

# ROLE OF BACK-UP FROZEN SEMEN IN COUPLES UNDERGOING IN VITRO FERTILIZATION (IVF)

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## INTRODUCTION

Sperm cryopreservation has been used for decades as a means for long-term storage of male gametes. Cryopreservation of male gametes is normally utilized prior to any treatment that has the potential to either render the male infertile or reduce the quality of subsequent sperm production. Suboptimal sperm quality has been shown to negatively impact the success of IVF. Failure to successfully produce a semen sample at the time of the IVF cycle results in IVF cycle cancellation. All males in our program are required to bank a frozen semen sample which may be used in the event the fresh semen sample is compromised on the day of oocyte retrieval.

## ABSTRACT

### Objective:

To describe the frequency, indications and outcomes of using a back-up frozen semen sample emergently in lieu of the fresh sample.

### Methods:

We retrospectively analyzed 826 consecutive IVF cycles at Baylor Center for Reproductive Health, performed from January 1997 to December 2003. The study group includes only those cycles in which back-up frozen sample was used emergently. Cycles in which frozen sperm sample usage was planned ahead of time were excluded.

### Results:

A total of 826 cycles were performed at our center from January 1997 to December 2003. Back-up frozen sample was used in a total of 11 cycles (1.33%). The indications for back-up frozen sample usage included the following: inability to produce a sample on the day of retrieval (n=3); contaminated sample with bacteria (n=1); male partner not available (n=4); inadequate or poor sperm sample (n=1); reasons not documented (n=2). Of the 11 cycles in which back-up frozen sample was utilized emergently, a positive pregnancy result was reported in 7 (63.6%), and 4 patients reported a live birth (36.4%). Intracytoplasmic sperm injection was done in 8 (72.7%) patients.

### Conclusion:

The low cost and the favorable outcome from utilizing frozen back-up semen as indicated by our data is supportive of this practice considering the emotional and financial burden experienced by couples attempting an IVF cycle. Back-up frozen semen may be indicated in situations wherein the male is unable to produce a semen sample secondary to psychological stress, bacterial infection and/or contamination, poor semen parameters or the partner's absence on the day of oocyte retrieval. The knowledge that a back-up semen sample is available will help decrease the psychological stress in the male partner when undergoing an IVF cycle.

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## MATERIALS AND METHODS

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