Thymus and Self: Immunobiology of the Mouse Mutant Nude. JORGEN RYGAARD (1976). London and New York: John Wiley & Sons, in association with F.A.D.L. Copenhagen. 194 pp. Price £6.50 net.

Procedures which accomplish the ablation of thymic function in laboratory animals have long been an indispensable approach to the analysis of cellular and humoral immunity to various antigens. The athymic mutant "nude" mouse is the first animal other than man, to have inherited primary immune deficiency. As such it is a natural host for the classical type of biological experiment designed to emphasize the importance of an organ by its absence.

The book is divided into 2 parts and the first describes the immune system with special reference to the thymus. This is written, purposely, from an elementary standpoint, providing such basic information as is necessary to comprehend what is to follow, but little more. Part Two, which provides the real substance of the volume, initially covers the genetic background and discusses the important practical issues of breeding and husbandry. The effects of "nu" gene homozygosity on the haematological spectrum are described, and the anatomy and pathology of the mutant is the subject of fairly comprehensive treatment. The largest section, however, is devoted to the differences in nude mouse immune responses; viz. diminished antibody production in response to diverse antigenic stimuli and the absence of responses of delayed hypersensitivity type, as illustrated by acceptance of xenografts from a variety of species, including the grass snake.

In many respects, immunological studies in the nude mouse have yielded little more than a confirmation of the earlier pioneer studies of Miller, Parrott and many others, who demonstrated in studies in which the thymus was extirpated, that the organ is essential for full expression of biological integrity. However, in other respects, it continues to prove an invaluable asset in the current reappraisal of the concept of immunosurveillance against neoplasia, as well as providing an *in vivo* system for the study of various therapeutic agents against both animal and human tumour xenografts.

A lucidly written and well illustrated book, this volume is indispensable for the increasing number of laboratory investigators who are active in either of these areas. More particularly, newcomers to the field will soon feel at home with this unique and intriguing accident of Nature.  

M. MOORE

High Energy Photons and Electrons: Clinical Applications in Cancer Management. Ed. S. KRAMER, N. SUNTHERRINGAM & G. F. ZINNINGEN. London and New York: John Wiley & Sons. 363 pp. Price £17.65 net.

This book comprises the papers presented at a conference held at Thomas Jefferson University, Philadelphia in May 1975, together with some verbatim reports of discussion sessions. The words "high energy" are interpreted as applying to linear accelerators and betatrons operating at electron energies above 10 MV. The book is divided into 3 sections; viz, "The need for High Energy Beams in Radiotherapy", "Current Experience with High Energy Beams", and "New Horizons for High Energy Beams".

The first section has 4 papers, 3 concerned with the physical properties of high energy X-ray and photon beams, and one by Hall on the radiobiological properties and their clinical significance for this type of radiation. A paper by Johns and Rawlinson discusses how the penetrating properties of high energy photons depends on the material used for targets and beam-flattening filters, and makes the important point that the energy of the accelerated electrons that produce the X-rays is not an adequate index of radiation quality.

Fletcher, in a review of the dose distribution given by high energy photons, deals with this comment by saying that the only adequate description of an X-ray beam is its penetrating properties in tissue. The paper in this section by Ho, outlines the properties of high energy electron beams, and gives numerous clinical examples of their application. Perhaps the conclusion of this paper can be summarised by selecting 2 sentences: