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INTRODUCTION

Activation of alternative complement pathway has recently emerged as important factor in the pathogenesis and clinical expression of IgA nephropathy (IgAN).

High serum IgA:C3 ratio, decreased serum C3 level and intensity of mesangial C3 deposition predict a worse renal outcome.

AIM

This study aimed to investigate clinical, pathological features, and prognosis of adult IgAN patients with mesangial C3 deposition.

METHOD

- retrospective observational single-center study
- patients with kidney biopsy and clinically confirmed primary IgAN from 2011 to 2021
- follow-up of at least 6 months
- C3 deposition was considered significant if the mesangial C3 immunofluorescence intensity was $\geq 2+$
- renal outcome was the composite of a $\geq 30\%$ decline in eGFR or end-stage renal disease

RESULTS

- total of 40 pts, 65% male
- median follow-up 49 (25 -99) months
- 65% mesangial C3+
- no difference between mesangial C3+ and C3- groups in:
 - age
 - systolic and diastolic blood pressure
 - BMI
 - serum urate
 - IgA prediction tool score
 - eGFR
 - serum levels of C3

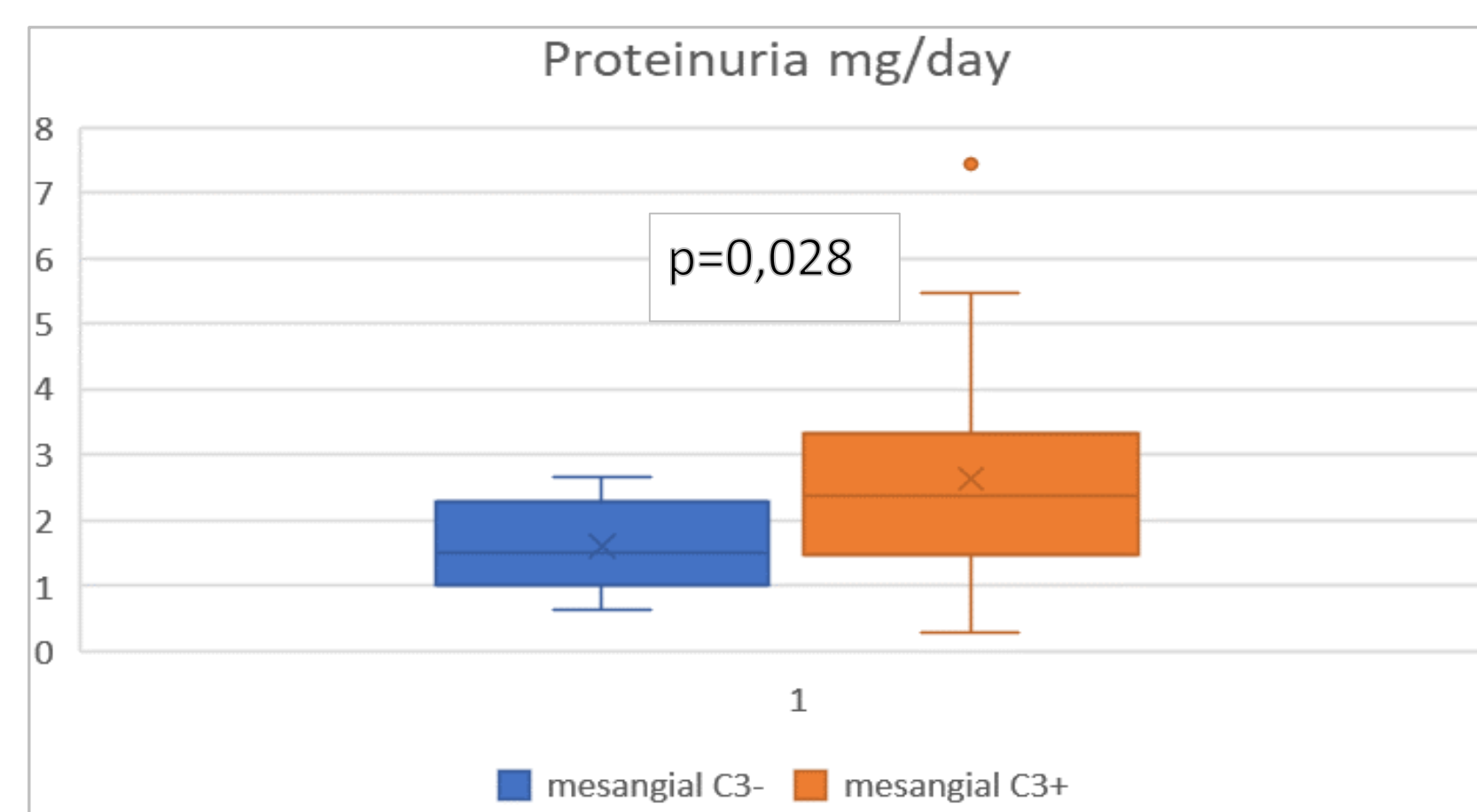


Fig.1 Patients with mesangial C3 deposition had higher initial level of proteinuria

