10 Flow cytometric analysis of DNA content in uterine cervical dysplasia. T. Watanabe, S. Izumi*, T. Sakuma, F. Tsutsui, K. Yamaoka*, S. Nozawa, Keio Univ. Sch. Med., Tokyo, *The Tokyo 2nd National Hosp., Tokyo.

Flow cytometry was used for the investigation of DNA distribution in fresh 143 specimen from 101 patients with dysplasia or CIS of uterine cervix. DNA histograms were generated after dissociation of the tissue in the presence of Triton X-100, RNAse, and propidium iodide. Human leukocytes were used for the internal standard. Histopathologic examination of the specimen was made. DNA aneuploidies were seen in 87.5% cases with mild dysplasia (n=8), 92.3% with moderate (n=26), and all of the cases with severe dysplasia (n=43) and CIS (n=24). Multiple populations of aneuploidies (heterogeneity), up to 5, were seen in 12.5% cases with mild dysplasia, 23% with moderate, 77% with severe, and 33% with CIS. Distribution of DNA indices (DI) was also discussed. Most of the cases with mild and moderate dysplasia, cell populations with DI around 1.1 were common. Aneuploid populations with DI above 1.6 were frequently observed in cases with severe dysplasia. In cases with CIS relatively uniform distribution of DI around 1.1 was observed. DNA distribution of such cases with severe dysplasia, that was proved to be a CIS in a year, was already similar to that of CIS.

11 Analysis of expression of c-myc and Ha-ras oncogenes in invasive cervical carcinoma. M.Yokoyama, T.Iwasaka, Y.Hayashi, K.Hara, T.Hachisuga, K.Fukuda, Y.Okuma, H.Sugimori, Dept.Obst.and Gynec., Saga Med.Sch., Saga

To investigate the correlation between the invasive cervical carcinoma and oncogenes, we examined the invasive carcinomas of the uterine cervix of 24 patients for the state of the c-myc and Ha-ras oncogenes. Of the 24 tumors, c-myc amplification was found in only one tumor, while there was no Ha-ras amplification. Overexpression of c-myc gene was observed in seven (35%) of the 20 tumors analyzed, while there was no overexpression of Ha-ras. Relapse-free rates at 24 months were 29% for those with tumors of a c-myc overexpression and 69% in case of tumors with no c-myc overexpression, respectively. These results suggest that an activation of c-myc oncogene is associated with tumor progression. Analysis of c-myc RNA in cervical cancers will provide a means of identifying patients at high risk of early recurrence.

12 Estimation of Medroxyprogesterone acetate against a human endometrial tumor constituted from the established Ishikawa cancer cells by a subrenal capsule assay. T. Ishizaki, R. Itoh, T. Yamamoto, H. Okada, M. Yoshihama*, Dept. Obst. and Gynec., Kyoto Pref. Univ. Med., Kyoto, *Yukijirushi Res. Inst. of Life Science, Tochigi.

In order to establish a sensitivity test system for evaluation of anti-cancer hormonal agents, we tried a long-term subrenal capsule (SRC) assay, using nude mice with a transplanted solid tumor of endometrial cancer cells (Ishikawa's line). Unlike DNA-affecting agents, anti-cancer hormonal agents exert cytostatic effects rather than cytocidal effects, and their evaluation in a short period is considered to be inaccurate. Our test system is somewhat difficult in terms of technique, but it is useful since it can (1) evaluate the agents in a relatively short period of 28 days and (2) compare the cytostatic anti-tumor efficacy of two or more agents under the same conditions. Moreover, the rate of successful tumor transplantation in nude mice in our system is very high, i.e., more than 90%. Although there are some points which need improvement, our system is considered to be useful as an assay system for future development of anti-cancer hormonal agents and other similar chemotherapeutic agents for cancers. When medroxyprogesterone acetate (MPA) was evaluated using this system, the administration period, as well as the dosage, was found to be important.