Book Reviews


Stephen Carter and his colleagues are to be congratulated for putting together the Proceedings of the Oakland Symposium on Bleomycin. With a subject developing as rapidly as cancer chemotherapy, it is difficult for any single author, editor or even a symposium to keep abreast with the developments in this field. This outstanding book correlates the results of laboratory studies with clinical experience. The book combines clarity with simplicity; details with precision. There are some authoritative chapters on cell kinetics which clearly show the rationale of combining the vinca alkaloids with bleomycin. The experiments cited are neat and justify the conclusion that such data should be available on all new drugs before the introduction of the agent into clinical practice. However, not all agents lend themselves to such experimental procedures, and if they do, this would add yet another bottleneck to the already complicated pathway of introducing a new drug for clinical usage.

On the whole this is a comprehensive review of the subject and it is a valuable handbook to every chemotherapist or research worker.

Charles L.M. Olweny
H. Egan

Analysis of Volatile Nitrosamines in Food
Environmental Carcinogens Selected Methods of Analysis, vol. 1
IARC Scientific Publication No. 18
International Agency for Research on Cancer, Lyon 1978
XIII + 212 pp.; sFr. 90.-/US $ 45.-
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Volume No. 18 of the IARC publications contains a collection of selected methods for determining volatile nitrosamines in foodstuffs. The authors are well-known specialists in the field of estimating trace amounts of N-nitrosocompounds and many of them had deserved well of suitable analytical methods.

The collection of methods is completed by a short preliminary chapter concerning the carcinogenicity of N-nitrosocompounds and a general review of approaches to nitrosamine analysis. This review includes fundamental remarks on the problems and difficulties of sampling procedure and sample preparation, extraction of samples, cleanup and concentration of extracts, especially with regard to the examination of foods and beverages. Mode of action and range of application of various analytical methods (polarography, spectrophotometry, TLC, HPLC, GC, MS, thermoenergy analyzing (TEA) and combinations of these techniques as GC/MS or GC/TEA are described and critically discussed. Also analytical methods for the determination of nitrosamine precursors (amines, nitrite, nitrate) are dealt with in proper chapters.

The analytical part comprises 11 methods of estimation for volatile nitrosamines tested for their reliability in collaborative IARC studies.
Procedures are described in all details but combinations of similar methods were excluded. The practice shows appearing of unexpected difficulties caused by even small modifications of analytical procedure, therefore, the IARC recommendation desire to follow the method of choice in all details.

The presented analytical methods include relatively simple techniques up to the most sensitive and specific MS and TEA systems. For scientists working in the field of investigation of foods for nitrosamines this book can be very helpful by the choice of the best method with regard to the analytical problem on the one hand and the available laboratory equipment on the other. The publication of a contact point address is a very good arrangement and will facilitate the approach to more detail informations.

This volume will contribute to standardize the methods of analysis and to improve international comparisons. It is desirable that evaluations of hazards for men caused by environmental nitrosamines may be carried out in the future on the base of more reliable data.

T. Gnauk
A.J. Cochran
Man, Cancer and Immunity

During the last decade numerous investigations into tumor immunology have been performed in order to establish methods for diagnosis, prognosis and immunotherapy of malignant diseases. The book Man, Cancer and Immunity covers most of the knowledge on tumor immunology. As an introduction, clinical observations suggesting a host response against malignant cells are presented.

In a separate chapter, methods for the detection of an immune response against tumor-associated antigens are given in detail. Experimental data of both the author himself and of other investigators are summarized, thus giving a representative survey on tests used for the demonstration of cell-mediated and humoral tumor-specific immunity.

The section dealing with tumor-associated antigens describes both oncofetal and carcinogen-induced tumor antigens including those of virus-induced tumors. The problems arising from variations in tumor antigen expression and the common antigenicity of cells of benign and malignant origin are also discussed.

