

# One-Blastocyst Transfer as Successful as Two

BY KATE JOHNSON  
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PHILADELPHIA — Results of two new U.S. studies may help dispel fears that single blastocyst transfer results in poor pregnancy success rates. The studies were presented at the annual meeting of the American Society for Reproductive Medicine.

Single blastocyst transfer, which is widely practiced in Europe, guarantees a reduction in multiple births, the biggest problem facing fertility specialists worldwide.

Although triplet pregnancies have been reduced dramatically in the United States by limiting the number of embryos transferred, twin pregnancies still make up roughly one-third of all births from assisted reproductive technology (ART). The most recent figures from the Centers for Disease Control and Prevention show that in 2001 64% of ART births were singletons, 32% were twins, and almost 4% were triplets or other higher order multiples. More than three embryos were transferred in roughly 66% of the ART cycles.

Despite recently released guidelines from the American Society for Reproductive Medicine (ASRM), which suggest consideration of single embryo transfer in patients with the most favorable prognosis (Fertil. Steril. 2004;82:773-4), there has



been considerable resistance to this practice in the United States. Many physicians and patients fear that single embryo transfer may reduce overall pregnancy rates. The failure of an in vitro fertilization (IVF) cycle is a financial burden that rests almost entirely on U.S. patients' shoulders. In contrast, the cost of IVF is covered by the national health care systems of most European countries.

Results of the two studies presented at the meeting may help change some people's opinion about the practice. "We feel strongly that single blastocyst transfer is the way to go," said Marius Meintjes, Ph.D., scientific director of assisted reproductive technology services at Presbyterian Hospital of Dallas.

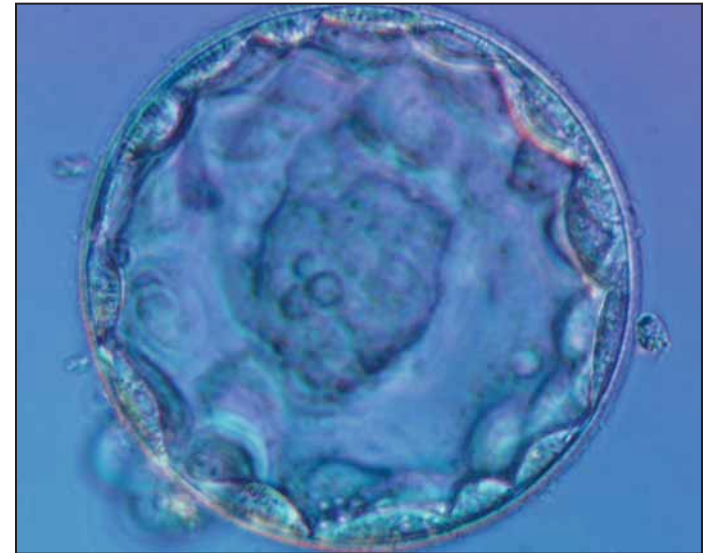
He presented a 3-year retrospective study that examined live birth rates and twinning rates among 103 patients who had single blastocyst transfer (SBT) and 290 who had double blastocyst transfer (DBT). To be eligible for SBT, patients had to be 37 years of age or younger or be receiving donated oocytes. Patients had to have at least two excellent quality embryos to choose from on the day of transfer. The excess embryos were frozen, and if the patient failed to become pregnant during the fresh cycle, the clinic agreed to pay for subsequent frozen embryo cycles free of charge.

The SBT group had a slightly higher rate of live births/ongoing pregnancies in

the fresh cycle, compared with the DBT group (79% vs. 70.9%). But the cumulative rate, which included both fresh and frozen cycles, was not significantly different between groups (79.6% vs. 83.4%). In contrast, the rate of twins was significantly less in the SBT group (2% vs. 68%). There was one case of monozygotic twinning in the SBT group. These results are an important contribution toward convincing patients and physicians that SBT won't decrease the chance of pregnancy, but will reduce the risk of twins. "Patient education is also critical, because there is too much of a perception that twins are OK," said Dr. Meintjes, adding that the clinic's offer to cover the extra costs of undergoing a frozen cycle removed a financial barrier to SBT.

Roughly one-third of patients who were offered SBT accepted, and almost half of the DBT group had no option for SBT because they didn't have a second good quality blastocyst for freezing.

