**NOVEL TECHNOLOGIES FOR ATRIAL FIBRILLATION MONITORING AND CATHETER ABLATION**

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Catheter ablation has become an important and widely used treatment option for patients with symptomatic atrial fibrillation (AF). Over the past decade, a variety of new technologies has been developed in order to improve the safety, efficacy, and speed of catheter ablation as well as to optimize peri-interventional management. While electroanatomic mapping has been established as a useful tool for ablation procedures, image integration of previously acquired MRI or CT scans of the heart with the mapping space is commonly used to guide AF ablation procedures. Non-fluoroscopic, sensor-guided modalities are currently under investigation and preliminary results are very promising. These developments are complemented by advances in ablation catheters such as ablation balloons, multielectrode catheters, catheters with contact force and porous-tip irrigated catheters and ancillary tools such as steerable sheath and remote navigation technologies. There has also been progressive development in ambulatory external electrocardiogram monitoring technologies and implantable loop recorders that play important roles to guide anticoagulation therapy and to assess the efficacy ablation procedures.

In conclusion, several new key technologies begin to impact on contemporary AF monitoring and catheter ablation.