

GRAFT SURVIVAL IN KIDNEY TRANSPLANT EXPANDED CRITERIA DONORS: ANALYSIS OF TWO PERIODS

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INTRODUCTION

In recent years we have seen a decrease of optimal donors. In parallel, we have observed an increase of the elderly patients in waiting lists. This new scenario has conditioned a growing increase in the use of expanded donors for these elderly recipients.

OBJETIVE

To compare graft survival in two time periods in kidney transplant expanded criteria donors (KTECD).

- Period I: 1999-2004.
- Period II: 2005-2011.

MATERIALS AND METHODS

- We studied 333 patients who received a KTECD, divided into two cohorts:

- Period I: 129 KTECD between February 1999 and December 2004.
- Period II: 224 KTECD between January 2005 and December 2011.

- All patients had a minimum follow-up of 3 years.
- All kidney had a biopsy pretransplant.

RESULTS

DONORS CHARACTERISTICS

	Period I (n=129)	Period II (n=204)	P
Age (Mean)	64±5	63±6	0,572
Gender (Female %)	51,9	40,2	0,036
Weight (kg)	75,9	78,6	0,064
BMI (kg/m ²)	28	27	0,298
Creatinine (mg/dl)	0,8 ± 0,1	0,8 ± 0,1	0,092
MDRD (ml/min/1.73m ²)	90± 28	93± 23	0,337
Diabetes (%)	12	29,5	<0,001
Hypertension (%)	54	56	0,799
Traumatic Brain Injury	82	81	0,822
Death (%)			
Stroke Death (%)	17,8	18	0,822
Histology (mean score)	2,3±1,2	2,2±1,3	0,213

