

#### Appendix 4 (as supplied by the authors): Detailed table of characteristics of included studies

Study	Trial Characteristics	Patient Characteristics	Intervention	Outcome
Lozano 2000	N (Tx/Ctl): 109/113 Design: Crossover Randomization: Post implantation Allocation Concealment: Unclear Blinding: NR; patients appeared to be blind.	Age (mean, SD): 65 (10) Male (%): 83 Ischemic CM (%): 68 NYHA Class I to IV (%): 0, 35, 57, 8 LVEF (mean, SD): 0.22 (0.007) QRS (msec): NR RBBB (%): NR AF (%): NR	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Cardiac resynchronization therapy+implantable defibrillator: implantable defibrillator capable of BV pacing. Atrial synchronous, ventricular pacing mode.  Optimal medical therapy: Was not specified part of study protocol. At enrolment 87% received ACE, or arbs, 83% diuretics, 66% digoxin 38% $\beta$ -blockers	All cause mortality  Timepoint: 3 months
MUSTIC Cazeau 2001	N (Tx/Ctl): 29/29 Design: Crossover Randomization: Post implantation Allocation Concealment: Unclear Blinding: "single blind"	Age (mean, SD): 63 (10) Male (%): 75 Ischemic CM (%): NR NYHA Class I to IV (%): 0, 100, 0, 0 LVEF (mean, SD): NR QRS (msec mean, SD): 176 (19) RBBB (%): NR AF (%): NR	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Cardiac resynchronization therapy+implantable defibrillator: Triple output dual chamber devices (Chorum 7336 MSP ELA Medical, insync 8040 Medtronic). Basic rate 40 bpm, upper rate 85% of max heart rate.  Optimal medical therapy: Included at least diuretics and Ace inhibitors at maximal tolerated dose for at least one month before implantation.	Death  Timepoint: End of first treatment period prior to crossover was 3 mos.
MIRACLE Abraham 2002	N (Tx/Ctl): 228/225 Design: Parallel group Randomization: Post implantation Allocation Concealment: Yes Blinding: patients, treating physician, assessors	Age (mean, SD): 64 (11) Male (%): 68 Ischemic CM (%): 54 NYHA Class I to IV (%): 0, 0, 90, 10 LVEF (mean%, SD): 21.7 (6.3) QRS (msec mean, SD): 166 (20) RBBB (%): NR AF (%): 0	Cardiac resynchronization therapy+optimal medical therapy vs optimal medical therapy  Cardiac resynchronization therapy: insync model 8040 Medtronic.  Optimal medical therapy: "conventional therapy for heart failure"	Death  Timepoint: 6 months

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MIRACLE implantable defibrillator Young 2003	N (Tx/Ctl): 187/182 Design: Parallel group Randomization: Post implantation Allocation Concealment: Yes Blinding: Patients, treating physicians and staff. (Others NR)	Age (mean, SD): 67 (10) Male (%): 77 Ischemic CM (%): Tx 75.8, Ctl 64.0 NYHA Class I to IV (%): 0, 0, 89, 11 LVEF (mean%, SD): 24 (6.2) QRS (msec mean, SD): 163 (22) RBBB (%): 13 AF (%): 0	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Cardiac resynchronization therapy+implantable defibrillator: Model 7272 insync implantable defibrillator Medtronic to deliver BVP plus implantable defibrillator. Programmed to pace ventricles following atrial-sensed events at rates <130/min. Atrial pacing occurred only for sinus rates < 35/min.  Optimal medical therapy: Stable and appropriate drug regimen which included ACE or ARB if tolerated for 1 month prior to implantation. If taking a $\beta$ -blocker it had to have been initiated 3 mos prior to enrollment. Initiation of B-blockade not permitted during trial.	Death  Timepoint: 6 months
MIRACLE implantable defibrillator2 Abraham 2004	N (Tx/Ctl): 85/101 Design: Parallel group Randomization: Post implantation Allocation Concealment: Yes Blinding: Patients, treating physicians and staff. (Others NR)	Age (mean, SD): 63 (12.4) Male (%): 89 Ischemic CM (%): 57 NYHA Class I to IV (%): 0, 100, 0, 0 LVEF (mean%, SD): 24.5 (6.7) QRS (msec mean, SD): 165 (24) RBBB (%): 16% AF (%): NR	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Cardiac resynchronization therapy+implantable defibrillator: Model 7272 insync implantable defibrillator Medtronic to deliver BVP plus implantable defibrillator. Programmed to pace ventricles following atrial-sensed events at rates <130/min. Atrial pacing occurred only for sinus rates < 35/min.  Optimal medical therapy: All appropriate treatments for heart failure which included a diuretic an ACE or ARB and usually digitalis and a $\beta$ -blocker. Patients were stable on meds for one month ( $\beta$ -blocker for 3 mos) before implantation.	Death  Timepoint: 6 months

