

EMBRYO SELECTION IN 2009

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One of the great challenges in clinical IVF is to refine embryo selection techniques so that the single most developmentally competent embryo can be reliably identified in every cohort of available embryos. While morphological evaluation has been the primary method used for embryo assessment, this approach has recognized limitations and there remains no consensus regarding the optimum day(s) for evaluation or the scoring systems to use. This lecture will appraise the relative efficacies of single day versus multi-day morphological scoring, specifically for day 3 transfers. We will then proceed to consider evolving non-invasive technologies for embryo selection including metabolomic and proteomic systems, as well as assays focused to specific targets such as amino acid profiles. The presentation will conclude by evaluating available data regarding the utility of combining morphological assessment with these evolving non-invasive technologies to identify optimal embryos.

At the end of this lecture, participants will be able to:

1. Discuss different strategies for morphological evaluation for embryo selection, and appraise the relative efficacies of single day versus multi-day observations;
2. Describe the principles underlying evolving non-invasive approaches for embryo assessment;
3. Evaluate available data regarding the utility of using evolving non-invasive systems in combination with morphological evaluation, to identify optimal embryos.