# TRANSMISSION OF PANCREATIC ADENOCARCINOMA BY A SINGLE DONOR TO TWO KIDNEY TRANSPLANT RECIPIENTS

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## INTRODUCTION

**Despite careful donor selection, cancer transmission remains a rare but serious, life-threatening complication of renal transplantation, with an estimated incidence of 0.01% to 0.05%. Here, we report a single center's experience with the transmission of adenocarcinoma of the pancreas from a deceased multiorgan donor to two kidney transplant recipients.**

## CASE

**Autopsy of the donor revealed adenocarcinoma of the pancreas that had already metastasized locally to the regional lymph nodes and had not been detected at the time of organ retrieval. The donor was a 46-year-old female who died due to spontaneous intracerebral hemorrhage without a known history of malignancy. Because the patient's history of diabetes, concurrent kidney-pancreas transplantation was not considered.**

## CASE

**Both kidney transplant recipients were male and were carefully monitored, as neither consented to nephrectomy of the graft. In one patient, the tumor was discovered incidentally during a surveillance biopsy of the graft approximately 14 months after transplantation. The biopsy showed no evidence of rejection, but two of four tissue samples showed moderately to poorly differentiated adenocarcinoma. According to the immunohistochemical findings (positive immunohistochemical staining for cytokeratin 19 and 7 and mucin 1), the tumor was compatible with metastasis from the pancreaticobiliary tract (Figure 1).**

**A sample of tumor tissue from the transplanted kidney was analyzed based on the detection of selected genetic markers on the X and Y-chromosomes using the quantitative fluorescence polymerase chain reaction (QF-PCR) method. In the second patient, ultrasound-guided aspiration needle biopsy of a growing cystic formation in the lower pole of the graft revealed a poorly differentiated metastatic adenocarcinoma. Both patients were successfully treated with graft nephrectomy and complete discontinuation of immunosuppression, and follow-up revealed no persistent or recurrent disease (Figure 2,3).**