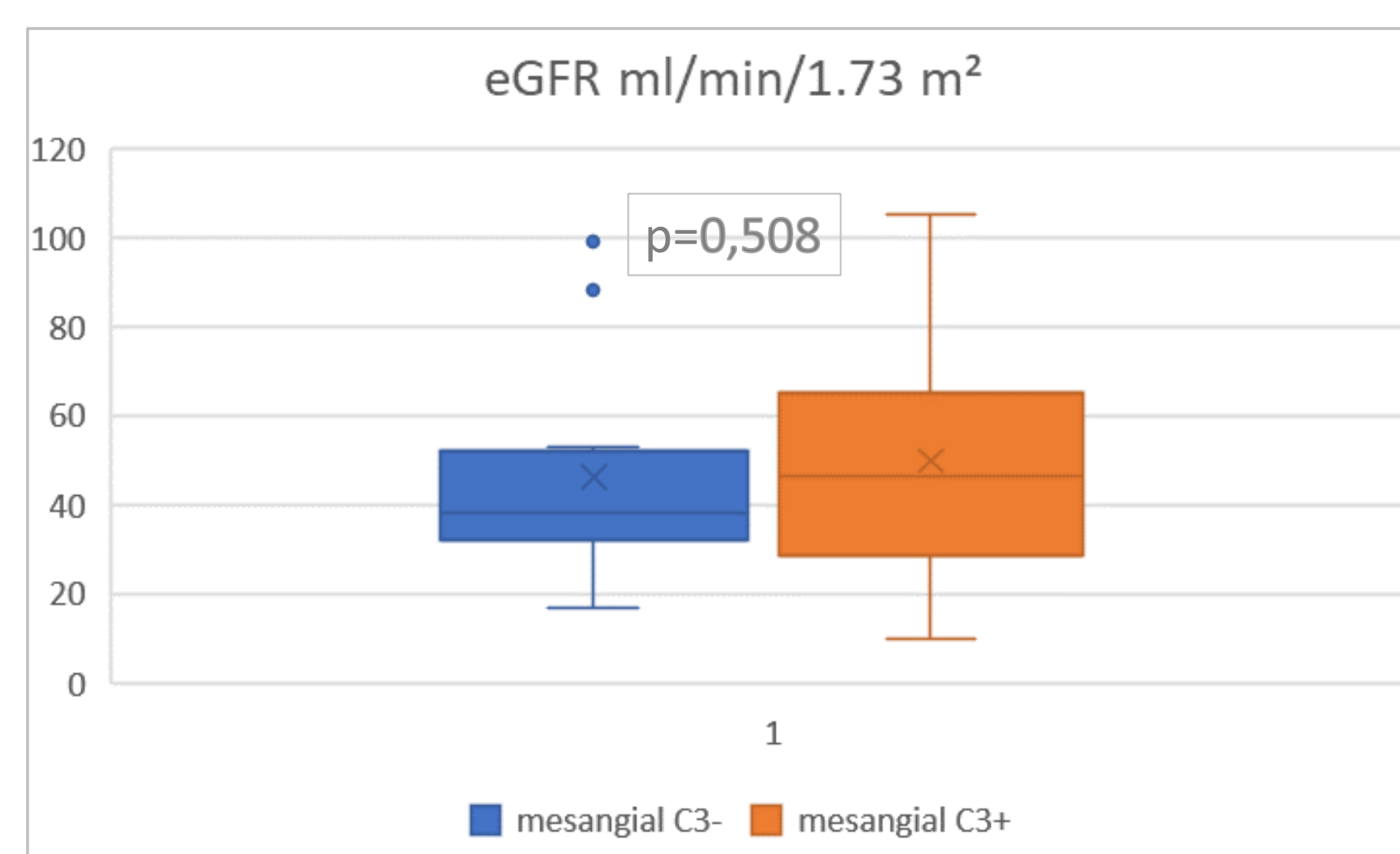


Fig.2 There was no difference in eGFR between groups

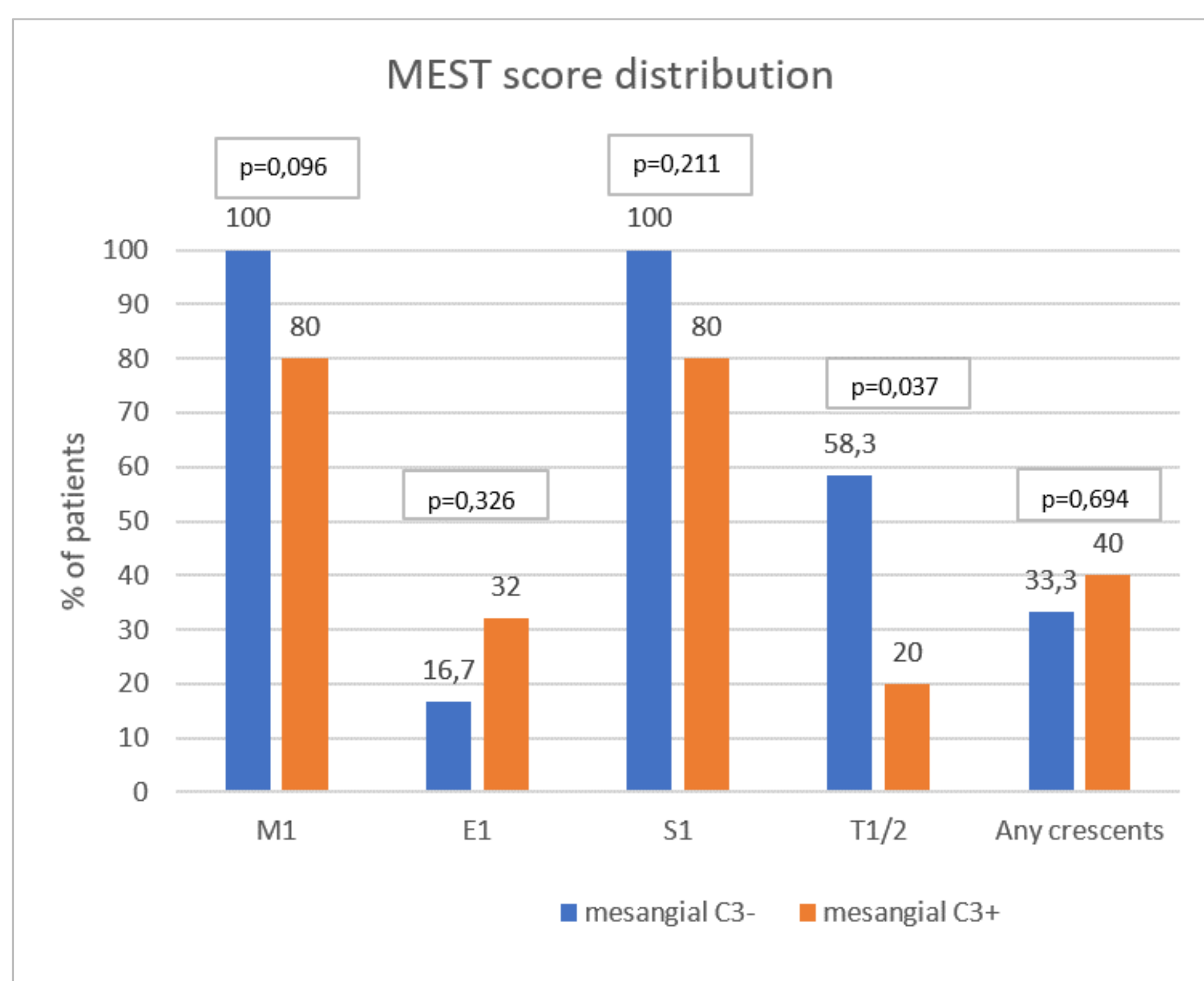


Fig.3 Patients with C3 deposits had higher T score, and no significant difference in M,E,S, and C score

