book attempts to coordinate the anatomical, physiological, biochemical, endocrinological, pharmacological and immunological aspects of human prostatic cancer. There are 35 contributors, from N. America, Europe and Japan. The editors have produced a conspectus of the present "state of the art" in prostatic cancer research. Hospitals and research institutes involved with prostatic disease will find this book a useful addition to their library shelves.

It is interesting to see scanning electron micrographs frankly used as purely decorative chapter headings, perhaps a just assessment of their main value in biological research.

R. DODGE

Malignant Lymphomas other than Hodgkin's Disease. Ed. K. LENNERT (1981). Berlin: Springer Verlag. 833 pp.

Karl Lennert, with other European collaborators, introduced the Kiel Classification of non-Hodgkin's malignant lymphomas. The book is essentially a text of pathology, but some preliminary information is provided relating clinical progress to pathological type. At present, there is no completely satisfactory pathological classification of the non-Hodgkin's lymphomas, but this attempt, which takes into consideration immunological methods, has been well received by many pathologists in Europe. The histological, cytological and cytochemical features of each type of lymphoma are discussed at length and illustrated with high-quality photography. One section, by Kaiserling, describes the ultrastructure, and another, by Stein, the immunological basis for the Kiel classification. The English is clear, and the case for the new classification is well presented. There are many pathologists and clinicians who would not agree with several aspects of this classification and prefer another. However, the book will be a well read text for pathologists involved in the classification of this difficult group of tumours and clinicians responsible for their treatment. The text book is for the specialist but Karl Lennert is to be congratulated on his important contribution to our understanding of lymphoma pathology. The deficiencies in relating prognosis, immunological phenotype and histology will undoubtedly be corrected in the years to come as the classification becomes more widely used.

D. CROWTHER

Thermal Characteristics of Tumours: Applications in Detection and Treatment. R. K. Jain and P. M. Gullino (1980). New York: N.Y. Acad. Sciences. 542 pp. U.S. $95.00.

This volume represents the proceedings of a conference held by the New York Academy of Sciences in March 1979, under the same title.

Most papers concern treatment, and there are 28 relevant to the use of hyperthermia. The papers are grouped into detailed sections, considering for example the thermal properties of normal and neoplastic tissues, the bioheat transfer equation, temperature-response relationships, methods of heating, and clinical aspects. Considerable attention is paid to the calculation of temperature increases resulting from power input. The calculations allow for metabolic heat generation and tissue perfusion, but the effects of major blood vessels are difficult to estimate accurately.

Some useful data for such calculations are included in various chapters (e.g. electrical conductivities and relative dielectric constants of many pig tissues, and the penetration of microwave frequencies in human tissues). In the range of cell lethality the temperature is critical, and this is one of the major problems in the clinical application of hyperthermia. It is a challenge to developing technology to overcome current problems in its application. Time–temperature relationships and temperature measurement are also discussed in some of the chapters, for both whole-body and localized treatments.

Clinical experience with heat is reviewed, including cutaneous tumours and melanomas, with radiofrequency and perfusion techniques. It is clear that the use of hyperthermia, although in its infancy, is a promising new adjuvant in therapy. This one of the areas which is dealt with less fully, particularly with respect to interaction with radiation and with chemotherapy.

The role of thermography in cancer detection is discussed in detail in 12 chapters. These include aspects of sensitivity, imaging techniques, new developments, and the value of thermography in screening for breast cancer. These chapters complement those which discuss additional heat to extinguish tumours, as many of the biological features relevant to the measurement and induction of tissue temperature are similar. The chapters
are well referenced and indexed, and discussions are included. The presentation of the book is of a high standard and is recommended as a detailed and comprehensive treatise on the use of tissue temperature in diagnosis and in therapy. It is unlikely to be bettered until many of the problems discussed have been largely solved.

J. Hendry

Long Term and Short Term Screening Assays for Carcinogens: A Critical Appraisal. IARC Publication Reports. (1980). Geneva: WHO. 426 pp. 40 Sw. Fr.

This is definitely one of the more worthwhile appraisals in this series and offers an acceptable foundation for anyone entering the field of carcinogen screening and a useful reference source for those already in the field.

The first report is concerned with long-term assays, and details practically every pitfall of such systems. This is so important in assay systems which have so many inherent variables. Everything from the administration of the test substance, through animal caging bedding selection, to processing of the data is discussed.

The reports on ‘Mutagenesis Assays in Bacteria’, ‘Mutagenesis Assays in Mammalian Cells’, ‘Transformation in Cell Culture’ and ‘Cytogenetic Damage as an end point in short-term Assay systems’ are well and enthusiastically presented, detailing the advantages and dis-advantages of both, the particular class of screening test and the detailed and varied methods encompassed within each class.

Perhaps the most interesting report in the book is that on ‘Mutagenesis Assays with Whole Mammals’. This is an area that has been relatively poorly studied and theoretically represents the situation closest to that in real life. Conversely, the Yeast, Drosophila and DNA-repair chapters tend to demonstrate that these areas are outmoded.

A. Kinsella

The Occurrence of Tumours in Domestic Animals (NEI Monograph 54). W. A. Priestner and F. W. McKay. Bethesda: National Institutes of Health. 210 pp. U.S. $8.50.

The expectation that research into neoplasia in domestic animals would provide new insight into the origins of human cancer, led to the establishment in 1961 of the Epizootology Section within the Epidemiology branch of the National Cancer Institute.

Data from 15 veterinary schools in the U.S.A. and Canada have been processed at the National Cancer Institute and the details on neoplastic disease are published in the present volume.

Neoplasms in cats were mainly malignant (88%), and horses had the lowest proportion of malignant tumours (40%) with dogs (56%) and cattle (77%) intermediate.

The tumours most commonly seen were:

- Cattle: squamous-cell carcinoma, lymphoma, leukaemia.
- Horse: squamous-cell carcinoma, malignant melanoma, fibrosarcoma.

Cat and Dog; tumours of the skin, haemopoietic and lymphatic tissues, and mammary gland.

In many cases the R (summary relative risk) values are given. For all tumours in dogs the Boxer had R 3·4 and the St. Bernard 3·0. The Pekinese R value was 0·2 for the Beagle (commonly used for carcinogen testing) R was 0·9. High R values in osteosarcomas were seen in the St. Bernard (10·9) and German Shepherd (7·9), whereas in the Chihuahua it was 0·1.

For canine haemopoietic and lymphatic neoplasms, the Boxer headed the list (3·9) with the Bassett Hound (3·6) and the St. Bernard (3·3) very close.

In cats the R value for haemopoietic neoplasms was 4·5 in the Manx breed and 3·1 in Burmese.

The monograph provides a mass of interesting observations and is excellent value at $8.50.

L. N. Owen

Interferon 2. Ed. Gresser (1980). London: Academic Press. 95 pp. £6.80.

Following the successful first volume in 1979, this book will have been enthusiastically awaited by specialists in several fields, not only because it succeeds in bringing together between the same covers diverse aspects of current interferon research, but also because this research is advancing with quite exceptional rapidity simultaneously on all fronts.

Knight deals in the first chapter with the