Cryoablation/Microwave/IRE/HIFU

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Lecture : Minimally invasive image-guided tumor ablation using thermal, non-thermal or chemical have been utilized in the treatment of primary liver cancer (e.g. HCC) and secondary liver cancer (e.g. colorectal metastasis). As the trend continues toward the minimally invasive and image-guided treatment of tumors, percutaneous ablations have begun to partake a bigger role in oncology. Over 200,000 cases of liver tumor ablation have been performed globally. Although most of tumor ablation techniques in the early era were thermal ablation such as radiofrequency ablation, other novel and improved techniques have been introduced in the past 10 years.

The most notable benefits of percutaneous tumor ablations are improved complication profiles, lower morbidities, and its ability to treat non-surgical cancer patients with comparable treatment outcomes. Currently, a percutaneous tumor ablation for an early-stage HCC is considered curative.

In this presentation, the latest advancement of some of the newest locoregional ablative techniques including cryoablation, microwave ablation, HIFU and irreversible electroporation will be presented in detail including clinical cases. This presentation will also discuss some of the important advantages and disadvantages of each ablation technique and future directions in the field of ablation therapy.