

Immunoglobulin A nephropathy and eGFR below 50 mL/min: to treat or not to treat?



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BACKGROUND

According to the 2012 Kidney Disease: Improving Global Outcome (KDIGO) Guidelines on Glomerulonephritis, in patients with IgA nephropathy (IgAN) there is no evidence to support the use of corticosteroids when eGFR<50mL/min. Therefore, we aimed to investigate whether the addition of immunosuppressive agents (ISA) to angiotensin-converting enzyme inhibitor (ACEI) improves the outcome in this set of patients.

METHODS

We examined the outcome at **31 December 2014** in **52 adult patients (median age 45.5 [37-52] years, 75% male)** with IgAN diagnosed by biopsy between 2002-2013. Patients with crescentic IgAN and rapidly deteriorating kidney function were excluded. All renal biopsies were scored according to the Oxford classification. **All patients had eGFR<50mL/min and were treated either only with ACEI (ACEI group - 31 patients) or with ACEI plus corticosteroids and cyclophosphamide (ISA group - 21 patients).** The primary endpoint was kidney survival defined as doubling of serum creatinine or end-stage renal disease (ESRD).

RESULTS

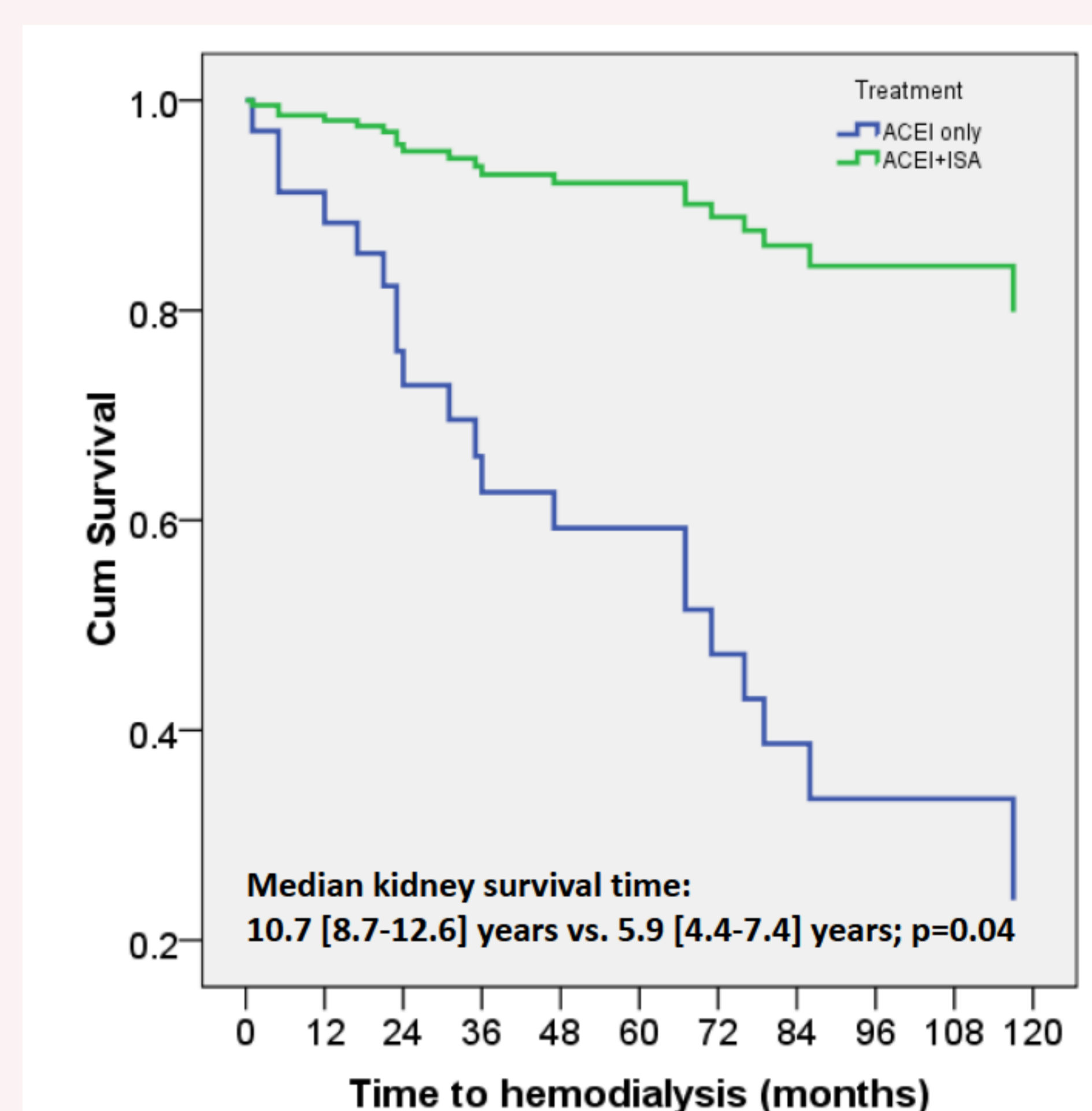
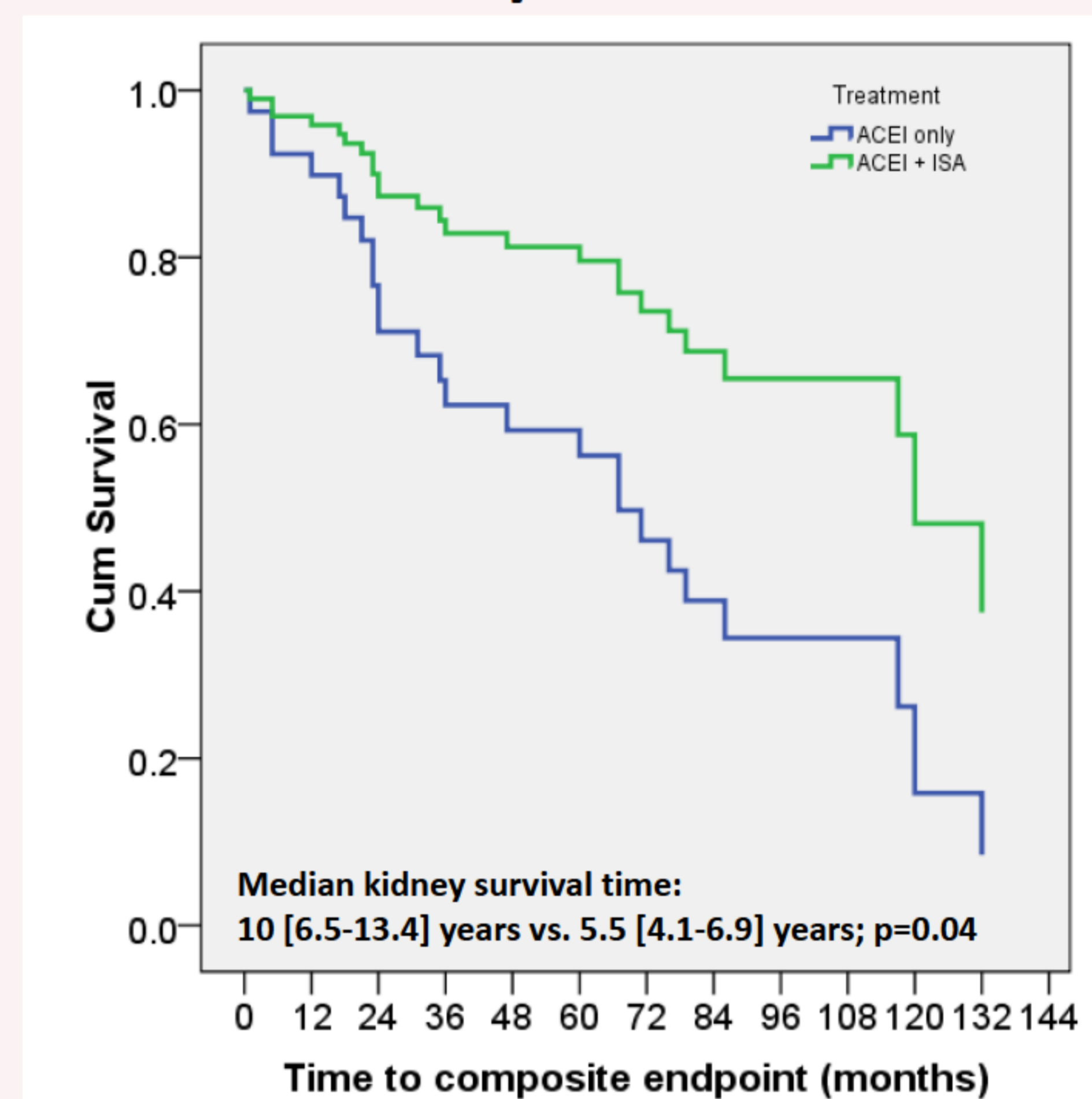
The patients in the ISA group were more often men, had higher hematuria and were more frequent in Oxford class M1. There were no differences at presentation between ACEI and ISA groups in risk factors for progressive kidney disease: proteinuria, eGFR, hypertension. However, 61% of the ACEI group reached the composite endpoint as compared to 29% in the ISA group. The median kidney survival for the entire cohort was 6.5 [4.6-8.4] years, but was almost double in patients in the ISA group. Furthermore, the survival advantage remained in favor of ISA group when using ESRD as endpoint. Multivariate analysis showed that ACEI only group, hypertension, 24 hours proteinuria, E1 Oxford class and S1 were the independent predictors of kidney survival (HR>1 implies decreased chances of renal survival).

