

Long-term renal function after endovascular aneurysm repair (EVAR)

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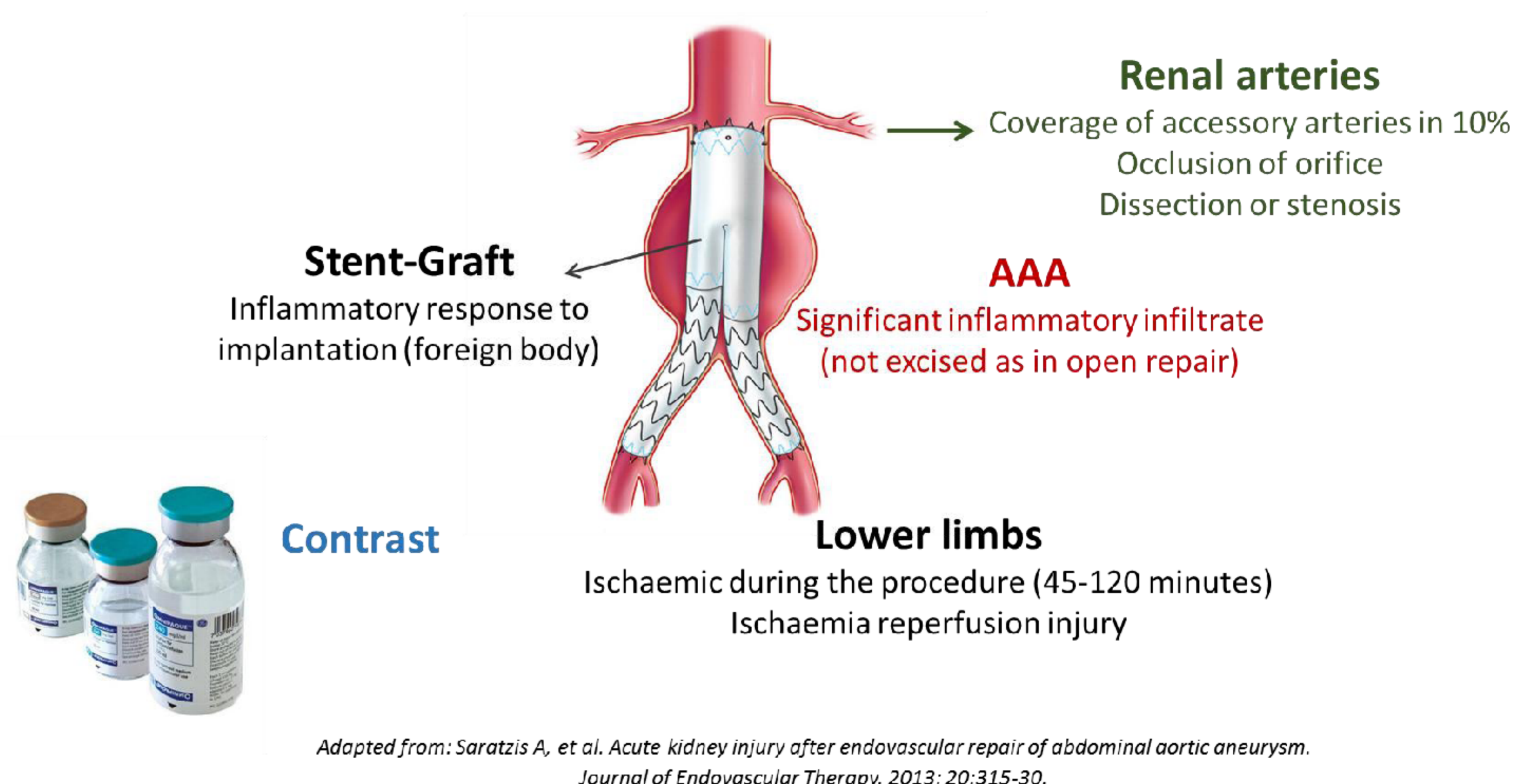
Background: EVAR is a common treatment for abdominal aortic aneurysm (AAA). It is now routinely offered in younger patients. However, its long term effects on renal function remain unknown. The aim of this study was to assess long term renal dysfunction after EVAR using a contemporary estimate of eGFR.

Methods: 1,894 patients were included: 947 [7.4% females, age: 71±8 (SD) years, AAA-size: 6.1±1.3cm] undergoing elective EVAR and 947 undergoing treatment of carotid artery stenosis. These were **case matched** at baseline for **age** and stage of chronic kidney disease. eGFR levels (CKD-EPI formula) were compared at 30 days, 1, 2 and 5 years.

