GENDER SPECIFIC PATTERNS OF BREAST CANCER POST-KIDNEY TRANSPLANT

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BACKGROUND

- Within the general population, male breast cancer (BC) is exceedingly rare, with approximately one case per every 100 female cases
- As a high-volume transplant center, we have observed several cases of male BC following kidney transplant
- The gender-specific BC incidence in solid organ transplant remains a gap in the current literature
- We therefore sought to examine the gender-specific incidence and mortality of BC among kidney transplant recipients

METHODS

- Retrospective analysis of Scientific Registry of Transplant Recipients (SRTR) database from 1987-2022
- Patients who developed BC following kidney transplant were included
- Clinical, pathological, treatment, and follow-up data were collected
- Statistical analysis performed using R software

RESULTS

- Among the 1,267 post-kidney transplant recipients, 42 developed BC within the follow up period
- Among the 484 women post-kidney transplant, 15 (3%) developed BC compared to 27 of 783 men (3%)
- Overall, there were more male breast cancer cases (27/42) compared to females
- The incidence of BC in women was 0.08 per 1,000 transplants vs. 0.09 per 1,000 transplants in men
- The odds ratio for association of BC with male gender was OR 1.1 (95% CI 0.6-2.2)
- The median time to mortality among post-kidney transplant patients with BC was 144 months (95% CI 87-NA) compared to 198 months for patients without BC (95% CI 179-252)
- Controlling for gender, post-transplant patients with BC were nearly 3 times more likely to have died (OR 2.9, 95% CI 2.8-2.9)

Figure 1: Flow Diagram

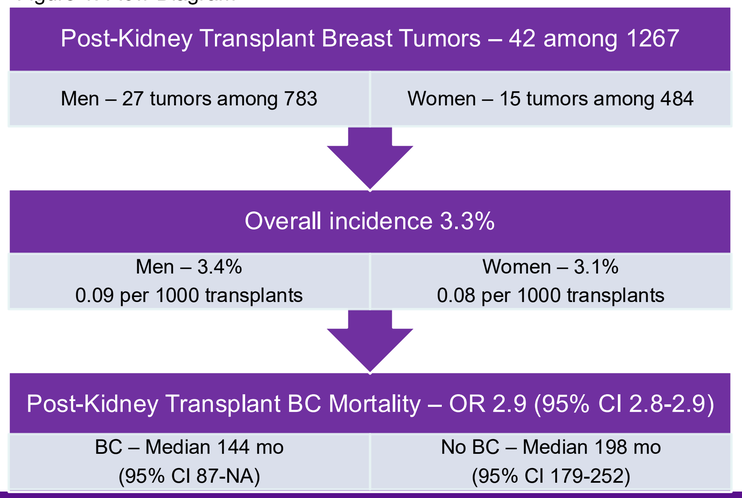
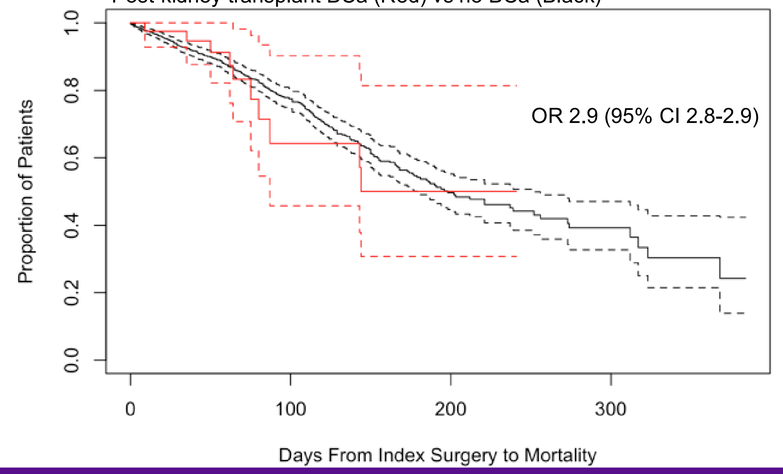


Figure 2: Kaplan Meier Curve, time to mortality
Post-kidney transplant BCa (Red) vs no BCa (Black)



CONCLUSIONS

- Surprisingly, we found an unexpected shift in the gender distribution of BC cases among patients who underwent kidney transplant
- Male kidney transplant recipients exhibited a slightly higher risk of developing breast cancer compared to their female counterparts
- This striking reversal of the usual gender disparity in BC represents a highly significant finding
- Further investigation into the factors affecting the internal hormonal milieu in these patients may shed light on the physiologic basis of this heightened risk
- We observed a three-fold increase in mortality for patients who developed BC compared to those who did not after kidney transplant, regardless of gender
- Understanding the risk of BC in well-defined subsets of post-transplant populations may help guide screening approaches with hopes of lowering morbidity and mortality

Disclosures:
None