

In Pancreas after Kidney Transplant Recipients (PAK), the Pre-Pancreas Level of Kidney Allograft Function Is Associated with Kidney Allograft Failure

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BACKGROUND: There is limited information to guide the selection of diabetic kidney transplant recipients for subsequent pancreas transplantation. In clinical practice, the level of kidney allograft function is relied upon to guide selection of PAK candidates.

METHODS: In this analysis of n = 3030 diabetic kidney transplant recipients in the UNOS/OPTN database between 1989- 2007 who subsequently received a pancreas transplant we determined the independent association of last available GFR prior to pancreas transplantation with all-cause kidney allograft failure after the pancreas transplant.

RESULTS: The median GFR prior to pancreas transplantation was 57ml/min (95% CI 29-93ml/min). The loss of GFR in kidney allograft recipients prior to pancreas transplant was negligible (mean GFR slope -0.07 ml/min/year, 95% CI -0.42 – 0.28). The table shows that patients with a higher pre-pancreas transplant GFR had a lower risk of all-cause kidney allograft failure after pancreas transplantation.

Factors	Risk of kidney allograft failure
	HR (95%CI)
eGFR pre-Pancreas transplant (ml/min)	Ref <45ml/min
45-60	0.67(0.56-0.79)
61-90	0.58(0.48-0.69)
>90	0.49(0.33-0.74)

- 1) Cox Multivariate Regression adjusted for patient age, gender, race, year of kidney transplantation, dialysis exposure prior to kidney transplantation, kidney donor source, and time between kidney and pancreas transplantation.
- 2) GFR estimated using 4 variable MDRD equation and last available creatinine prior to pancreas transplantation. GFR slope(ml/min/1.73m²/year) determined using mixed effects repeated measures model

CONCLUSION: In this cohort of kidney allograft recipients who were selected to receive a pancreas based on their stability of kidney allograft function, the level of kidney allograft function prior to pancreas transplantation was still associated with all-cause kidney allograft failure after the pancreas transplant.