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COMPANION Bristow 2004	N (Tx/Tx/Ctl):617/595/308 Design: Parallel group Randomization: Pre implantation Allocation Concealment: Unclear Blinding: Endpoint committee, steering committee and sponsor. (patients, physicians, statisticians, data management group and data safety and monitoring board were not blinded)	Age (mean): 67 Male (%): 67 Ischemic CM (%): 55 NYHA Class I to IV (%): 0, 0, 86, 14 LVEF (mean): 0.22 QRS (msec mean): 160 RBBB (%): 10 AF %: NR	Cardiac resynchronization therapy+optimal medical therapy vs optimal medical therapy Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs optimal medical therapy  Cardiac resynchronization therapy: Contak TR model 1241, Guidant  Cardiac resynchronization therapy+implantable defibrillator: Contak CD model 1823 Guidant. Both devices set at VDD with rate well below patient's lowest heart rate.  Optimal medical therapy - Diuretics, ACE inhibitors, beta-blockers, spironolactone. All subject to tolerance and contraindication. Other meds could be used at investigator's discretion.	Death rate from any cause  Timepoint: 12 months for rates. (potentially up to 1080 days for raw data) Median duration of follow-up: Optimal medical therapy 14.8 months; cardiac resynchronization therapy 16.5 months; cardiac resynchronization therapy+implantable defibrillator 16 months
CARE-HF Cleland 2005	N (Tx/Ctl): 409/404 Design: Parallel group Randomization: Pre implantation Allocation Concealment: Unclear Blinding: Endpoint committee. (patients and treating physicians were not blind.)	Age: (median, IQR) 66 (59-72) Male (%): 74 Ischemic CM (%): 38 NYHA Class I to IV (%): 0, 0, 93, 7 LVEF: (median, IQR) 25 (22-29) QRS (msec median, IQR): 160 (152-180) RBBB (%): NR AF %: 0	Cardiac resynchronization therapy+optimal medical therapy vs optimal medical therapy  Cardiac resynchronization therapy: Medtronic insync or In Sync III device. Atrial based BVP. 60 beats/min.  Optimal medical therapy: "standard medical therapy"	Death from any cause  Timepoint: Mean 29.4 months (range 18-44.7)
REVERSE Linde 2008	N (Tx/Ctl): 419/191 Design: Parallel group Randomization: Post implantation Allocation Concealment: Unclear Blinding: Patients, treating physicians, assessors were blind (electrophysiologist, echocardiographer and data monitors were unblinded)	Age (mean, SD): 62 (11) Male (%): 79 Ischemic CM (%): 55 NYHA Class I to IV (%): 18, 82, 0, 0 LVEF (mean%, SD): 27 (7) QRS (msec mean, SD): 153 (12) RBBB (%): NR AF (%): 0 (excluded)	Cardiac resynchronization therapy+optimal medical therapy vs optimal medical therapy  Cardiac resynchronization therapy: cardiac resynchronization therapy system with (83%) or without (17%) implantable defibrillator capabilities.  Optimal medical therapy: ACE or ARB and $\beta$ -blocker for at least 3 mos before enrolment.	Death  Timepoint: 12 months

