

# COMPARISON OF COVER OILS - OVOIL GIVES BOTH MORE GOOD AND TOP QUALITY EMBRYOS

It is well known that the quality of culture media is crucial for successful ART. However, optimal performance of the medium is dependent on factors such as contact supplies, air, incubators and oil. Oil overlaying embryos during culture may significantly influence the early embryo development.

## Background

In a randomised prospective study with a total of 500 IVF/ICSI treatments, four different mineral oils were evaluated looking at embryo quality<sup>1</sup>. Embryos were cultured in micro droplets and divided into four groups overlaid with;

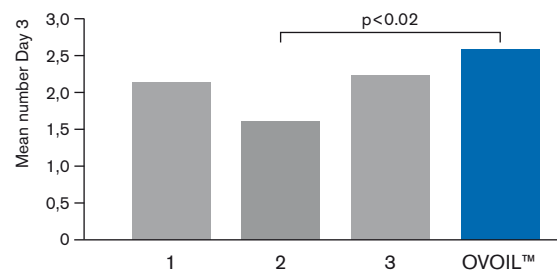
- 1) Mineral Oil (CryoBioSystem)
- 2) Liquid Paraffin (Medicult)
- 3) Nidoil (Nidacon International)
- 4) OVOIL™ (Vitrolife)

The primary endpoint was embryo quality, defined as good and top quality embryos. With less than 20% fragmentation and 3-5 four-cell embryos on day 2 or 6-10 eight-cell embryos on day 3. Implantation rates (IR) and pregnancy rates (PR) were additional measures.

## Results

From 500 ovarian retrievals, 464 embryo transfers were performed (day 2/3) with an overall PR of 33.2%. For each oil, three different lots were used without any significant difference between the lots. Looking at top quality embryos at day 3, the mean number was statistically higher in the group overlaid with OVOIL compared to group 1 and 2. Additionally, the mean number of good quality embryos was significantly higher in the OVOIL group compared to group 2.

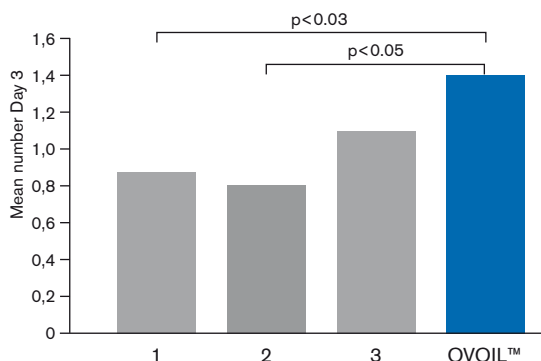
Mean number of good quality embryos



## Conclusions

Microdroplet embryo cultures covered with OVOIL from Vitrolife gives a significantly increased mean number of good and top quality embryos at day 3, compared to other commercial available oils. This difference may be explained by the origin of raw materials and the difference in quality tests performed by each company.

Mean number of top quality embryos



## REF

1. Sifer, C., et al. A prospective randomized study to compare four different mineral oils used to culture human embryos in IVF/ICSI treatments. European Journal of Obstetrics & Gynecology and Reproductive Biology (2009), 147(1), 52-56.