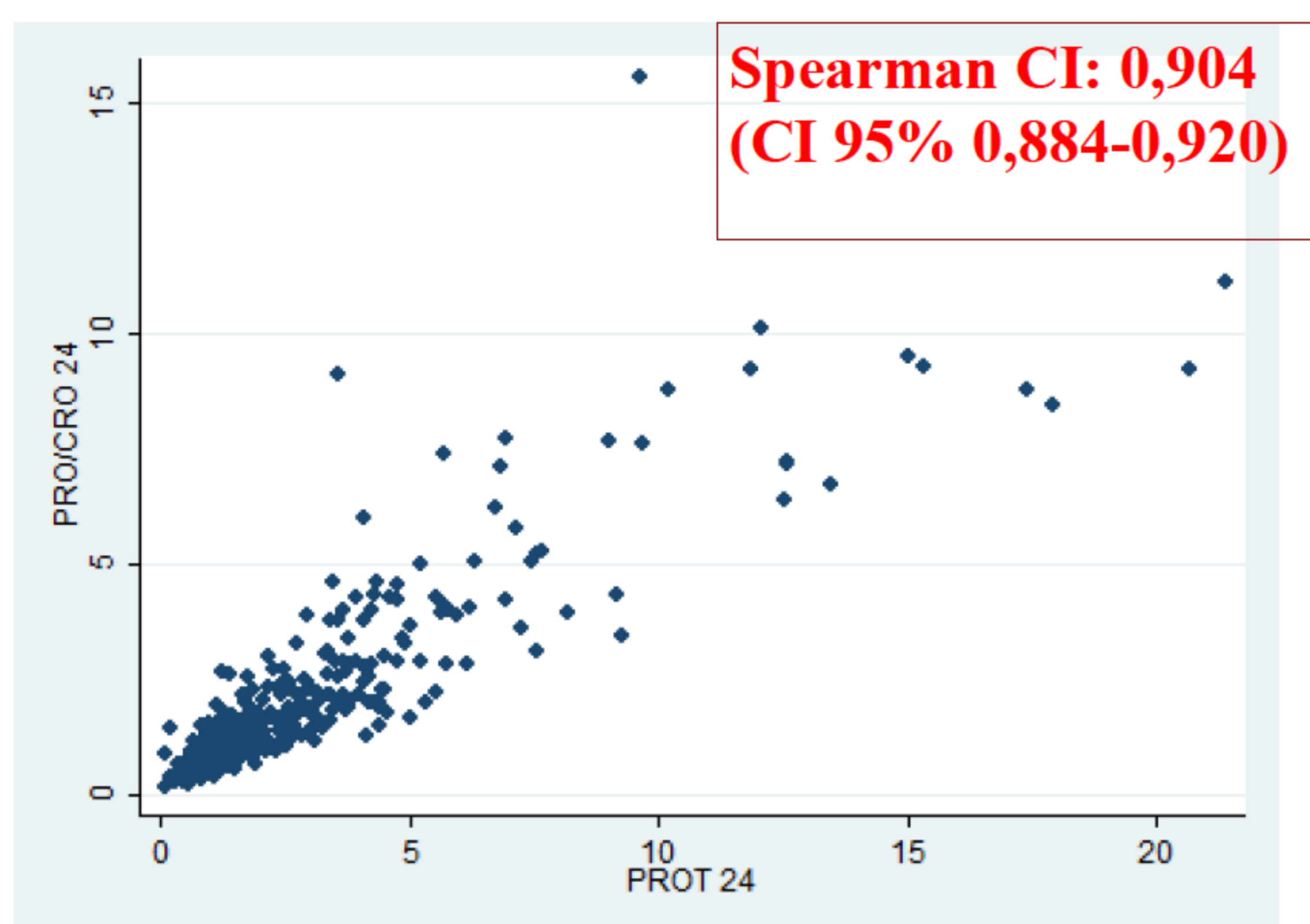


Correlation between spot-UPC and 24-UPC

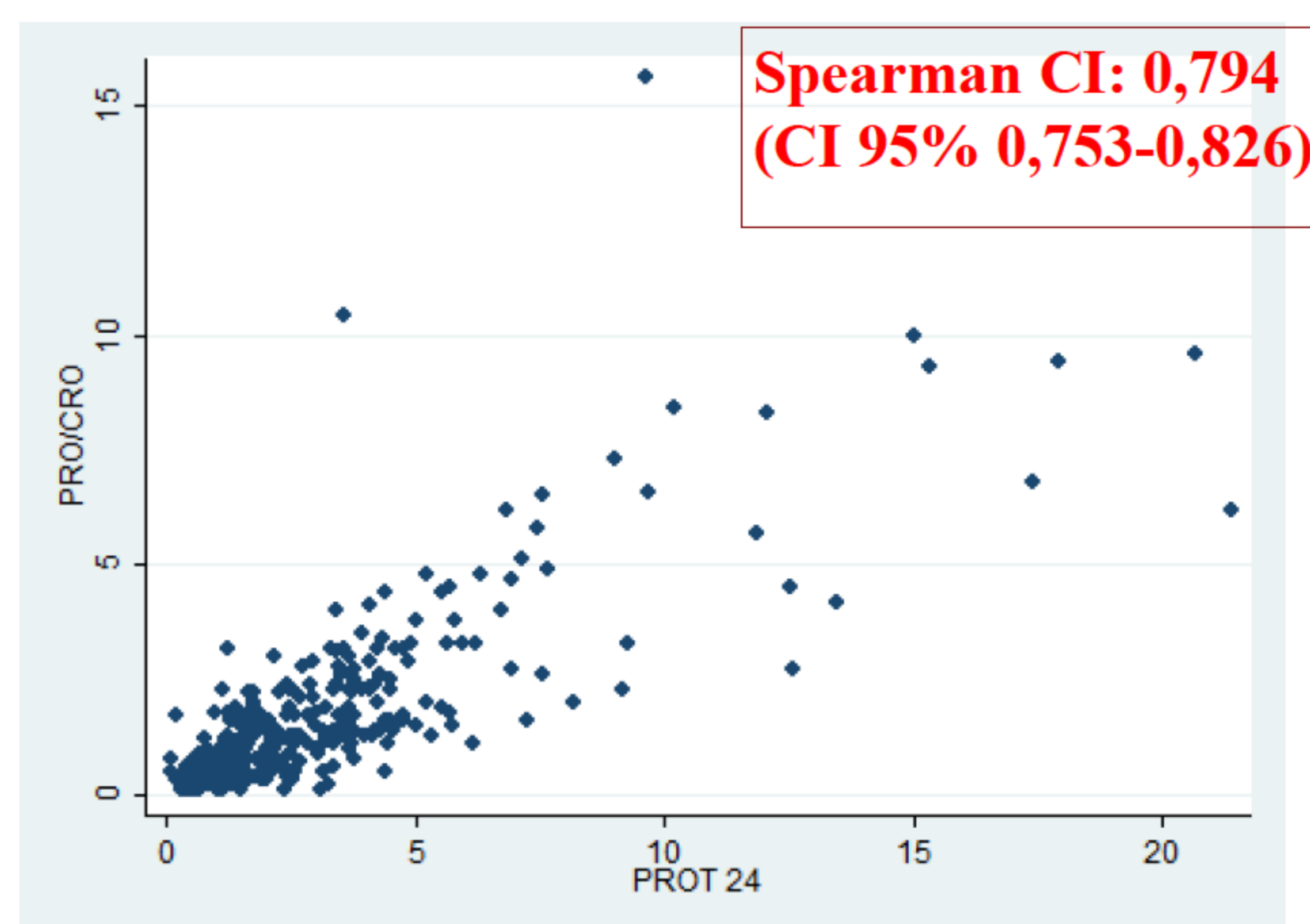


Concordance between spot-UPC and 24-UPC

24-UPC cutoff	Area under the curve	Spot-UPC	Sensibility	Specificity
1	0,9184	0,8	84,87%	87,82%
3,5	0,9796	2,1	90,57%	90,17%



Correlation between 24-UPC and 24-hr proteinuria



Correlation between spot-UPC and 24-hr proteinuria

CONCLUSIONS

- There are differences between 24-hour urine-creatinine ratio and spot sample urine creatinine-ratio, with significant differences when >2,5 mg/mg
- 24-hour urine-creatinine ratio is more reliable for estimation of proteinuria in patients with proteinuric CKD.