



## Value of C-arm computed tomography in radiofrequency ablation of small lung lesions

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**ABSTRACT.** This study aimed to explore the value of C-arm computed tomography (CT) applications in radiofrequency ablation (RFA) of small lung lesions. The puncture success rate, cumulative survival rate, tumor response rate, complications, and radiation dose during C-arm CT-guided RFA of 36 small lung lesions in 34 patients were analyzed. In 35 RFA procedures for 36 small lung lesions, the puncture success rate was 100%. There were 7 cases of complications, including 4 cases of pneumothorax (puncture suction or closed chest drainage was not required) and 3 cases of hemoptysis. The cumulative survival rate in the 34 patients after RFA was 100% at 6 months, 69.0% at 1 year, and 60.0% at 2 years. In assessments of 36 foci imaged during the follow-up period, the total response rates at 1 month, 3 months, and 6 months were 77.8% (28/36), 69.7% (23/33), and 61.3% (19/31), respectively. The mean cumulative dose and average effective dose during surgery were  $120.1 \pm 61.4$  mGy and  $3.5 \pm 1.7$  mSv, respectively. The application of C-arm CT to RFA of small lung lesions could provide abundant information to the surgeon

and increase the lesion puncture success rate and is considered to be a promising image-guided technology.

**Key words:** C-arm CT; Small lung lesions; Radiofrequency; Radiation dose