Kurzfassung: Cystic and small solid renal masses are frequently detected renal lesions with increasing incidence in the elderly population. Therefore, renal cell carcinomas are also increasingly detected as incidental findings on imaging. Nephron-sparing surgery has been the method of choice for the treatment of small solid renal masses. However, a large percentage of these solid renal lesions is benign and most of the incidentally detected malignant renal tumors such as renal cell carcinomas (RCCs) are smaller, with lower stage and are less aggressive than symptomatic RCCs. In addition, a correlation with size of the solid lesion and growth rate has been described ranging from 0.13-0.31 cm per year. Therefore, active surveillance is now a more frequently applied approach to deal with these incidentally detected small solid renal lesions (<3-4cm). Whereas in solid enhancing lesions < 1cm in diameter active surveillance is the treatment of choice at any age, in larger lesions management is mainly depending on clinical factors including the age and the performance state of the patient. The role of the radiologist is to exclude benign lesions such as Bosniak I and II cysts and angiomyolipomas as well as non-neoplastic conditions mimicking a tumor (infection, infarct, vascular anomalies and aneurysms).

Lernziele: In patients with small solid renal lesions stratified for active surveillance close followup with note of the growth rate has to be performed in order not to miss the time point of delayed treatment in case of a fast growth rate or clinical progression.