

### INTRODUCTION

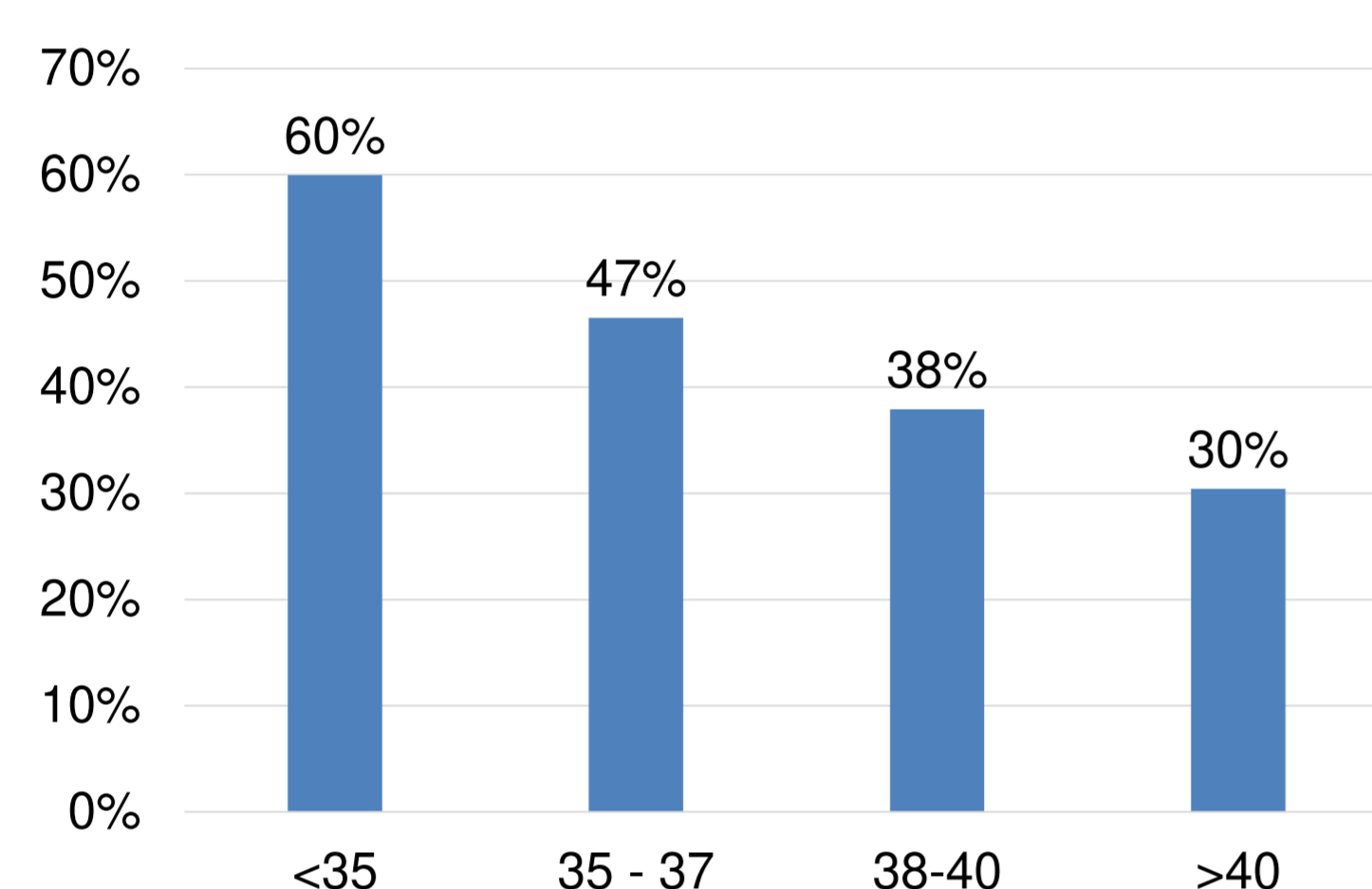
Preimplantation genetic testing for aneuploidies (PGT-A) is a technique used in IVF procedures to identify euploid embryos prior to transfer decreasing the frequency of spontaneous abortions. Advanced maternal age has demonstrated to increase aneuploidies. However, there is discrepant information about the impact of maternal age on the frequency of embryonic mosaicism.

This non-randomized prospective study included 1887 IVF cycles with PGT-A analysis from January 2016 to January 2020, divided into four groups stratified by maternal age (using the SART classification): group 1 (under 35 years), group 2 (35 to 37 years old), group 3 (38 to 40 years old), and group 4 (over 40 years old).

