End-stage renal disease substantially increases the risks of death and cardiovascular disease, but the effects of less severe kidney dysfunction on these outcomes in HIV infected subjects are less well defined.

Methods
A retrospective study was performed on the cohort of a large reference hospital in Northern Italy. eGFR was computed for HIV+ subjects followed in 2006 and the occurrence of cardiovascular diseases was checked in the following 10 years.

Patients’ disposition
Patients with at least a visit in 2006 1482 subjects

Death not due to CV disease 12 subjects (0.8%)

Lost to follow-up 42 subjects (2.8%)

Already diagnosed with CV disease in 2006 69 subjects (4.6%)

Followed between 2006 and 2016 and included in the analysis 1359 subjects

Baseline characteristics
Subjects were mostly males (72%) with a median age of 41.6 years (IQR 10.8) and a median time from first HIV diagnosis of 9.6 years (IQR 6.2). The proportion of patients with a HIV-RNA value < 50 copies/ml was 57.8% in 2006 and the proportion of severely immune-depressed patients (CD4< 200/cells/mL) was 9.3%. Median serum creatinine levels were 0.8 mg/dl (IQR 0.2) and eGFR median value was109.6 (IQR 15.4). The proportion of patients with altered eGFR (< 60 ml/min/1.73 m²) was a modest 1.2%. For eGFR the 5th percentile cut-off value was 80 ml/min/1.73 m² and the 25th percentile was 100 ml/min/1.73 m²

Conclusions
A relevant, graded association was observed between a reduced estimated GFR and the risk of death, cardiovascular events, or renal insufficiency. These findings highlight the clinical importance of closely monitoring chronic renal insufficiency in the HIV infected population.

Proportion of patients with at least an event over 10 years

Proportion of patients with at least an event over 10 years (1359 patients without CV known problems at baseline)

Proportion of patients ASCVD free over 10 years according to baseline eGFR

Baseline eGFR values in patients with and without ASCVD over 10 years

eGFR variation over 10 years

Proportion of patients with at least an event over 10 years (CV events excluding hypertension)