

# Renal outcome and life expectancy in a Belgian elderly population with chronic kidney failure – a retrospective study –

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## Background

Renal function deteriorates with age, but only a few studies have reported the decline in eGFR in a large population of patients aged  $\geq 75$  years, and have described the risk factors of evolution to end stage kidney disease (ESKD) with or without dialysis, or death.

## Methods

In a retrospective study we enrolled 240 patients aged  $\geq 75$  years with chronic kidney disease (CKD) stage 3a, 3b or 4, seen at the outpatient nephrology clinic at one institution, between 1 January 2014 and 31 December 2019. Data extracted included patient age, sex, baseline eGFR, comorbidities, proteinuria and the administration of RAAS blockers.

## Results

We showed a significant decline in eGFR over time, with a mean decrease of  $-2.05 \text{ ml/min/1.73m}^2$  per year (fig. 1). Patients without proteinuria or proteinuria  $\leq 1000 \text{ mg/day}$  had the slowest decline rate of  $1.0 \text{ ml/min/1.73m}^2$  per year, and  $1.6 \text{ ml/min/1.73m}^2$  per year, respectively (fig. 2). CKD stage 3 was not associated with progression to ESKD. Patients with proteinuria of  $\geq 1000 \text{ mg/day}$  had a significantly increased decline rate, and high level proteinuria and CKD stage 4 were both independent risk factors for progression to ESKD with or without dialysis. More patients died than evolved to end stage renal disease with dialysis during follow-up.

## Conclusion

We suggest that patients aged 75 years or older with CKD stages 3a and 3b without or with moderate proteinuria do not need specialized nephrology follow up, and can be followed by their general practitioner.

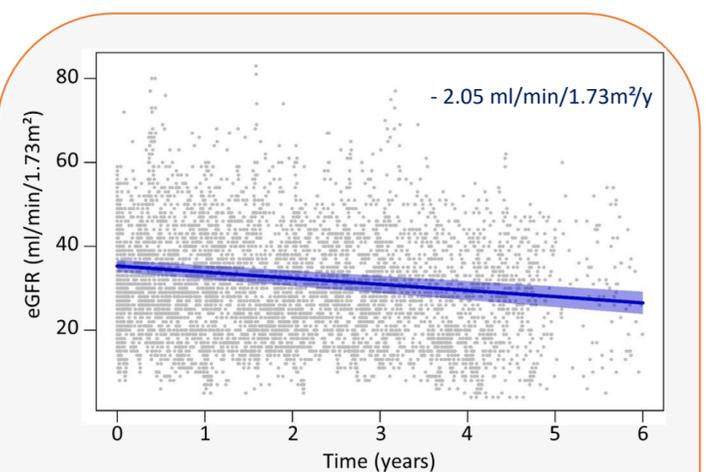


Figure 1. Mean eGFR decline rate for the overall population during follow-up.

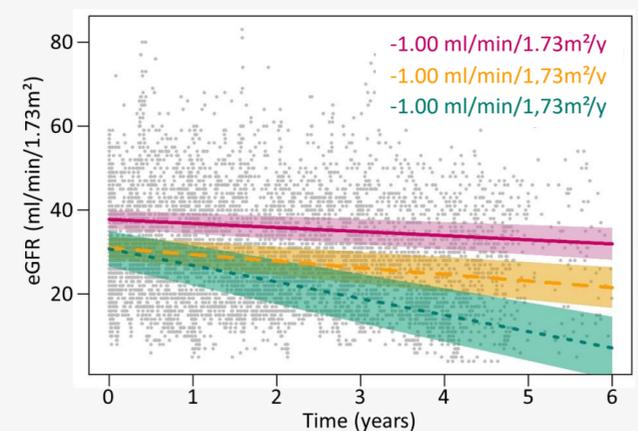


Figure 2. eGFR measurements over time in 3 groups, according to baseline proteinuria. Lines are fitted mixed effects regression lines per group, with 95% confidence bands.

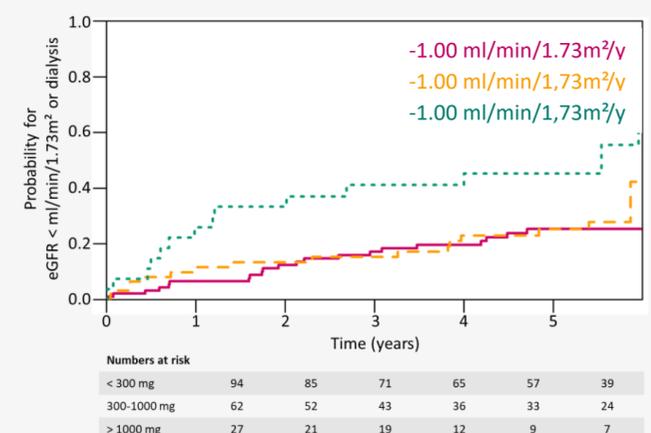


Figure 3. Cumulative incidence plot of evolution to ESRD, according to level of proteinuria.