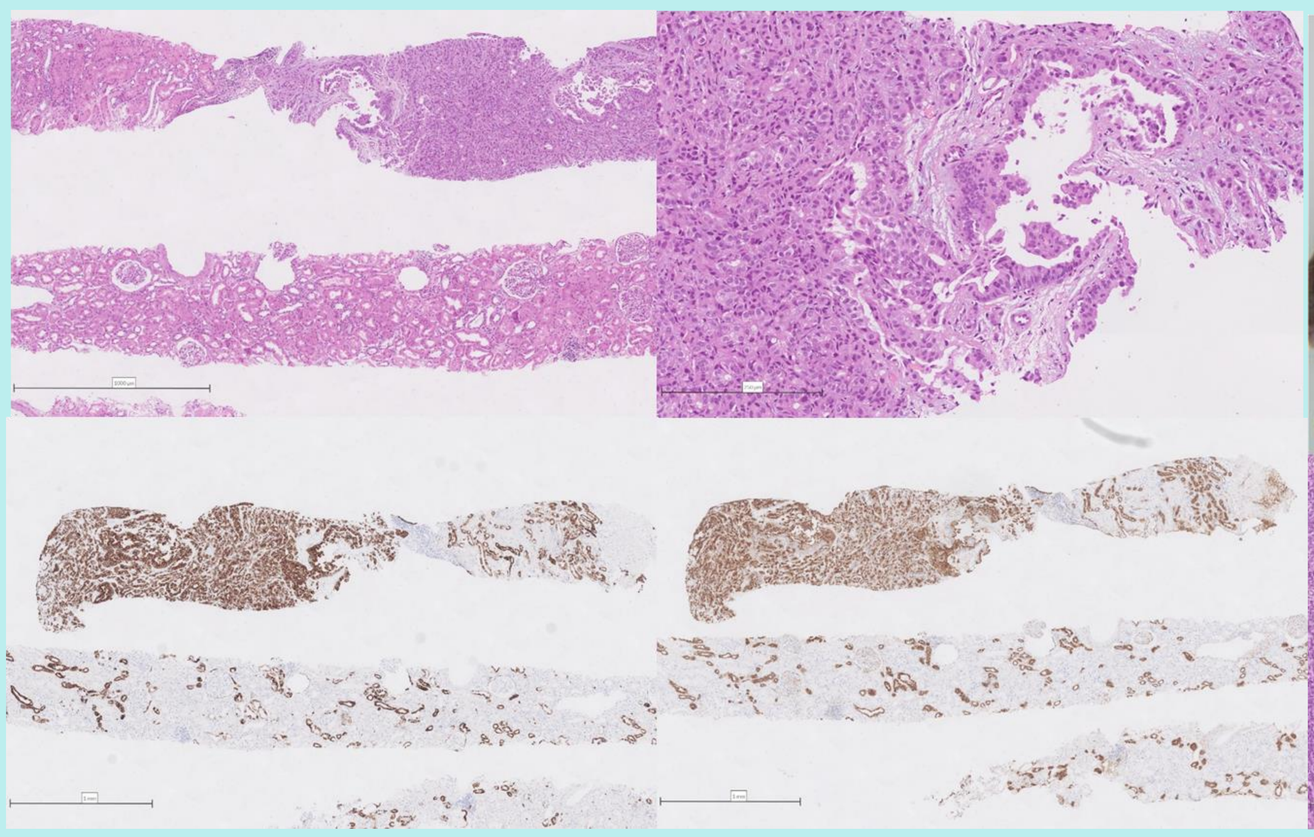

**Figure 1. A. Adenocarcinoma in surveillance transplant kidney biopsy 1-year after transplantation; B. closer view; Adenocarcinoma expressed C. CK7 and D. MUC1 indicating origo from pancreas.**

