

SUPPLEMENTARY ONLINE MATERIAL

Appendix 1: Rational for excluding interventions from some subgroups

Table S1: Rationale for excluding interventions from some subgroups

Treatment option	Subgroup from which excluded	Rationale/ justification
Medical Therapy	None	
ICD	NYHA IV	Minimal IPD data available from clinical trials (of 12,638 patients included in IPD database only 77 (0.6%) were NYHA IV and randomised to an ICD)
CRT-P	NYHA I/II	Minimal IPD data available from clinical trials (of 12,638 patients included in IPD database only 74 (0.6%) were NYHA I-II and randomised to a CRT-P)
	QRS duration<120ms	Prolonged QRS duration required for consideration of device insertion. No evidence of benefit from CRT in patients with normal QRS duration
CRT-D	QRS duration<120ms	Prolonged QRS duration required for consideration of device insertion. No evidence of benefit from CRT in patients with normal QRS duration

Appendix 2: List of studies contributing information to all-cause hospitalisation and health related quality of life analyses

All-cause hospitalisation

Abraham WT, Fisher WG, Smith AL, DeLurgio DB, Leon AR, Loh E et al. Cardiac resynchronization in chronic heart failure. *New England Journal of Medicine* 2002; 346(24):1845-1853.

Bardy GH, Lee KL, Mark DB, Poole JE, Packer DL, Boineau R et al. Amiodarone or an implantable cardioverter-defibrillator for congestive heart failure.[Erratum appears in N Engl J Med. 2005 May 19;352(20):2146]. *New England Journal of Medicine* 2005; 352(3):225-237.

Beshai JF, Grimm RA, Nagueh SF, Baker JH, Beau SL, Greenberg SM et al. Cardiac-resynchronization therapy in heart failure with narrow QRS complexes. *New England Journal of Medicine* 2007; 357(24):2461-2471.

Bristow MR, Saxon LA, Boehmer J, Krueger S, Kass DA, De MT et al. Cardiac-resynchronization therapy with or without an implantable defibrillator in advanced chronic heart failure. *New England Journal of Medicine* 2004; 350(21):2140-2150.

Cleland JG, Daubert JC, Erdmann E, Freemantle N, Gras D, Kappenberger L et al. The effect of cardiac resynchronization on morbidity and mortality in heart failure. *New England Journal of Medicine* 2005; 352(15):1539-1549.

Higgins SL, Hummel JD, Niazi IK, Giudici MC, Worley SJ, Saxon LA et al. Cardiac Resynchronization Therapy for the Treatment of Heart Failure in Patients with Intraventricular Conduction Delay and Malignant Ventricular Tachyarrhythmias. *Journal of the American College of Cardiology* 2003; 42(8):1454-1459.

Linde C, Abraham WT, Gold MR, St John SM, Ghio S, Daubert C et al. Randomized trial of cardiac resynchronization in mildly symptomatic heart failure patients and in asymptomatic patients with left ventricular dysfunction and previous heart failure symptoms. *Journal of the American College of Cardiology* 2008; 52(23):1834-1843.

Moss A. MADIT-CRT: The multicentre automatic defibrillator implantation trial-cardiac resynchronization therapy. *European Journal of Heart Failure* 2009; 11(12):1217-1219.

RHYTHM ICD. St. Jude Medical® Epic™ HF System including the Epic™ HF Model V-338 Cardiac Resynchronization Therapy Defibrillator, the Aescula™ LV Model 1055K Lead, the QuickSite™ LV Model 1056K Lead, and the Model 3307 v4.5m Programmer Software - P030054. US Food and Drug Administration

Tang AS, Wells GA, Talajic M, Arnold MO, Sheldon R, Connolly S et al. Cardiac-resynchronization therapy for mild-to-moderate heart failure. *New England Journal of Medicine* 2010; 363(25):2385-2395.

Young JB, Abraham WT, Smith AL, Leon AR, Lieberman R, Wilkoff B et al. Combined cardiac resynchronization and implantable cardioversion defibrillation in advanced chronic heart failure: the MIRACLE ICD Trial. *JAMA : the journal of the American Medical Association* 2003; 289:2685-2694.

Health Related Quality of Life

Cleland JG, Daubert JC, Erdmann E, Freemantle N, Gras D, Kappenberger L et al. The effect of cardiac resynchronization on morbidity and mortality in heart failure. *New England Journal of Medicine* 2005; 352(15):1539-1549.

