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LETTER TO THE EDITORS

# Donor-origin cancer in renal transplant recipients from deceased donors: worth gambling?

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Dear Sirs,

Transmission of donor malignancies has been reported since the early days of clinical transplantation [1]. Literature stands equivocal upon these donors with many centers suggesting using these grafts under specific indications [1–4] and others supports its full rejection [5]. We present, to our knowledge, the first and only case of donor-origin malignancy in Greek national registry.

A 56-year-old male deceased donor with RCC offered two kidneys in two recipients in two renal transplant centers in Greece. The left kidney presented with a solid single yellowish subcapsular nodule of the upper pole with a maximum diameter of 2.5 cm, during the back-table procedure, which was biopsied and sent for frozen section (FS). The results were negative for RCC. Thus, the first surgical team decided to proceed to the transplantation.

At the same time, the second surgical team proceeded to the implantation of the right kidney in the other recipient. Both patients were in the same immunosuppression regimen (cyclosporine – CsA, mycophenolate mofetil – MMF, and corticosteroids).

Final histological report revealed a type 2 papillary RCC. The difference with FS was attributed to the difficulty in distinguishing normal corticoadrenal spongiocytes from Fuhrman-I clear-cancer cells. Due to these findings and the diameter of the tumor, the first surgical team decided not just to excise the tumor but to proceed to allograft nephrectomy. The patient who received the contralateral (right) kidney was informed about the results of the histological report and gave informed consent to keep the allograft with strict follow-up instead of its excision. Both patients have been followed up for 4 years with blood chemistries and chest X-ray. The recipient of the right kidney also underwent allograft ultrasound every 6 months and annual abdominal CT scan. Both patients have shown no evidence of metastatic disease throughout their 48-month follow-up. The latter is still on MMF, CsA, and corticosteroids with a creatinine of 1.43 mg/dl (eGRF = 53).

Donor-origin cancer in transplant recipients may be transmitted with the graft (donor-transmitted cancer; DTC) or develop subsequently from the graft. The majority of recipients with DTC could undergo explant/excision with a disease-related mortality of 20% [6]. Five-year survival was 83% for kidney recipients with DTC compared with 93% for recipients without DTC ($P = 0.077$) [6].

Current recommendations suggest rejecting organs from donors with a history of melanoma and lung cancer and accepting the use of donor kidneys with a history of small, incidental RCC [2].

Moreover, it has been suggested that donor kidneys with small RCC Fuhrman grade-I/II may be transplanted after appropriate surgical excision because the risk of tumor recurrence is small and the benefits of a kidney transplantation are great [1].

Additionally, these grafts should be considered for transplantation into carefully selected patients with numerous comorbidities, who might benefit from renal transplantation, but not survive the waiting period to find a graft when in hemodialysis [7].

All in all, using grafts form deceased donors with RCC is a matter of debate. To draw meaningful conclusions on this topic, we require a long-term analysis of national and international registries. The conclusions would then have to be tempered with a certain degree of philosophical considerations as to the need and the risks associated with it. Our experience consorts with emerging literature that explantation/excision is likely to benefit recipients with localized and small RCCs, but in transplants other than kidney/pancreas and malignancies other than RCC, the benefits should be balanced against the risks of disease transmission and transmission-related mortality.

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## Conflicts of interest

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