

The high reinduction rate may result from (1) avoidance of drug resistance, (2) early diagnosis of relapse or (3) positive effect of immunotherapy or a combination of these factors.

**IMMUNE COMPETENCE IN COLON CANCER: RELATIONSHIP OF PRE-TREATMENT TESTS TO DIAGNOSIS AND TUMOUR STAGE.** A. M. MANDER, P. M. BOLTON, R. H. WHITEHEAD, R. G. NEWCOMBE and L. E. HUGHES, Department of Surgery, Welsh National School of Medicine, Cardiff.

A spectrum of immunological tests was performed to assess cellular and humoral immunity in 40 patients with colon cancer. Controls had suspected cancer but proved to have benign disease.

The tests employed were measurements of peripheral white cell count, lymphocyte count, serum immunoglobulin levels, lymphocyte response to PHA, DNCB response, and the Montoux test. Results were correlated with diagnosis and tumour stage. The colon cancer patients had both absolute and relative lymphocytopenia. Serum IgM and IgA levels were significantly raised in the cancer group and were highest in the patients with distant spread. No difference in lymphocyte response to PHA was observed. DNCB and Mantoux responses were markedly depressed in the cancer group even in patients with early cancer. Discrimination between benign and malignant conditions was not greatly improved by using the tests in combination.

**HOST TUMOUR RELATIONSHIP IN STOMACH CANCER—CORRELATION OF HISTOLOGICAL CRITERIA WITH TESTS OF IMMUNE COMPETENCE.** A. M. MANDER, C. A. MORGAN, E. W. OWEN, J. ZLOSICK and L. E. HUGHES, Welsh National School of Medicine, Cardiff.

The current prospective study involves multifactorial computer analysis of 50 stomach cancer patients who have been assessed from two separate approaches: the first by preoperative estimation of host immune competence, measuring lymphocyte response to phytohaemagglutinin, peripheral lymphocyte count, serum immunoglobulin levels, Mantoux response and dinitrochlorobenzene skin testing, and the second approach

by histological examination of tumour and lymph nodes for evidence of cellular and humoral immune response.

Correlation of the two sets of data with each other and with clinical tumour staging has given a broad view of host tumour interaction in stomach cancer. The results will allow an assessment of whether histological parameters of cellular and humoral immunity correlate with results obtained by immunosurveillance tests, and which of these is most relevant to the clinical outcome of the disease.

**HUMORAL IMMUNITY IN HUMAN LUNG NEOPLASIA.** M. DAWSON and M. MOORE, Paterson Laboratories, Manchester.

Sera from patients with carcinoma of the lung were examined for evidence of humoral immunity towards allogeneic lung carcinoma cells in short-term culture.

Microcytotoxicity assays were used to investigate: (a) complement dependent cytotoxicity; (b) serum mediated cellular cytotoxicity and (c) "blocking" activity of sera towards leucocytes obtained from patients with lung carcinoma.

The incidence of complement dependent cytotoxic antibody to the sera was low, only 3/18 (17%) sera giving positive reactions. A higher proportion 8/18 (44%) of the same sera were found to induce cellular cytotoxicity against lung carcinoma cells in leucocytes obtained from healthy donors, while "blocking" activity towards lung cancer patients' leucocytes was found in 10/18 (56%) sera. The latter phenomenon was not specific since 5/7 (71%) sera from patients with unrelated cancers also reduced the cytotoxicity of leucocytes from lung cancer patients for cultured lung carcinoma cells. The implications of these findings for the interpretation of *in vitro* cytotoxicity tests in the human allogeneic context are to be examined.

**MACROPHAGE MIGRATION INHIBITION AND IMMUNOGLOBULIN PRODUCTION BY HODGKIN'S DISEASE (HD) BIOPSY SPECIMENS *IN VITRO*.** D. B. JONES, S. V. PAYNE, J. L. SMITH, and D. H. WRIGHT, Department of Experimental Pathology, Southampton University.