Book reviews

Prescribing, Recording and Reporting Photon Beam Therapy (Supplement to ICRU Report 50), ICRU Report 62. By ICRU, pp. ix+52, 1999 (ICRU, Bethesda, MD), $65.00
ISBN 0-913394-61-0
ICRU Report 62 is a supplement to ICRU Report 50 published in 1993. The recommendations contained in Report 50 were widely followed in centres worldwide. Report 62 is intended to be used in conjunction with Report 50 when prescribing, recording and reporting photon beam radiotherapy.

Since 1993, there has been a number of improvements in radiotherapy. Imaging techniques have improved, giving much clearer three-dimensional (3D) definitions of target volumes and organs at risk. Engineering of linear accelerators has advanced to MLC and IMRT. Also, treatment planning systems have evolved with better 3D algorithms and outlining tools. The new report takes into account these advances and formulates more accurately some of the definitions and concepts.

The definitions of the volumes required in radiotherapy are clearly set out, including the introduction of the planning organs at risk volume. ICRU Report 62 gives more detailed recommendations on the different margins that need to be considered for planning and reporting. A conformity index is introduced. This can be used when the treated volume totally encompasses the planning target volume and is the quotient of the treated volume and the planning target volume. Internal margin, internal target volume and set-up margin are explained. The internal margin allows for patient movement and variation in size, shape and position of the clinical target volume during therapy. The set-up margin accounts for variation in patient positioning, mechanical and dosimetric uncertainties and transfer errors between planning and treatment set-ups. There are no recommended values given for these margins, which will vary between centres as well as with factors such as technique, anatomical site and treatment machine. Consideration is given as to how the defined margins should be combined. A convention is recommended for colours of the various volumes. For the first time, guidance is given on how to report a series of patients rather than an individual.

Clear clinical examples are given throughout the report. The recommendations are very practical, with very well presented graphical support.

S L Morgan-Fletcher

Clinical Doppler Ultrasound. Ed. by P L Allan, P A Dubbins, M A Pozniak and W N McDicken, pp. x+293, 2000 (Churchill Livingstone, London), £44.95
ISBN 0 443 055491
This paperback text is a review of the use of pulsed, colour and power Doppler imaging for medical diagnosis. The first chapter covers the basic physics of the Doppler process in reasonable depth but in a very approachable manner and with the minimum of graphs. There are adequate references if the reader wishes to obtain more detail. The second chapter deals with haemodynamics and blood flow. It is well illustrated with simple diagrams. The remainder of the book, which comprises a further 12 chapters, covers the clinical applications of Doppler, with emphasis on the more important areas such as the extracranial vessels and the lower limb arteries and veins. Both native and transplanted kidneys are included as is the liver and the male and female genital organs. The final chapter deals with Doppler ultrasound in pregnancy. The illustrations are of very high quality, with considerable use of colour, but despite this the price has been kept to £45.00, which is very reasonable for so much colour illustration. There is a very short discussion of new contrast agents, but clinical application, which is extremely limited as yet, is only barely covered. Clearly this will be something that will be more extensively reviewed in the next edition. The editors have kept to their brief and restricted themselves almost entirely to Doppler, so there is very little attempt to compare this technique with other imaging modalities.

This book represents extremely good value for money, is clearly and concisely laid out, with very little repetition or overlap, and would make a good addition to both the departmental library and a personal collection.

J B Bingham