

Abstract:

A significant amount of human preimplantation embryos is aneuploid. Preimplantation genetic testing of aneuploidies (PGT-A) enables us to examine the number of chromosomes in a few trophectoderm cells biopsied from developing embryos, and only euploid embryos are then recommended to be transferred. Biopsy of trophectoderm cells is an invasive method, PGT is quite expensive, the examination is not performed at all patients. Therefore, non-invasive methods for determining the highest quality embryos are searching. Non-invasive continual monitoring in a time-lapse system is able to observe the morphokinetic parameters of embryonic development, and can select the best developing embryos with a good prognosis for successful implantation. However, there is still the question of whether and how morphokinetic parameters and embryonic ploidy correlate. Most studies on this topic show that a combination of both of these approaches is the best way for selecting the highest quality embryo for transfer.