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292 Analysis of the patients showing dissociation between serum CA125 and CA130 levels: consideration on the releasing mechanism of CA125 into the blood stream. H.Nonogaki, Y.Nanbu, F.Kobayashi, T.Iwai, DP.Wang, I.Konishi, S.Fujii, T.Mori, K.Endo*, Dept. Gynec. and Obst., *Dept. Nucl. Med., Facul. Med., Kyoto Univ.

CA125 is a common antigen of coelomic cavity-derived tissues, and elevation of serum CA125 levels is seen in the patients with abnormalities of these tissues. CA130 is an epitope that exists on the different site from that of CA125 on the same glycoprotein molecule, and CA130 levels correlate well with CA125 levels in the serum samples. Recently, however, we encountered five women with elevated serum CA125 levels without increase of serum CA130 levels. All the patients failed to find pathological foci of CA125-production. Immunohistochemistry of CA125 and CA130 showed both CA125 and CA130 to be present in normal ovarian surface. Analysis of the molecules of CA125 and CA130 in the patients' sera by Sephacryl S-300 column revealed that CA125 was found in the void volume (>1,000,000 molecular weight, MW), whereas CA130 in the fraction of MW 200,000. In the sera of control women, however, both CA125 and CA130 were present in the void volume. These results suggest that the glycoprotein expressing both CA125 and CA130 consists of two kinds of subunits; one having more than two epitopes of CA125 and the others having one epitope of CA130, and that these subunits may dissociate in the sera of these patients. Unusual structure of the glycoprotein molecule may faciliate the release of CA125 from the tissue into the blood stream.

293 Relationship between immunohistochemical detection of P-glycoprotein and effect of chemotherapy in ovarian carcinoma. H.Matsuda, Y.Tanioka, H.Tanimoto, K.Takehara, M.Tamaki, H.Fujimoto, S.Ohta, N.Nagai, K.Ohama, Y.Katsube*, A.Fujiwara**, Dept. Obst. and Gynec., Hiroshima Univ. Sch. Med., Kure Kyosai Hosp.*, Onomichi Sogo Hosp.**, Hiroshima.

Immunoreactive P-glycoprotein(P-GP) was analysed on 52 ovarian carcinomas (pre-chemotherapy(CTX) cases) and 18 post-CTX cases. Positive ratio of P-GP was 42.7% (24/52) in pre-CTX cases. In 18 post-CTX cases, the ratio was increased from 44.4% (8/18, pre-CTX) to 61.1% (11/18, post-CTX). Before chemotherapy, the immunoreactivity of P-GP was observed diffusely on cytoplasm with fairly weak intensity. After chemotherapy, carcinoma cells showed increased positive reaction at plasma membrane. All 8 cases showing pre-operativelly positive P-GP died from progressive disease. In 10 cases showing pre-operativelly negative P-GP, 7 cases represented chemotherapeutic response and 4 cases are servived. In conclusion, analysis of immunoreactive P-GP on ovarian carcinoma might be useful for evaluation of effectiveness of chemotherapy. (Supported in part by the grant of Ministry of Education, Science and Culture, Japan (No.02771070).)

294 Evidence for the involvement of TGFα/EGF receptor autocrine growth mechanism in a human ovarian cancer cell-line. H.Kurachi, K.Morishige, Y.Fujita, K.Amemiya, M.Inoue, A.Miyake, O.Tanizawa, Dept.Obst.and Gynec., Osaka Univ. Medical School, Osaka.

TGFα/EGF receptor autocrine mechanism is expressed in many kinds of cancers. But its biological significances on cancer growth still remain to be clarified. We critically assessed the roles of TGFα/EGF receptor autocrine mechanism on the growth of an ovarian cancer cell-line, designated SHIN 3. Northern blotting revealed the expression of EGF receptor and TGFα but not EGF mRNA, and TGFα and EGF receptor but not EGF proteins were present on the cell. A class of high affinity EGF receptor was abundantly expressed on the cell by $^{125}$-EGF binding studies. We, next, assessed the biological significance of this mechanism on the cell growth in serum free monolayer cultures. Although TGFα added to the medium did not enhance cell growth, TGFα and EGF receptor but not EGF monoclonal antibodies significantly inhibited cell growth. These findings suggested the crucial role of TGFα/EGF receptor autocrine growth mechanism in this cell-line.

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