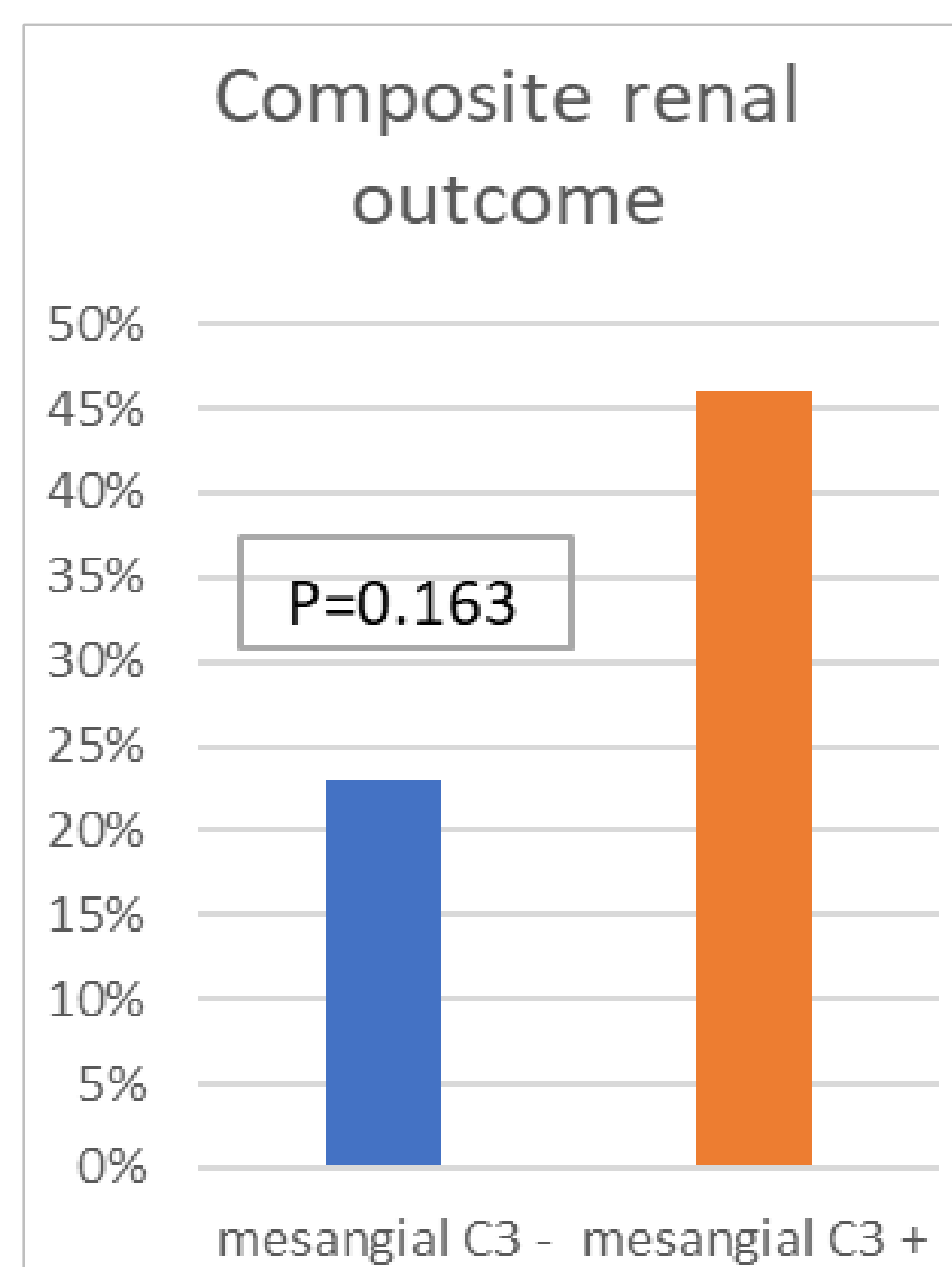


Fig.4 Although more patients with mesangial C3 deposits reached composite renal outcome ($\geq 30\%$ eGFR decline and/or ESRD), this difference was not statistically significant

