

Supplementary Material

Defibrillation threshold testing after ICD implantation in patients with chronic kidney disease.

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Short Title: DFT Testing in CKD Patients with ICDs.

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ICD generator types, n (%)					
	Manufacturer	Group 1*	Group 2 [†]	Group 3 [‡]	Total
		n = 294	n = 90	n = 67	n = 451
Confient DR HE F030	Boston Scientific	3 (1.0)	1 (1.1)	0	4 (0.9)
Energen DR F142	Boston Scientific	5 (1.7)	3 (3.3)	0	8 (1.8)
EnTrust D154ATG	Medtronic	7 (2.4)	5 (5.6)	0	12 (2.7)
Evera MRI XT DR Surescan DDMB2D4	Medtronic	8 (2.7)	2 (2.2)	0	10 (2.2)
Ilesto 7 DR-T ProMRI DF1	Biotronik	5 (1.7)	0	7 (10.4)	12 (2.7)
Ilesto 7 DR-T ProMRI DF4	Biotronik	11 (3.7)	2 (2.2)	3 (4.5)	16 (3.5)
Ilivia 7 ProMRI DR-T DF4	Biotronik	2 (0.7)	0	0	2 (0.4)
Incepta DR F162	Boston Scientific	8 (2.7)	1 (1.1)	0	9 (2.0)
Iperia 7 ProMRI DR-T DF4	Biotronik	16 (5.4)	4 (4.4)	6 (9.0)	26 (5.8)
Lumax 300 DR-T	Biotronik	7 (2.4)	1 (1.1)	0	8 (1.8)
Lumax 340DR-T	Biotronik	22 (7.5)	8 (8.9)	13 (19.4)	43 (9.5)
Lumax 540 DR-T	Biotronik	69 (23.5)	15 (16.7)	25 (37.3)	109 (24.2)
Lumax 540 VR-T	Biotronik	0	0	1 (1.5)	1 (0.2)
Lumax 740 DR-T	Biotronik	19 (6.5)	8 (8.9)	11 (16.4)	38 (8.4)
Secura DR D234DRG	Medtronic	32 (10.9)	10 (11.1)	0	42 (9.3)
Protecta XT DR D354DRG	Medtronic	13 (4.4)	3 (3.3)	0	16 (3.5)
Protecta XT DR DF4 D354DRM	Medtronic	9 (3.1)	5 (5.6)	0	14 (3.1)
Teligen 100 DR F110	Boston Scientific	31 (10.5)	11 (12.2)	1 (1.5)	43 (9.5)
Teligen 100 DR F111	Boston Scientific	8 (2.7)	3 (3.3)	0	11 (2.4)
Teligen 100 DR x	Boston Scientific	6 (2.0)	2 (2.2)	0	8 (1.8)

Vitality 2 DR T165 [§]	Boston Scientific	13 (4.4)	6 (6.7)	0	19 (4.2)
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24 **Supplementary Table 1. ICD generator types.**

25 * Group 1: eGFR > 60 mL/min/1.73m², CKD stage 1-2 or normal kidney function.

26 † Group 2: eGFR 15 – 59 mL/min/1.73m², CKD stage 3-4.

27 ‡ Group 3: eGFR < 15 mL/min/1.73m², CKD stage 5.

28 [§]Vitality 2 DR T165 * is the only non- high output ICD device in this study.

29 CKD chronic kidney disease; eGFR estimated glomerular filtration rate (mL/min/1.73m²); ICD
30 implantable cardioverter-defibrillators.

