9. SUMMARY

Molecular biological parameters, including genetic alterations, present new and perspective direction in diagnostics, prediction of prognosis, monitoring and possible therapeutic approaches in oncological disease**.** The results presented have to do with the project, which is concentrated upon chromosomal rearrangements in ovarian and cervical cancer and their correlations with available parameters of both molecular biological and clinical characteristics.

Sixty patients with ovarian cancer and twenty patients manifesting cervical cancer were included into the study. The histological type and grade, MIB-1 and p53 (using immunohistochemical method) were estimated by histopathologist.

Both conventional karyotyping and molecular-cytogenetic methods (fluorescent in situ hybridization and comparative genomic hybridization) were applied to reveal chromosomal aberrations.

The results were subjected to statistical evaluation, using analysis of variances and χ^2 test. There were correlated parameters of quantitative and qualitative character – age, stage, histological type, grade, CA 125 before and after treatment, MIB-1, p53, surgical residuum, lymphadenectomy, response rate, chromosomal rearrangements.

Analyses accomplished in ovarian cancer group revealed typical amplifications on chromosomes 1q, 3q and 20q; and deletions on chromosomes 4p, 4q, 18p, 18q, and 19q. The most frequent findings in cervical cancer group there were amplifications 3q and isochromosome 5p.

On the other side, specific genetic alterations, including some rare findings, have been found both in ovarian and cervical cancer cells. Deletion 22q, being quite rare in terms of available references, detected in 36% cases in the group of ovarian cancer patients examined, is described as a common chromosomal aberration connected with immunological disorders.

Statistically significant correlations between specific parameters both quantitative and qualitative character were found in the tested groups. Correlation between severity of chromosomal rearrangements and age in ovarian cancer group was found.

The number of aberrations in ovarian cancer cell, just as activity of proliferative markers, seems to be typical important finding, especially when associated with younger age.