TITLE: Embryos with delayed development on day 5 must be frozen. Implantation rates of grade 1 "blastocysts" better in frozen embryo transfers.

AUTHORS: J. Llácer, A. Rodríguez-Arnedo, J.A. Ortiz, J. Guerrero, J. Ten, R. Bernabeu. Speech.

## SUMMARY:

During embryonic culture to the blastocyst stage, there are embryos that are delayed in their speed of development and are classified as sub-optimal embryo quality with a low implantation rate. Our hypothesis in this study was that these embryos were being incorrectly categorized, and there might actually be an asynchrony in the endometrium that is to blame for these low results. Therefore, embryo cryopreservation and subsequent thawing and transfer in a synchronous endometrium, could improve results.

To test this hypothesis, we analyzed 170 transfers with exclusively slow developing embryos, 72 of which were fresh cycles and 98 of which were in freeze-thaw cycles. The implantation rate of embryos that were cryopreserved and synchronized with the endometrium significantly improved from 15.7% to 28.3%

These results confirm that the embryos with slow development must be vitrified and thawed in a subsequent cycle, with a prepared synchronous endometrium, and not to be transferred in the "fresh" cycle. This type of strategy undoubtedly helps us to optimize reproductive treatments by increasing the pregnancy rates.