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# Endocrine Disorders in Kidney Disease

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Editors

# Endocrine Disorders in Kidney Disease

Diagnosis and Treatment

 Springer

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## Preface

This inaugural edition of *Endocrine Disorders in Kidney Disease: Diagnosis and Treatment* is dedicated to examining the complex interplay between endocrine and kidney disorders and how this interrelationship impacts patients with chronic kidney disease, including those receiving renal replacement therapy in the form of dialysis and kidney transplantation. Indeed, chronic kidney disease patients are a unique population among whom a myriad of hormonal derangements may exist. While there has been growing appreciation of this important link between endocrinology and nephrology, many endocrine disorders may remain latent and under-recognized among kidney disease patients.

Hence, this scholarly work is the product of a collaborative effort among experts in areas of endocrinology and nephrology in order to provide a comprehensive overview of the most relevant endocrine disorders observed in the chronic kidney disease population. Part 1 entitled *Diabetes, Insulin, Resistance, and the Metabolic Syndrome* presents a practical overview of areas commonly encountered in the clinical management of diabetic kidney disease patients, as well as kidney transplant recipients who develop new onset diabetes. Part 2 entitled *Thyroid Dysfunction* presents innovative themes pertaining to the high prevalence of thyroid dysfunction in kidney disease, including real-world interpretation of thyroid functional derangements and emerging data on thyroid dysfunction and outcomes in the chronic kidney disease population. Part 3 presents highly pertinent information on *Gonadal Disorders*, which include testosterone deficiency and other testicular conditions, as well as amenorrhea and estrogen disorders in the chronic kidney disease population. Also included in this section is a chapter on pregnancy in kidney disease describing maternal, fetal, and obstetric outcomes, as well as general principles of management. Part 4 entitled *Dyslipidemia* provides valuable insights into the vast spectrum of lipid disorders associated with chronic kidney disease and nephrotic syndrome, as well as a rigorous summary of existing evidence and clinical practice guidelines addressing the management of dyslipidemia in kidney disease. Part 5 provides an extensive overview of the full-spectrum of *Mineral Bone Disorders* encountered in kidney disease, including calcium, phosphate, fibroblast growth factor 23, vitamin D, and parathyroid hormone alterations; osteoporosis and osteomalacia; and mineral bone derangements observed in kidney transplantation. Emerging data on *Obesity and Adipokines* in kidney disease are presented in Part 6. Then in Part 7 entitled *Other Pituitary Disorders*, experts in the field describe

pituitary disorders in kidney disease including growth hormone disorders and abnormal stature, as well as prolactin, glucocorticoid, and arginine vasopressin derangements. Finally, Part 8 synthesizes many of the aforementioned themes by describing the *Multi-System Implications of Endocrine Derangements in Kidney Disease*, including endocrine derangements in acute kidney injury, as well as the interaction between nutrition and endocrine disorders in kidney disease.

We hope that the insights provided by this scholarly endeavor will engender greater understanding of the magnitude of impact that endocrine disorders have upon the kidney disease population, as well as identification of persistent gaps in knowledge that point toward future areas of investigation, with the overarching goal of improving the health and survival of chronic kidney disease patients. We thank all of our authors for their extraordinary expertise and valuable contributions, as well as the Springer editorial team for their tremendous support, which made the development of this unique textbook and resource possible.

Orange, CA, USA  
Orange, CA, USA  
Los Angeles, CA, USA

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Kamyar Kalantar-Zadeh  
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# Contents

## Part I Diabetes, Insulin Resistance, and the Metabolic Syndrome

- 1 Insulin Resistance and the Metabolic Syndrome in Kidney Disease (e.g., the Cardiorenal Metabolic Syndrome) . . . . .** 3  
Vikram Patney, Sivakumar Ardhanari,  
and Adam Whaley-Connell
- 2 Diabetic Kidney Disease . . . . .** 15  
Robert C. Stanton
- 3 Glucose Homeostasis and the Burnt-Out Diabetes Phenomenon in Patients with Kidney Disease . . . . .** 27  
Masanori Abe, Csaba P. Kovcsdy, and Kamyar  
Kalantar-Zadeh
- 4 Glycemic Metrics and Targets in Kidney Disease . . . . .** 39  
Joshua J. Neumiller and Irl B. Hirsch
- 5 Diabetic Pharmacotherapies in Kidney Disease. . . . .** 49  
Deborah A. Chon, Rachael T. Oxman, Rashmi S. Mullur,  
and Jane Eileen Weinreb
- 6 Diabetes Mellitus and Renal Transplantation . . . . .** 75  
Curtiss B. Cook and Harini Chakkera

## Part II Thyroid Dysfunction

- 7 Evaluating Thyroid Function Tests in Patients with Kidney Disease . . . . .** 85  
Stephanie Smooke Praw, Jennifer Sue An Way,  
and Rebecca Weiss
- 8 Thyroid Status and Outcomes in Kidney Disease . . . . .** 97  
Connie M. Rhee, Gregory A. Brent,  
and Kamyar Kalantar-Zadeh

### Part III Gonadal Disorders

- 9 Testosterone Deficiency and Other Testicular Disorders in Kidney Disease** ..... 113  
Anna L. Goldman and Shalender Bhasin
- 10 Amenorrhea and Estrogen Disorders in Women with Kidney Disease** ..... 127  
Kavitha Vellanki and Holly Kramer
- 11 Pregnancy in Kidney Disease** ..... 139  
Madeleine V. Pahl

### Part IV Dyslipidemia

- 12 Lipid Disorders Associated with Chronic Kidney Disease and Nephrotic Syndrome** ..... 153  
Hamid Moradi and Nosratola D. Vaziri
- 13 Drugs for Treatment of Dyslipidemia Available in the USA** .... 171  
Elani Streja and Dan A. Streja

### Part V Mineral Bone Disorders

- 14 Calcium Homeostasis in Kidney Disease** ..... 199  
Michel Chonchol and Jessica Kendrick
- 15 Phosphorus Retention and Elevated FGF-23 in Chronic Kidney Disease** ..... 207  
Yoshitsugu Obi and Connie M. Rhee
- 16 Vitamin D and Parathyroid Hormone in Kidney Disease** .... 223  
Sagar U. Nigwekar
- 17 Management of Bone Disorders in Kidney Disease** ..... 231  
Stuart M. Sprague
- 18 Mineral and Bone Disorders Following Renal Transplantation** ..... 243  
Hatem Amer and Rajiv Kumar

### Part VI Obesity and Adipokines

- 19 Obesity in Kidney Disease** ..... 265  
Peter Stenvinkel
- 20 Adiponectin and Leptin in Kidney Disease Patients** ..... 277  
Jerry Zhong Yu, Kamyar Kalantar-Zadeh,  
and Connie M. Rhee



**Part VII Other Pituitary Disorders**

**21 Growth Hormone Disorders and Abnormal Stature in Kidney Disease** . . . . . 293  
 Amira Al-Uzri, Annabelle N. Chua, and Bradley A. Warady

**22 Other Pituitary Disorders and Kidney Disease** . . . . . 309  
 Wenyu Huang and Mark E. Molitch

**23 Endocrine System in Acute Kidney Injury** . . . . . 321  
 Alice Sabatino, Graziano Ceresini, Michela Marina,  
 and Enrico Fiaccadori

**24 Nutrition and Endocrine Disorders in Kidney Disease** . . . . . 333  
 Anuja Shah and Joel Kopple

**Index** . . . . . 347

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