

## Prognostic Value of Electrophysiology Studies Among ICD Recipients in the Israeli ICD Registry

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### **Introduction:**

There are conflicting data regarding the prognostic implications of electrophysiology studies (EPS) among patients with reduced left ventricular ejection fraction (LVEF) who receive an implantable cardiac defibrillator (ICD).

### **Methods:**

We compared the clinical characteristics and the risk of ventricular tachyarrhythmic events (VTE) of patients who had ventricular tachyarrhythmia induced at EPS with those of patients implanted on the basis of LVEF alone in the Israeli ICD Registry.

### **Results:**

Of 2971 patients undergoing ICD implantation in the Israeli ICD Registry, 504 (17%) patients (age  $66 \pm 11$ , 89% male) had an EPS prior to ICD implantation, of whom, 91% yielded positive results. Patients who underwent EPS had a higher LVEF, a lower frequency of advanced heart failure symptoms, less atrial fibrillation, narrower QRS, and were less likely to be treated with diuretics, anticoagulation, and anti-arrhythmic drugs. Among 1188 registry patients with available follow-up, the rate of appropriate ICD therapy for VTE was similar between those with a positive EPS and patients who underwent ICD implantation on the basis of LVEF alone ( $p=0.92$ ; Figure). Consistently, multivariate analysis showed similar VTE risk between the 2 groups ( $HR=1.97$ ;  $p=0.49$ ) after adjustment for age, gender, type of prevention, NYHA, and LVEF.

### **Conclusions:**

Our findings indicate that EPS inducibility testing prior to ICD implantation performed in a selected group of lower risk patients has limited prognostic implications.

