

# OOCYTE CRYOPRESERVATION IN ADOLESCENTS AND YOUNG ADULTS (AYA) AND NON-AYA ONCOLOGIC PATIENTS

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## Abstract Body

Adolescents and young adults (AYAs) represent a significant proportion of patients with oncological pathology. Chemotherapy regimens, particularly those including alkylating agents, are notoriously ovariotoxic as they damage all kinds of ovarian follicles from primordial to antral stages. Oocyte cryopreservation remains the recommended fertility preservation technique for pubertal patients with chemotherapy protocols with low to moderate risk to ovarian reserve.

This retrospective, observational, study reviewed the outcomes of ovarian stimulation for all patients who underwent fertility preservation for oncologic reasons in the Lille University Hospital Fertility Observatory from July 2008 to November 2020.

The study population was divided into two groups according to age: 76 adolescents and young adults (AYA group) aged from 15 to 24 years old and 153 women aged from 25 to 35 (non-AYA group). 145 patients were diagnosed with solid tumors or breast cancer and 84 with hematological disease. AYA patients had significantly more follicles of 12 - 15 mm and larger than 15 mm at triggering day than non-AYA group. They had also significantly more total ( $12.0 \pm 7.9$  vs.  $10.5 \pm 7.1$ ) and mature oocytes eligible for vitrification ( $7.75 \pm 5.9$  vs.  $6.6 \pm 5.0$ ). There was no difference between the two groups regarding duration of stimulation, total dose of FSH received, estradiol level on the day of triggering and number of immature oocytes retrieved. In both groups, results were better with GnRH agonist or double triggering. In the non-AYA group, there were significantly more mature oocytes collected when stimulated with HMG rather than recombinant FSH. There was no significant difference in mature oocytes retrieved depending on type of pathology or time of onset of stimulation in the cycle. To our knowledge, our study is the first comparing outcomes of oocyte preservation in AYA vs. non-AYA patients with oncologic pathology requiring chemotherapy. It highlighted some specificities of controlled ovarian stimulation for each group.