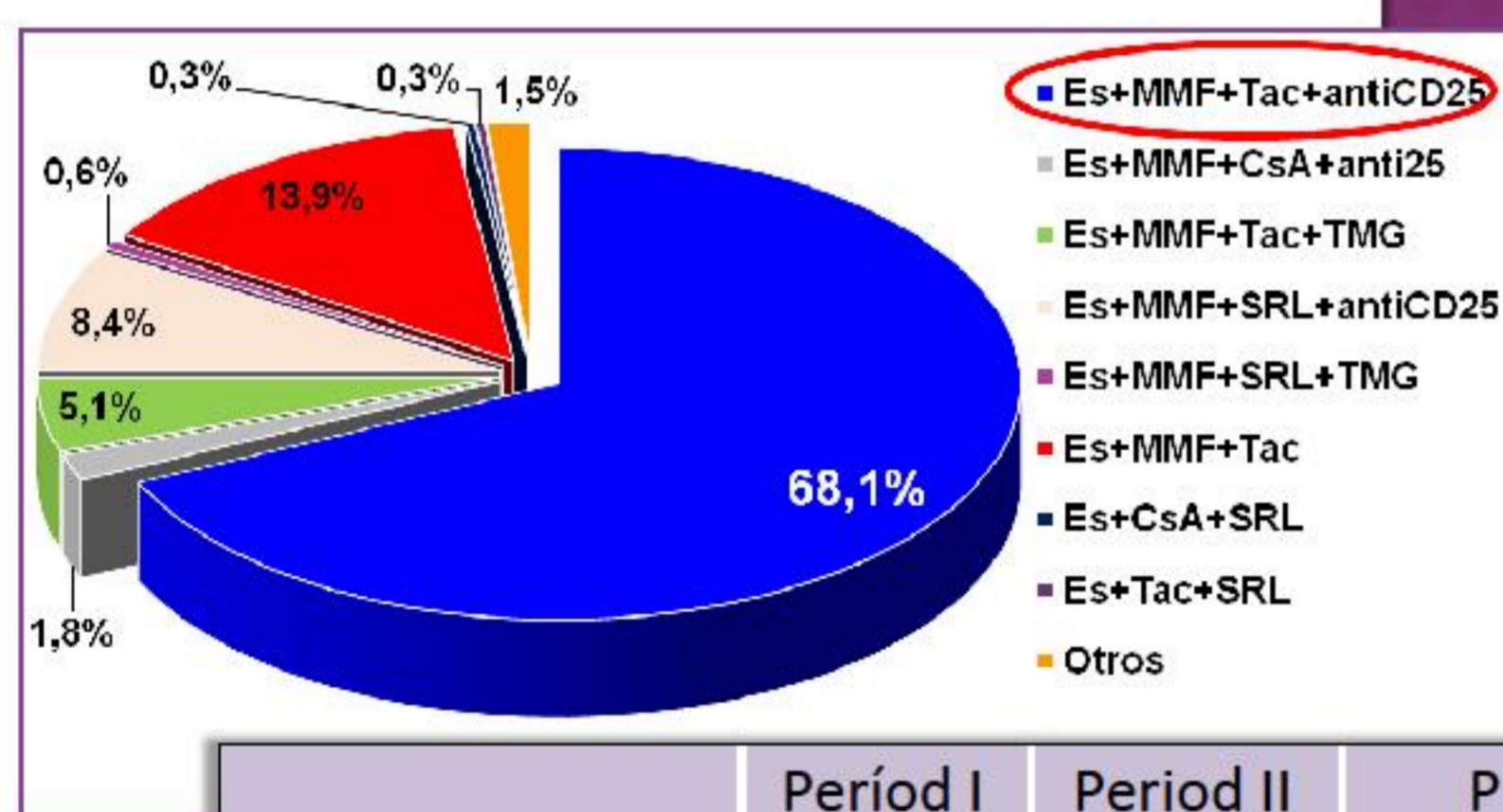
RECIPIENTS CHARACTERISTICS

	Period I (n=129)	Period II (n=204)	P
Age (mean)	57,7±9	61,0±7	<0,001
Gender (Female %)	42	41	0,813
BMI (Kg/m ²)	27,1	26,6	0,306
Time on dialysis (months)	31±26	36±27	0,146
Pretransplant diabetes (%)	8,5	12,4	0,234
Pretransplant stroke (%)	13,2	7,6	0,123
Pretransplant HTA (%)	61	60	0,801
Pretransplant dyslipemia (%)	29	45	0,014

POST-TRANSPLANT

	Period I (n=129)	Period II (n=204)	P
Retransplant (%)	6,2	11,5	0,108
HLA mismatches	3,5±0,9	3,6±1,1	0,361
Cytotoxic antibodies >25%	2,3	2,7	0,821
Cold ischemia time (hours)	15,0±4,4	15,9±3,8	0,075
Revascularization time (mi)	33,2±7,5	35,0±10,4	0,020