	ICD leads, n (%)			
	Group 1*	Group 2 [†]	Group 3 [‡]	Total
	n = 294	n = 90	n = 67	n = 451
Right ventricular leads				
Endotak Reliance G 0185	58 (19.7)	23 (25.6)	1 (1.5)	82 (18.2)
Endotak Reliance SG 0158	3 (1.0)	1 (1.1)	0	4 (0.9)
Endotak Reliance SG 0181	6 (2.0)	3 (3.3)	0	9 (2.0)
Linux S 65	79 (26.9)	15 (16.7)	44 (65.7)	138 (30.6)
Linux S 75	0	1 (1.1)	0	1 (0.2)
Linux SD 65/16	20 (6.8)	7 (7.8)	10 (14.9)	37 (8.2)
Linux SD 75/16	1 (0.3)	1 (1.1)	1 (1.5)	3 (0.7)
Linux Smart ProMRI S65	21 (7.1)	8 (8.9)	0	29 (6.4)
Linux Smart T 65	1 (0.3)	0	0	1 (0.2)
Protego ProMRI S 65	27 (9.2)	6 (6.7)	11 (16.4)	44 (9.8)
Plexa ProMRI S65 DF-4	2 (0.7)	0	0	2 (0.4)
Reliance 4-Front	8 (2.7)	1 (1.1)	0	9 (2.0)
Secura DR D23DRG	2 (0.7)	0	0	2 (0.4)
Sprint Fidelis	1 (0.3)	3 (3.3)	0	4 (0.9)
Sprint Quattro Secure	39 (13.3)	12 (13.3)	0	51 (11.3)
Sprint Quattro 6947	26 (8.8)	9 (10.0)	0	35 (7.8)
Right atrial leads				
Not applicable	3 (1.0)	2 (2.2)	2 (3.0)	7 (1.6)
CapSure Epi	1 (0.3)	0	0	1 (0.2)

CapsureFix Novus 4076-52	49 (16.7)	12 (13.3)	7 (10.4)	68 (15.1)
CapsureFix MRI 5086MRI52	6 (2.0)	3 (3.3)	2 (3.0)	11 (2.4)
CapSure Sense MRI SureScan	32 (10.9)	12 (13.3)	10 (14.9)	54 (12.0)
Fineline II EZ Sterox 4470	3 (1.0)	2 (2.2)	0	5
Fineline II EZ Sterox 4473	67 (22.8)	23 (25.6)	14 (20.9)	104 (23.1)
Flexextend II 4096	12 (4.1)	1 (1.1)	3 (4.5)	16 (3.5)
Flexextend II 4097	2 (0.7)	0	0	2 (0.4)
Ingevity MRI 7740	7 (2.4)	1 (1.1)	4 (6.0)	12 (2.7)
Siello S 53	2 (0.7)	2 (2.2)	1 (1.5)	5 (1.1)
Solia Pro MRI S53	25 (8.5)	1 (1.1)	11 (16.4)	37 (8.2)
Sweet Tip Rx 4243	84 (28.6)	31 (34.4)	13 (19.4)	128 (28.4)
Sweet Tip Rx4244	1 (0.3)	0	0	1 (0.2)

Supplementary Table 2. Right atrial and ventricular lead types.

* Group 1: eGFR > 60 mL/min/1.73m², CKD stage 1-2 or normal kidney function.

[†] Group 2: eGFR 15 – 59 mL/min/1.73m², CKD stage 3-4.

[‡] Group 3: eGFR < 15 mL/min/1.73m², CKD stage 5.

CKD chronic kidney disease; eGFR estimated glomerular filtration rate (mL/min/1.73m²); ICD implantable cardioverter-defibrillators.

Variable	N	
	Valid	Missing
Chronic kidney disease stage	451	0
Age	451	0
Quetelet Index	451	0
Heart rate	450	1
Systolic bloodpressure	428	23
Diastolic bloodpressure	428	23
Laboratory		
— Hemoglobin	448	3
— Sodium	451	0
— Potassium	433	18
— Creatinine	451	0
— Ureum	451	0
Electrocardiogram		
— QRS-duration	450	1
— LBTB	450	1
— RBTB	450	1
Shock impedance	415	36
Duration of ICD implantation procedure (hours)	451	0
Duration of ICD implantation procedure (minutes)	451	0
Gender	451	0
Left ventricular ejection fraction	451	0

— > 49%	451	0
— 40 - 49%	451	0
— 30 - 39	451	0
Atriumfibrillation or Atriumflutter	451	0
Coronary artery disease	451	0
Cerebrovascular accident or transient ischemic attack	451	0
Chronic obstructive pulmonary disease or asthma	451	0
Diabetes mellitus	451	0
Hypertensie	451	0
Hypercholesterolemie	451	0
Betablocker (not sotalol)	451	0
Sotalol	451	0
Amiodaron	451	0
Angiotensin-converting enzyme inhibitor	451	0
Angiotensin inhibitor	451	0
Calcium antagonist	451	0
Statin	451	0
Coumarin	451	0
Platelet aggregation inhibitor(	451	0
Diuretics	451	0
Diabetes mellitus medication	451	0

37 **Supplementary Table 3. Missing variables.**

38 ICD implantable cardioverter-defibrillators.

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