

OVERVIEW

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Is it now unethical not to screen out an aneuploidy embryo in IVF?

The aim of preimplantation genetic screening (PGS) is to select out embryos that are aneuploid. The reason to do so has generally been to increase the chance of live birth in couples undergoing IVF/ICSI. However, data that supports the notion that PGS increases live birth rates is lacking. In fact, PGS using day 3 biopsy and FISH results in a significant reduction in live birth rates. For novel technologies using day 5 biopsy and array based or NGS analysis, well designed trials are lacking. Simple reasoning demonstrates that no selection method will ever increase live birth rates per started cycle; at best, it could reduce time to pregnancy but at what cost? If one proposes that PGS should be applied to prevent the (unethical) birth of aneuploid offspring, there is sufficient data to demonstrate that PGS is neither sensitive nor specific enough to do so, while there is sufficient data to demonstrate that this will be at the cost of lowering live birth rates.