



**NEUROPATHIC  
PAIN:  
A Clinical Guide  
to Diagnosis**

**Robert J. Schwartzman, MD**

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*Neuropathic Pain: a Clinical Guide to Diagnosis* is a practical volume written by a master clinician and pain specialist. Dr. Robert Schwartzman redefined Reflex Sympathetic Dystrophy (aka CRPS) with nuanced elaboration on other forms of neuropathic pain, from molecules to pain behavior. This book is a body of knowledge culminating in decades of experience diagnosing and treating neuropathic pain by an astute and compassionate observer. The book is equally valuable for all physicians who deal with pain, including physiatrists, neurologists, and general medicine physicians.

—Sayed Ausim Azizi, MD, PhD, FANA  
Department of Neurology  
Yale University School of Medicine

Dr. Robert Schwartzman stood at the forefront of the field of neurology. He was renowned for his unrivaled expertise in evaluating, treating, and diagnosing conditions associated with neuropathic pain. With a vast wealth of knowledge backed by years of experience, Dr. Schwartzman cemented his position as an indisputable leader in his field. This is another of his books that proves it. This book about neuropathic pain is a must-read by everybody interested in this subject matter.

—G. Peter Gliebus, MD FAAN,  
Associate Professor, Academic Chair of Neurology  
Drexel University College of Medicine

Over the years, I have had the opportunity to observe many examiners in Neurology, but no one has taught me more than Dr. Schwartzman, my chairman, for more than 25 years. With each Chairman's Rounds, there was something he taught me, along with the rest of the audience. Dr. Schwartzman was the consummate examiner and diagnostician; nowhere was this more evident than in his approach to neuropathic pain. His academic and thoughtful approach to the diagnosis and treatment of neuropathic pain is unparalleled. He has captured his decades of experience in writing this monumental work dedicated to diagnosing neuropathic pain. It is truly a gift to the medical community and will be an essential read for anyone caring for patients with neuropathic pain.

—Terry Heiman-Patterson, MD  
Professor of Neurology  
Director Center for Neurodegenerative Diseases  
Temple University Lewis Katz School of Medicine

Dr. Schwartzman was the greatest clinical teacher I have ever met. His method, warmth, and vast knowledge were unparalleled. All of us still repeat his sayings or aphorisms, which were tremendously helpful as a teaching tool but also colorful and funny.

I had the privilege of being one of his Chief Residents. Six months that helped shape me and in which I learned and grew tremendously. Work was punctuated by our Friday evening meetings to debrief and talk about the previous week, the future, and life in general. I consider Dr. Schwartzman my principal mentor.

I will never forget him, and still tell my children about the great teacher who helped me become a neurologist and a better doctor.

—Victor C. Urrutia, MD, FAHA

**Professor of Clinical Neurology**

**Director, The Johns Hopkins Hospital Comprehensive Stroke Center**

**Director, Sheikh Khalifa Stroke Institute**

**JHMI Medical Director**

**Director, Global Center for Organized Stroke Care**

Dr. Schwartzman's teachings are exceptional pearls of wisdom: the knowledge and astute examination skills he taught, as well as his insights about life in general. He helped me become a good doctor and a good person.

He said medicine is a profession where you get to help people every day, and the added benefit is that you get paid for it!

—Rohini Bhole, MD

**Associate Professor**

**Department of Neurology**

**University of Virginia**

**Drexel Neurology Residency Graduate 2014**

I was privileged to serve under Dr. Schwartzman as a chief resident at Drexel Univ College of Medicine. The knowledge base he provided enabled me to open my own practice specializing in Complex Regional Pain Syndrome. His teachings carry me through my days as I often refer to his published papers and books. As a result, my patients benefit profoundly, and I am blessed with a very rewarding career. This book contains a treasure of knowledge that is an indispensable reference and a gift to all physicians.

—Lara Edinger, DO

**Edinger Pain Management**

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What a gift to have this manuscript left behind by such a highly respected neurologist and master diagnostician. Dr. Schwartzman taught me the wealth of information to be gleaned from the subtleties of a careful physical exam. *Neuropathic Pain: a Clinical Guide to Diagnosis* offers those seeking expert guidance a way to fill the void created by the passing of a generous scholar and tireless advocate of the patient suffering from neuropathic pain.

