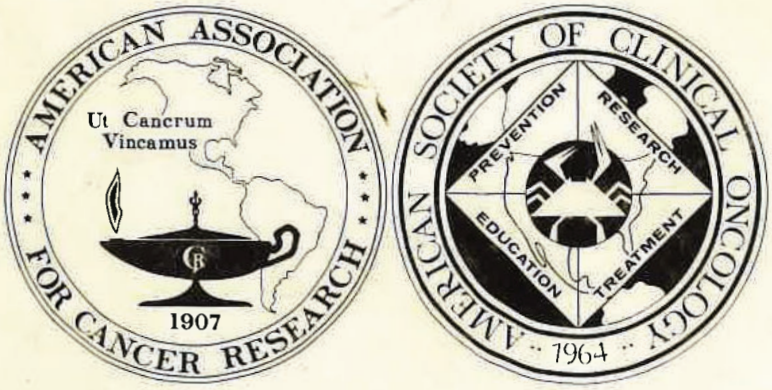
# SIXTY-SIXTH
annual meeting
of the
American Association
for Cancer Research

# PROCEEDINGS

# ELEVENTH
annual meeting
of the
American Society
of Clinical Oncology

## MAY 7-11, 1975
San Diego, California

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**Proceedings of the**
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Sidney Weinhouse, *Editor*

Margaret Foti, *Managing Editor*

**617** REMISSION INDUCTION IN REFRACTORY MYELOBLASTIC LEUKEMIA WITH CONTINUOUS INFUSION OF 5-AZACYTIDINE. W.R. Vogler, D. Miller and J.W. Keller. Emory Univ., Atlanta, Ga. 30322 and Duke Univ., Durham, N.C. 27710 (For Southeastern Cancer Study Group)

Rapid infusions of 5-azacytidine in doses of 100mg/$M^2$ or greater produce severe nausea, vomiting and occasional diarrhea, thus limiting its therapeutic use. In this study doses of 50-400mg/$M^2$/day were infused continuously for 5-day courses at intervals of 14-25 days. The use of Ringer's lactate and frequent (q3-12hr) changes of solutions insured drug stability. The majority of patients, all with refractory myeloblastic leukemia, received 150mg/$M^2$/day. Doses were escalated by 50mg/$M^2$ increments in 6 of 22 patients. All 22 patients received at least 2 courses of treatment. Complete remissions occurred in 7(32%) and partial remissions in 3(14%). In general the drug was well tolerated, however, nausea and vomiting became troublesome at doses of 200mg/$M^2$ or more.

The results indicate that 5-azacytidine given by continuous infusion is an active agent in the treatment of refractory myeloblastic leukemia and worthy of further investigation.

**618** CYLINDROID LAMELLA-PARTICLE COMPLEXES IN MALIGNANT LYMPHOMA OF NORTHERN PIKE (E. lucius). Clyde J. Dawe, William G. Banfield, Cecil W. Lee, Herman J. Michelitch, and Ron Sonstegard. National Institutes of Health, Bethesda, Md. 20014 and Univ. of Guelph, Ontario, Canada N1G 2W1

Malignant lymphoma in northern pike is enzootic in North America, Ireland, and Sweden. Experimental and field studies have indicated the disease is transmissible. We report intracytoplasmic cylindroid structures visualized by transmission electron microscopy in pike lymphoma cells. Cylindroid bodies range from 2 to 4 μm. in length and 0.8 to 1.0 μm. in diameter. Their walls are composed of alternating layers of dense lamellae and dense particles. The dense lamellae average about 90 $A^o$ in thickness and the particles about 260 $A^o$ in diameter. Often the inner and outer surfaces of the walls of the cylindroids are covered by two wavy membranes enclosing a space similar to the perinuclear cisterna. The cylindroids in pike lymphoma cells resemble those described in human "hairy cell" leukemia and in EB virus-transformed human embryo cells. Their significance and manner of development are not understood. One concept is that the particles are RNA and the membranes are part of the endoplasmic reticulum. Another possibility is that the particles are DNA and the membranes are derived from nuclear membrane.

**619** MULTIPLE LEUKOCYTE WASHING: IMPROVEMENT IN CELL-MEDIATED IMMUNITY IN LUNG CANCER. Patrick C. Marabella, Hiroshi Takita, Mitsuru Takada and Jun Minowada. Roswell Park Memorial Institute, Buffalo, N.Y. 14203

This study was undertaken to investigate the possibility of a "blocking factor" adherent to leukocytes in lung cancer.

The leukocyte migration inhibition test using leukocytes isolated from heparinized peripheral blood of 28 previously untreated lung cancer patients was employed. The leukocytes were washed comparatively three and six times. The antigen used was a tumor extract of a cultured cell line of lung carcinoma. Twenty-five of the 28 cases had improved percent inhibition with six times wash. The overall percent migration inhibition of the three times washed group was $-1.3 \pm 4.4\%$ and that of the six times washed group being $13.9 \pm 4.6\%$. The 11 localized cases had percent inhibitions of $14.3 \pm 4.5$ and $26.4 \pm 7.1\%$ for three and six times washed groups respectively. The 17 disseminated cases had percent inhibition of $-12.5 \pm 6.8\%$ and $4.5 \pm 3.9\%$ for three and six times washed.

It appears that multiple washing of leukocytes improves in vitro cellular immunity in lung cancer patients and moreso in disseminated localized cases. Impaired cellular immunity in lung cancer may be due to some "blocking factor" adherent to the leukocytes.

**620** PATTERNS OF SPLEEN CELL (SC) MIGRATION IN VITRO IN SPONTANEOUSLY METASTASIZING AND NON-METASTASIZING MAMMARY TUMOR (MT) HOSTS: POSSIBLE IMMUNE ESCAPE MECHANISM. U. Kim and G. Montessori. Roswell Park Memorial Institute, Buffalo, N. Y. 14203

In vitro demonstration of positive lymphocyte cytotoxicity in patients with a rapidly growing or widely disseminated cancer is one of the most puzzling phenomena in tumor immunology. To gain a better understanding of this immune response in a well defined experimental system, the patterns of SC migration and migration inhibition were studied by the standard MIF test procedure with 4 spontaneously metastasizing, antigen-shedding and in 3 non-metastasizing, non-shedding rat MT. The SC from non-metastasizing MT hosts migrated as well as normal SC or was often slightly stimulated in the blank culture media. However, SC migration from the metastasizing MT hosts was markedly inhibited (40-60%) in the media indicating that their physical capacity to migrate was impaired. By incubating the SC from the former group with their respective MT extract, their migration was inhibited by 30-40%. On the other hand, the inhibited SC migration in the latter group was usually restored to normal levels or even stimulated upon exposure to their own MT extract. This inhibition or stimulation was tumor specific.

The significance of "blocking" and "unblocking" effects of specific MT antigens will be discussed in terms of both antigen-antibody on the lymphocyte surface and the relative mi-