IMMUNOSUPPRESSIVE TREATMENT

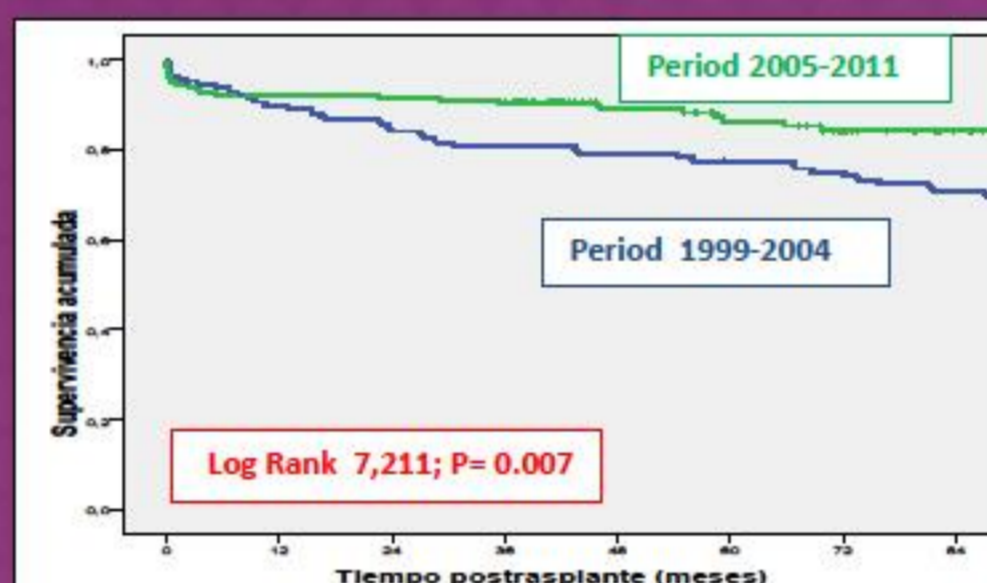


	Period I	Period II	P
Tac+MMF+Es(%)	47	89	<0,001
Induction (%)	69	96	<0,001
Sirolimus (%)	20	2,5	<0,001

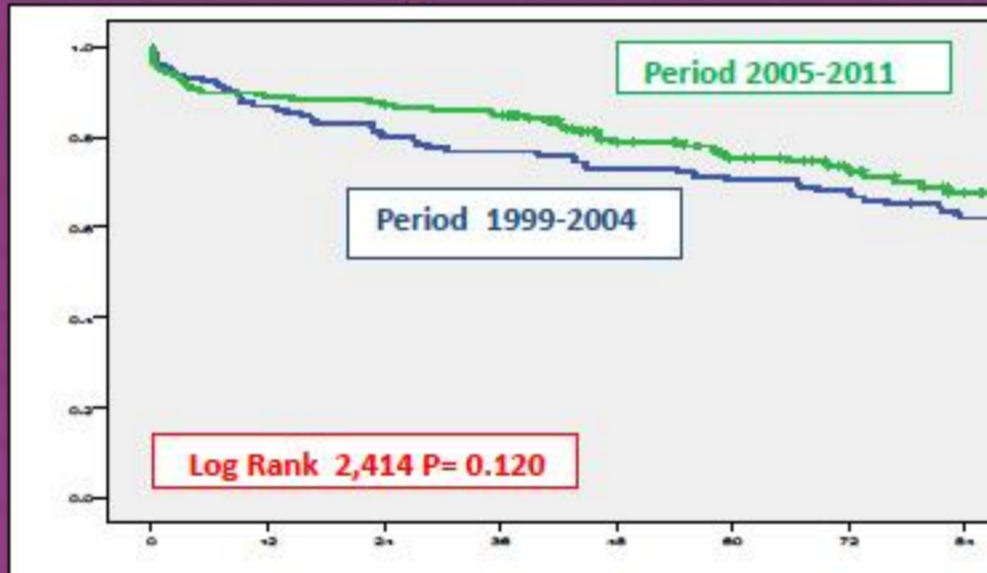
GRAFT SURVIVAL

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Period I	89%	80%	77%	70%
Period II	92%	90%	86%	84%

