□NONDISEASE-SPECIFIC PROBLEMS AS DETERMINANT OF CONSERVATIVE TREATMENT IN ELDERLY PATIENTS WITH CKD NOT YET ON DIALYSIS

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Introduction.-

The interest of conservative management in elderly patients is increasing, on the thinking of maintaining quality of life rather than quantity. Starting dialysis, these patients suffer increased morbidity, high mortality rates and loss of functional status. A fully informed patient is needed to choose treatment preferences to be incorporated into their care, where palliative treatment is an option to be discussed. Nondisease-specific problems (ND-SP) are not often part of the clinical workup for patients with CKD and only focusing on kidney-specific biomarkers may have limited efficacy in improving health outcomes.

Objectives.-

The aim of this study was to determine which of them are determinants of poor prognosis as well as facilitators to discuss with patients and their families about conservative treatment. Secondary objetives were to analize this factors in patients elected for dialysis.

Methods.-

A case-control study was performed including 44 elderly patients with CKD 4-5 not yet on dialysis elected to conservative management, matched with 97 control subjects for sex and eGFR. Baseline data included: demographic, Body Mass Index (BMI), eGFR (MDRD), serum albumin, C-reactive protein and six ND-SP: congestive heart failure, isquemic cardiopathy, cognitive disorders, impaired mobility, polypharmacy and 24h urine collection at home as example of functional ability, among others. Quantitative variables were expressed as mean and standard deviation ($\pm$SD) or median and interquartile range (IQR). Logistic regression was used to evaluate the association of ND-SP with conservative treatment election, relative to control subjects. Results are expressed as odds ratios (OR) with 95 percent confidence intervals (CI) and *P* values.
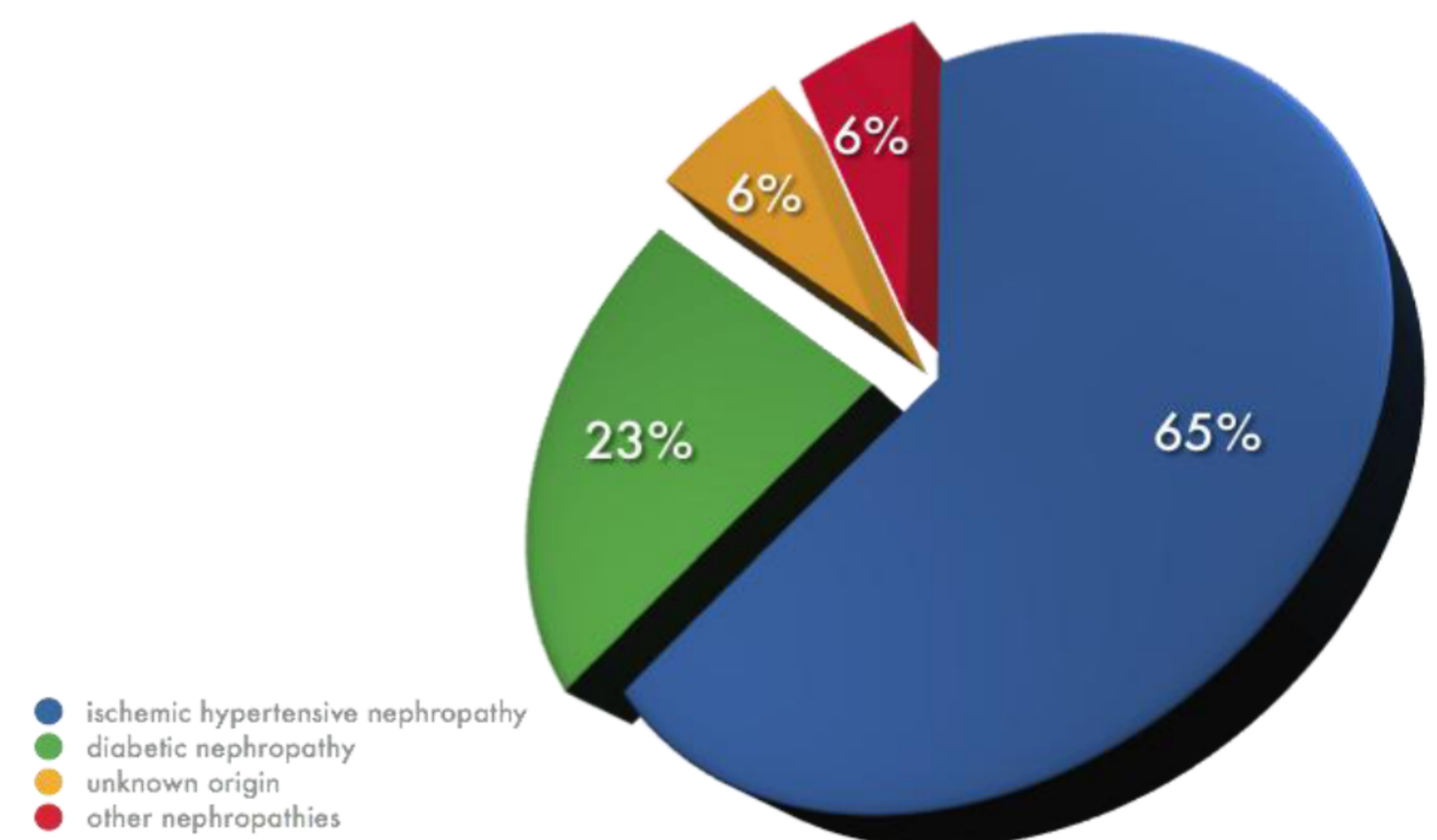
Results:

