HIGH SUCCESS RATE AFTER BLASTOCYST BIOPSY AND VITRIFICATION IN A PGS PROGRAM

A. Mercader¹, P. Buendía¹, A. Delgado¹, L. Escrich¹, Y. Galiana¹, D. Beltrán¹, C. Simón², A. Cobo¹, M.J. de los Santos¹, C. Rubio³,
¹IVF laboratory, IU-IVI Valencia, Spain
²Reproductive Medicine, IU-IVI Valencia, Spain
³PGD Molecular Cytogenetics, iGemomix, Spain

Introduction
Trophectoderm biopsy may provide more cells for an accurate diagnosis and high efficiency of aCGH for 24-chromosomes aneuploidy screening. Blastocyst vitrification after biopsy is a strategy that offers high implantation rates. The aim of this study was to analyse our results on trophoderm biopsy and whole genome amplification in our PGS program.

Material & methods
Retrospective study: 81 couples (375 blastocysts) from our PGS program (July 2012 - July 2014). Indications: recurrent miscarriage, advanced maternal age, repetitive implantation failure, severe male factor and abnormal previous pregnancy. Mean maternal age: 38.2 years. The biopsy was carried out in fresh blastocysts. Trophoderm biopsy was possible in 73 cycles (90.1%). Biopsied blastocysts were vitrified within the hour following biopsy. Analysis by aCGH was performed. From the 375 blastocysts, 142 of them were normal (37.9%). All analysed blastocysts were abnormal in 22 patients (30.1%). Only euploid blastocysts were transferred in a next cryotransfer.

Results
Eighty one blastocysts were warmed up and 76 of them (93.8%) survived. Embryo transfer was performed in 50 cycles. Thirty and two of them (64.0%) had a positive β-hCG 10 days after embryo transfer. Twenty eight pregnancies (56.0%) were confirmed by ultrasound diagnosis with 39 positive foetal heart bit (17 singletons and 11 twins) representing an implantation rate of 51.3%. Twenty five pregnancies (50.0%) are ongoing and 9 healthy babies at home.

Conclusions
Our results suggest that trophoderm biopsy and aCGH analysis is a safe option that does not compromise the clinical outcome of a PGS program.

Keywords
Blastocyst biopsy, aCGH, vitrification, PGS, implantation rate