**Extended statistical analysis**

Study endpoints were:

1. Overall Survival defined as the time from the start of dialysis to the time of death from any cause
2. Cause of death
3. Cause-specific Survival defined as the time from the start of dialysis to the time of SD or other cause.

In the survival analysis patients starting dialysis before the 1st January 2010 and alive on the 1st of January 2010 were not considered at risk of death during the interval time between the beginning of dialysis and 1st of January 2010 (i.e. truncation period), since we observed them because they survived the truncation period. These survival data were left-truncated [13].

Overall Survival distribution was estimated by the product-limit method; a linear time by treatment interaction term was introduced in a Cox regression model to demonstrate formally (i.e. p-value <0.05) the curvature over time of the relative hazard function. In order to model a relative hazard function that goes down and reaches a plateau a quadratic term was introduced in the Cox regression model. If the relative hazard function was not constant the restricted mean survival time at 8 years was preferred to the median survival time as summary measure; 8 years was taken post-hoc in order to be slightly below the maximum follow-up time. The hazard function (i.e. the instantaneous risk of failure at time t, given that failure has not occurred prior to that time) of each dialysis modality was described. The average hazard of death per unit time (i.e. each year following dialysis start)was estimated as the observed number of deaths in that interval divided by the total person-time of observation over the same interval. A fixed-effects meta-regression was fitted to the point and standard error estimate of the average hazard of death per unit time using the Stata's vwls command. Time and time squared terms were introduced as predictor variables into the meta-regression model. If the squared term was not statistically significant (i.e. p-value ≥0.10) it was removed from the meta-regression model. A meta-regression forest plot was used to summarize meta-regression results. The Cox regression model was used to evaluate predictors of Overall Survival and to test their interaction with treatment. The likelihood-ratio test was used to compare the goodness of fit of two nested Cox regression models (i.e. one model is obtained from the other one by putting some of the parameters to be zero). A p-value lower than 0.05 was considered to be statistically significant.

In order to estimate the statistical association between the two cohorts of patients (i.e. HD and PD patients) and the specific cause of death and to identify patient characteristics statistically associated to the specific cause of death, a survival analysis in the presence of competing risks was performed. The cumulative incidence function for failure of sudden death and other causes of death were computed using Stata's stcompet command. The Fine and Gray regression model was used to estimate the cause-specific hazard ratio (HRcpRisk). HRcpRiskwas computed using Stata's stcrreg command. A linear time by treatment interaction term was introduced in the Fine and Gray regression model to demonstrate formally (i.e. p-value < 0.05) the curvature over time of the relative cause-specific hazard function. The cause-specific hazard function (i.e. the instantaneous risk of failure at time t for the specific cause, given that failure has not occurred prior to that time) of each dialysis modality was described as follows. The average cause-specific hazard of death per unit time (i.e. each year following dialysis start)was estimated as the observed number of deaths for the specific cause in that interval divided by the total person-time of observation over the same interval. The same fixed-effects meta-regression procedure previously explained for the Overall Survival endpoint was used to model the cause-specific hazard function.

In the multivariable Cox and Fine and Gray regression models ICD implantation was considered a time-varying treatment.

Survival status was updated on the 31st of January 2014. Median follow-up and its interquartile range (IQ range) were estimated with the reverse Kaplan–Meier method[14]; the C completeness index [15] was used in order to quantify the completeness of follow-up at the update of survival status.

Baseline covariate distributions were summarized using descriptive statistics (median and range for continuous variables, and absolute and percentage frequencies for categorical variables). The logistic regression model was used to detect imbalances between baseline covariate distributions.

Statistical analysis was performed using Stata software, version 12.1 (StataCorp. 2011. Stata Statistical Software: Release 12. College Station, TX: StataCorp LP).