### RESULTS

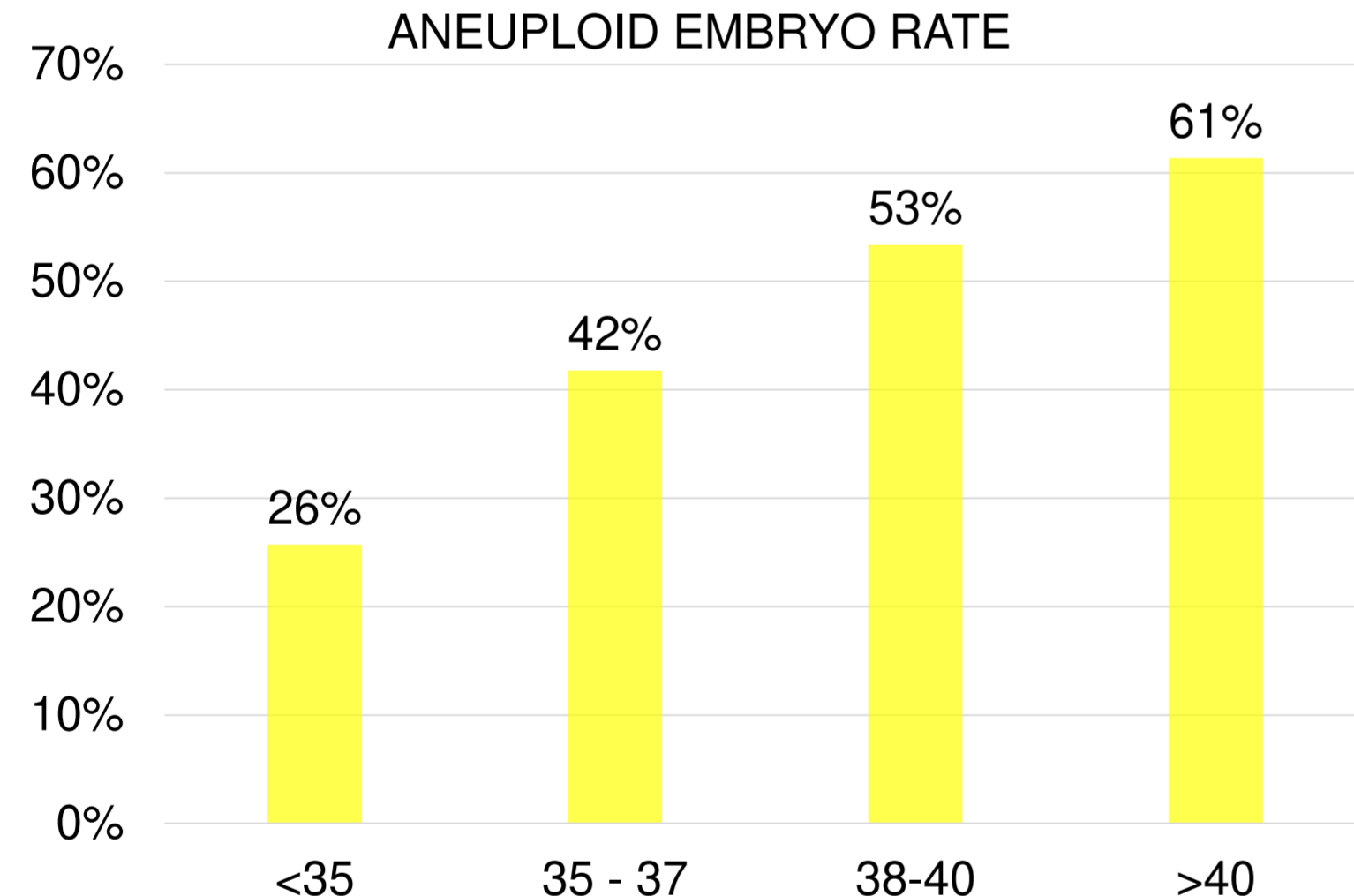
- The rate of euploid embryos was significantly higher in patients of group 1 compared to groups 2, 3 and 4 (60%, 47%, 38% and 30%, respectively  $p < 0.001$ ).

