

Introduction

Ventricular tachycardia (VT) is a complex arrhythmia that can lead to sudden cardiac death and is associated with distinct underlying cardiomyopathies. We examined a registry of 91 VT patients by comparing the outcomes in patients with nonischemic (NICM) and ischemic cardiomyopathy (ICM).

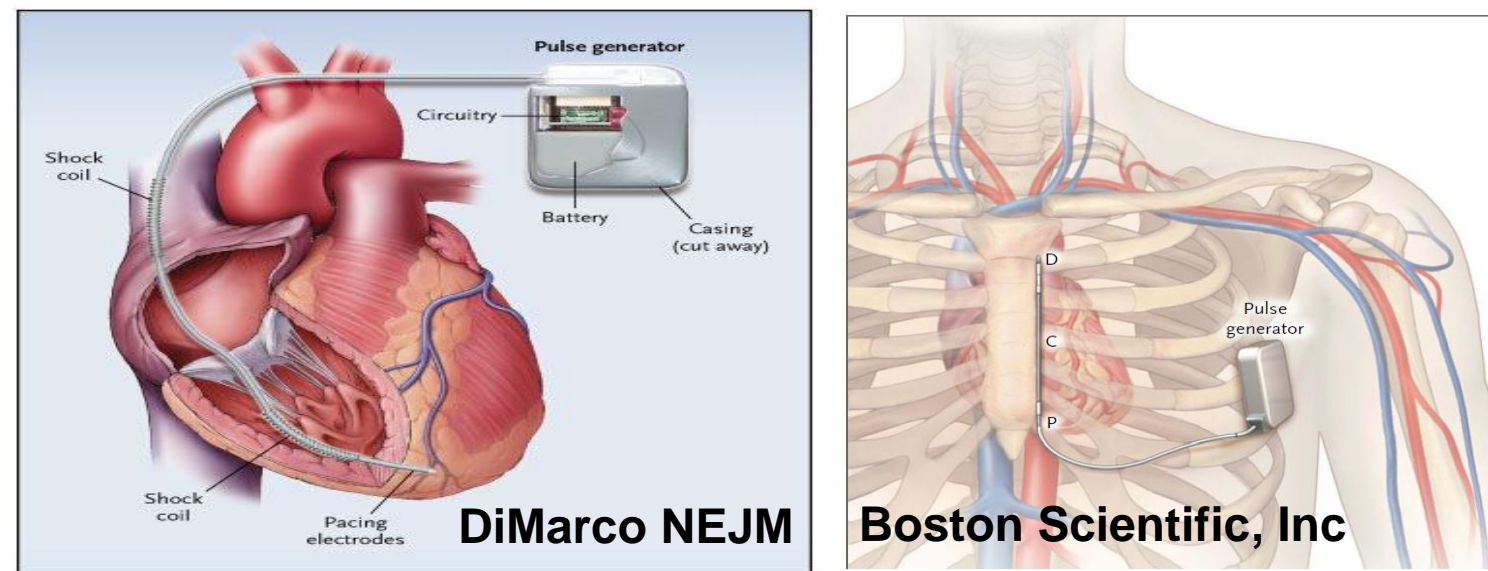


