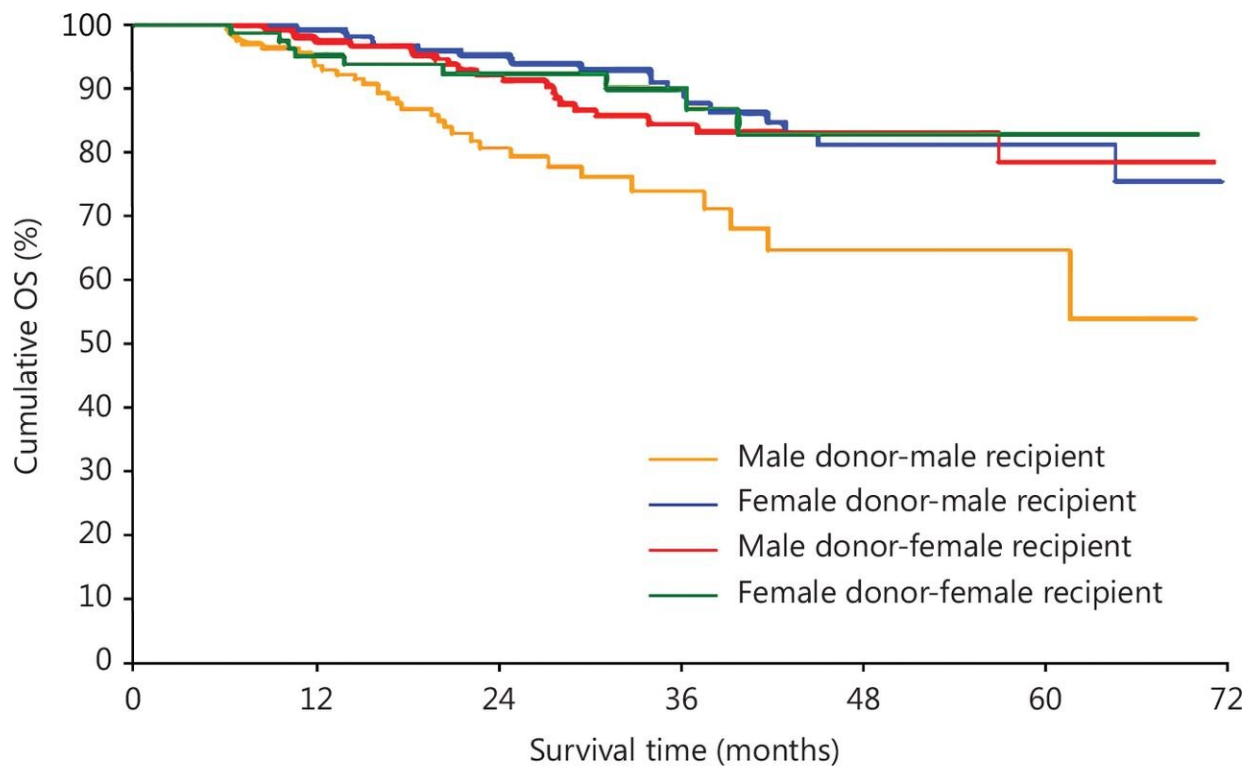


Study reveals how gender affects liver transplant success in cancer patients

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| Patient at risk | Total | 1-year | 3-year | 5-year |
|-----------------|-------|--------|--------|--------|
| M-M | 168 | 157 | 124 | 109 |
| F-M | 168 | 167 | 151 | 137 |
| M-F | 168 | 164 | 142 | 132 |
| F-F | 84 | 80 | 76 | 70 |

Overall survival (OS) of different donor-recipient match patterns based on sex after PSM. OS of different transplant patterns based on sex. M–M, male donor transplant to male recipient; F–F, female donor transplant to female recipient;

M–F, male donor transplant to female recipient; F–M, female donor transplant to male recipient. Credit: *Cancer Biology & Medicine* (2024). DOI: 10.20892/j.issn.2095-3941.2023.0453

Liver transplantation is a life-saving option for those with hepatocellular carcinoma (HCC), the most prevalent type of liver cancer. Although often successful, outcomes can vary widely among recipients.

A key variable drawing increasing attention is sex and its impact on post-transplant survival rates. Historically, men have had a higher incidence of HCC and have been more likely to receive liver transplants. However, recent research suggests that [female patients](#) may fare better after transplant, indicating a potential need to reassess organ allocation practices for greater fairness and improved care.

A [recent study](#) published in *Cancer Biology & Medicine* has unveiled pivotal insights into liver transplant surgery. The large-scale research involved more than 3,700 HCC patients from various regions of China and uncovered significant sex-based disparities in post-transplant survival rates. Led by Zhejiang University School of Medicine, the study could prompt a reevaluation of organ allocation practices to improve transplant success and equity.

The researchers examined data from 3,769 patients who underwent [liver transplantation](#) for HCC, using propensity score matching (PSM) to ensure comparable groups. The results were remarkable: female recipients showed significantly higher overall survival rates at 1, 3, and 5 years post-transplant compared to their [male counterparts](#).

Interestingly, this survival advantage did not appear to be influenced by the donor's sex, suggesting that the recipient's sex, rather than the

donor's, is crucial. The study also revealed that male recipients of grafts from male donors (M–M pattern) had the worst outcomes, implying that male livers might be more suitable for female recipients.

These findings carry practical implications for organ allocation in transplantation. Considering sex as a vital factor in post-transplant success, transplant centers might improve outcomes by adjusting allocation strategies accordingly. This study contributes to the growing body of evidence supporting personalized medicine, where individual factors like sex are key to medical decisions.

Dr. Jian Chen, the study's lead author, stated, "Our findings suggest that female recipients generally have better outcomes after liver transplantation for [hepatocellular carcinoma](#). The results underscore the importance of considering sex when evaluating post-transplant survival and making organ allocation decisions."

The study's implications are significant for liver transplant practices. The evidence points to a survival advantage for female recipients, suggesting that organ allocation should account for recipient sex. Moreover, the male-to-male donor-recipient pattern may need further study to understand its effect on post-transplant survival.

More information: Jian Chen et al, Influence of sex on outcomes of liver transplantation for hepatocellular carcinoma: a multicenter cohort study in China, *Cancer Biology & Medicine* (2024). [DOI: 10.20892/j.issn.2095-3941.2023.0453](https://doi.org/10.20892/j.issn.2095-3941.2023.0453)

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