EUPLOID EMBRYO RATE



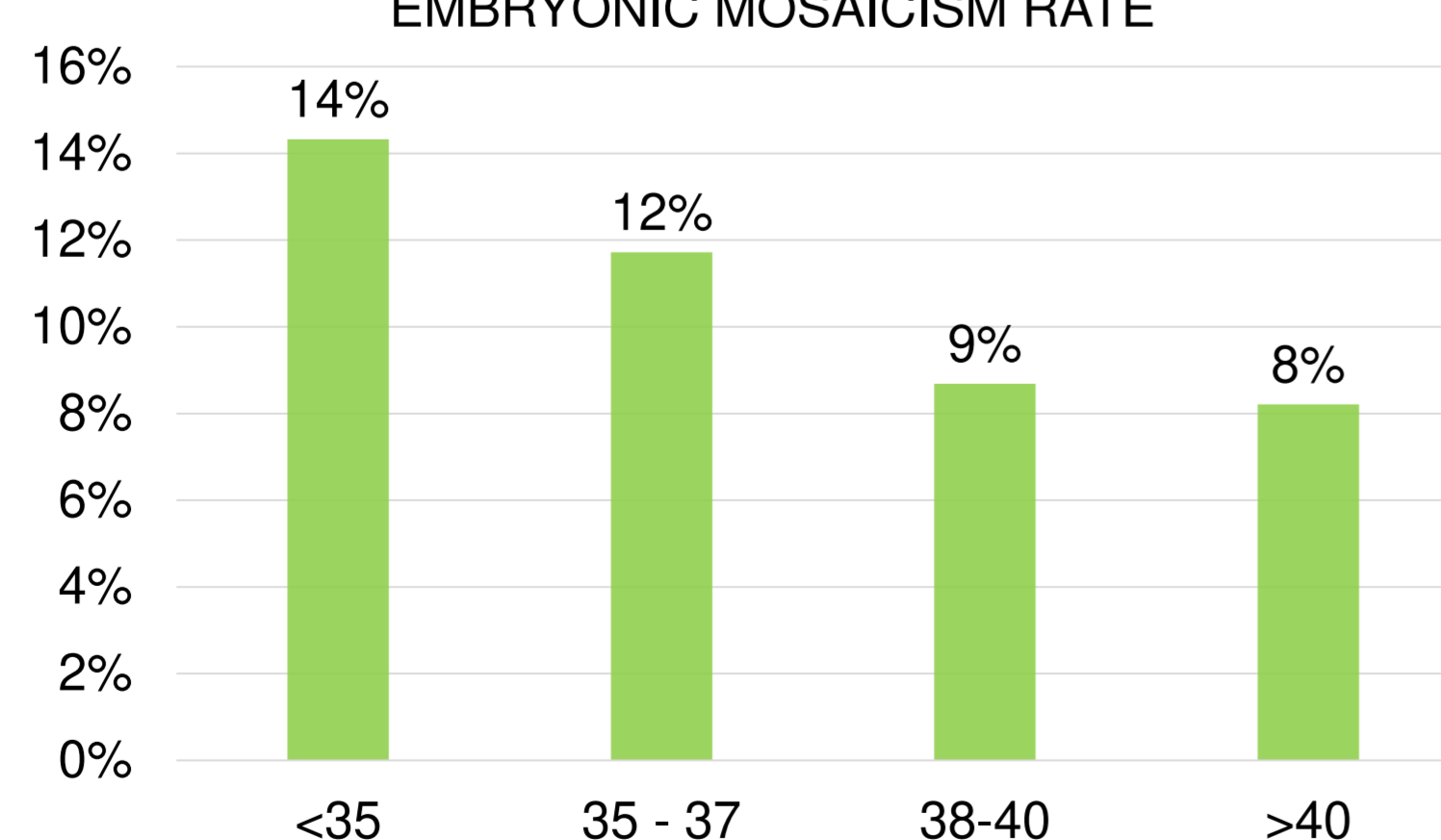
- The aneuploid embryo rate was significantly higher in group 4 (61%) compared to group 1 (26%) and 2 (42%).

ANEUPLOID EMBRYO RATE



- The rate of embryonic mosaicism was significantly higher in patients of group 1 compared to groups 2, 3 and 4 (14%, 12%, 9% and 8%, respectively).

EMBRYONIC MOSAICISM RATE



**60%** was the rate of euploid embryos in women under age 35

**61%** was the rate of aneuploid embryos in women over age 40

**14%** was the rate of embryonic mosaicism in women under age 35

### CONCLUSION

Our findings suggest that the rate of embryonic mosaicism is higher in patients younger than 35 years. The aneuploidy rate increases with maternal age. It is necessary to assess the clinical utility of preimplantation genetic tests in patients younger than 35 years.

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