

## **PREDICTING THE LIKELIHOOD OF EMBRYO TRANSFER FOLLOWING PRE-IMPLANTATION GENETIC TESTING FOR ANEUPLOIDY (PGT-A)**

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**Objective:** This study was carried out to predict the likelihood of embryo transfer following PGT-A. **Methods:** A total of 847 PGT-A cycles (VeriSeq kit, Illumina) (n=3694 blastocysts) from January 2016 to March 2018 were analysed. The probability where there was at least one euploid blastocyst for transfer (P1E) and the probability of having at least one euploid blastocyst and/or low risk mosaic aneuploid blastocyst (utilizable) for transfer (P1U) were evaluated. The data were stratified by oocyte age ( $\leq 29$ , 30-34, 35-39 and  $\geq 40$  years) and number of blastocysts biopsied ( $\leq 2$ , 3-5, 6-8 and  $\geq 9$ ). **Results:** With increasing oocyte age, there was a trend towards lower chance of having at least one blastocyst for transfer (P1E 75.3%, 68.5%, 45.6%, 34.8% and P1U 97.0%, 90.0%, 80.5%, 49.2% respectively). While there was a less than 50% chance of at least one euploid blastocyst in oocyte age between 35-39 years, there was a minimum of 80% chance of at least one blastocyst for transfer. With increasing number of blastocysts biopsied, there was also a higher chance of at least one blastocyst for transfer (P1E 30.8%, 57.3%, 83.8%, 93.1% and P1U 54.2%, 88.0%, 98.1%, 100% respectively). If less than 3 blastocysts were biopsied, the chances of at least one blastocyst for transfer were 63.2% and 31.9% for oocyte age between 35-39 and above 40 years. However if 3-5 blastocysts were biopsied, the chances of at least one blastocyst for transfer were 88.6% and 64.1%. When 9 or more blastocysts were biopsied, at least one blastocyst can be transferred across all age groups. **Conclusions:** This study provides a guide for counselling patients who are deciding on PGT-A as an adjunct to IVF, with patients above 35 years old having a relatively good chance to have a transfer in PGT-A cycles if between 3-5 blastocysts were biopsied.