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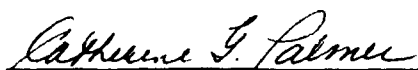
CYTOGENETIC STUDIES OF OVARIAN AND ENDOMETRIAL MALIGNANCIES

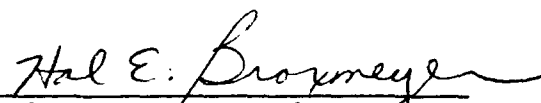
Athena Milatovich

Submitted to the faculty of the Graduate School
in partial fulfillment of the requirements
of the degree
Doctor of Philosophy

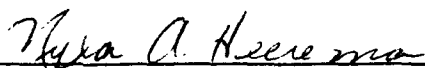
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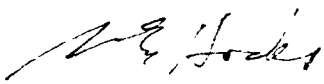
Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements of the degree of Doctor of Philosophy.


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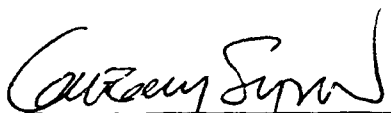

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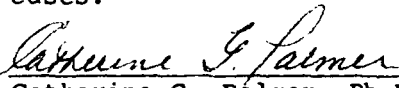
CYTOGENETIC STUDIES OF OVARIAN AND ENDOMETRIAL MALIGNANCIES

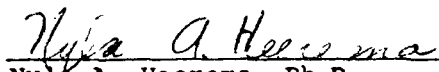
Athena Milatovich, Department of Medical Genetics

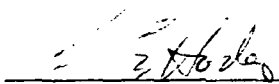
The cytogenetic characteristics of a series of ovarian and endometrial malignancies and the relationship of cytogenetic findings to clinical parameters have been investigated. Eleven ovarian and 41 endometrial tumors were analyzed and specific chromosomal aberrations were identified.

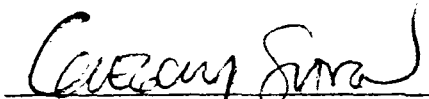
In four of the seven ovarian carcinomas studied, a chromosome 6q deletion [del(6)(q21)] was found, and i(6p) was seen in two cases. Since both resulted in loss of 6q, it is proposed that loss of a tumor suppressor gene occurred. The ovarian carcinomas also had other common chromosomal aberrations. A similar 7q+ was seen in three cases with metastasis or prior treatment, and i(12p) was observed in three ovarian tumors. The latter finding is of significance as i(12p) is a chromosomal marker thought to be specific for germ cell tumors and not for cancers of epithelial origin. Chromosomal *in situ* hybridization with two unique sequence DNA probes located on the 12p (KRAS2 and pPRP2.2) were used for identification. This experiment showed that these markers were, in part, 12p. This identification causes one to question the specificity of i(12p) for germ cell tumors.

Thirty-three endometrial carcinomas and eight endometrial malignant mixed mullerian tumors (MMMT) were studied. These tumors appeared to belong to three cytogenetic groups - those with normal chromosomes; those with simple karyotypes; and those with complex karyotypes. Chromosome 1 aberrations were often the sole change seen and were considered to be a primary chromosomal change. A t(1;16) resulting in 1q trisomy was seen in two cases, and trisomy 10 in two others. Clinical and pathologic correlations of cytogenetic findings among the three groups showed some associations with tumor grade, depth of myometrial invasion, uterine size, age and estrogen dependence. It was concluded that cytogenetic results have potential for use in predicting patient outcome. The endometrial MMMT's studied had either very complex aberrations or normal chromosomes. Chromosomes 1, 3, 5, 13 and 17 were abnormal in the majority of cases.


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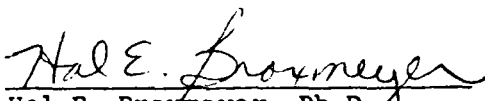

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