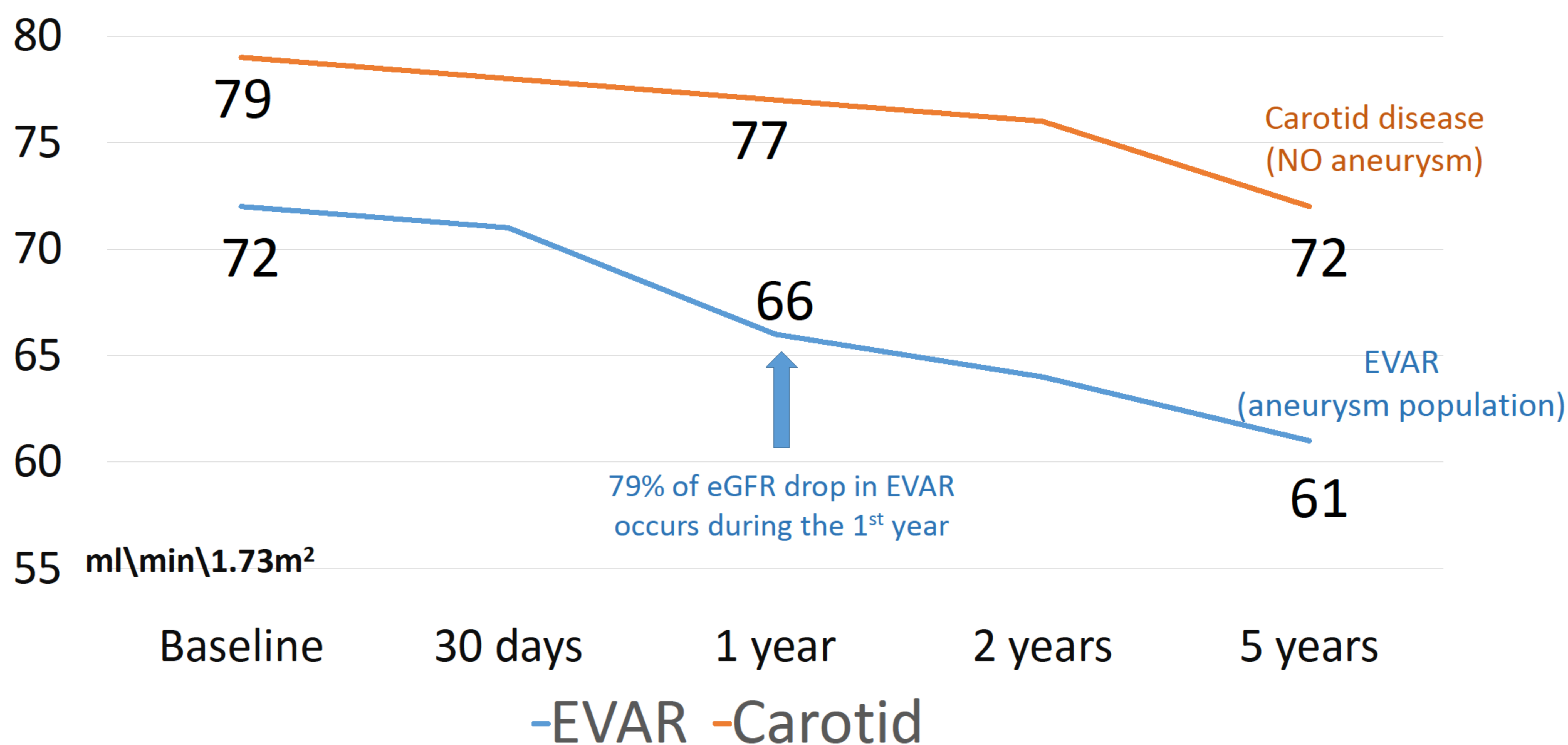
Results: The two groups did not differ at baseline with regards to age (71±8 vs 73±12 years, p=0.32), cardiovascular disease (15% vs 19%, p=0.14) and eGFR (72±20 vs 79±24 ml/min/1.73m², p=0.09).

Incidence of statin-use, beta-blocker use, use of ACEi were also comparable (p>0.2 in all cases).

Mechanisms of renal damage in EVAR



Changes in eGFR during 5 years



Conclusions: Elective EVAR leads to a significant decline in eGFR after 5 years, which is more pronounced compared to a population with similar characteristics and risk factors. Most of that loss in renal function occurs during the first year. Perioperative renoprotective strategies are required in this population.