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Working with Top-Flight Reproductive Centers
Helping Couples Build a Healthy Family

Embryo Chromosome Test — ArrayCGH Triples Success Rates

A UK-pioneered test to screen embryos for chromosome abnormalities has increased embryo implantation threefold, states a paper published in the Journal, Fertilisation in Vitro. The paper details a study of 150 cases of arrayCGH carried out at CARE Fertility in Nottingham and Manchester. Oliver, was the world's first baby, born in 2009, following arrayCGH testing. Oliver's mother had suffered 13 failed attempts at IVF until her embryos were screened for abnormal chromosomes (aneuploidy).

The study followed 134 couples presenting for 150 cycles of arrayCGH with a median age of 41 in the female and a history of miscarriage or failed IVF. The procedure involved a laser assisted removal of the polar body from the fertilised egg, then checking the chromosome complement using "24Sure" microarrays. The rapid screening process allowed fresh transfer of viable embryos, with no need to freeze whilst results were obtained.

Professor Simon Fishel, lead author and Managing Director of CARE Fertility said:

"We know that chromosome abnormality is a major cause of miscarriage and IVF failure. Our team at CARE have studied 150 cases, the largest study undertaken world-wide and concluded that using this technique dramatically increases the chance of implantation. All couples undergoing IVF could benefit from this test which can reliably detect faulty chromosomes prior to implantation"

Simon Fishel: "ArrayCGH is a not only a triumph of UK ingenuity but also a real insight into the viability of an embryo. CARE's scientists examine thousands of embryos every year, deciding which embryo to replace is critical. ArrayCGH can give us reliable information to help us make that decision"

Since the birth of baby Oliver, the collaboration between CARE Fertility Group and Cambridge laboratory BlueGnome has developed the chromosome test which is now being used in over 60 laboratories worldwide.

Nick Haan (CEO BlueGnome): "The publication of this paper provides further evidence of the benefits of including 24sure in the management of some of the more challenging IVF cases. Our expectation is that the same technique can now be applied more widely in order to improve the overall outcome of IVF."

Vicki and Simon Ward of Lichfield pictured with baby Lottie, born in November 2011 as a result of arrayCGH testing at CARE in Nottingham. The couple were trying for a family for 6 years, and had 4 years of unsuccessful treatment. Photographer: Robert Yardley Photography

Professor Mark Hughes (Director, Genesis Genetics Europe): "This publication is yet another confirmation that the BlueGnome technology dramatically assists certain couples attain a healthy pregnancy in IVF. These new molecular tools have been shown conclusively to markedly help the most difficult cases of infertility. It does not require a leap of logic to anticipate that many couples with less complicated fertility issues will also benefit from this powerful technology. Genesis Genetics is proud to be the laboratory that provides these new medical advances from BlueGnome to the patients under treatment at CARE Fertility.

A recent published study by the European Society of Human Reproduction (ESHRE) of 42 cases has also confirmed the reliability of arrayCGH testing.