RFT showed preliminary enthusiastic results in the treatment of HCC, with high rate of complete response and good global and disease free survivals. Nevertheless, major complications are described and some authors have reported rapid intrahepatic neoplastic progression after RFTA. This study reports several additional cases of unexpected progression disease after ablation.

The data derive from an “audit” on RFTA in North East Italy, involving a collaborative group of 13 centres on HCC (GENE-Gruppo Epatocarcinoma Nord-Est). Data were collected utilizing a form on clinical, morphological, functional data such as age, grading, serum AFP level, Child-Pugh score, number and size of the lesions, type of needle, number of insertions, collateral effects. Inclusion criteria were according with AISF and EASL guidelines. Patients were treated with cooled-tip needles (Radionics, Kerna) in 96% of the cases and with RITA medical system in 4%. Treatment result were estimated by dual phase CT 30 days from procedure, US, contrast US or CT and serum AFP were performed every 3 months.

Our study included 248 male and 82 female (mean age 68). 254 pts (77%) presented single nodule; 23% multifocal disease. Collateral effects were reported in 34% of patients, with isolate cases of major effect as pneumothoracis, haemoperitoneum, bowel perforation, haemobilia, seeding and abscess. In 9 cases (2,7%) a rapid and unexpected progression of HCC was observed, with an increase of number and/or dimension of nodules of liver lesions. Most patients after a complete HCC ablation showed the appearance of new (1-13) nodules at a mean time interval from demonstration of therapeutic success of 3,5 months (range 1-9). Despite previous reports, no correlation with AFP levels, proximity to vascular structures or tumor grading was observed.

RFTA of liver tumors is a well tolerate technique, but caution should be kept in mind when choosing this approach for number and severity of side effects and the possibility of rapid and unjustified progression of HCC after treatment. Why do these patients develop this severe, unexpected complication, is an open question.