Study	Trial Characteristics	Patient Characteristics	Intervention	Outcome
RHYTHM implantable defibrillator FDA report 2004	N (Tx/Ctl): 119/59 Design: Parallel group Randomization: Post implantation Allocation Concealment: Unclear Blinding: “double blind”	Age (mean, SD): NR Male (%): NR Ischemic CM (%): NR NYHA Class I to IV (%): 2, 6, 87, 6 LVEF (mean%, SD): 24.8 (7.7). QRS (msec mean): 168 RBBB (%): NR AF (%): 0	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Cardiac resynchronization therapy+implantable defibrillator: Epic HF V 338 implantable defibrillator system  Optimal medical therapy: Included ACE inhibitor and $\beta$ -blocker 30 days prior to enrolment	"Expired"  Timepoint: 12.1 (3.4) months, range 0.3 to 20.3) Mortality data available for both 6 months and beyond.
Vector FDA report 2005	N (Tx/Ctl): 59/47 Design: Parallel group Randomization: Post implantation Allocation Concealment: Unclear Blinding: “double blind”	Age (mean, SD): 67.1 (9.7) Male (%): 62.5 Ischemic CM (%): NR NYHA Class I to IV (%): 0, 29, 65, 6 LVEF (mean%, SD): NR QRS (msec): NR RBBB (%): NR AF (%): 0	Cardiac resynchronization therapy+optimal medical therapy vs optimal medical therapy  Cardiac resynchronization therapy: Frontier Model 5508  Optimal medical therapy: Not specified.	Death  Timepoint: 6 months (data reported beyond 6 months was not broken down by group) Mean followup 19.9 (8.9) months, range 0.8-35.4 months
MADIT-cardiac resynchronization therapy Moss 2009	N (Tx/Ctl): 1089/731 Design: Parallel group Randomization: Pre implantation Allocation Concealment: Unclear Blinding: Endpoint committee (others NR)	Age (mean, SD): 65 (11) Male (%): 75 Ischemic CM (%): 55 NYHA Class I to IV (%): 15, 85, 0, 0 LVEF (mean, SD): 0.24 (0.05) QRS (% > 150 msec): 65 RBBB (%): 12.5 AF (% > 1 mo before enrolment) 11.5	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Commercially available Boston Scientific devices were used.  Cardiac resynchronization therapy+implantable defibrillator: programmed for DDD with a lower rate of 40bpm and hysteresis off.  Implantable defibrillator only: pacing mode was VVI for single-chamber units and DDI for dual-chamber with lower rates of 40 bpm and hysteresis off in both single and dual-chamber units.  Optimal medical therapy: not described.	Timepoint:  Death at any time  Timepoint: Mean follow up 2.4 years

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RAFT Tang 2010	N (Tx/Ctl): 894/904 Design: Parallel group Randomization: Pre implantation Allocation Concealment: Yes Blinding: Patients, health care providers, heart failure management team who reported clinical events, adjudication committee, were blinded. Arrhythmia team that performed device implantation and management was not blind.	Age (mean, SD): 66.1 (9.3) Male (%): 83 Ischemic CM (%): 67 NYHA Class I to IV (%): 0, 80, 20, 0 LVEF (mean, SD): 22.6 (5.2) QRS (mean msec): 158 (24) RBBB (%): 9 AF (%): 12.8	Cardiac resynchronization therapy+implantable defibrillator+optimal medical therapy vs implantable defibrillator+optimal medical therapy  Medtronic device was programmed to minimize ventricular pacing in the ICD group and maximize ventricular pacing in the ICD-CRT group as well as provide uniform arrhythmia detection and therapy.  Optimal medical therapy: Beta blocker, ACE inhibitor or ARB, spironolactone, aspirin and statins, when appropriate.	Death from any cause  Timepoint: Mean follow up 40 (20) months