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World's first IVF born after DNA sequencing

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Singapore: The world's first test tube baby to have undergone an embryo selection using a procedure that can read the entire human genome was born in June.

Making the announcement of this birth using next generation sequencing (NGS) that could enable IVF clinics across the world to determine the chances of children developing diseases, researchers presented at the European Society of Human Reproduction and Embryology meeting in London

The new technique presented employs modern low-cost DNA sequencing to spot both whole chromosome abnormalities and specific gene defects before an embryo is implanted in the womb. Only around 30 percent of embryos selected during in-vitro fertilization (IVF) - when eggs are fertilized with sperm in a lab dish - actually implant successfully, and chromosomal defects are a major factor in failures, researchers said.

"We can do this at a cost which is about a half to two-thirds of what current chromosome screening costs are. If further randomized trials confirm this, we could reach a point where there is a very strong economic argument that this should be offered very widely - perhaps to the majority of IVF patients," said Dr Dagan Wells of the University of Oxford.

Screening of embryos in IVF is currently reserved for older women, who are at increased risk of chromosomal abnormalities, and those with recurrent miscarriages.