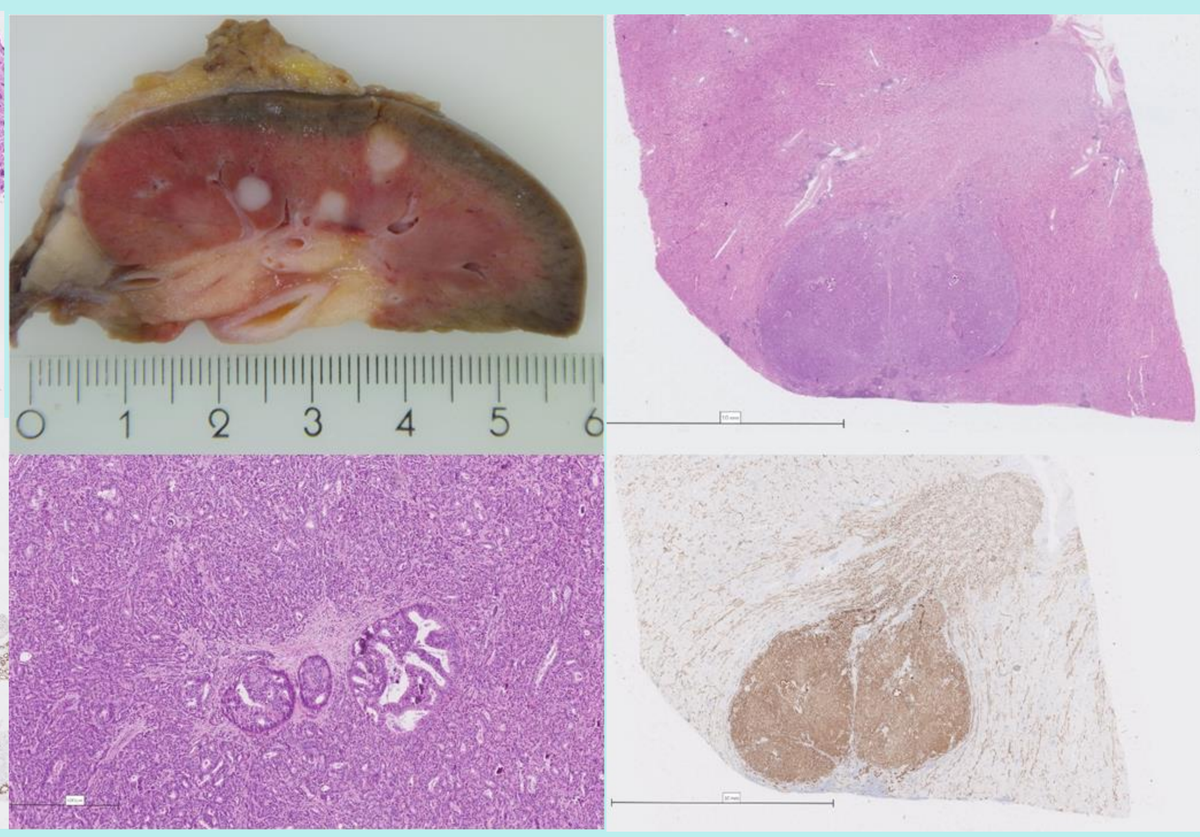

**Figure 3. Explanted kidney with foci of adenocarcinoma. Adenocarcinoma expressed CK19.**

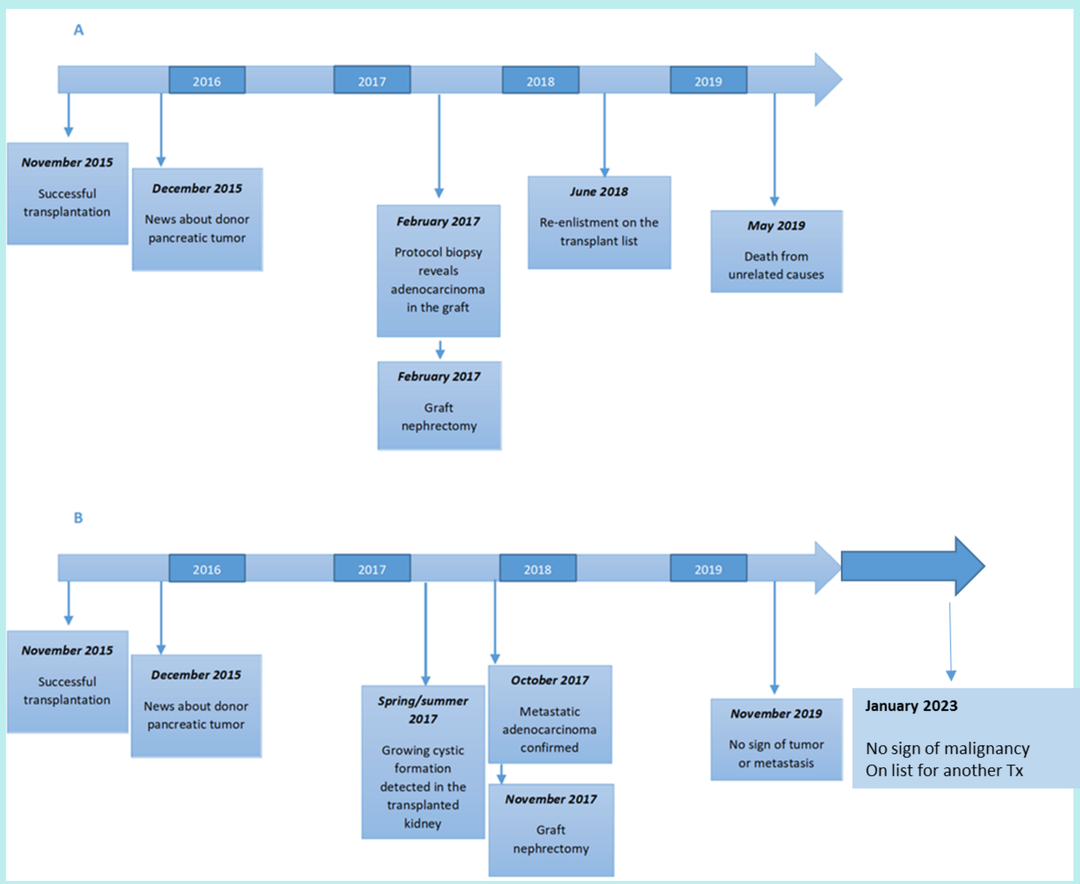


**Figure 3. Timelines of major events in both kidney transplant recipients. A. left-kidney recipient. B. right-kidney recipient.**

## CONCLUSION

**Autopsy of the donor is mandatory.**
**Microscopic tumor transmission can be detected on surveillance/indication kidney graft biopsy.**

**Early intervention upon discovery of tumor cells is mandatory and can prevent a poor outcome. In case of kidney graft lesion suspected for tumor transmission, ultrasound guided biopsy is recommended for patohistological evaluation. The best treatment options are immunosuppression withdrawal and graft nephrectomy offering potential full recovery even in suspicious metastatic disease.**

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