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### Surgical treatment of atrial fibrillation: Today's questions and answers

Atrial Fibrillation (AF) is the most common cardiac arrhythmia, characterized by chaotic electrical activity and the lack of coordinated contractions in the atria. AF can cause significant morbidity and mortality including stroke and heart failure. The goal of AF therapy is to achieve a return to permanent sinus rhythm. Medical treatment is accompanied with serious drug side effects and often fails to completely preclude complications of AF. Classic cut and sew procedure Cox-Maze did not gain widespread acceptance due to complexity and technical difficulty. There are alternative techniques using various energy sources in an effort to make Cox-Maze procedure technically simpler and faster to perform. The main idea is to create lines of intra-atrial conduction block that will stop macro-reentrant electrical circuits in the atria, isolate the trigger or triggers for AF originating near the pulmonary vein orifices or accomplish both and allow the atria to resume a sinus rhythm. Radiofrequency, cryotherapy and ultrasound waves are the most common sources of energy employed in clinical use of treatment of AF. These energy sources rely on energy sources to create long, continuous, linear lesions that block conduction. They differ mainly in the way by which they transfer energy to the tissue and how deep that energy is conducted into the tissue. There are some important questions we have to answer when we are considering to treat a patient with AF, they are: Which patients benefit most? How much important does the preoperative AF triggers localization? Should we consider hybrid procedures? What is the optimal ablation approach? What are the choices of the lesion set? Which energy source alternative should we use? In future; answering these questions and better understanding of AF will bring successful ablation modalities to AF patients.

### Biography

Ergun Demirsoy has completed his PhD from Karadeniz Technical University and postdoctoral studies from Istanbul University, School of Medicine. He is the director of Cardiovascular Surgery at International Sisli Kolan Hospital, Istanbul - Turkey. He has published more than 38 papers in reputed journals and has been serving as an board member and cardiac councilor of European Society of Cardiovascular Surgeons (ESCVS).