There were 11 deaths among case patients (25%) with a median of 224.5 (IQR 70.3-270.5) days from palliative choice. None in control subjects. This decision was taken by the family with clinical advice in 35 patients (79.5%). Only three patients took it for themselves.
With respect to frequency-matched variables, sex and eGFR were similar, but case patients were significantly older (85.7$\pm$4.7 vs 83.6 [81.7 to 86.3]; p=0.021)
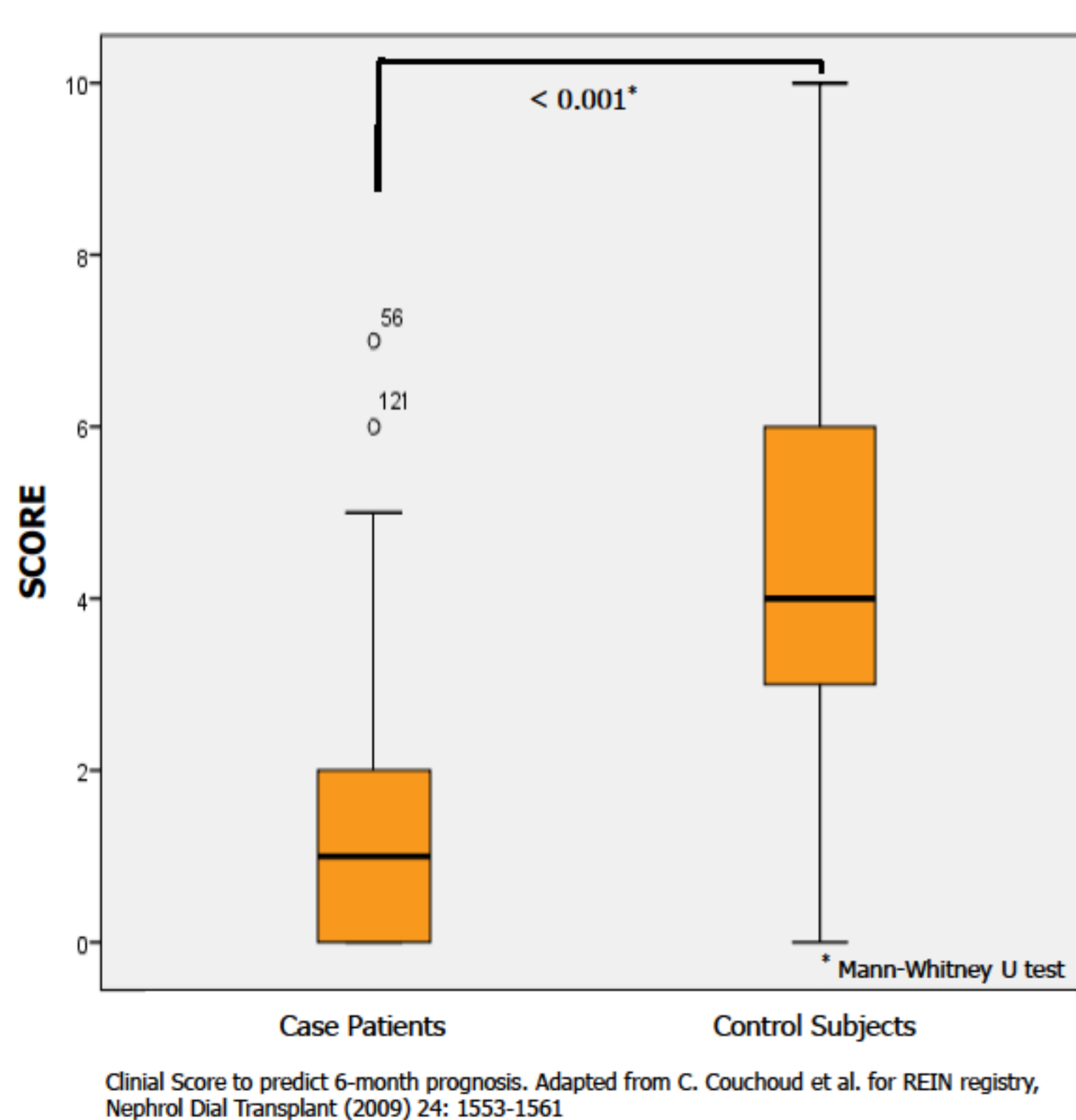
Baseline characteristics

