

"Chronic Kidney Disease and Type 2 Diabetes" is published by the American Diabetes Association, 2451 Crystal Drive, Arlington, VA 22202. Contact: 1-800-DIABETES, <https://professional.diabetes.org>.

The opinions expressed are those of the authors and do not necessarily reflect those of AstraZeneca, Bayer, or the American Diabetes Association. The content was developed by the authors and does not represent the policy or position of the American Diabetes Association, any of its boards or committees, or any of its journals or their editors or editorial boards.

©2021 by American Diabetes Association. All rights reserved. None of the contents may be reproduced without the written permission of the American Diabetes Association.

Acknowledgments

Editorial and project management services were provided by Debbie Kendall of Kendall Editorial in Richmond, VA. M.R.W. is supported by National Institutes of Health grants R01 HL-127422, U01 DK-16095-01, U01 DK-106102, and R01 DK-120886. R.A. is supported by National Heart Lung and Blood Institute grant R01 HL126903 and U.S. Veterans Administration grant I01 CX001753. P.R. is supported by Novo Nordisk Foundation grant PROTON Personalized Treatment of Diabetic Nephropathy (NNF14OC0013659).

Dualities of Interest

M.R.W. has served on a clinical trial steering committee for Vifor and on advisory boards for AstraZeneca, Boehringer Ingelheim, Janssen, Merck, Novo Nordisk, and Vifor.

R.A. has received consulting fees from Akebia, AstraZeneca, Bayer, Boehringer Ingelheim, Chinook, Diamedica, Merck, Reata, Relypsa, and Sanofi and has received royalties from UpToDate.

P.R.'s institution has received honoraria from his teaching and consultancy activities from Astellas, AstraZeneca, Bayer, Boehringer Ingelheim, Eli Lilly, Gilead, Merck, Merck, Sharp, & Dohme, Mundipharma, Novo Nordisk, Sanofi, and Vifor.

J.B. serves as a consultant for Abbott, Adrenomed, Amgen, Array, AstraZeneca, Bayer, Boehringer Ingelheim, Bristol Myers Squibb, CVRx, G3 Pharmaceutical, Impulse Dynamics, Innolife, Janssen, LivaNova, Luitpold, Medtronic, Merck, Novartis, Novo Nordisk, Relypsa, Roche, V-Wave Limited, and Vifor.

K.C.N. has been a consultant to Atlantis Health Care, served on an advisory board for ESRD Network 3, and been a board member of the Forum of ESRD Networks.

S.D.-J. has received research grants from the National Institutes of Health, and his institution has received funding for clinical trials in which he was an investigator from AstraZeneca, Boehringer Ingelheim, and Novo Nordisk; he has served as a consultant or advisory board member for AstraZeneca, Bayer, Boehringer Ingelheim, Janssen, Merck, and Sanofi; and he is a stock shareholder in Aerami Therapeutics and Jana Care.

G.L.B. has been a consultant to Alnylam, AstraZeneca, Bayer, Ionis, KBP Biosciences, Merck, and Vifor and has served on clinical trial steering committees for Bayer, Novo Nordisk, and Vascular Dynamics.

No other potential conflicts of interest relevant to this compendium were reported.

Author Contributions

All authors researched and wrote their respective sections. Lead author M.R.W. reviewed all content and is the guarantor of this work.

About the Covers

Male kidneys. Credit: Science Photo Library / Sebastian Kaulitzki / Getty Images

TABLE OF CONTENTS

- 1** | Introduction
Matthew R. Weir, MD
- 2** | Pathogenesis of Diabetic Nephropathy
Rajiv Agarwal, MD, MS
- 8** | Risk Factors, Symptoms, Biomarkers, and Stages of Chronic Kidney Disease
Peter Rossing, MD, DMSc
- 13** | The Interplay Between Diabetes, Cardiovascular Disease, and Kidney Disease
Muhammad Shariq Usman, MD, Muhammad Shahzeb Khan, MD, MSc, and Javed Butler, MD, MPH, MBA
- 19** | Socioeconomic and Racial Disparities Related to Chronic Kidney Disease and Type 2 Diabetes
Keith C. Norris, MD, PhD
- 23** | Screening, Monitoring, Prevention, and Treatment Strategies for Chronic Kidney Disease in Patients with Type 2 Diabetes
Sam Dagogo-Jack, MD, DSc
- 28** | Slowing Diabetic Kidney Disease Progression: Where Do We Stand Today?
Sandra C. Naaman, MD, PhD, and George L. Bakris, MD, MA
- 33** | Conclusion
Matthew R. Weir, MD
- 34** | References