Background: The purpose of this paper was to review our experience with radiofrequency ablation (RFA) in the management of liver tumors.

Methods: Since 1999, RFA is used to treat malignant hepatic lesions that are not considered as surgically resectable because of size, location, multifocality or inadequate functional hepatic reserve. RFA is used intraoperatively under general anesthesia in 20 patients, after laparotomy, laparoscopy, or through the percutaneous route. Fifteen patients received underwent one RFA, four underwent two and one patient underwent three RFA (total: 26 intraoperative RFA). During the procedure one to six applications were used. Seventeen RFA were conducted in surgical curative intent (R0). In 10 cases, unique or multiple hepatic resections were performed during the procedure, with or without bowel resection. In 6 other cases, resection of adenopathies or peritoneal cancerous tissue was also performed. Primary tumour was colorectal adenocarcinoma in 9 cases, hepatocarcinoma in 4 cases, pancreas adenocarcinoma in 2 cases.

Results: After the procedure, all patients presented mild fever (38-39°C) attributed to the hepatic tissue necrosis. No patient died during the postoperative period. There was two septic complication: one patient with tumoral bile duct dilatation developed infected biliary fistula and one developed intraabdominal abscess treated by percutaneous drainage. At follow-up (November 2000), 4 patients died, all from their cancer. No patients developed cancer recurrence at the site of RFA. Twelve patients were considered in remission.

Conclusions: Radiofrequency ablation seems to be a useful tool to treat unresectable liver tumours. RFA may render operable patients who were not candidate for surgical resection a few years ago. However, RFA should be limited to non-resectable lesions.