



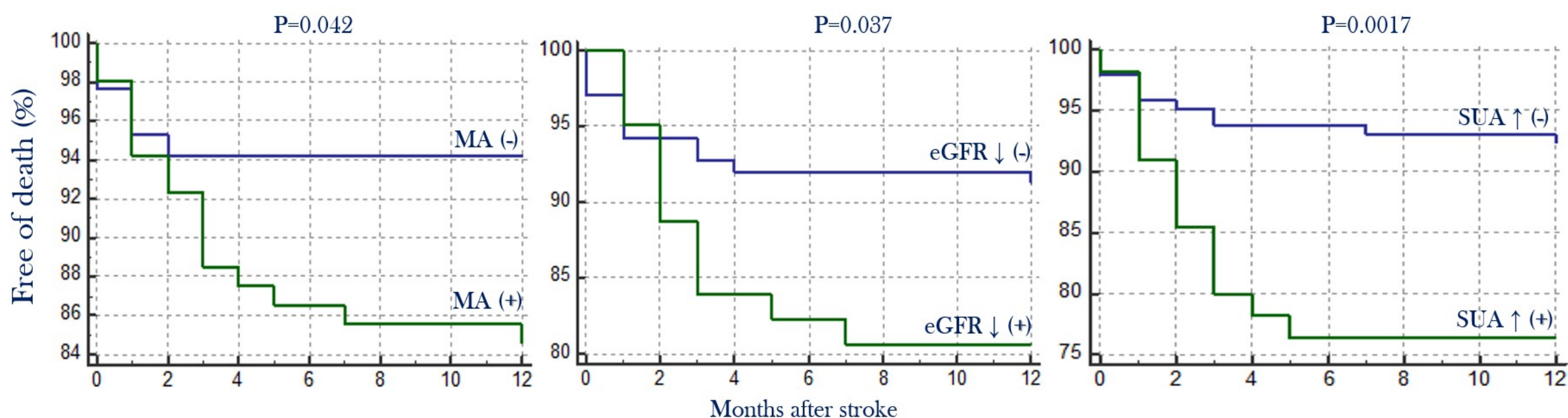
RENAL FUNCTION AND SERUM URIC ACID IN ISCHEMIC STROKE OUTCOME

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Background: Microalbuminuria (MA), estimated glomerular filtration rate (eGFR) and serum uric acid (SUA) represent emerging risk factors for cerebrovascular disease, but contrasting observations have been made among these parameters and ischemic stroke. In this study, we investigated the role of the three markers in the stroke subtypes (TOAST and OCSP classification systems) and their relationships with functional outcome.

Materials and Methods: A total of two-hundred consecutive patients with acute ischemic stroke were prospectively enrolled in a single center. At admission, MA, eGFR, SUA, NIHSS score and stroke subtypes were assessed. Good functional outcome at 7 and 90 days was defined as mRS \leq 2, while poor outcome was assigned if mRS \geq 3. The recurrence of stroke at 1 year was monitored.

Results: MA, decreased eGFR and high SUA were significantly associated with worse NIHSS score at admission ($P\leq 0.017$), poor outcome at 7 and 90 days ($P\leq 0.002$). In the multivariate logistic regression analysis, adjusting for variables, only MA was negatively associated with a good functional outcome ($P\leq 0.0002$; OR 6.25 (2.38-16.39)). eGFR had a significant correlation with cardioembolic stroke etiology ($P=0.001$) and total anterior circulation infarcts ($P=0.05$). MA was associated with recurrent stroke at 1 year ($P=0.0024$). MA, eGFR and SUA were correlated to higher rate of mortality ($P\leq 0.042$).



Discussion: MA, eGFR and SUA are widely recognized predictors of cardiovascular disease. However, it is not clear whether this observation is applicable to cerebrovascular disease. In this study, MA, decreased eGFR and enhanced SUA seem to be correlated to poorer outcome in patients with ischemic stroke and higher mortality rate at 1 year. MA was also associated to further cerebrovascular events. eGFR was significantly associated to TOAST and OCSP subtypes.

Finally, these three parameters represent useful and easily assessable clinical indicator in evaluating the risk of adverse outcome after stroke.