Anti-CEA mouse MoAb, produced by JP Mach (Ludwig Inst., Lausanne, Switzerland) were injected IV as 500 µg of intact immunoglobulins, ^{131}I labeled according to the iodogen technic to a specific activity of 5 to 10 µCi/µg. Mouse MoAb 19-9 and 17-1-A provided by H. Koprowski (Wistar Inst., Philadelphia, USA) labeled with ^{131}I to a specific activity of 2 µCi/µg were injected IV as 1 mg of $F(ab')_2$ fragments. A mixture of 2 out of the three antibodies mentionned above was infused 22 out of 27 times, and scanning was performed up to 7 days after injection. Final diagnosis was obtained by pathology (14/27) or on clinical evolution (13/27). Overall specificity of the method was 100% (10/10) with no false positive results, sensitivity yielded to 59% (10/17) with 7 false negative results and accuracy happened to be 74% (20/27). According to our limited experience, three major indications could be selected prospectively:1)Isolated elevation of serum tumor markers, 2)Non convincing evidence on conventionnal methods, 3) Staging of GI carcinoma prior to surgery. In most cases, failure of the method was observed in peritoneal carcinomatosis (4/7) or when recurrence occured behind the bladder, making image analysis difficult due to urinary clearance of ^{131}I. Improvement of the technic could be expected from more appropriated radiolabel than Iodine and possibly from single photon emission tomography along with the association of several MoAb sharing similar tumor cell specificity but reacting with distinct epitopes.

12.

ESTIMATION OF CIRCULATING IMMUNE COMPLEXES IN CANCER PATIENTS: SENSE OR NONSENSE? M. Bertschmann, J.P. Späth, U.E. Nydegger and E.F. Lüscher, Theodor Kocher Institute, University of Berne and Blood Transfusion Service, Swiss Red Cross, Central Laboratory, CH-3000 Bern 9, Switzerland.

Since the detection of blocking factors in serum of cancer patients and the identification of circulating tumor-antigen-antibody complexes (CIC) as the active entities a large body of data has accumulated from experimental animal models and cancer patients in the hope to use levels of CIC as parameters for diagnosis and/or prognosis of malignancies. In the present experiments CIC were sequentially determined in serum samples from DBA/2 mice bearing histocompatible P-815 mastocytomas. 125I-C1q binding assays and Raji cell binding assays were used according to standard procedures. The tumor model is characterized by a transient phase of spontaneous regression correlated with proliferation and differentiation of cytotoxic T cells. However, regression normally changes to progression and not only T- but also B cell proliferation is observed. Since no functional correlate of B cell stimulation in the form of circulating or tumor cell bound antibody could be detected so far, tests were performed for detecting antibody in the form of CIC and for correlating CIC levels with tumor development. Despite the wide variation in tumor development elevated levels of CIC were not detected, neither in the 125I-C1q binding nor in the Raji cell binding assay. Reference complexes formed between soluble tumor cell membrane proteins and allo-antibody, however, were easily detected. These negative results are in accordance with recent negative results in mammary cancer patients (Krieger et al., Int. J. Cancer 31, 207, 1983). They support a more critical evaluation of the usefulness of CIC determination for diagnosis and/or prognosis of malignancies.

13.

MONOCLONAL ANTIBODIES AGAINST HUMAN LUNG CARCINOMAS.
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Mouse monoclonal antibodies were generated against cell lines of human lung adenocarcinoma (SLC40) and small cell carcinoma (OH1). SLC40 grows as cellular aggregates in suspension culture and forms glandular structures in nude mice. The antibodies LAM2 and LAM3 are strongly reactive with the surface membrane of SLC40, as demonstrated by indirect immunofluorescence and radioimmunoassay. LAM3 is also reactive with several lung adenocarcinomas growing as adherent or suspension cells in culture, but not with other adenocarcinomas, including colon and pancreas. LAM3 may be helpful in distinguishing adenocarcinomas of the lung from other carcinomas. In contrast, LAM2 is reactive with several carcinomas that grow as suspension cells in culture, including small cell carcinomas, lung adenocarcinomas, mesothelioma and seminoma. Little or no reactivity was observed with 18 carcinoma cell lines that grow adherent to the culture dish. Thus, LAM2 recognizes a surface membrane antigen that is present primarily in carcinoma cells that lack anchorage dependence in vitro. Model systems are being used to evaluate the correlation between LAM2 reactivity and metastatic potential in vivo. The antibody SM1 is strongly reactive with cell lines and tissues from small cell carcinoma of the lung but not with most other cancer cells and normal tissues. We have found SM1 to be useful in identifying small cell carcinoma in tissue sections and in bone marrow aspirates. Since SM1 is highly cytotoxic to small cell carcinoma in the presence of complement, it may also be useful for therapy. SM1, LAM2 and LAM3 are unreactive with normal bronchus, normal bone marrow cells and leukemic cells. These antibodies may be useful in studies of differentiation and biologic behavior of lung cancer cells; they could also be important in the diagnosis, staging and treatment of lung cancers.

14.