CONCLUSIONS

With the reserve due to the small sample size and the retrospective design, our study suggests that the addition of immunosuppressive agents (corticosteroids plus cyclophosphamide) to ACEI provides kidney survival benefit as compared to ACEI alone in patients with IgAN and eGFR<50ml/min.

	All N=52	ACEI only N=31	ACEI+ISA N=21	p
Age (years)	45.5 [37-52]	40 [34-51]	51 [37-57]	0.2
Male gender	75%	65%	91%	0.03
Hypertension	64%	58%	71%	0.3
Nephrotic syndrome	21%	26%	14%	0.3
Nephritic syndrome	27%	13%	48%	0.006
eGFR (mL/min)	33.8 [29.1-40.3]	30.6 [22.9-37.5]	40.3 [29.1-45.7]	0.2
Proteinuria (g/24h)	1.7 [1.3-2.2]	2 [1-3.2]	1.6 [1-2.2]	0.7
Hematuria (h/mm ³)	135 [75-210]	75 [30-160]	210 [120-230]	0.01
Oxford classification				
M1	75%	65%	91%	0.03
E1	27%	26%	29%	0.8
T1	92%	94%	91%	0.6
S1	75%	74%	76%	0.8
Endpoint				
HD	39%	58%	10%	<0.01
Double creatinine	14%	7%	23%	0.07
Composite endpoint	48%	61%	29%	0.02

Kaplan Meier



Cox proportional hazard model

	HR (95% CI)	p
Female vs. Male gender	0.37 [0.12-1.11]	0.07
24 hours proteinuria	1.59 [1.18-2.14]	<0.01
Hypertension	3.12 [1.22-7.95]	0.01
ACEI only vs. ISA group	4.70 [1.55-14.20]	<0.01
E1 vs. E0	5.91 [1.83-19.05]	<0.01
S1 vs. S0	3.43 [1.10-10.66]	0.03