The Role of Percutaneous CT Guided Radiofrequency Ablation in the Treatment of Primary and Secondary Lung Tumors

Abstract

Ablation of lung tumors is an expanding area within interventional oncology. Radiofrequency ablation is especially among the most widely used of these thermal ablation methods. Which of these ablation technologies becomes the preferred technique for lung tumors remains to be seen. Evidence based research studies concluded that the safety profile was sufficiently well understood for ablation to be performed but that its role relative to other treatment modalities is still unclear.

The efficacy of RF ablation therapy of pulmonary neoplasms is mainly determined by pre-ablation tumor size and location in relation to the hilum. Successful ablation of pulmonary metastases is more likely for peripheral lesions of < 3cm. The preablation tumor size (of < 3cm) is the most significant independent predictor of ablation success. Careful selection of cases where the benefit of ablation therapy will outweigh the potential complications is key to ensure optimal patient outcomes.

Keywords: Lung tumors, radiofrequency ablation, metastases, RFA, minimally invasive techniques.