Objective: Women who conceive through ART are at increased risk of pregnancy-induced hypertensive disorders. The aim of this study was to compare the prevalence of preeclampsia among patients with fresh and frozen embryo transfer.

Materials and methods: Retrospective study that includes pregnancies achieved after IVF-ICSI treatment between January 2012 and May 2014 at the Hospital Universitario Materno Infantil de Canarias. 473 pregnancies 22 weeks, both single and twin, were included.

Results: 88% (416) of the pregnancies were achieved after fresh embryo transfer versus 12% (54) after vitrified transfer. The average age of the first group was 34.7 [34.3-35.1; 95%CI] and in the vitrified group was 35.6 [34.7-6.5; 95%CI]. The mean body mass index was 24.5 [24.1-25.0;95CI] and 24.6 [23.3-26.0;95CI] respectively. 16.7% of patients in the group of fresh embryo transfer were smokers versus 19.8% of women who underwent transfer with frozen embryos. No history of hypertension was found in patients with fresh embryo transfer versus a 1.7% in the vitrified group. When comparing both populations there were no statistically significant differences in these parameters. The prevalence of hypertensive disorders induced by pregnancy was 7.9% after fresh embryo transfer and 15% after vitrified embryo transfer, without being statistically significant (p=0.075).

Conclusions: There is an increased risk of hypertensive disorders induced by pregnancy in pregnant patients after vitrified embryo transfer, resulting not statistically significant probably due to the small sample size. A possible bias would be no differentiation between single and twin pregnancies, so it would be appropriate to evaluate this issue in future studies.