—Lynn Durmala, FNP-BC

Dr. Schwartzman had a brilliant gift of quickly assessing patients in a way that few others could because of his comprehensive understanding of the intricacies of the neurological system, yet in a compassionate and caring manner. Through my interactions with patients, I heard countless stories of his astounding ability to thoroughly diagnose conditions that puzzled patients' prior caregivers as they struggled with debilitating pain. He was always professional, knowledgeable, and kind—a rare physician with a blend of these admirable qualities.

I had the honor of knowing Dr. Robert Schwartzman as a patient initially, who, after a long search, was able to provide an accurate diagnosis and treatment. He became a wonderful mentor from whom I learned so much, attending his pain clinics for a decade. Through this mentorship, I then provided physical therapy for many of his patients with complex regional pain syndrome and brachial plexus traction injuries.

Finally, Dr. Schwartzman loved to share and teach what he discovered through decades of practice and research. I strongly believe that the insights conveyed in this book will continue to aid clinicians in diagnosing and understanding neurological pain disorders.

—Irene Connolly, PT, MS

Owner Cedars Therapy, LLC

### **“Standing on the shoulders of Giants”**

Dr. Schwartzman was the most influential mentor I have had in my career. He had an encyclopedic knowledge of neurology (and everything else!), sage-like wisdom, and a great sense of humor! I am honored and privileged to be counted among his residents and chief residents. In the Winter of 2008, as I navigated the neurology residency interview trail, Drexel University/Hahnemann University Hospital was an interview I will never forget. I remember watching in awe and admiration as Dr. Schwartzman, the Neurology Maestro he was, masterfully conducted Neurology Grand Rounds. In this exact manner, every morning during Morning Report, Dr. Schwartzman, taught us how to use key pieces of the history and neurologic exam to precisely localize neurologic lesions as well as formulate a sophisticated differential diagnosis. “Age and Chief Complaint” became a statement all of his residents became familiar with. To this day, I continue to use the classical neurology teachings of Dr. Schwartzman in the evaluation of patients and in teaching my trainees. This book will be an invaluable resource to all who consult it, for it contains the distilled wisdom of an Academic Giant and one of the most talented Neurologists of our time, Dr. Robert J. Schwartzman.

—Gilbert Mbeo MD

**Assistant Professor, University of Central Florida**

**Board Certified in Adult Neurology, American Board of Psychiatry and Neurology**

**Board Certified in Neurocritical Care, United Council of Neurologic Subspecialties**

**Board Certified in Interventional Pain Management, American Board of Psychiatry and Neurology**

**Neurologist, Neurointensivist and Interventional Pain Management Specialist**

## **DEDICATION**

*For Sarah and Evan  
because Pa promised*

# IN MEMORIAM

Robert Jay Schwartzman, MD  
1939–2021



Dr. Robert J. Schwartzman was an Emeritus Professor and former Chairman of the Department of Neurology at Drexel University College of Medicine in Philadelphia, PA. At Drexel and his previous academic appointments, he always maintained a large clinical practice, treating patients for over 40 years.

He dedicated a major portion of his research and practice to treating chronic pain. Dr. Schwartzman taught students, residents, and colleagues that persistent pain was the symptom most likely to cause a patient to seek medical help, making pain a significant component of consultative neurology.

Dr. Schwartzman is best known for his groundbreaking work in the treatment of Complex Regional Pain Syndrome (CRPS), also known as Reflex Sympathetic Dystrophy (RSD). He founded the first CRPS clinic in the U.S. while at the Thomas Jefferson University School of Medicine, pioneering the use of ketamine as a treatment for CRPS and other pain conditions.

After Dr. Schwartzman retired from academic responsibilities and clinical practice, he wrote this book. This book is the result of decades of clinical experience and research. It is intended as a guide for practitioners, presenting an organized approach to diagnosing neuropathic pain.

Marco Island, Florida  
2023



# ACKNOWLEDGEMENTS

I could not have completed the task of bringing this book to press after my husband's death without the support of my children, Jane (Bergman), Nancy, and David. A special thank-you must go to my son-in-law, Raymond Bergman, who tirelessly and patiently addressed my many and constant technical problems with electronics.

I would be extremely remiss if I did not thank Kirsten Erwin, whose dedication, editorial assistance, and expertise made this book possible. I also thank Dr. Helen Tuzio for her valuable insights and assistance in the preparation of this work.

Lastly, I thank my husband's many colleagues who offered comments, suggestions, and insights for this work. Unfortunately, I do not know their names, but luckily Dr. Schwartzman did.

Denise D. Schwartzman, 2023

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