

O03**Establishment of an ovarian tissue bank in Croatia**Katarina Bilić^a, Marija Vilaj^{b,d}, Davor Ježek^{b,c,d}^a School of Medicine University of Zagreb^b Department of Transfusion Medicine and Transplantation Biology, University Hospital Center Zagreb, Zagreb, Croatia^c Department of Histology and Embryology, Zagreb University School of Medicine, Zagreb, Croatia^d Scientific Center of Excellence for Reproductive and Regenerative Medicine, Zagreb University School of Medicine, Zagreb, CroatiaDOI: <https://doi.org/10.26800/LV-144-supl2-O03>

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INTRODUCTION/OBJECTIVES: Recently, medicine has made significant progress in treating patients with malignant diseases. However, the growing number of cancer-free patients turns the spotlight on their posttherapy treatment and remediation of pharmacological side effects. A new method in overcoming the gonadotoxic effects of chemotherapy and preserving fertility for female patients is ovarian tissue cryopreservation.

MATERIALS AND METHODS: The ovarian tissue banking procedure consists of biopsy retrieval surgery, mostly performed laparoscopically, and tissue cryopreservation. Tissue preservation is the most delicate part of the entire process. It is done by using slow freezing protocols, or alternatively, vitrification. Once patients are done with their therapy and wish to conceive or renew their hormonal cycles, the ovarian tissue fragments are then thawed and reimplanted in orthotopic or heterotopic sites in the patient's body. In 2019, a workshop on ovarian tissue banking was held for the University Hospital Centre Zagreb employees. They were educated about the conditions necessary for establishing an ovarian tissue bank and also received practical training for proper processing and cryopreservation of the tissue.

RESULTS: The employees are adequately trained for the implementation of new techniques. Tissue transport containers were validated, and it was proved that they could retain proper temperature for 17 hours at room temperature conditions (20-25°C), while the optimal temperature for tissue processing was achieved when the cooling elements for the cold plate were cooled at -20°C for 48 hours.

CONCLUSION: Ovarian tissue bank offers a promising new method of preserving fertility in oncology patients and could greatly contribute to Croatian medical care in general.

