

**Title of the project:** Difference in the behavior of the freshly isolated and cryo-preserved ovarian cancer cells and its clinical significance

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#### **Summary of 2008 results**

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One of the major goals of oncology is to predict the response of patients with cancer to chemotherapeutic agents by employing laboratory methods called tumour chemosensitivity assays. Ninety-three MTT (3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) chemosensitivity essays were performed in 22 patients with advanced epithelial carcinoma of ovary. Results of MTT assay using freshly isolated tumours cells were compared to results obtained from defrost samples. In four categories scale absolute agreement of results was observed in 53 cases from 93 (56%). In 36 cases the results with defrost cells were different within one category of chemosensitivity.

Five chemosensitive samples turned to chemoresistant after defrosting. In fifteen cases defrost samples were less sensitive, in 20 samples the sensitivity to chemotherapeutical drugs was higher after thawing.

Similar MTT assay results obtained from fresh and defrost tumor tissue could be of essential importance for chemoresistance testing in practice as frozen samples can be transported to specialized laboratory from remote hospitals. Only five tests from 93 (5.37%) presented different values in the sence of chemosensitivity/chemoresistence. That promising observation encourage us to workout more precise laboratory technique which will confirm our hypothesis that results from fresh and defrost tumour tissue are analogical.

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