Figure 1: ICD Implant Techniques

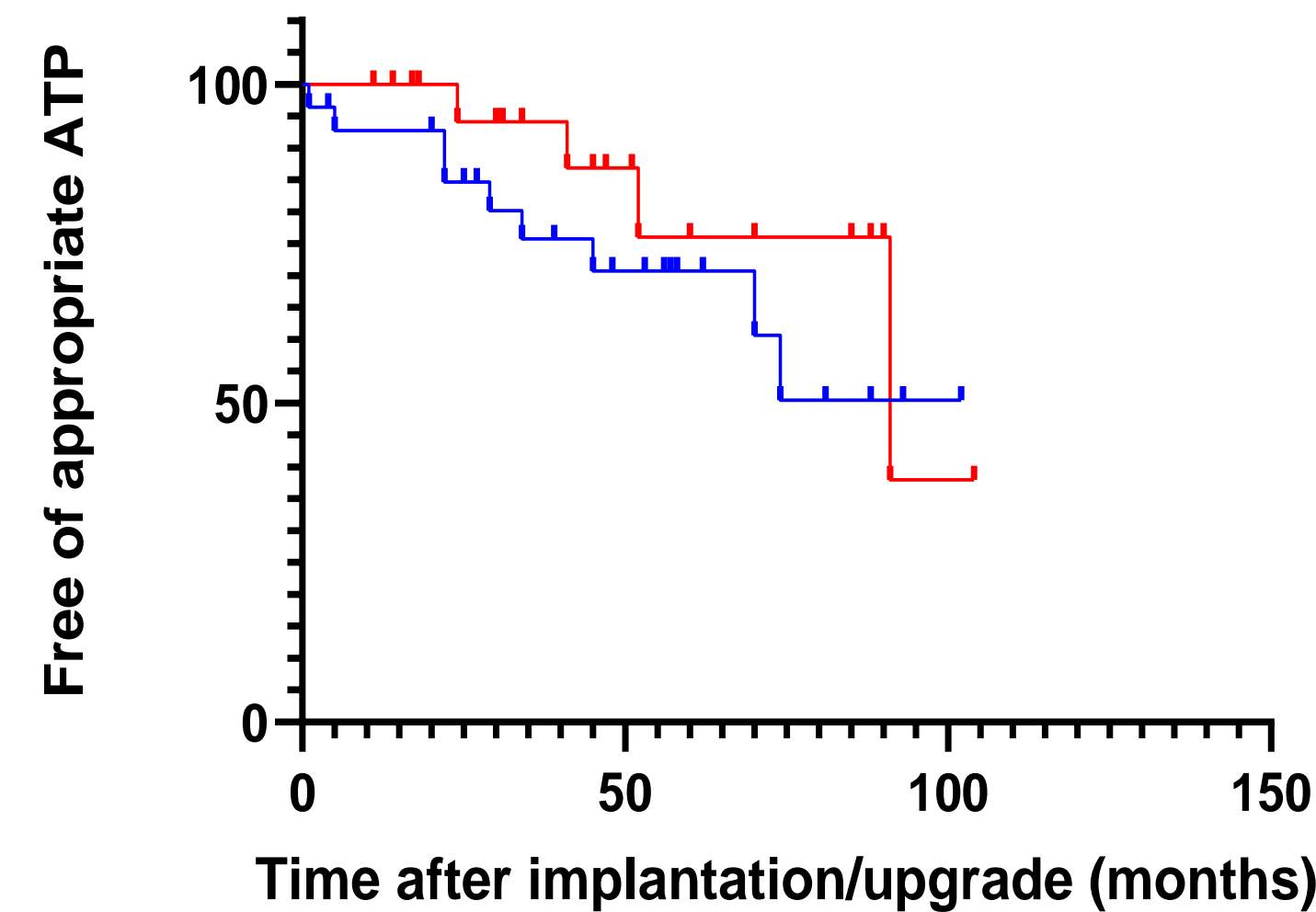
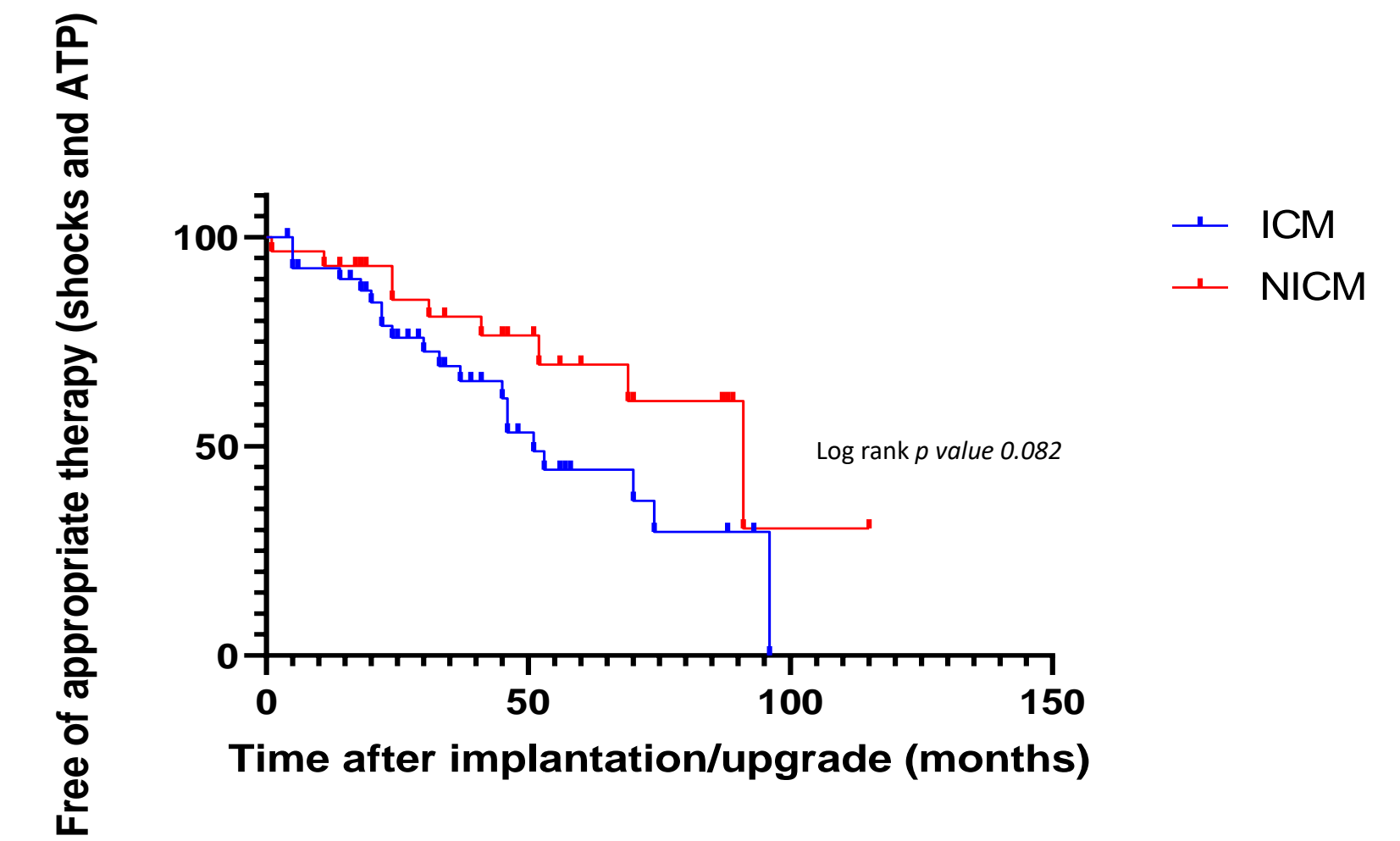
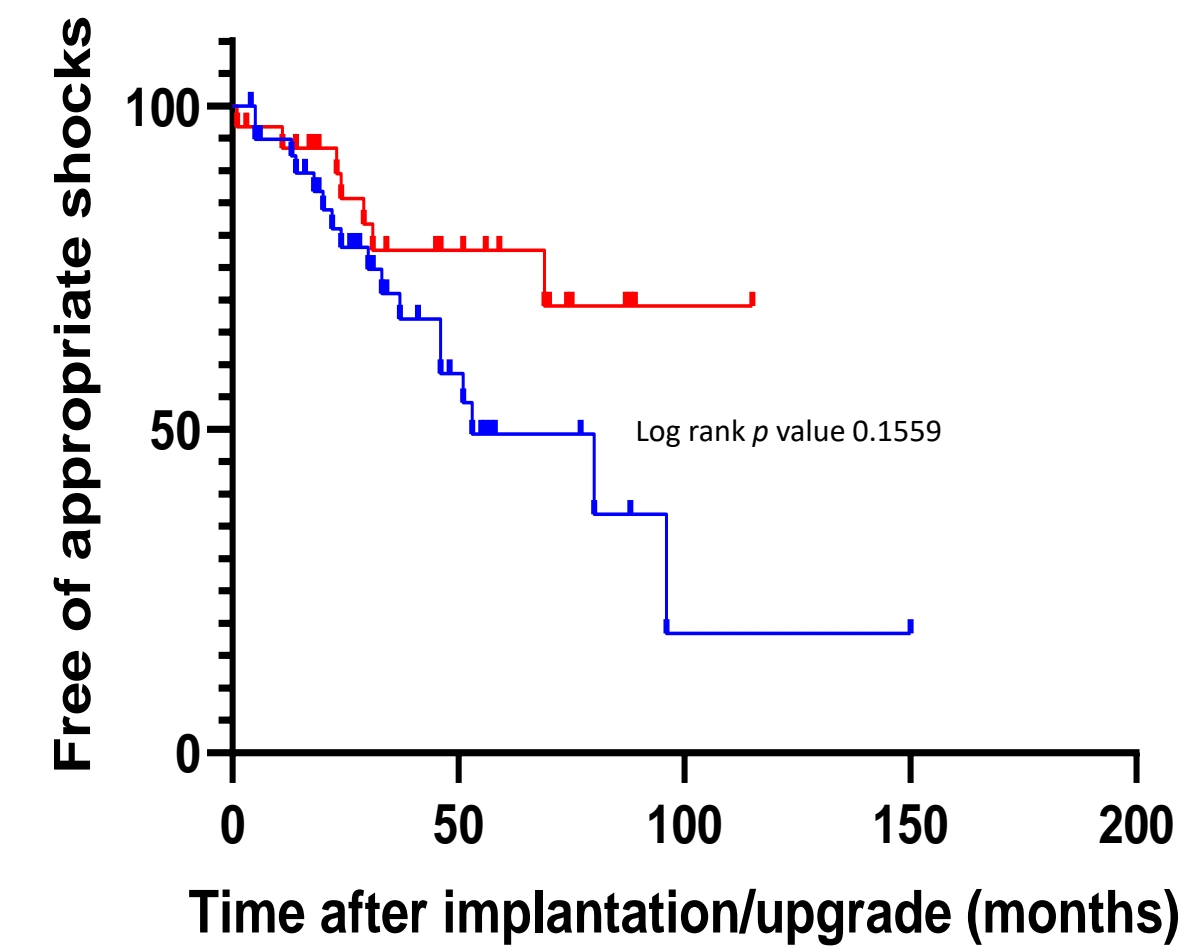
Methods

