

## Preface



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*Guest Editor*

Upper urinary tract stones are a significant source of morbidity and cost in Western society. With genetic, environmental, and metabolic risk factors for stone formation, the disease affects a large cross-section of the population. Consequently, strategies aimed at stone prevention are attractive. To that end, a thorough understanding of the pathogenesis and pathophysiology of stone disease is critical to target key physiologic processes that can be manipulated to prevent stone formation. Likewise, the identification of individuals at high risk of stone formation can streamline the selection, evaluation, and treatment of patients who have a history of stones.

Despite efforts to prevent stone formation, however, stones do and will continue to occur. Therefore surgical treatments with the least morbidity and highest effectiveness are sought continuously. New innovations in minimally invasive surgical modalities have increased their effectiveness and reduced the morbidity so that ureteroscopy and percutaneous nephrostolithotomy now compete with shock wave lithotripsy as first-line therapy for renal and ureteral stones. Although

shock wave lithotripsy technology has remained relatively static during the last 2 decades, recent efforts to optimize treatment parameters are resulting in more efficient and efficacious shock wave treatment as well.

In this issue of *The Urologic Clinics of North America*, all aspects of stone disease, from pathogenesis to surgical treatment to prevention, are explored to provide the reader with a comprehensive understanding of stone disease and an update on the most recent innovations in surgical and medical management. The contributing authors, all leaders in the field of stone disease, have graciously lent their expertise to this special issue devoted to urolithiasis.

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