Censored graft survival



No censored graft survival

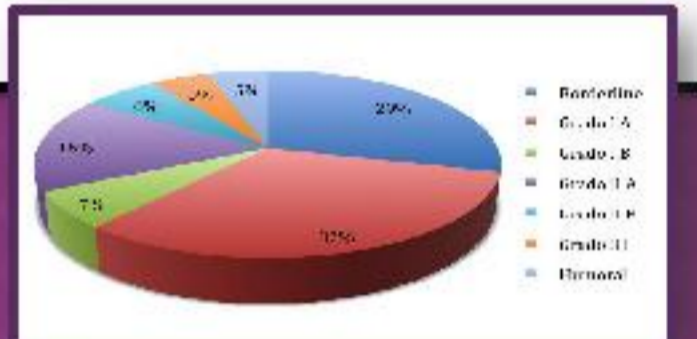


HISTOLOGY

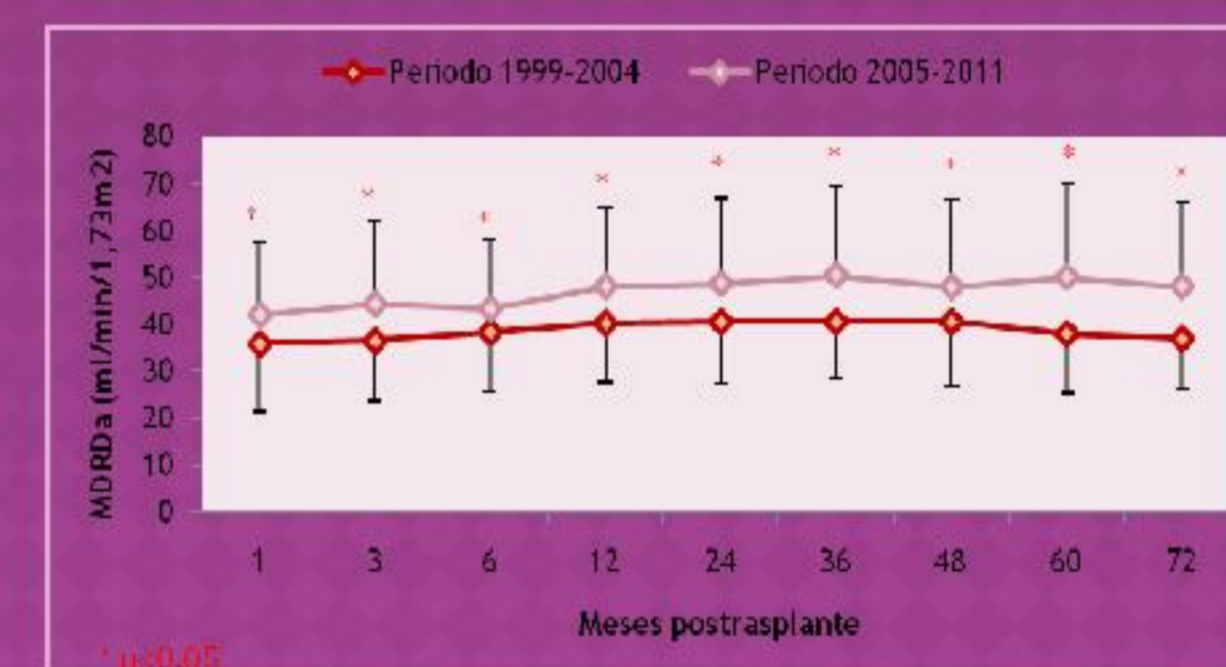
	Period I	Period II	P
Score Glomerulosclerosis (median)	0,7 ± 0,6	0,8 ± 0,5	0,037
Score Arteries (median)	0,9 ± 0,8	0,6 ± 0,7	0,001
Tubular atrophy (median)	0,7 ± 0,4	0,4 ± 0,5	<0,001
