



# FRACTIONAL EXCRETION OF PHOSPHORUS: LONGITUDINAL EVALUATION AND CLINICAL IMPACT ON A CHRONIC PERITONEAL DIALYSIS COHORT



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## INTRODUCTION AND AIMS:

The fractional excretion of phosphorus (FePi) showed to be useful in pre-dialysis care guiding phosphorus-lowering interventions. It was also associated with risk of mortality in some studies. Nevertheless its clinical relevance after start of dialysis remains unclear.

This study aimed to explore longitudinally the role of FePi in peritoneal dialysis (PD) patients with residual renal function (RRF).

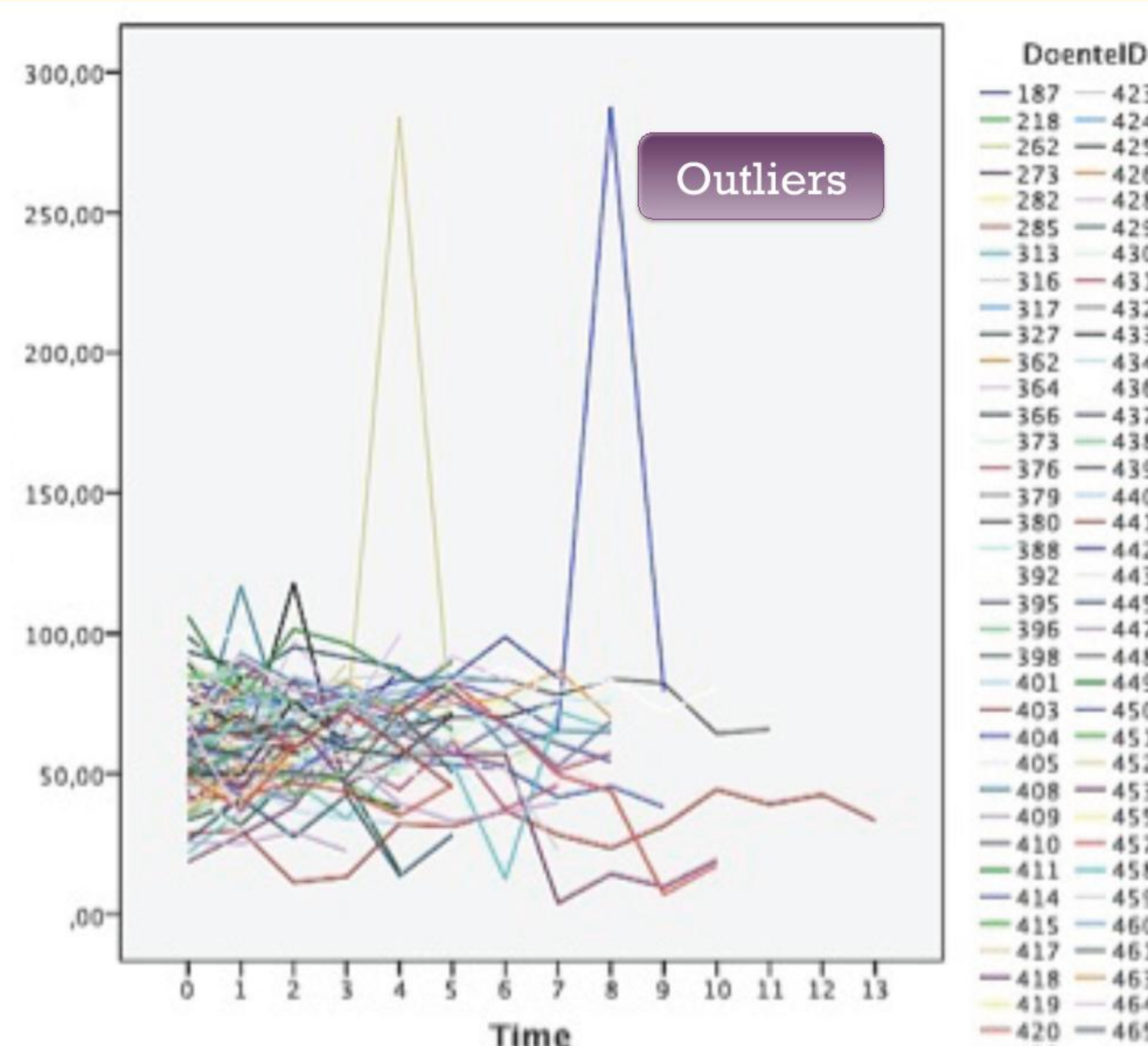
## METHODS:

108 consecutive chronic PD patients, followed for a median of 31 months were investigated with repeated measurements of FePi overtime. FePi outliers were documented in graphs, but were excluded in the analysis.

A joint model for longitudinal and survival outcomes taking competing risks into account (including clinically relevant variables: sex, age, automated peritoneal dialysis (APD) use and diabetes status) was applied to explore the time course of FePi as well as its impact on combined patient and technique survival, taking access to transplantation as competing event.

