

# Sorting out fertility after childhood cancer

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As success rates in treating childhood cancers have improved, greater emphasis is being placed on quality of life issues following successful treatment. Many cancer treatments can lead to infertility, but there are few methods to preserve the fertility of children who have not entered puberty.

Spermatogonial stem cells (SSCs), which produce sperm cells, are present prior to the start of puberty.

In theory, SSCs could be removed via biopsy prior to the start of treatment and then retransplanted following remission; however, there is a potential risk of reintroducing malignant material during transplantation.

To overcome this hurdle, Kyle Orwig and colleagues at the University of Pittsburgh characterized the cell surface markers of human spermatogonia in testicular tissue from organ donors. In this issue of the *Journal of Clinical Investigation*, Orwig and colleagues report the development of a multi-parameter sorting approach to separate SSCs from cancerous cells. Sorted SSCs exhibited were able to function properly when transplanted into mice, but did not form tumors.

These results suggest that SSC transplantation could be a viable method to preserve fertility in male [childhood cancer survivors](#).

**More information:** Eliminating malignant contamination from therapeutic human spermatogonial stem cells, *J Clin Invest*.

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