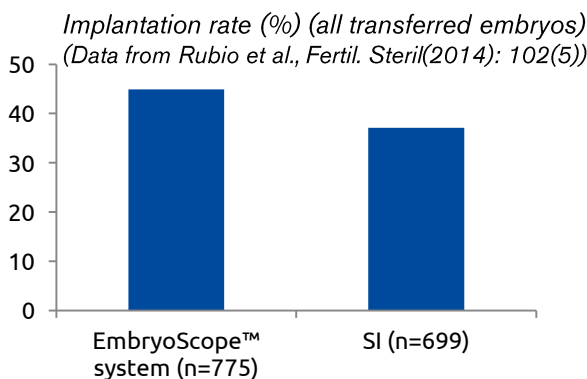
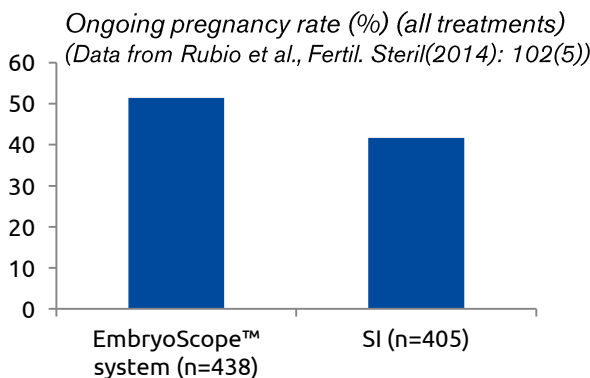


Clinical benefits of the EmbryoScope™ time-lapse system

Evidence of the clinical benefits of using the EmbryoScope™ time-lapse system continues to grow. As an increasing number of clinics gain more knowledge about embryo morphokinetics from their specific labs, more studies demonstrate that using the EmbryoScope time-lapse system for embryo culture and assessment makes a difference in IVF.

Clinically proven enhancement of IVF outcomes in a randomized controlled trial

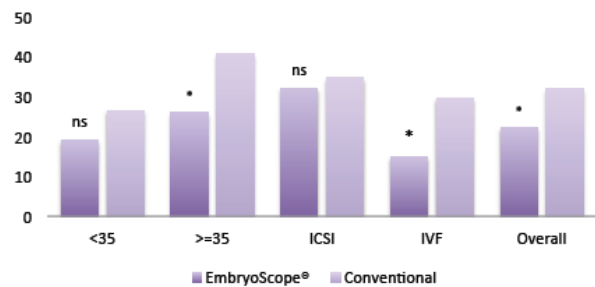
A retrospective study has shown that the combination of the EmbryoScope time-lapse system with a customized morphokinetic model resulted in a relative increase of 20% in the clinical pregnancy rate when compared with culture in a standard incubator (*Meseguer et al., Fertil Steril(2012): 98(6)*). The results of this study have now been challenged in a large randomized controlled trial (RCT). In the RCT the overall implantation rate increased by 21% and the ongoing pregnancy rate increased by 23.2% when compared to standard incubation and assessment.



The clinical benefits of using the EmbryoScope time-lapse system were thus profoundly demonstrated (*Rubio et al., Fertil. Steril(2014): 102(5)*).

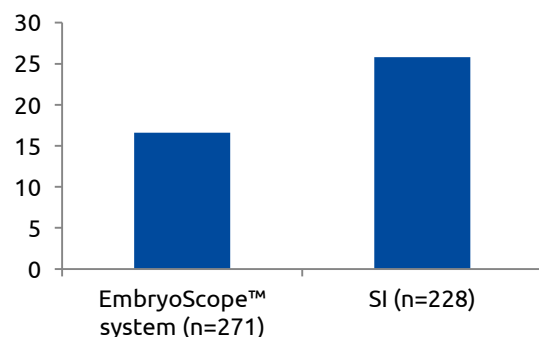
Reduced miscarriage rate

Usage of the EmbryoScope time-lapse system significantly reduced the miscarriage rate as compared with standard methods:



Miscarriage rate (defined as pregnancy loss before week 12 of gestation) was significantly reduced for cycles using the EmbryoScope time-lapse system as compared with conventional methods.

Data from *Barrie et al. ASRM2013: P-353*
Graph courtesy of Hewitt Fertility Centre, UK



Early pregnancy loss (defined as positive BhCG but no fetal heartbeat) was significantly reduced for pregnancies with embryos that were cultured and assessed with the EmbryoScope time-lapse system compared with standard methods (SI).

Data from *Rubio et al., Fertil. Steril(2014): 102(5)*

EmbryoScope user since 2012 says:

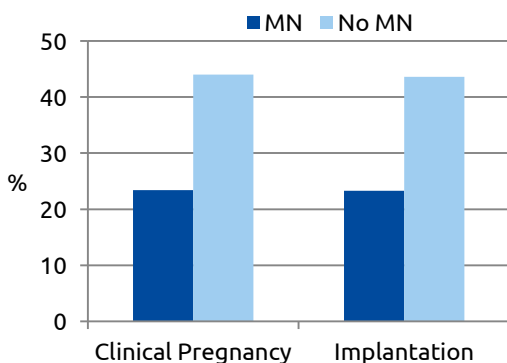
“In our laboratory we see relative increases of 18% in clinical pregnancy rate and 22.6% in ongoing pregnancy rate when EmbryoScope treatments are compared with standard treatments” says Andrea Borini, Raffaella Sciajno and Cristina Lagalla from Tecnobios Procreazione Bologna, Italy

EmbryoScope user since 2013 says:

“With the EmbryoScope time-lapse system we experienced that compared with a standard benchtop incubator we can achieve the same pregnancy rates by transferring less embryos (1.39 vs 1.95). We observed a substantially higher implantation rate (50% vs 41%) and we could reduce our multiple birth rate from 25% to 19%” says Lydia Els-Smit, Lizanne and Johannes van Waart from Wijnland Fertility, Stellenbosch, South Africa (data from Jan 2013 to July 2014, includes all ages and fresh and frozen transfers)

Multinucleation: impact on clinical outcome

The EmbryoScope time-lapse system can be used for identifying multinucleation in developing embryos. A recently published study demonstrated the significantly reduced clinical pregnancy rates (23.4% vs 44%) and implantation rates (23.3% vs. 43.6%) for transfers with multinucleated vs transfers without any multinucleated embryos respectively. Only 27.6% of multinucleated embryos were identified within traditional time limits for embryo assessment.



Data from Ergin, E.G., et al., Fertil Steril(2014): 102(4)

Impact and incidence of direct cleavage

An analysis of 2494 embryos performed by Vitrolife demonstrates that 63% of embryos exhibiting direct cleavage from one to three cells would not have been detected by conventional static monitoring at 27 to 29 hours after fertilization.

The incidence and impact of direct cleavage is depicted in the studies below.

12%

Of all embryos exhibited direct cleavage at 1st, 2nd or 3rd cleavage division



Impaired development and high chromosomal abnormality rate

(89% of direct cleavage embryos)

Zaninovic et al. (ASRM2013: P327)

13.7%

Of embryos exhibited direct cleavage



Significantly reduced clinical pregnancy rate

(1% vs 13.1% of embryos were known to implant for direct cleavage vs non-direct cleavage embryos, respectively)

Rubio et al. (2012): FertilSteril 98(6)