

# Identifying The Optimal Morphokinetic Range For Euploid Embryos Using An AI-Based Embryologist Tool.

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## Objective

To assess CHLOE-EQs prediction of ploidy and identify the optimal time-range of morphokinetic events in euploid embryos using an AI automatic embryo assessment tool.

## Methods

Retrospective study



**Chloe**

AI embryologist support tool



Automatic EQ Score



Automatically annotated embryo morphokinetics (tPNa-tEB) in 218 time-lapse embryo videos.



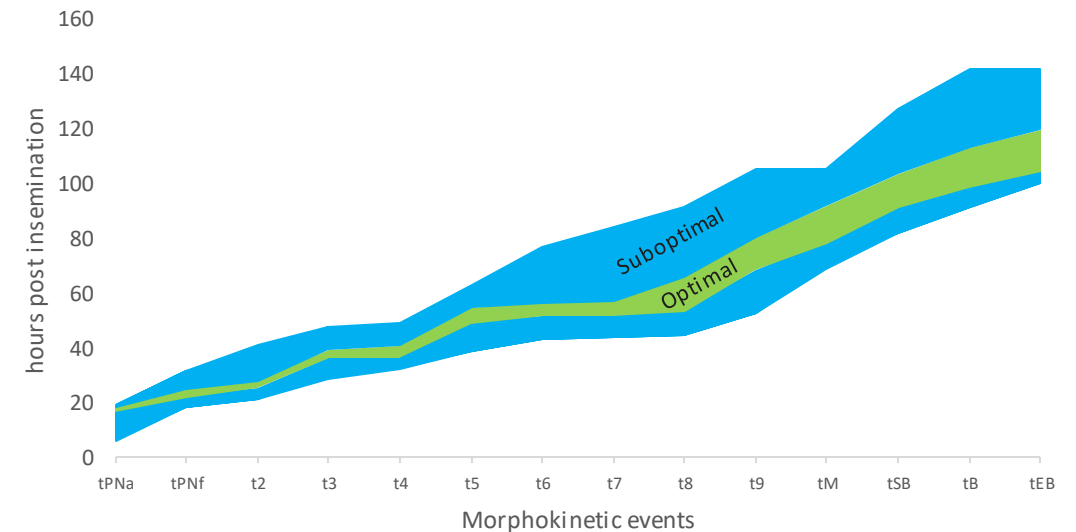
Identify optimal morphokinetic range of euploid embryos (Q1-Q3)



Prediction of euploidy (AUC)

## Results

- CHLOE-EQ Score was predictive of euploidy (n=52, AUC=0.71, baseline=44%, p<0.05).
- For each morphokinetic event, an optimal range (green) for identification of euploids was identified in hpi.



## Conclusion

- CHLOE-EQ can identify the optimal morphokinetic time range to maximise the chance of identifying a euploid embryo;
- This is a potentially valuable biomarker for embryo selection, within the context of a PGT-A program;
- This provides consistency in embryo selection for biopsy and to help reduce the chance of viable embryos being discarded.