Reporting on

Cancer Research

Commentary on the
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November

Molecular Hybridization

For over a decade, the laboratory of Speigelman has contributed reports of DNA-RNA molecular hybridization. It was shown that many human tumors contain a high molecular weight RNA, with reverse transcriptase activity and other physical characteristics similar to those found in RNA oncornaviruses. Postulations were inevitable that this could be indirect evidence of an oncogenic virus in human tumors. W. Cuatico and C.H. Cheung (Idaho Falls, Idaho) applied the technique to a wide variety of human tumors and found sequence homology between cancers of the same organ or cell type but not with cancers of different cell types. Their interpretation is that the findings reflect embryological origins. It is of interest that the sequence for colon cancer was different than for rectal cancer, indicating a difference in cell types. Further work in this area of inquiry promises to be of importance.

Immunologic Forays

The search for immunological characteristics of cancer patients continues unabated. M.J. Deegan et al. (University of Michigan, Ann Arbor, Michigan) contribute a well-designed investigation of multiple tests for immunocompetence in 37 patients with epidermoid carcinoma of the head and neck, and in 51 controls. A variety of statistical methods, including multivariate analysis, were applied. Decreased T cells and depressed PHA were found among cancer patients, but the results were not consistent and some patients with advanced disease had normal results. Thus, although many patients with cancer had defects in non-tumor-specific immunocompetence, such defects were not always predictive of the extent of the disease. It should be pointed out that the controls were "volunteers in good health;" an additional group with chronic disease other than cancer would have been informative.

In another approach to the role of immunity in cancer, E. Phil and co-workers (M.D. Anderson Hospital and Tumor Institute, Houston, Texas) assessed the presence of perivascular lymphocytes in the surgically resected colorectal carcinomas of Dukes' Class B. The recurrence-free rate and survival was significantly better in patients with lymphocyte evidence of immunomorphology. The authors carefully point out that "factors other than those investigated may be of importance in relation to survival."

December

Endocrine Profiles

Many attempts to correlate endocrine profiles with breast cancer have been essentially negative. Interest in the field was reawakened by investigations on rodents, indicating a relationship of breast cancer to prolactin. W.B. Malarkey and associates (Ohio State University School of
Medicine, Columbus, Ohio) contribute two papers in which women with benign breast masses and with breast cancer were compared with age-and-weight-matched controls. Mean 24-hour GH, LH, FSH, estriol and progesterone concentrations were similar in all three groups. Testosterone was significantly elevated in women with breast cancer evaluated in the luteal phase of their cycles, and normal in post-menopausal women with breast cancer. Serum TSH, thyroxine, cholesterol and triglyceride levels were normal. Plasma cortisols and urinary-17-hydroxysteroid excretion tended to be higher in women with either breast disease, probably reflecting preoperative anxiety. The only significant finding was decreased nocturnal prolactin in post-menopausal breast cancer subjects. The role of prolactin in human breast cancer remains uncertain.

Estrogen Receptors

Estrogen receptors (ER) have been established as useful indicators of response to hormonal therapy in advanced breast cancer. Data are now accumulating that the absence or presence of estrogen receptors also are related to prognosis. William A. Knight III et al. (University of Texas Health Science Center, San Antonio, Texas) studied 145 women who underwent mastectomy for breast cancer. Early recurrence (by 18 months) occurred more often in women with ER—than in women with ER + tumors, independent of other known prognostic factors such as lymph node status and tumor size. However, the histologic grading of the cancers was not reported and would have been a useful addition.

Chemotherapy

A 1976 report from France (Cancer 37: 653, 1976) indicated that Rubidazone, a daunorubicin derivative, was an active chemotherapeutic agent in acute leukemia of adults. Robert S. Benjamin and co-workers (M.D. Anderson Hospital and Tumor Institute, Houston, Texas) conducted Phase I-I clinical trials on 39 previously treated adults with acute leukemia, and achieved 13 complete remissions with Rubidazone. Remissions were achieved by a median time of one month, and lasted three months; in complete responders, median survival after Rubidazone was eight months. The authors conclude that "Rubidazone is the most active antileukemic agent we have yet tested."

Paul P. Carbone (University of Wisconsin, Madison, Wisconsin), in the first Rosenthal lecture, makes a plea for symbiotic rather than competitive relations between clinical and basic research, and presents a list of questions about breast cancer to basic researchers.

Send Us Your Questions on Cancer

We will refer specific questions in any area of cancer management to a leading cancer specialist.

All questions will be answered and some will be published in Ca-A Cancer Journal for Clinicians.

Please submit your questions to:

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