91 VT patients (71 years; 81% male) were enrolled into a rolling prospective registry (MANAGE-VT; 2019 to present) collecting patient demographics, type of cardiomyopathy, type of ventricular tachycardia, and presence of implantable cardioverter defibrillator (ICD). The patients were divided into NICM versus ICM. NICM cardiomyopathy included infiltrative and genetic cardiomyopathies. The primary endpoints measured included heart failure (systolic and diastolic), syncope, antitachycardia pacing (ATP), shock, and death.

There were 47 patients (40% monomorphic VT) with ICM (3/47 NYHA class III ICM) and 44 patients (38% monomorphic VT) with NICM (0/44 NYHA class III NICM). 43/47 ICM patients had an ICD implant (11/44 S-ICD), while 34/44 NICM patients had an ICD implant (7/42 S-ICD). 16/43 ICM patients and 8/34 NICM patients received a shock (p-value NS). 7/44 NICM patients and 7/47 ICM patients reported syncope (p value NS). 3/27 NICM patients and 8/32 ICM patients received ATP (p value NS). 37/47 ICM patients had heart failure and 16/44 NICM had heart failure (p value < 0.05). 3/47 ICM patients died, there were no registered deaths for NICM patients.

Parameter	All patients (n=91)	ICM (n=47)	NICM (n=44)	P-value
LVEF (%)		40.5	35	.46
Male (%)	74 (81)			
Heart Failure (%)	53 (58)	37 (79)	16 (36)	<0.05
Hypertension (%)	82 (90)	37 (79)	25 (57)	<0.05
Death (%)	3 (3)	3 (6)	0 (0)	<0.05
Myocardial Infarction (%)	31 (34)	26 (55)	5 (11)	<0.05
Previous CABG (%)	21 (23)	19 (40)	2 (5)	<0.05
Syncope (%)	14 (15)	7 (15)	7 (16)	NS

Results



Conclusions

ICM patients have a greater association with heart failure compared to NICM. There was no significant difference in syncope between NICM and ICM patients. The four years shock free survival was higher in NICM patients compared to ICM patients (77% vs 63%). The four years ATP event free survival was higher in NICM patients compared to ICM patients (89% vs 75%). Median survival time free of appropriate therapy was 51 and 91 months for ICM and NICM patients respectively.

Conflicts/Acknowledgments

Dr. Burke receives honoraria and speaker fees from Boston Scientific; He research grants with Boston Scientific and Biosense Webster (J&J).