	Case Patients	Control Subjects	P
N patients	44	97	
Age, years	85.7 ± 4.7	83.6 (81.7 − 86.3)	0.021*
Sex, male / females	13 / 31 (70.5%)	31 / 66 (68%)	n.s.
Diabetes, n (%)	20 (45.5)	43 (44.3)	n.s.
Hypertension, n (%)	43 (97.7)	94 (96.9)	n.s.
Body Mass Index, Kg/m^2	30.9 ± 6.4	30.7 (27.5 − 34.8)	n.s.
Baseline eGFR (MDRD), ml/min/1.73 m^2	19.6 ± 5.2	21.0 (19.0 − 23.0)	n.s.
Serum creatinine, mg/dl (IQR)	2.7 (2.3 − 3.4)	2.6 (2.2 − 3.0)	n.s.
C reactive protein, mg/dl (IQR)	4.3 (1.7 − 12.5)	5.2 (1.2 − 13.6)	n.s.
Plasma Albumin, g/dl	3.6 ± 0.4	4.0 (3.8 − 4.2)	<0.001*
Serum total calcium, mg/dl (IQR)	8.8 (8.5 − 9.4)	9.1 (8.7 − 9.4)	n.s.
Serum phosphate, mg/dl	3.7 ± 0.6	3.7 (3.2 − 4.2)	n.s.
Serum PTH, pg/ml (IQR)	171.5 (109.9 − 292.3)	155.8 ± 85.4	n.s.
25-hydroxyvitamin D, ng/ml	16.4 ± 8.8	17.4 (9.4 − 21.4)	n.s.
Hb concentration, gr/dl	11.0 ± 1.6	11.4 (10.4 − 12.4)	n.s.
Ferritin, ng/ml (IQR)	160.0 (45.5 − 254.8)	134.0 (64.1 − 257.9)	n.s.
Serum transferrin saturation, %	24.4 ± 11.2	24.3 (18.4 − 30.5)	n.s.
Score to predict 6-month prognosis	4.6 ± 2.3	2 (1 − 4)	<0.001*

* Mann-Whitney U test

Different etiologies of CKD

- ischemic hypertensive nephropathy — 65%
- diabetic nephropathy — 23%
- unknown origin — 6%
- other nephropathies — 6%

Score to predict 6-month prognosis

Clinial Score to predict 6-month prognosis. Adapted from C. Couchoud et al. for REIN registry, Nephrol Dial Transplant (2009) 24: 1553-1561

Variables determining the choice of conservative management. Multivariate logistic regression

Variable	O.R.	C.I. 95%	P
Age	1,1	1.0 − 1.3	0.168
Congestive Heart Failure			
Stage I or II	4.9	1.2 − 19.3	0.023
Stage III or IV	15.8	3.1 − 79.4	0.001
Behavioural disorder			
Alzheimer Disease	30.1	3.0 − 305.3	0.004
Major Depression	0.2	0.0 − 2.0	0.161
MDRD	0.8	0.7 − 1.0	0.018
Lack of 24h urine collection	7.6	2.3 − 25.2	0.001
Lack of attendance to medical consultation	12.4	3.4 − 45-3	<0.001

