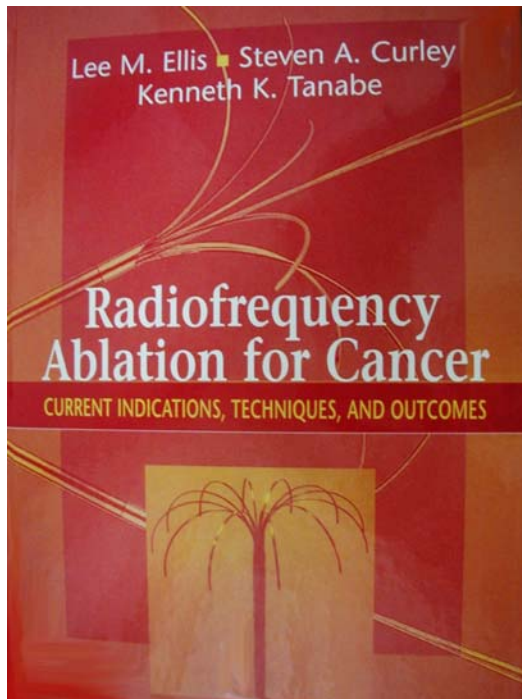


RADIOFREQUENCY ABLATION FOR CANCER

L.M. Ellis, S.A. Curley, K.K. Tanabe, Springer Verlag, 2004, ISBN 0-387-95564-X



Technologic advances have provided new methods for the surgical treatment of malignant tumors. This minor revolution in surgical therapy began with the widespread use of laparoscopy for the diagnosis and treatment of various abdominal malignancies. More recently, radiofrequency ablation (RFA) has been used to treat malignant disease in the liver. Although prior ablative therapies such as cryotherapy or ethanol injection have been used for malignant liver tumors, the complication rates have been moderately high and efficacy has been suboptimal. There has been a great deal of enthusiasm for the increased use of RFA not only for liver tumors but also for tumors in other locations. It is well established that the complication rate associated with RFA for tumors in various anatomic locations is relatively low. Specifically, when compared to cryoablation of liver tumors, RFA of liver tumors is associated with reduced morbidity. However, RFA is not yet in widespread use for malignant disease, and the long-term outcome of this

treatment modality has yet to be determined.

This book on RFA for cancer addresses mainly hepatic tumors. The use of RFA for malignant liver neoplasms is approved by the Food and Drug Administration (FDA) and is now becoming more widespread throughout the world. It is important to point out that the indications for the use of RFA for liver tumors vary among treating physicians. The gold standard for the treatment of malignant liver tumors remains resection until such time as long-term follow-up of patients treated with RFA demonstrates equivalent or better results with respect to survival, morbidity, and quality of life. The use of RFA for malignant hepatic tumors has increased the number of patients who are now surgical candidates because RFA can be used in combination with hepatic resection for bilobar tumors that would otherwise be deemed unresectable. Experienced oncologists recognize that highly aggressive tumors are infrequently affected by surgical therapy. Therefore, the addition of chemotherapy to RFA of malignant hepatic tumors is a natural strategy to explore, and this topic is carefully considered in this book. With the relatively low complication rate associated with RFA, surgeons now have the option of “debulking” hepatic tumors.

Recognizing that RFA can produce complete thermal tumor necrosis and is associated with relatively low complication rates, clinicians have investigated the use of RFA for benign and malignant tumors at others anatomic sites. Although one might anticipate that the complication rate for RFA of pulmonary and thyroid tumors would be high, initial experience suggests that RFA for lesions in these sites is feasible. The results reported in this book are in a highly selective group of patients studied on clinical protocols.

Lastly, it is critically important to understand the role of radiographic imaging in directing and monitoring the ablative process. It is also necessary for radiologists and oncologists to understand the radiographic changes associated with successful ablation versus recurrent disease the use of radiographic imaging for RFA is covered in a separate section in this book.

Furthermore, some of the data may be difficult to interpret because RFA equipment continues to evolve; more powerful and larger arrays are continually being developed.