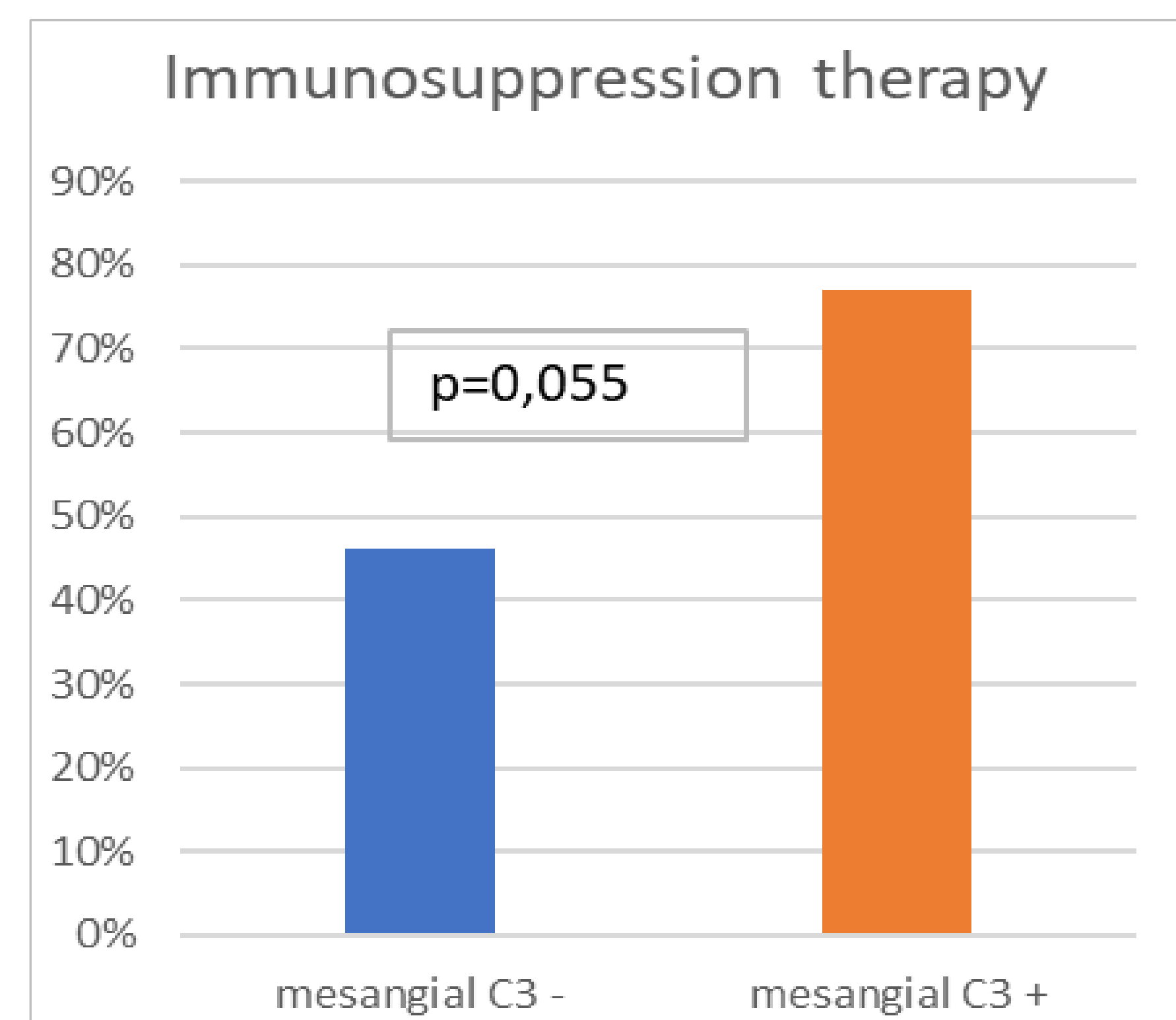


Fig.5 Patients with mesangial C3 deposits were more likely to be treated with immunosuppression therapy, probably due to higher initial proteinuria. This therapeutic intervention might have led to the similar renal survival rates between groups.

CONCLUSIONS

- IgAN with mesangial C3 deposits clinically presents with higher proteinuria
- There is a trend toward worse prognosis of IgAN patients with mesangial C3 deposits but larger patient cohort and longer duration of follow up is needed

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