

## **The Impact of Integrating CT Image of Left Atrium and Smart Touch Technology in Electroanatomical CARTO Mapping System on Recurrence of Atrial Fibrillation**

**Ibrahim Marai**, Mahmoud Suleiman, Lior Gepstein, Monther Boulos  
*Cardiology, Rambam Health Care Campus, Israel*

### **Background:**

Pulmonary vein isolation (PVI) is an established therapy for paroxysmal atrial fibrillation (PAF). Early and late re-conduction has an important role on recurrence. CT merge of left atrium and smart touch technology are now integrated in electroanatomic mapping (EAM) systems and can improve the efficacy and durability of PVI.

### **Objective:**

To compare the recurrence rate of atrial tachyarrhythmia after PVI using CARTO system with or without CT merge and smart touch technology in patients with PAF

### **Methods:**

65 consecutive patients with PAF who were treated by point by point irrigated radiofrequency ablation for PVI using CARTO system were summarized and divided into two groups according to the mapping and ablation method: three dimension's EAM only, EAM merged with CT with or without smart touch technology. Patients were followed for 2 years.

### **Results:**

CT merge with or without smart touch technology was used in 33 patients and EAM only in 32 patients. Baseline characteristics were similar among the two groups. Recurrence rate of atrial tachyarrhythmia during follow up for 2 years was more in the EAM group compared to CT merge group (45% vs 19% respectively,  $p=0.027$ ) (figure 1). There was no difference in recurrence rate when 11 patients from CT merge group who were treated with smart touch technology were excluded from analysis (45% among EAM group vs 27% among CT merge group without smart touch,  $p=0.16$ ).

### **Conclusion:**

CT merge and smart touch technology can reduce the recurrence of atrial tachyarrhythmia after PVI among patients with PAF.