must decide what to do next—stop and make a diagnosis, seek further information through questioning or laboratory tests, or begin treatment.

One of the difficulties has been the lack of statistical information regarding the interdependence and incidence of symptoms for each disease category. Gustafson presents a summary of his methodology by which he has attempted to extract this information from physicians who are experts in their respective fields. He describes his system at the University of Wisconsin where patients with suspected thyroid disease are interviewed by computer and the summaries and recommendations then sent to the physician. It is an isolated task and his results are only preliminary. The paper by Allen Ginsberg describes his approach to the problem of a pleural effusion. His project is one of the most sophisticated and attempts to include many of our value judgments in calculating a diagnostic strategy and treatment regimen.

To date, one of the major impacts of computers has been to force physicians to refine their thinking and definitions of disease. They have made quite obvious the consequences of many clinical decisions, the usefulness of much clinical folklore, but most importantly have drawn attention to the diagnostic process itself, a much neglected topic in medical education. Barnett and his group describe their work in the use of computers for medical education where clinical problems are presented as they may actually present in real clinical situations. The astute clinician is revered not merely for his accuracy in making the final diagnosis, but for his clinical judgment in efficiently interviewing the patient, concentrating on the relevant symptoms and deciding the necessity of each test, considering the risk and cost to that particular patient. To the extent that this process can be clearly defined, it can be mechanized by computers, but in evaluating such a system, we have every right to apply the same standards, not just percent right or wrong, as we apply to physicians. No general system has yet met these criteria.

Diagnosis is an extraordinarily complex process and an expensive process to perform on a computer. The problems of health care facing us are not primarily a lack of sophisticated diagnosis, and for the near future, computer diagnostic systems, even when improved, will remain a luxury. Though this book covers a significant spectrum of the work in computer diagnosis, it is not comprehensive. For the most part, it consists of extracts of work the authors have published elsewhere, yet it gives the reader a flavor, but not the basic content, of a very challenging and exciting field.

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Coagulation. Current Research and Clinical Applications. Edited by Gottfried Schmer and Paul E. Strandjord. Academic Press, New York, 1973. x, 238 pp. $9.00.

The field of coagulation has expanded logarithmically such that a week's Gordon conference covers only a few aspects in depth. This newest addition to coagulation literature includes selected topics as they were presented in a 2-day symposium.

The first section introduces the biochemistry and pathology of coagulation; the text reads easily and several of the summary illustrations are quite useful as teaching material. Perhaps most informative, however, are discussions relating to patient
care in grave situations. These comments are not usually found in print and help put the pathology into perspective for people not directly involved in patient care.

Next, a section describes recently developed methods for detecting consumption coagulopathies using solid-phase, and immunological techniques and following the kinetics of radiolabelled materials in vivo. For example, Schmer's chapter illustrates in detail new ways to approach detection of plasminogen using radiolabelled substrates attached to agarose beads, allowing simple separation of radioactive peptides at the end of the incubation. More generalized discussions of detection of fibrinogen degradation products, carrier states of hemophilia, and heparin effect on platelet survival with artificial valves complete this section.

Two therapy chapters describe early results of Stanford's home care program for hemophiliacs and includes Deutsch's brief but comprehensive chapter on circulating anticoagulants—incidence, detailed assays for detection, immunological properties, management, and usefulness of purified inhibitors for detecting carriers of hemophilia.

The concluding section deals with development of biocompatible materials, discussing engineering problems in meeting physiological requirements for flexibility and size, and possible chemical modifications of a number of materials for in vivo and in vitro uses. In particular, the chapter by Hoffman and Schmer is a lucid introduction into methods for developing affinity chromatography materials.

Overall, this book might be most useful for the clinical pathologist, as it demonstrates the adaptability of solid phase techniques to clinical assays and discusses some of the clinical problems to which these assays are addressed. While several procedures are presented in detail, most assays are specifically described elsewhere, and the material included here acts as supplementary material to more complete texts.

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The Benzodiazepines. Monographs of the Mario Negri Institute for Pharmacological Research. Edited by S. Garrattini, E. Mussini and L. O. Randall. Raven Press, New York, 1973. xxi, 685 pp. $35.00.

At a time in human history where Lancet can predict the total tranquillization of America by the millenium, any addition to our knowledge of the sedative-anti-anxiety drugs is welcome. "The Benzodiazepines," a monograph of the Mario Negri Institute for pharmacological research, edited by S. Garrattini, E. Mussini and L. O. Randall, is a welcome and needed contribution to information about these seemingly ubiquitous compounds. Librium and Valium are household words—or at least they should be in a society where as many as 30% of the population takes tranquilizers. These drugs have provided great wealth for Hoffman-LaRoche, the Swiss pharmaceutical firm, and are the most widely prescribed drugs in this and other countries. The book contains a series of occasionally well written, often authoritative, research reports on various aspects of benzodiazepine pharmacology. In that respect it will be the standard reference work on these compounds.

The information presented is fascinating for what it does not contain. We still don't know how the drugs work as sedative-anti-anxiety agents. We find that sophis-