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RADIOFREQUENCY ABLATION FOR RENAL TUMORS: A SINGLE CENTER EXPERIENCE

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Purpose: We tried to evaluate the long-term oncological outcomes of radiofrequency ablation (RFA) for renal tumors which was performed in a single institution.

Materials & Methods: 242 patients (183 males and 59 females) who underwent RFA for a total of 317 renal mass lesions were retrospectively analyzed. Regular follow-up with imaging study was performed 1, 3, and 6 months after treatment and annually thereafter. Kaplan-Meier analyses were performed to evaluate the postoperative survival outcomes. The severe complications were defined as Clavien-Dindo classification ≥ 3 .

Results: After a median follow-up of 30.9 (IQR 21 – 46) months, the median size of tumor was 2.6cm (IQR 1.5 – 3.4). The technical success (complete ablation on first follow-up) was achieved in 235 (97%) patients and secondary ablations were required for the residual lesions in 7 patients (3%). The estimated 5-year recurrence-free survival rate, disease specific survival and overall survival were 93.1%, 93.6% and 87.0%, respectively. Local recurrence was observed in 14 (5.8%) patients and metastatic lesions in 2 (0.8%) patients. Although the overall renal function showed tendency to decrease after RFA, the differences were not statistically significant ($p > 0.05$). The severe postoperative complications were observed in 7 patients (2.9%) after treatment.

Conclusion: The RFA showed a high rate of technical success with low complication rate and durable local control in patients with small renal tumors.