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TITLE

FREEZE ALL STRATEGY: FRESH VS FROZEN-THAWED EMBRYO TRANSFER

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## **ABSTRACT**

Conventional IVF protocols involve the transfer of a fresh embryo (ET) into the uterus during the same cycle in which the eggs were collected and freezing extra embryos for future use. Recently all embryos generated from an egg collection cycle are electively frozen and transferred in a subsequent cycle. This "freeze-all" policy initially was developed to minimize risk of ovarian hysperstimulation syndrome in high risk patients as part of a "segmentation" approach. The segmentation approach was designed to separate the ovarian stimulation segment from the pregnancy segment, but what began as a safety aim also suggested more overall benefits. Controlled Ovarian Stimulation is necessary to the development and maturation of many follicles and oocytes, however, the supra-physiologic hormonal levels that occur during a conventional COS are associated with modifications in the peri-implantation endometrium that may be related to decrease in pregnancy rates and poorer obstetric and perinatal outcomes when comparing fresh to frozen-thawed embryo transfers. In theory, waiting until a later "natural" cycle for embryo transfer should improve outcomes. There was also a benefit found in patients with elevated progesterone levels prior to egg retrival. Several studies have shown that this rise in progesterone is associated with a lower pregnancy rate after fresh embryo transfer. The evidence supporting elective frozen-thawed embrio transfer, when taken together from large observational studies and RCTs, is growing, not only in terms of achieving higher pregnancy rates but also in terms of lower maternal and infant morbidity and mortality. There is a reduction in the risk of ectopic pregnancy, lower risk of low birth weight and pre-term birth after FET when comparing to fresh ET. However, the FET cycles are associated with a higher incidence of large for gestational age.