

Kidney Ablation with the Cube Navigation System

Summary

Microwave ablation of a borderline-sized right renal cell carcinoma in solitary kidney under CT guidance.



Figure 2: Placement of the ablation antenna through the Access Cube after navigation in the software

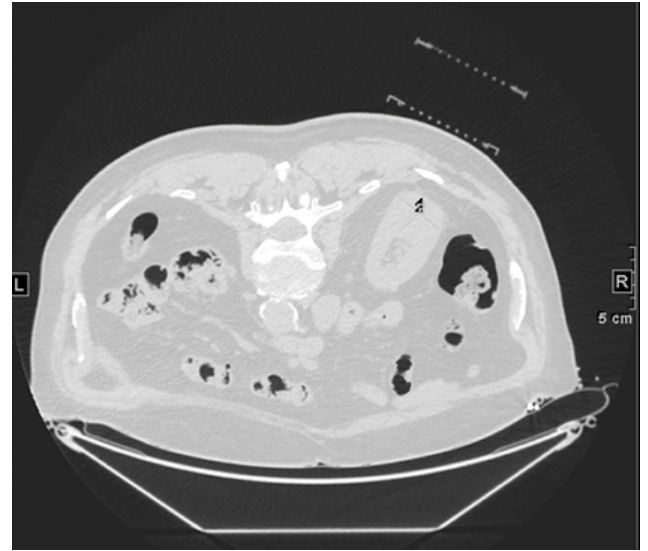


Figure 1: Initial planning scan showing tumor location and Access Cube positioning

Patient Profile

82 year old male with History of coronary disease and kidney failure. Left side nephrectomy in 1998 due to renal cell carcinoma. First diagnosis of kidney tumor on the right with increasing size

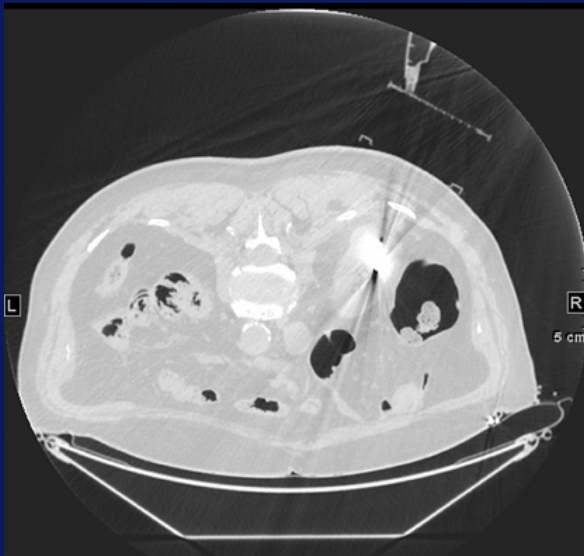


Figure 3: Verification scan with ablation device held in place by the Access Cube

Procedure

An open partial resection of the tumor was initially planned. Due to the single kidney and immediate postprocedural need for dialysis, patient was deemed inoperable. A diagnostic scan showed the tumor to be of borderline size (4.2 cm) and therefore suitable for ablation. The Cube Navigation System was chosen as the preferred navigation solution to improve the accuracy of needle placement during this procedure (Figures 1 & 2).

Result

Target was reached after 3 verification scans (Figure 3) and the entire procedure was performed under intubation anesthesia with a procedure duration of approximately 90 minutes. The needle holding function of the Access Cube supported the ablation antenna in place during the entirety of the procedure. Ablation was performed without complications and postprocedural controls indicated complete coverage of the planned ablation zone. Patient was scheduled for a follow up in 3 months.



Team

Dr. med. Mohammed Shamseldin, EBIR, DeGIR
Senior Radiologist and Head, Interventional
Radiology
Institute for Diagnostic and Interventional
Radiology and Neuroradiology
Helios Klinikum Erfurt, Germany