

## DO ANEUPLOID EMBRYOS MAKE BABIES? ONE NETWORK'S REAL-WORLD EXPERIENCE

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**Background:** Preimplantation Genetic Testing for Aneuploidy (PGT-A) is a screening test primarily intended to identify euploid embryos available for transfer. However, some clinicians critique PGT-A for the possibility of embryo wastage, and some patients desire the option to transfer aneuploid embryos on the basis that PGT-A is not diagnostic. A previous study of blinded embryo transfers showed no healthy babies born from aneuploid embryos [1]. However, there is little data on the outcomes of known aneuploid transfers in a typical clinical setting.

**Objective:** The aims of this retrospective study are to report on one clinic network's experience performing aneuploid embryo transfer, and to assess the real-world potential for known aneuploid embryos to result in successful pregnancies.

**Materials and Methods:** We collected embryo transfer outcomes from a single clinic network that permits aneuploid embryo transfer. Only transfers of PGT-A-tested embryos were included. Genetic testing for all embryos was performed by a single genetic testing laboratory utilizing next-generation sequencing for chromosome copy number analysis. Transfers were performed between January 2020 and December 2022.

**Results:** Approximately 1,600 transfers of embryos tested by the single PGT-A laboratory occurred during the study period, including 47 mosaic embryo transfers and 15 aneuploid embryo transfers. Here we report on the outcomes of the 15 aneuploid embryo transfers performed between February 2020 and December 2021. Five single aneuploid embryo transfers, seven double embryo transfers, and two triple embryo transfers occurred. 4/15 (26.7%) resulted in a positive HCG, 1/4 (25%) resulted in a spontaneous abortion, and 0/15 resulted in an ongoing pregnancy. Comparatively, there were 11 live births from 47 mosaic embryo transfers (23.4%) during the same time period.

**Conclusions:** While the chance of successful pregnancy with aneuploid embryo transfer is nonzero, these data can reassure clinicians and patients that aneuploid embryos are unlikely to result in positive reproductive outcomes.

**Financial Support:** CooperSurgical

### References:

1. Tiegs, A. et al. *A multicenter, prospective, blinded, nonselection study evaluating the predictive value of an aneuploid diagnosis using a targeted next-generation sequencing-based preimplantation genetic testing for aneuploidy assay and impact of biopsy*. Fertil Steril, 2021. **115**(3):627-637.