

# INTRA-OPERATIVE OOCYTE RETRIEVAL FOR FERTILITY PRESERVATION DURING OPEN PELVIC SURGERY

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## Abstract Body

### Objectives

In ovarian cancer or pelvic metastatic tumor, a transvaginal ultrasound-guided oocyte retrieval is an unavailable option because of the risk of cancer cells spillage and additional metastasis. Intra-operative oocyte retrieval during transabdominal cancer staging surgery would be suggested to cancer patients as a safe strategy for preserving fertility.

### Methods

A total of 29 patients aged between 16 and 40 who underwent intra-operative oocyte retrieval during staging surgery at Seoul National University Bundang Hospital from 2014 to 2022 were enrolled for study and controlled ovarian stimulation outcomes were analyzed.

### Results

Among 29 patients who underwent intra-operative oocyte retrieval, 27 unmarried women had oocyte cryopreservation and 2 married women had embryo cryopreservation. The final pathologic diagnoses were 14 cases of ovarian cancer, 1 case of double primary of ovarian and endometrial cancer, 2 cases of cervical cancer, 4 cases of borderline ovarian tumor, 7 cases of benign ovarian tumor, and 1 case of Burkitt lymphoma. Three patients had neo-adjuvant chemotherapy and no significant relationship with oocyte retrieval. Oocytes retrieval rate was 82.8% (24/29). Among 24 women, 20 patients succeeded to oocyte cryopreservation, and 2 patients proceeded to embryo cryopreservation; 3 and 4 embryo cryopreserved in each patient. Cryopreservation rate was 91.7% (22/24). The median number of retrieved oocytes was 5 [min 1, max 22], and the median number of cryopreserved oocytes was 4 [min 1, max 17]. Anti-Müllerian Hormone (AMH) and a type of ovarian stimulation were significant factors for oocyte acquisition between success and failure group. (AMH:  $3.86 \pm 3.62$  vs  $1.30 \pm 2.21$ ,  $p=0.023$ ; ovarian stimulation: recombinant Follicle Stimulating Hormone: 87.5% vs 40.0% ( $p=0.046$ )).

### Conclusion

For women with gynecologic cancer planning to have staging surgery, intra-operative oocytes retrieval can be an efficient and safe option for preserving fertility.