



# Patients' and Physicians' Experiences With Sperm Banking and Infertility Issues Related to Cancer Treatment

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## Patients' Experiences

Schover, L., Brey, K., Lichtin, A., Lipshultz, L., & Jeha, S. (2002). Knowledge and experience regarding cancer, infertility, and sperm banking in younger male survivors. *Journal of Clinical Oncology*, 20, 1880–1889.

## Study Summary

The purpose of this descriptive study was to explore knowledge, attitudes, and experiences regarding cancer-related infertility and sperm banking in male patients between the ages of 14–40 at diagnosis. Patients were identified from tumor registries at two large cancer centers and included in the study if they had undergone pelvic surgery or had been treated with chemotherapy or radiation to the whole body, pelvis, brain, or abdomen. A questionnaire was mailed to 904 men and was completed by 201 men (response rate 27%). The questionnaire asked participants about their knowledge regarding cancer-related infertility and sperm banking and their attitudes regarding children and parenthood after cancer. The majority of the men were married, well educated with a bachelor's degree or higher, diagnosed at the age of 30, and Catholic or Protestant. The most frequent cancer types were leukemia, Hodgkin's disease, non-Hodgkin's lymphoma, testicular cancer, and brain tumors. The average length of time since diagnosis was three years. Forty-eight percent had biologic children before the cancer diagnosis, and 10% had a biologic child conceived after cancer treatment. Forty-one percent of the men wanted children in the future and were concerned about cancer-related infertility. Only 60% of the men indicated that a health-

care professional had discussed the possibility of infertility as a side effect of cancer treatment, and just 51% remembered discussing the option of sperm banking before treatment. The men identified the following individuals who discussed infertility with them: oncology physicians (55%), nurses (21%), family physicians (8%), or family members or friends (12%). Sperm banking was more likely to be discussed with men treated in private oncology clinics (62%) compared with cancer centers (52%) or hospitals (20%), and more frequently by oncology physicians (40%), followed by nurses (14%). Only 24% of the respondents banked sperm before treatment. The most frequent reasons for not banking sperm were lack of information (25%), already having all the children desired (20%), and not wanting more children in the future (15%). The men who discussed infertility with their physicians were more knowledgeable about cancer-related infertility and more likely to bank sperm. Results from the knowledge questions indicated that one-third of the respondents did not know that sperm quality often was reduced after a cancer diagnosis, infertility is more common after adolescent cancer treatment in males than in females, infertility treatments do not require a large quantity of sperm cells, most men will not have good fertility after treatment, and children of cancer survivors do not have an increased risk of cancer. The majority of respondents felt that the cancer experience increased their value and awareness of family life and parenting skills. A majority of the respondents were concerned about living to see their children grow up (66%) and leaving their spouse to function as a single parent (73%).

## Application to Patient Care

- Results indicated that 41% of the respondents definitely wanted children in the future; however, only 24% actually banked sperm. Reasons for not banking sperm included lack of information, already having all the children desired, and not wanting children in the future. Men who were more knowledgeable about infertility were more likely to bank sperm.

These results highlight the immense need for education and open discussion with patients who are of childbearing age and facing cancer treatment. With the advances in cancer treatment, healthcare professionals also should focus on patients' long-term quality of life as cancer survivors. In preparing for chemotherapy with fertility-impairing potential, all patients should be questioned about their desire to have children. Male patients wanting children in the future should be educated about the process of sperm banking and given information about local facilities. Topic areas identified by the respondents that necessitated more information included sperm quality after a cancer diagnosis, gender differences in fertility after treatment, and general information about fertility treatments. Respondents also were unclear about their children's risk for cancer. Patients should be given the opportunity to have genetic counseling before their cancer treatment. Discussing their children's risks may allay any fears and encourage patients to bank sperm prior to the initiation of treatment.

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Digital Object Identifier: 10.1188/02.CJON.293-294