Interstitial fibrosis (median)	0,1 ± 0,3	0,3 ± 0,4	<0,001
Total Score (median)	2,3 ± 1,2	2,2 ± 1,3	0,213

ACUTE REJECTION

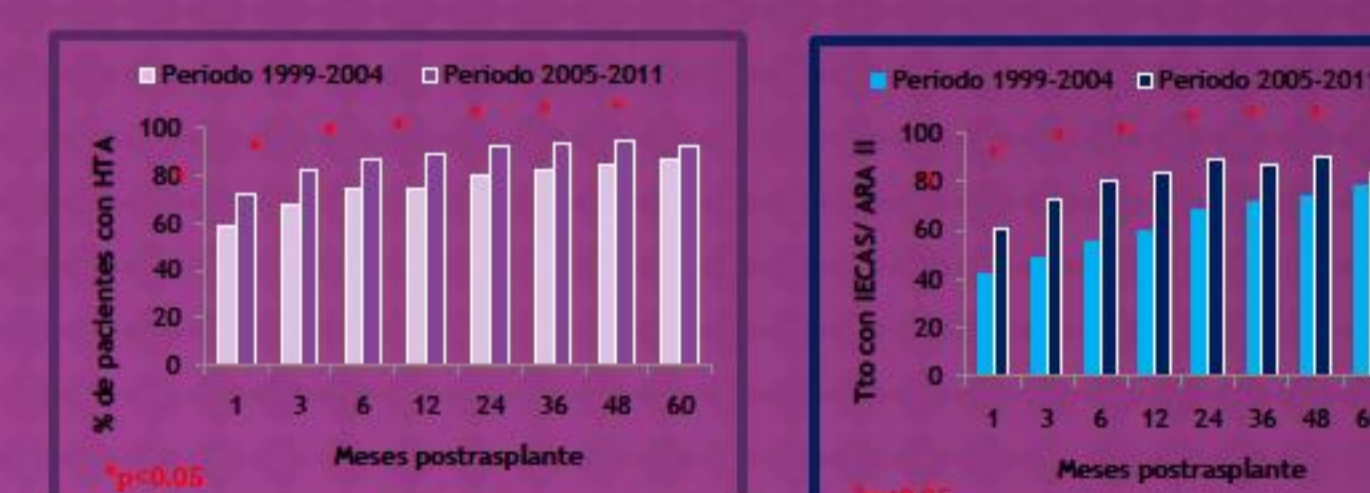
-Seventy-eight patients (23.4%) an episode of acute rejection.
-Time post-transplant 22 days (ICR 9-172).
-Lower incidence in the period II (25% vs 22%, p=0.4).