## RESULTS:

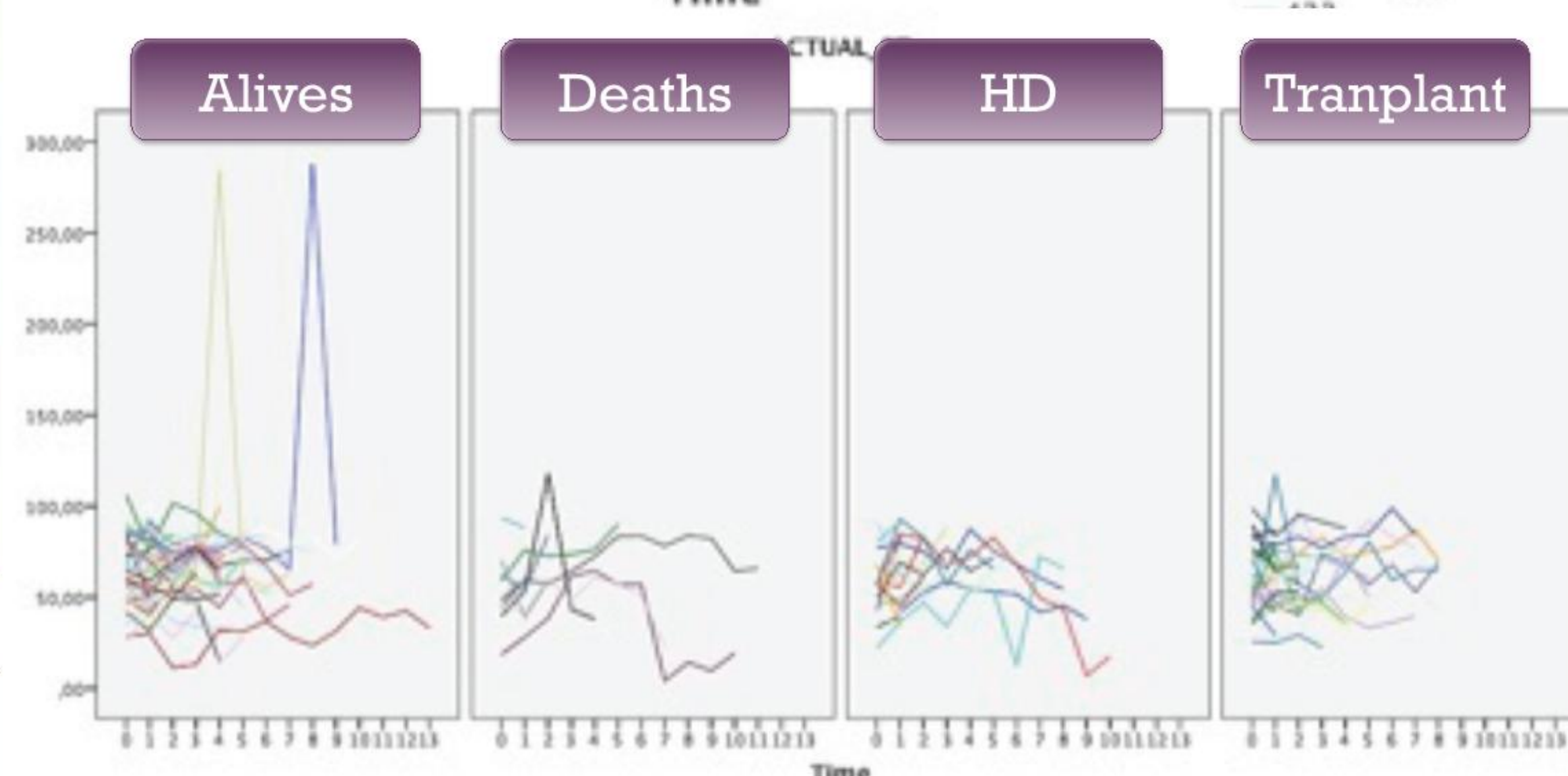
Median age	48.8 years ( $\pm 14.7$ )
Male	53%
APD	53%
DM	20%
Mean FePi	60.4% (min 3.9%, max 99.4%)
Events	N=65 (60%)
Death	N=12
Transfer to HD	N=19
Renal transplant	N=34



Adjusted model	Longitudinal process	
	Coefficient	P
Time	0.0825	0.0419
Males	6.5820	0.0168
Age	-0.1882	0.0452
APD	-3.4368	0.1917
DM	3.7263	0.2544

The adjusted model showed:

- Significant increase of FePi with time ( $p < 0.05$ ).
- Age and sex also exhibited an effect on FePi: younger patients and men had higher FePi levels ( $p < 0.05$ ).
- APD use or diabetes status was not associated significantly with the time-course of FePi levels.



The association between FePi and outcomes (survival and renal transplant) was not statistically significant.

## CONCLUSIONS:

There is a significant increase of FePi levels in chronic PD patients, calling for optimization of diet and therapy intervention. However FePi was not associated with mortality in our population.