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**Primer on the metabolic bone diseases and disorders of mineral metabolism**, 8<sup>th</sup> edition, C. J. Rosen, R. Bouillon, J.E. Compston, V. Rosen, editors (Wiley-Blackwell, UK) 2013. 1104 pages. Price: US\$ 137.95

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Metabolic bone diseases and disorders of bone mineral metabolism have always been studied with interest by physicians and endocrinologists. There

is increasing awareness about vitamin D deficiency, osteoporosis and hyperparathyroidism. However, unlike other disorders such as diabetes and thyroid dysfunction, the number of experts available to manage patients with metabolic bone diseases is limited. One of the major deterrents has been limited availability of a text with clear description of the problems of metabolic bone diseases and unambiguous approach needed to solve these. This book fulfils the above need in a lucid manner.

The book has 11 sections with 124 chapters. Each of these chapters has been written by experts with several years of experience. The first section covers in detail the molecular, cellular and genetic aspects of bone structure and formation. Separate chapters on osteocytes, osteoclasts, connective tissue pathways along with signal transduction cascades add depth to the understanding of metabolic bone diseases and osteoporosis. Sections II and III deal with physiology of the bone and covers structure and function of vitamin D, parathyroid hormone (PTH) and calcium sensing receptor. Section IV covers investigation related to metabolic bone diseases. However, there is a scope for improvement. Basic assays like serum calcium, alkaline phosphatase, PTH and vitamin D could have been easily covered here.

Section V on osteoporosis occupies a major portion of the book. All major aspects of osteoporosis such as pathogenesis, diagnosis and management from physicians' and surgical perspective have been covered. Section VI deals with clinical disorders of bone mineral metabolism. This section begins with a chapter on approach to parathyroid disorders followed by newer information on familial primary hyperparathyroidism and covers treatment for vitamin D deficiency as well. The chapter on idiopathic hypoparathyroidism and its complications could have been covered in more details.

Similarly, information on clinical fluorosis and related metabolic bone disease could have also been included as a chapter.

Sections VII and VIII deal with cancer, and sclerosing and dysplastic bone diseases where modern genetic information for these disorders has been detailed. Section IX is on renal stone and its pathogenesis. Though all essential aspects have been covered, information on proximal and distal tubular disorders and their treatment would have added to the complete understanding of renal stones.

Section X, on oral and maxillofacial biology and pathology is a new addition and contextual for clinicians in view of the importance of bone mineral homeostasis in oral health. It is difficult to find this information in other textbooks of endocrinology. Similarly, section XI on interaction of bone disorders in perspective of abnormalities of other disorders such as obesity, diabetes and immune system provides information which is difficult to find in other books.

Lack of information on research methods related to metabolic bone diseases is a major limitation of the book. A chapter on osteoblast cultures, stem cells for bone regeneration, assays for advanced investigations such as calcium sensing receptor and role of next generation sequencing for diagnosis of rare bone mineral disorders would have attracted the attention of basic bone biologists and physician scientists.

Overall, this book is appropriate for postgraduate students to understand various metabolic bone disorders.

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