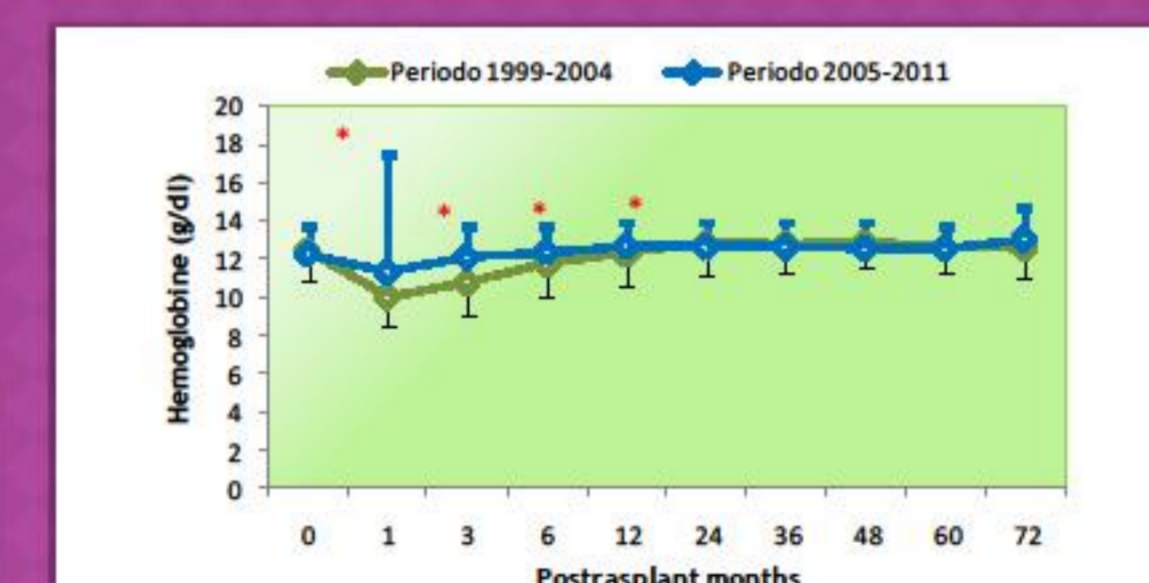
RENAL FUNCTION



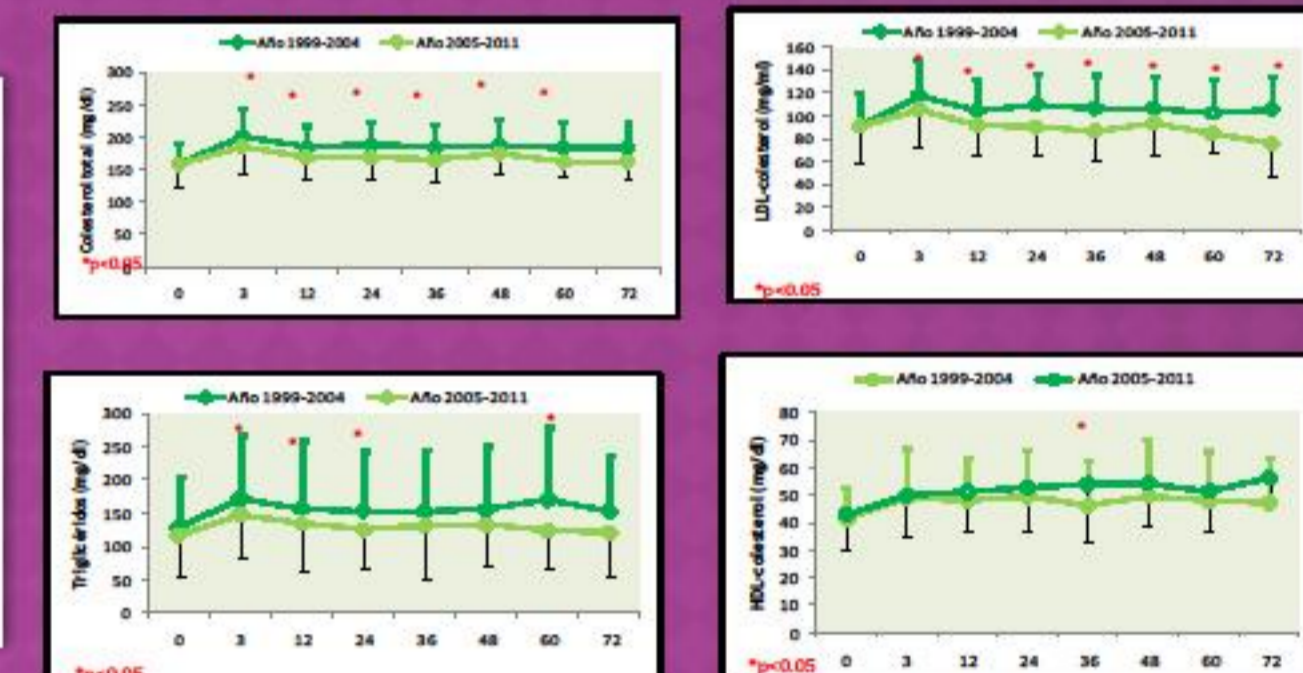
HYPERTENSION



ANEMIA



DYSLIPEMIA



COX REGRESSION. MULTIVARIATE ANALYSIS. Factors associated with graft loss (censored).