ROC curve

AUC =0.936 (0.895 − 0.976)
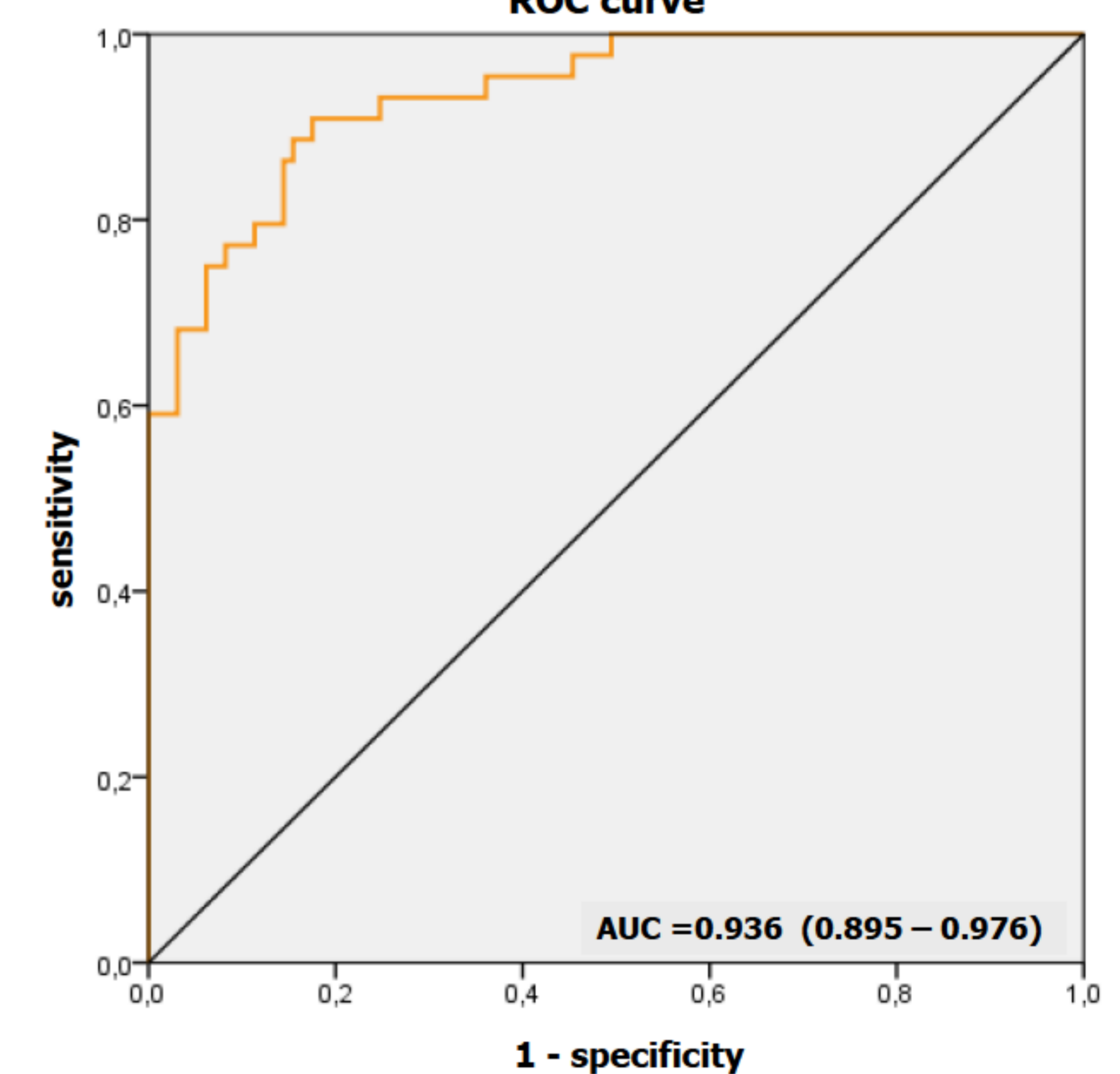
Conclusions.-

We conclude that ND-SP are neccesary to have into account to guide clinical decision making regarding dialysis, providing clear information to patients and families about prognosis and what to expect from dialysis.

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