Moss A. MADIT-CRT: The multicentre automatic defibrillator implantation trial-cardiac resynchronization therapy. *European Journal of Heart Failure* 2009; 11(12):1217-1219.

Tang AS, Wells GA, Talajic M, Arnold MO, Sheldon R, Connolly S et al. Cardiac-resynchronization therapy for mild-to-moderate heart failure. *New England Journal of Medicine* 2010; 363(25):2385-2395.

Appendix 3: Additional model parameters

Table S2: Background medication by NYHA class (% patients receiving each drug)

	NYHA I	NYHA II	NYHA III	NYHA IV
Atorvastatin	20%	20%	20%	20%
Simvastatin	55%	55%	55%	55%
Warfarin	10%	15%	25%	40%
Clopidogrel	15%	15%	15%	15%
Ramipril	90%	90%	90%	90%
Carvedilol	85%	85%	75%	70%
Spironolactone	0%	30%	30%	30%
Digoxin	5%	25%	25%	25%
Furosemide	75%	80%	90%	95%
Eplerenone	0%	30%	30%	30%

Table S3: Medication purchase costs (all data taken from the British National Formulary²⁴, cost year 2012)

Drug	Tablets per pack	Daily dose	Pack price
Atrovastatin (Liptor®)	28	10mg	£13.00
Simvastatin	28	10mg	£0.90
	28	20mg	£1.01
	28	40mg	£1.32
	28	80mg	£2.29
Warfarin	28	0.5mg	£1.49
	28	1mg	£0.93
Clopidigrel	30	75mg	£3.40
	28	75mg	£3.17
Ramipril	28	1.25mg	£1.10
	28	2.5mg	£1.18
	28	5mg	£1.25
	28	10mg	£1.41
Carvedilol	28	3.125mg	£1.10
	28	6.25mg	£1.25
	28	12.5mg	£1.37
	28	25mg	£1.84
Spirolactone	28	25mg	£1.55
	28	50mg	£2.11
	28	100mg	£2.46
Digoxin	28	62.5	£2.03
	28	125	£1.12
	28	250	£1.13
Furosemide	28	20	£0.81
	28	40	£0.84
	28	500	£4.05
Eplerenone	28	25	£42.72

Table S4: Hospitalisation event costs (cost year 2012)

Item	Cost	Source
Day in hospital (HF)	£655.71	NHS Schedule of reference costs ^{16,22}
Day in hospital (non-HF)	£699.50	NHS Schedule of reference costs ^{16,22}
Day in hospital (leads)	£794.41	NHS Schedule of reference costs ^{16,22}
HF hospitalisation event	£2,295	NHS Schedule of reference costs ^{16,22}
Non-HF hospitalisation event	£2,448	NHS Schedule of reference costs ^{16,22}
Outpatient visits ^a	£110.00	Unit costs of health and social care ^{16,23}

a) Applied every six months to all patients alive regardless of device option in addition to any other hospitalisation event costs.

Table S5: ICD and CRT system costs (source Association of British Healthcare Industries unless otherwise stated, cost year 2012)

Item	Cost	Source
<i>System costs</i>		
CRT-P whole system costs (device and leads)	£3,411	Association of British Healthcare Industries*
CRT-D whole system costs (device and leads)	£12,293	Association of British Healthcare Industries*
ICD whole system costs (device and leads)	£9,692	Association of British Healthcare Industries*
CRT Leads	£510	Association of British Healthcare Industries*
CRT-P pulse generator	£2,600	Association of British Healthcare Industries*
CRT-D pulse generator	£11,752	Association of British Healthcare Industries*
ICD generator	£9,149	Association of British Healthcare Industries*
<i>UK Tariff values</i>		
CRT-P	£8,281	NHS Schedule of reference costs ^{16,22}
ICD/CRT-D non-purchase costs	£5,556	NHS Schedule of reference costs ^{16,22}
Revisions not requiring new device	£2,748	NHS Schedule of reference costs ^{16,22}

* Data on file

Table S6: Device costs used in the model (cost year 2012)

