

## Cancer Advances: Men Who Undergo Chemotherapy May Still Have Biological Children

From the February 15, 2002 issue of the *Journal of Clinical Oncology*. According to a new study, a common reproductive procedure can successfully find sperm in two-thirds of men who have undergone chemotherapy, and when used in conjunction with in vitro fertilization, allows nearly one-third of men to produce biological offspring. The study, which was led by Dr. Manish Damani, a Male Infertility Specialist and Clinical Associate Professor of Urology at the University of North Carolina at Chapel Hill, used two common reproductive techniques - testicular sperm extraction (TESE) and intracytoplasmic sperm injection (ICSI) - to determine the success rate of fatherhood in men who do not produce sperm in their ejaculate as a result of chemotherapy. TESE involves removing sperm from the testicles and ICSI is an in vitro technique in which sperm is injected into the cytoplasm of a mature egg. Although TESE and ICSI are commonly performed in couples trying to become pregnant, this is the first study to look at their effectiveness in men with a history of chemotherapy. "Most people believe that patients who have undergone chemotherapy and are infertile have no hope of producing their own biological children," said Dr. Damani. "This study refutes that theory and shows that even if men received chemotherapy in their childhood years, the combination of TESE and ICSI can still allow some men to produce their own biological offspring." Of the 23 men eligible to participate in the study, sperm was successfully extracted in 15 (65.2 percent) patients using TESE. Following sperm extraction, 12 couples received a total of 26 ICSI cycles, with only one couple unable to obtain pregnancy. Of the 11 remaining couples who did have a pregnancy, 30.8 percent should successfully deliver children. This success rate is comparable to other in vitro procedures. As of April, 2001, 10 children had been born and had normal pediatric examinations. Researchers also examined patients' testicular tissue to determine whether certain chemotherapy regimens caused specific tissue changes. According to study results, there is no correlation between the type of testicular tissue that develops after chemotherapy and the likelihood of finding sperm. **What does this mean for patients?** This study offers hope for men with a history of chemotherapy who did not bank or freeze sperm and are looking to have their own biological children. Utilizing testicular sperm extraction, more than 50 percent of the time, physicians will be able to find sperm and use it in conjunction with in vitro fertilization in couples to try to produce children. TESE and ICSI are covered by insurance in some states. The combined cost for these procedures is typically between \$10,000 - \$15,000. While these results offer good news for some patients, it is important for all patients who are undergoing chemotherapy to bank or freeze sperm prior to chemotherapy treatment to increase the likelihood of fathering biological children. Patients bank sperm in the event that the chemotherapy causes them to become infertile.