COMBINATION CHEMOTHERAPY WITH CISPLATIN, ADRIAMYCIN, ETOPOSIDE AND CYCLOPHOSPHAMIDE FOR SMALL CELL CARCINOMA OF THE LUNG (SCLC). J.P. Dumont, J. Klastersky, J.P. Sculier, D. Becquart, G. Vandermoten, F. Rocmans, P. Libert, P. Ravez, J. Michel, E. Longeval, A. Flemale, P. Mommen. Institut Jules Bordet, Université Libre de Bruxelles, Bruxelles, Belgique

Combinations of cisplatin (C), adriamycin (A) and etoposide (Vepesid - V)(Cancer 50, 652, 1982) or A, V and cyclophosphamide (Endoxan - E)(Cancer Treat. Rep. 66, 221, 1982) are effective in the management of SCLC. We evaluate a 4-drug combination consisting of C (60mg/ m^2), A (45mg/m^2), V (80 mg/m^2 d1,2,3) and E (1g/m^2) every 3 to 4 weeks in patients with proven SCLC; 40 patients were evaluated so far after 3 courses of therapy. The median age was 54 years and the initial median performance status was 75 (Karnofsky's scale):

	Limited disease	Extensive disease
Evaluable patients	24	16
Complete remission (CR)	6 (25%)	0 (0%)
Partial remission (PR)	15 (62%)	9 (56%)
CR + PR	21 (87%)	9 (56%)

Toxicity was moderate : leucopenia grade IV was observed in 11 (27%) and grade III in 10 (25%); serious (grade III and IV) extra-hematologic toxicity (nausea, vomiting, alopecia, diarrhea, stomatitis, infection and metabolic abnormalities) was rare, except for alopecia.

Treatment was continued for a total of 10 courses or until progression. Patients with LD and PR received thoracic irradiation (5000r) and those with CR prophylactic brain irradiation. Six months after therapy 5/6 patients with CR after 3 courses of CAVE are still alive without evidence of progressive disease ; the corresponding figure for PR's is 14/24.

Although final conclusions can only be drawn after evaluation of more patients and longer follow up, it appears that CAVE does not result in an increase rate of response as compared to CAV or AVE.

15.

AUTOLOGOUS MARROW TRANSPLANTATION (AUTO M.T.) IN ACUTE LEUKEMIAS : MARSEILLE EXPERIENCE IN 28 PATIENTS (PTS). D. Maraninchi, B. Mascret, J.A.Gastaut, G. Sebahoun, N. Tubiana, G. Novakovitch and Y. Carcassonne, Marrow Transplant Unit and Blood Bank. Institut Paoli-Calmettes (IPC) Marseille 13273 - France -

18 pts received auto MT after high dose Melphalan (HDM 140mg/m2 I.V. n= 17 pts) or BACT (n=1 pt) : all these pts were in relapse and had mesurable disease. In AML 10/12 acheived complete remission (CR), in ALL 2/3 achieved CR, in blast crisis of CML 2/2 achieved PR. The pt receiving BACT for ALL in relapse achieved CR. Thus high dose chemotherapy is able to induce new CR or PR in high proportion of pts with leukemia in relapse (15/18 evidence of response - 83%, 13/18 CR-72%). 10 pts received auto MT after HDM (8) or BACT (n=2) as a consolidation of previous remission and are not evaluable for response. In 13 pts no attempt was done to purge marrow, and no maintenance therapy was done after the graft : all relapsed except one with AML in relapse who is in second non maintened CR 17 mths+. 8 pts had new marrow aspiration, received second course of HDM and auto MT as a consolidation and in vivo treatment of their marrow : 2 pts died in CR, 2 relapsed, 4 are in continuous CR 29 mths +, 28 mths+, 15 mths+, 9 mths + after the first auto MT. 4 pts with ALL received I.V.Methotrexate (MTX) after auto MT (Seattle protocol for allogenic MT) : one died from pneumonia, 3 are in continuous CR 4 mths+, 3 mths+, 2 mths+. 3 pts received BACT and auto MT after complement + CALLA treatment of their marrow : all engrafted, one relapsed at 4 mths and is alive 9 mths +, one died from pneumonia within one mth, one is alive in continuous CR 3 mths +. High dosechemotherapy followed by auto MT is an efficient treatment for leukemic pts. Marrow contamination of the graft has to be considered as a limitant factor ; marrow contamination might be treated by immunological, pharmacological means...

16.

TOTAL BODY IRRADIATION (TBI) AND CYCLOPHOSPHAMIDE (Cy) AS A CONDITIONNING REGIMEN OF ALLOGENIC MARROW TRANSPLANTATION (ALLO M.T.) : INVESTIGATION OF SINGLE DOSE VERSUS FRACTIONNATED REGIMEN OF TBI. D. Maraninchi, D. Baume, J.A. Gastaut, B. Mascret, J.P. Guillet, R. Amalric and Y. Carcassonne, Marrow Transplant Unit. Institut Paoli-Calmettes (IPC). Marseille 13273 - France -

We investigated in 33 patients (pts) with hematologic malignancies different TBI regimen as a preparation of allo M.T.. 5 pts received 1000 rads TBI (lungshielding 800). 4 pts received 200 rads per day for 5 days. 11 pts received 220 rads per day for 5 days, 7 pts received 240 per day for 5 days. Irradiation source was linear accelerator saturne. Lungshielding