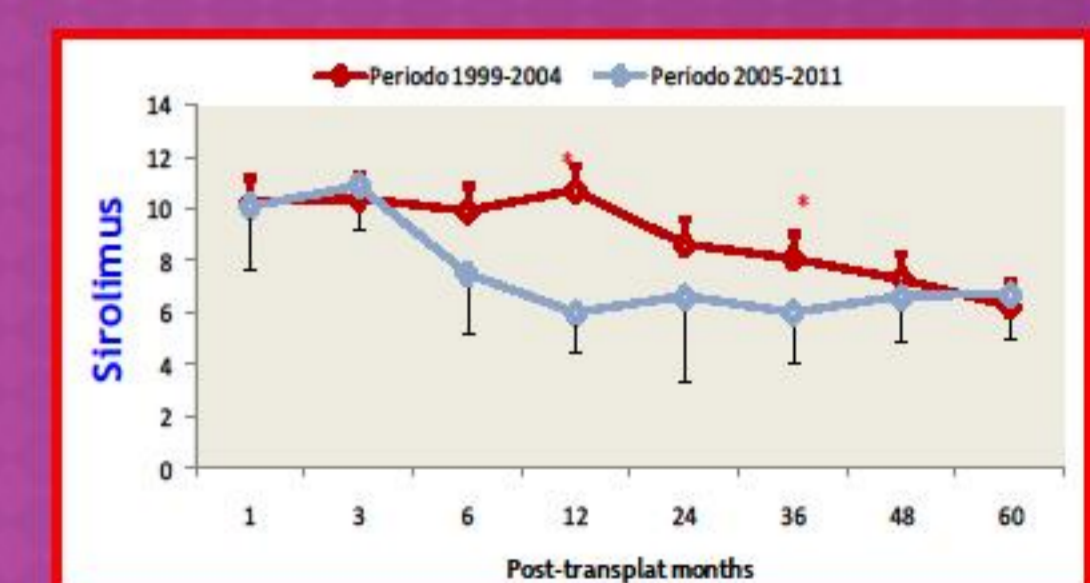
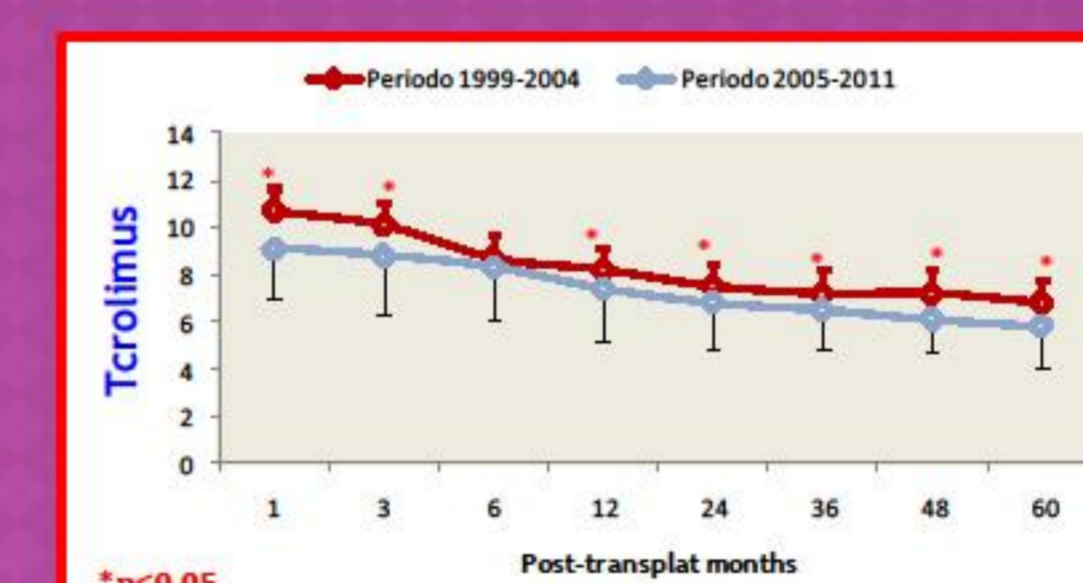
	HR	IC 95%	P
Donor age	0,9	0,9-1,0	0,673
Period (II vs I)	0,2	0,1-0,6	0,003
MDRD 3 ^{er} month	1,03	0,9-0,99	0,046
Delayed graft function	1,5	0,9-2,6	0,369
Cytotoxic antibodies >25%	2,7	0,5-15	0,239
Stroke Death Donor	0,5	0,3-1,1	0,159
Proteinuria 3 ^{er} month	1,002	1,001-1,003	0,001

COX REGRESSION. MULTIVARIATE ANALYSIS. Factors associated with graft loss (no censored).

	HR	IC 95%	P
Suspensión esteroides	0,4	0,2-0,9	0,016
Patient age	1,03	0,9-1,0	0,056
MDRD 3 ^{er} month	0,9	0,9-1,0	0,046
Proteinuria 3 ^{er} month	1,002	1,001-1,002	0,002
Period (II vs I)	0,4	0,2-0,6	0,024
Cytotoxic antibodies >25%	2,7	0,4-11	0,253
Delayed graft function	1,5	0,9-3,2	0,097

* Model adjusted for propensity to receive steroids divided into quintiles

IMMUNOSUPPRESSIVE LEVELS



CONCLUSIONS

The graft survival was significantly higher in the second period, probably due to a better management of immunosuppression and the cardiovascular risk.