INTRODUCTION

- Prognostic markers of mortality in transplantation are essential for:
  - Optimizing patients at high-risk of death
  - Optimizing medical management

OBJECTIVE

- To develop a score predicting the long-term survival of kidney transplant recipients beyond the first year post transplantation.
- To evaluate its capacity to predict the disease-related mortality.

MATERIALS AND METHODS

- Patients were selected from the French prospective DIVAT cohort of Nantes (www.divat.fr/en).
  - Adult recipients
  - Transplanted from 1996 to 2009
  - Patients receiving a kidney transplant alone
  - Living patients with functioning graft at 1 year post-transplantation
- 1230 patients included

RESULTS

- Development of a score predicting the excess mortality.
  - Separation of the initial cohort into 2 samples (training/validation).
  - Adaptation of the scoring system of Hernandez by maintaining the 8 variables in the model (from training set).
  - New weights obtained by using an additive relative survival model to remove the expected mortality as in the general population.
  - The objective of such models is to estimate the net survival.

- Evaluation of the score capacity to predict the excess mortality.
  - Proposed method: Net time-dependent ROC curves.
  - Calculation of the area under the curve: net AUC (from validation set).

STUDY POPULATION

- Mean age at the time of the transplantation: 49.0 years (± 13.8)
- 62.4% of the patients were male
- Median follow-up: 4.9 years (interquartile range: from 2.1 to 7.9)
- 83 deaths observed
- At 10 years post-transplantation, 40% of observed deaths were unrelated to kidney transplant status.

CONCLUSION

- It appears difficult to validate the score of Hernandez in the prediction of deaths specifically related to kidney transplant recipients (net AUC=0.65, CI95%: [0.56;0.72]).
- The capacity of the modified score to predict the disease-related mortality is acceptable (net AUC=0.73, CI95%: [0.64;0.80]).

REFERENCE