This article outlines the recent state of the art in the metabolic diagnosis of stone disease. The current literature in the field of urolithiasis-including the existing German and EAU-Guidelines as well as the Conference Book of the 1st International Consultation on Stone Disease-was critically reviewed. As far as possible the references were rated according to the EBM criteria. The occurrence of stone disease in the western world is increasing greatly. Modern lifestyle, dietary habits and excess weight-problems of affluent societies-are emerging as the important promoters of the "stone boom" in the new millennium. This even affects children, whose stone prevalence is otherwise significantly less than that of adults. Criteria for the high-risk group of stone formers were clearly defined. A diagnostic standard is formulated for the basic and the elaborate metabolic evaluation of a stone patient. The diagnostic pathways for the most important stone types and metabolic disorders, respectively, are described. The present concept allows a precise risk classification of each stone former and facilitates the decision whether stone-specific measures in addition to the basic metaphylaxis are recommendable or not.