**544** A Study on Usefulness of rG·CSF in Treating Bone Marrow Inhibition Arising from Chemotherapy in Ovarian Cancer Patients. T. HOSHINO, T. ADACHI, H. IWABUCHI, T. TANAKA, J. NAGATA, M. SAKAMOTO, Y. MUTAI, K. OKABE, Y. NUTAHARA, H. SATO and Y. NEGISHI, Tokyo Medical College

We administered rG·CSF to ovarian cancer patients with neutropenia during chemotherapy. We observed the effect of rG·CSF on preventing neutrophil reduction and promoting neutrophil restoration as well as function. [Methods] Twenty primary ovarian cancer patients, the subjects, were primarily treated with CAP therapy. On and after the second day of course 2, rG·CSF of 2 μg/kg/day was instituted for 14 days. Neutrophil variations and function were examined. [Results] (1) The lowest neutrophil counts were 950/ml, on the 12th day at time of observation, and 2100/ml, on the 8th day, showing a predominant rise in count in the latter. (2) An apparent rise in the recovery effect or neutrophils was also observed. (3) Phagocytosis and bactericidal competence of the neutrophils were normal, although cytogram revealed dispersion. (4) No significant change in leukocyte membrane antigen was observed. [Conclusions] rG·CSF was very effective in preventing neutrophil counts from decreasing and in helping restore normal counts, suggesting that intensifying the dose would boost its antitumor effect.

**545** Effect of anti-CD3 antibody treatment and cryopreservation on the proliferating rate and anti-tumor activity of cultured tumor-infiltrating lymphocytes. Y.Aoki, N.Yoshiya, S.Honma, S.Kodama, K.Kanazawa, K.Tanaka, Dept. Obst.and Gynec., Niigata Univ.Sch.Med., Niigata.

To enhance the anti-tumor capability and to obtain increased number of activated lymphocytes, we treated the tumor-infiltrating lymphocytes(TIL) with a solid phase anti-CD3 monoclonal antibody in addition to 100units/ml of interleukin-2 and had cryoprserved TIL in liquid nitrogen for several weeks. Proliferating rate of these TILs treated with anti-CD3 antibody was five times greater than that of cultured with interleukin-2 alone. Furthermore, anti-CD3 antibody activated TIL showed almost the same cytotoxic activity against autologous tumor cells as that of TIL cultured with interleukin-2 alone. The population of CD3/CD8 positive TIL were increased in the process of cultivation and after 4-5 weeks, over 80% were occupied with CD3/CD8 positive TIL in almost cases tested. After recovery from cryopreservation, no major change was observed in cell surface marker, a growth rate and a cytotoxic activity before and after cryopreservation. These data suggest that prospect of immunotherapy employing cryopreservation and/or anti-CD3 antibody activated TIL could offer attractive model for further investigation.

**546** Suppressive mechanism of cytotoxic T lymphocyte induction and activation against autologous tumor cells. N.Maeda, Y.Sagara, S.Fujimoto*, Dept.Obst. and Gync., *Dept.Immunol., Kochi Medical School, Kochi.

We have already reported the mechanism of CTL induction specific for autologous and HLA class I restricted allogeneic tumor cells from cancer patient. Two patterns of deviation of peripheral blood mononuclear cells (PBMC) were obserbed after radiation and chemotherapy, that is, lymphocyte predominant group (Group L) and monocyte predominant group (Group M) after therapy. Recurrence rate in the Group M was significantly higher than that in the Group L. CTL activity generated from the Group M was lower than that from the Group L. On the other hand, CTL activity was recovered after depletion of excess monocytes from PBMC of Group M treated with Nylon wool column. The killer cells, after 7 days culture, possessed $CD4^{-}8^{+}$ surface phenotype and killed tumor cells with HLA class I restricted manner. Instead of monocytes, monocyte culture supernatant obtained from Group M suppressed the CTL generation, and it also suppressed T cell proliferation to the autologous tumor cells. These results suggest that deviation to the monocyte predominant environment is intimatedly related to produce immunosuppressive state in the advanced stage. It is also suggested that the mechanism may be organized by the monocyte producing factor.