

the score by which the patients were evaluated made it possible to differentiate in such beneficial rate of 91.7%.

### 199. Intraoperative Cytological Diagnosis of Ovarian Tumors with Special Reference to Tumor Cell-Types

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An experience of intraoperative cytological diagnosis in a total of 147 cases of various ovarian tumors was presented, and an importance of intraoperative cytology was emphasized. Although frozen section histology is relatively common in modern well-equipped as well as well manpowered operating rooms, in many points intraoperative smear cytology is superior to frozen section histology.

By the use of smear cytology on materials obtained either by imprinting or touching the cut-surface of ovarian tumor, by scraping of the outer surface of ovarian tumor or by aspirating the content, in many cases of ovarian tumors not only "malignant or not" but also the cell-type of ovarian tumor can be diagnosed.

Many typical cytological patterns were presented comparing with their histological figures.

### 200. Analysis of Cytology in the Patients with Malignant Ovarial Tumor —Evaluation of Cytology as the Method of Early Detection for Malignant Ovarial Tumor—

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In order to make an early diagnosis for ovarian cancer at the preclinical stage, various investigations were made using various cytologic examinations. Cervical smears, aspirated materials from the uterine cavity, ascitic sediments, imprinted cells of the cut surface of the tumor and histological specimens from 69 patients with ovarian cancer (including the middle group) were prepared. As a result, (1) marked estrogenic effects were observed in the maturation index of 17 patients in the two years or more of menopause. (2)

malignant cells or atypical endometrial cells were detected in the aspirated smears from the uterine cavity of 26 patients out of 56, and in the cervical smears of 15 patients out of 66. (3) cancer cells can not be always differentiated from mesothelial cells or phagocytes only based on the form or size of the cell or the nucleus, but can be discriminated from them using the findings of coarse granular nucleus and specific cytochemical characteristics. (4) the cells in the ascites were more frequently oval and had more coarse and increased chromatin, when compared with the imprinted cells. (5) the tumors with positive mucin staining on cytological specimens were always resulted to mucin producing adenocarcinoma histologically.

### 201. Study about Prognostic Factors According to Clinical Stages of Common Primary Epithelial Carcinoma of the Ovary

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Commulative survival rate of common primary epithelial carcinoma of the ovary (stage Ia 40, Ib, c 14, IIa, b, c 15 and III, IV 52 cases) is scarcely changed after three years in all stages. By dividing into three years, we examined prognostic factors in relation to stage I cancer and advanced cancer (stage II & III).

Prognosis of stage I ovarian cancer was significantly bad ( $P < 0.05$ ) for capsule ruptured or infiltrated and presence of ascites. It was suggested that it was also influenced by the extent of competition of histological typing and postoperative chemotherapy.

Prognosis of advanced ovarian cancer was significantly good ( $P < 0.25$ ) by application of continued radical operation. On the other hand, incomplete prognosis of the aged, undifferentiated carcinoma, liver metastasis and postoperative chemotherapy tended toward worsening.

### 202. An Attempt to Determine the Prognostic Guide of Solid Ovarian Teratoma

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Much has been reported to determine the prognostic significance in solid ovarian teratoma. It is believed that the histologic grading system and extra embryonic elements might have been the determinant factors. Since the use of combination chemotherapy, however, long term remissions are being documented.

Sixteen cases of solid teratoma are reviewed in an attempt to determine the histologic feature of prognostic significance. In almost cases the histologic grading system is correlated with the clinical course. The neuroblastic tissue suggested usually as aggressive element, however, was not always associated with poor prognosis.

In present series, 2 teratomas containing glioblastoma tissue showed the more fluminant clinical behavior. Although these two cases revealed a high serum alpha feto-protein (AFP) value, the AFP value were not correlated with clinical courses.

The object of our presentation is to correlate histologic patterns and serum AFP values with the clinical behavior in 16 solid ovarian teratomas. In addition, the clinical significance of serum CEA value is discussed.

### 203. Clinical Significance of Intraperitoneal Ovarian Cancer Cells

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To determine the clinical significance of intraperitoneal cancer cells, comparative cytologic studies on ovarian cancer cells in peritoneal washings and peritoneal effusion were performed. The materials obtained from 6 patients with ovarian cancer were examined on light microscopy (LM), scanning electron microscopy (SEM) and transmission electron microscopy (TEM), and the achieved results were as follows; 1) Ovarian cancer cells were recognized in both peritoneal washings and peritoneal effusion. 2) The cytologic feature of the peritoneal washings were easier to get the diagnosis than that of the effusion, because of the fewer contaminations such as fibrin, red blood cells and other degenerated tissues. Even if the clustered cells in the washings, the nuclei and

cytoplasm were able to be clearly observed. 3) On SEM observation of the clustered cells from the effusion, red blood cells and fibrin showed adhering on the surface of cancer cell. 4) Ultrastructural observation of cancer cells by TEM confirmed that the activity of the cells were well preserved even in ascites.

### 204. Diagnosis of Ovarian Tumors by Combined Use of Multiple Image Visualization

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A combined use of computed tomography (CT) with  $^{67}\text{Ga}$  scintigraphy (RI) for diagnosis of ovarian tumors was clinically evaluated.

Further studies were done to make the diagnosis more correct by use of emission-CT (ECT) and Computerized Ultrasonography (CUS).

Three hundred thirty-one patients with ovarian tumors were examined by USG, CT and RI. ECT and CUS were performed in 28 and 16 patients respectively. CT scanning and calculation of CT-number were carried out. RI scintigram and R.O.I. counts were obtained, these data were further computerized to get the ECT. CUS was done by ultrasonography (USG) connected to a computer. Combined use of CT and RI enabled us to differentiate exactly cystic tumor from solid one in 83.2% of the cases and malignancy from benignancy in 90% respectively. Combined use of USG, CT and RI resulted in 89.3% and 93.3% respectively. Some of mucinous cysts were misdiagnosed by CT. RI could not grasp frankly some of dermoid cysts and fibromas. ECT and CUS (including USG) produced more reliable images of the tumor, and showed definite diagnosis in 89% of 28 cases and 91% of 16 cases respectively.

The combination of USG, CT and RI is useful for the diagnosis of ovarian tumor. Moreover, it seems Multiple Image Visualization (CT, USG, RI, ECT and CUS) will increasingly play a leading role for diagnosis of abdominal tumors in future.

### 205. A Study of the Connection between Krukenberg's Tumor and Gastric Cancer with Reference to the Role of the Lymph System