Another retrospective study had similar findings. Amy R. Criniti, M.D., of the University of Washington, Seattle, and her



In the United States there has been considerable resistance to transferring only one embryo during an IVF cycle.

colleagues compared good prognosis IVF cycles in which one blastocyst (44 cycles) or two blastocysts (66 cycles) were transferred.

Although pregnancy rates in the fresh cycle were slightly higher in the DBT group (79% vs. 76%), when the results from frozen cycles were included, the cumulative pregnancy rate was 83% in both groups. Once again, the SBT group had a significantly smaller percentage of twin pregnancies (3% vs. 62%). There was one case of monozygotic twinning in the SBT.

Eligibility for SBT included age less than 38 years, no previous failure of an IVF cycle, no endometriosis, a normal endometrium at the time of HCG administration, a normal uterine cavity, and at least three blastocysts available on the day of transfer, Dr. Criniti said. ■

## Egg and Ovarian Tissue Freezing Not for Healthy Women

BY KATE JOHNSON  
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PHILADELPHIA — Egg and ovarian tissue freezing should not be marketed or offered to healthy women as a means to defer reproductive aging, according to a new report issued by the American Society for Reproductive Medicine.

Although the techniques hold promise for female fertility preservation, a lack of sufficient data on success rates and safety issues means these procedures should be performed only experimentally under Institutional Review Board guidelines and only in women who face potentially sterilizing treatment, the report states (Fertil. Steril. 2004;82:993-8).

Despite these recommendations, Extend Fertility, a Boston-based company that promotes egg freezing to healthy women as a means of extending their biological clocks, says it plans to continue offering the service through participating fertility clinics.

The company is offering the services under IRB guidelines; however, the cost is approximately \$15,000 per cycle, and patients are usually advised to undertake several cycles, she said.

Bradford A. Kolb, M.D., of the Huntington Reproductive Center in Pasadena,

Calif., one of the company's affiliated clinics, said, "We do recognize the controversy over this issue and do advise patients that this procedure should be considered experimental. It's not a guarantee of preserving one's future" fertility. Dr. Kolb also serves as a medical advisor to Extend Fertility.

Although there is no way to force clinics to follow the guidelines, ASRM spokesman Sean Tipton said that clinics that do not follow the guidelines risk losing their membership with the Society for Assisted Reproductive Technology (SART), an ASRM affiliate.

The cryopreservation techniques outlined in the report are "by no means ready for wide applications outside of investigational protocols," Marc A. Fritz, M.D., chair of the ASRM practice committee that wrote the report, said during a press conference held at the meeting.

"It was the [ASRM's] view that the worldwide experience with these techniques is simply insufficient," said Dr. Fritz, professor of ob.gyn. and chief of the

reproductive endocrinology and infertility division at the University of North Carolina, Chapel Hill. He added that there have been fewer than 100 births from frozen eggs, although there have been no developmental or chromosomal abnormalities noted in any of these children. And although ovarian function has been restored in several cancer patients after ovarian tissue cryopreservation and transplantation, the first birth in a woman who underwent this procedure was announced only last September.

The ASRM report is less restrictive when it comes to patients who face potentially sterilizing chemotherapy or radiation therapy.

In this context, both oocyte and ovarian tissue cryopreservation techniques could be considered, the document states. In addition to cancer, this would include indications such as bone marrow or stem cell transplantation; oophorectomy for cancer prophylaxis or benign conditions; and certain autoimmune diseases.

In such cases, ovarian tissue freezing may be the only fertility-preserving option for

women who do not have enough time to complete ovarian stimulation cycles before chemotherapy or radiation treatment. On the other hand, for women who do have time, egg freezing is less invasive than ovarian tissue freezing, and may be more attractive to women who do not currently have a male partner, the committee wrote.

The report also outlines safety issues concerning these techniques. In the case of ovarian tissue cryopreservation and subsequent transplantation in cancer patients, "there is a legitimate concern regarding the potential for reseeding tumor cells," particularly when it comes to leukemias, neuroblastomas, and breast cancers. The document recommends that histological, immunohistochemical, and chromosomal evaluations should be performed on multiple harvested ovarian tissue samples before cryopreservation to minimize this risk.

There is also little known about the potential for malignant transformation of transplanted ovarian tissue. And in the case of oocyte cryopreservation, concerns remain regarding the effects of cryopreservation on the meiotic spindle of the oocyte and the potential for chromosomal aneuploidy or other karyotypic abnormalities in the offspring, according to the report. ■



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DR. FRITZ