Introduction and Aims: Black individuals have a significantly higher risk for death in the general population as compared with white individuals, but seem to have a survival advantage in the end stage renal disease (ESRD) population. Thus, among North American patients with chronic kidney disease undergoing dialysis, black patients survive longer than their white counterparts. This survival paradox in dialysis patients have received significant attention. In contrast, in Europe, evidences are lacking regarding Roma peoples (also known as gypsies, a minority consisted of about 12 million individuals which are living mainly in Eastern and Central European countries. The goal of this study was to evaluate the racial differences in mortality among the Roma patients with ESRD on hemodialysis therapy compared to Caucasian individuals. Patients were followed for 3 years.

Methods: Our prospective cohort study included 600 patients on hemodialysis therapy (aged 56 (median =19) years, 332 (55.3%) males, 57 (9.5%) Roma patients) recruited from 7 HD centres, from all main geographical regions of Romania. There have been followed up: dialysis vintage, dialysis efficiency, renal anemia, CKD-MBD, inflammatory status and comorbidities: coronary heart disease (CHD), peripheral vascular disease (PVD) and stroke.

Results: Roma patients initiate dialysis at a younger age (46 years [interquartile range [IQR]=18.5] vs. 52.3 years [IQR=19], P=0.001). No difference was found regarding dialysis vintage between Roma vs. Caucasian patients (2.7 years [IQR]=5) vs. 2.8 years [IQR=4.7], P=0.619). Dialysis adequacy was better in Roma (eKt/V=1.46±0.47 vs. 1.34±0.46, P=0.048). Also, in Roma group, we observed a more favourable nutritional profile, with higher serum albumin level (3.9±0.7 g/dl vs. 4.1±0.7 g/dl, P=0.033). Roma patients present higher serum phosphate levels (6.4±2 mg/dl vs. 5.6±1.7 mg/dl, P=0.006) and significantly higher CaXPO4 product (53.7±17.3 mg(2)/dl(2) vs. 48.1±15 mg(2)/dl(2), P=0.010), despite a more common treatment with sevelamer hydrochloride (38(66.7%) vs. 275 (506%), P=0.021).

The death rate was similar between Roma and Caucasians (16 death (28.1% mortality) vs. 137 death (25.2% mortality), P=0.640). Age at death was significantly younger in Roma patients (55.7 years [IQR=27.8] vs. 61.6 years [IQR=13.6], P=0.029). The lifelong survival analysis revealed a worsening outcome in the Roma hemodialysis patients (HR= 2.35; p=0.002).

Conclusions: Roma patients initiate maintenance dialysis at a younger age compared with Caucasians. Furthermore, Roma patient undergoing haemodialysis have a higher risk of death at a younger age than their white counterparts. Despite significantly better dialysis adequacy and more treatment with phosphate binder, Roma patients have more significantly hyperphosphatemia. These findings could be related to a poorer access to health care (particularly a less pre-ESRD care) and socioeconomic status disadvantaged of Roma minority. There should be continued effort to discern the factors responsible for the higher risk of Roma for earlier reaching ESRD needed replacement therapy. In dialysis, ethnicity-based interventions should be considered in order to improve the outcomes in Roma dialysed population.