The paradoxon of a tumor growing despite the presence of an immunity directed against this tumor is dealt with in a further chapter. Factors and immunological phenomena responsible for an abrogation of immunological effector mechanisms against malignant cells are presented. The book emphasizes the practical application of tests for the evaluation of the patient’s immune status, including methods for defining general immune reactivity as well as methods for determining tumor-specific immune reactions. In this section the author presents examples of his own experiences, pointing to the usefulness of some of these tests for monitoring cancer patients with respect to diagnosis of primary and metastatic malignant disease and establishment of prognostic factors.

Another section is devoted to the effects of therapies such as surgery, chemo- and radiotherapy on immune parameters, giving additional evidence to the value of immunological tests for monitoring of cancer patients.

Immunotherapy of human cancer which is still developing is presented in detail according to the different methods used in order to modulate the patients’ immune reactivity; results of recent clinical investigations are given.
The book is summing up comprehensively the knowledge on human tumor immunology available to date. It is characterized both by a clear description of the complex field – since the author is engaged in tumor immunology from its very beginning and therefore able to present own research work – and by relevant interpretation of recent data from literature. It can be recommended not only to people working on tumor immunology themselves but to everybody who wants a clear and easily readable introduction into this special field of oncology.

M. Micksche


Immunodiagnosis has now reached the point of practical clinical application. During the recent years, several methods – mainly laboratory tests – have been established for the evaluation of both the patients’ immune response to tumor-associated antigens and deviations of general immune reactivity.

This book (Part 1 of two volumes) is a collection of representative reports on methods which might be suitable for immunodiagnosis. The papers presented at a workshop of the NIH (Bethesda) in autumn 1978 and published soon afterwards really provide recent information on methodology and clinical relevance of various techniques used in tumor immunology. The first part deals with immunodiagnostic tests in general as far as techniques and evaluation of data on a statistical basis are concerned. A further chapter contains methods and data on clinical relevance of tumor-associated marker substances identified either on tumor cells or in the circulation of cancer patients. In recent years, the usefulness of oncofetal antigens and, especially, a-fetoprotein and carcinoembryonic antigens as marker substances for malignant diseases has been established. Other tumor antigens such as fetal sulfo-glycoprotein, pancreatic fetal antigen are presently investigated for their clinical relevance, and these results are given in the book.

In the following sections, ectopic hormones such as HCG, parathyroid hormones and calcitonin are demonstrated to have some value for diagnosis of active disease. Serum proteins such as immunoglobulins, ferritin and /C-casein can be applied for identifying the activity of the disease, whereas there is no specificity for diagnostic purposes.

In a following presentation, the application of various marker assays on one single blood sample is discussed. A selection of an appropriate marker for an individual patient may be one future approach for monitoring and early identification of active disease. Another part of this book deals with the expression of ‘specific’ tumor-associated antigens on malignant cells. Most of the described methods for identification of such antigens use xenogeneic ‘specific’ antisera raised against tumor cells, or sera of patients with active disease.

A detailed description of methods for the demonstration of antigens in acute lymphatic leukemia is presented, and the diagnostic and prognostic values are emphasized.

Antigens present on malignant melanoma cells have been demonstrated by various techniques. Problems associated with the different assays are discussed, and the conclusion is drawn that there is no real evidence of a prognostic and diagnostic value of testing humoral immune reactivity in melanoma patients.

A radioimmunoassay for demonstration of tumor antigens in the circulation of patients with ovarian cancer gives further insight in the limitations of immunodiagnostic methods.
The expression or loss of normal tissue antigens, as reported in two further papers, does not serve any diagnostic purposes.
The last article – a good example of this field’s complexity – discusses the demonstration of antigens in brain tumors.
For immunodiagnosis of malignant disease, this book is the most actual collection of methods for immunodiagnosis available to date. Both technical details and statements on clinical usefulness of several assays make this book an important reading for immunologists as well as for clinically and experimentally working oncologists.

M. Micksche