Item	Cost	Components
Initial implant operation (ICD)	£15,248	ABHI system costs (incl. leads) and UK tariff EA12Z
Initial implant operation (CRT-P)	£8,281	UK Tariff E07Z
Initial implant operation (CRT-D)	£17,849	ABHI system costs (incl. leads) and UK tariff EA12Z
Replacement (ICD)	£14,705	ABHI system costs (excl. leads) and UK tariff EA12Z
Replacement (CRT-P)	£8,281	UK Tariff E07Z
Replacement (CRT-D)	£17,308	ABHI System costs (excl. leads)* and UK tariff EA12Z
Device related infection (ICD)	£18,964	See footnote
Device related infection (CRT-P)	£12,541	See footnote
Device related infection (CRT-D)	£21,568	See footnote
Battery replacement (ICD)	£12,004	ABHI generator costs (excl. leads) and UK tariff EA39Z
Battery replacement (CRT-P)	£8,381	UK Tariff EA07Z
Battery replacement (CRT-D)	£14,672	ABHI generator costs (excl. leads) and UK tariff EA39Z

As per previous NICE appraisal of CRT, for the purpose of costing we have assumed that treatment of a device related infection involves explanation of the existing device and a *de novo* device reimplantation as well as an additional outpatient visit. Detailed breakdown of the relevant resource use protocol can be found in the ABHI NICE submission dossier.¹⁶

Table S7: Parameter estimates which to inform Weibull models (time to first device failure)^a

Parameter	ICD	CRT-P	CRT-D
Log-Lambda	-15.784	-14.287	-15.465
Gamma	1.943	1.689	1.935

a) Full details on source data and the modelling of device longevity to be found in the relevant NICE submission²⁵

Appendix 4: Clinical baseline risk equations

Table S8: Preferred baseline risk models (all-cause mortality and hospitalisation)

Variable	All-cause mortality (Weibull model)			All-cause hospitalisation (negative binomial model)		
	Coefficient	Hazard ratio ^a	P-value	Coefficient	Hazard ratio ^b	P-value
Age (per year), time-dependent covariate	0.03	1.02	<0.001	0.02	1.00	0.004
Male gender	0.24	1.24	0.003	N/A	N/A	N/A
NYHA III	0.62	1.74	<0.001	0.74	2.10	<0.001
NYHA IV	1.30	3.20	<0.001	1.48	4.41	<0.001
Ischaemic aetiology	0.37	1.39	<0.001	0.09	1.09	0.031
QRS duration <120ms	-0.20	0.84	0.002	N/A	N/A	N/A
QRS duration ≥120ms and <150ms	N/A	N/A	N/A	0.20	1.22	<0.001
QRS duration ≥150ms	N/A	N/A	N/A	0.06	1.06	<0.001
LVEF>20% and ≤25%	-0.26	0.79	0.001	N/A	N/A	N/A
LVEF>25% and ≤30%	-0.34	0.74	<0.001	N/A	N/A	N/A
LVEF>30%	-0.65	0.56	<0.001	N/A	N/A	N/A
log(scale)	10.09	N/A	<0.001	N/A	N/A	N/A
log(shape)	0.12	N/A	<0.001	N/A	N/A	N/A
Constant	N/A	N/A	N/A	-2.73	N/A	N/A

a) Hazard ratio = $\exp(\text{coefficient}/\text{shape})$; b) hazard ratio = $\exp(\text{coefficient})$. N/A = not applicable

Table S9: Negative Binomial Regression coefficients used to predict baseline utility

Covariable	Coefficient	Hazard ratio ^a	p-value
NYHA = III	0.4667	1.595	<0.001
NYHA = IV*	0.7721	2.164	0.117
Age	-0.0061	0.994	0.003
Ischaemic aetiology	0.1427	1.153	0.001
Gender= Male	-0.2296	0.794	<0.001
Constant	3.5271	N/A	N/A

a) Hazard ratio =exp(coefficient);

Appendix 5: Long term survival extrapolation and lifetime hospitalisation counts

Table S10: Predicted overall survival and lifetime hospitalisation event estimates (Medical Therapy, where included as a treatment option)

Pt. group	Predicted overall survival							Hospitalisation count (lifetime)
	0 yrs	2 yrs	4 yrs	6 yrs	8 yrs	10 yrs	Median	
<i>Individuals without LBBB morphology</i>								
NYHA I, QRS duration < 120ms ^a	100.0%	87.5%	74.5%	62.0%	51.3%	42.0%	8.96	1.58
NYHA I, QRS duration ≥ 120ms and < 150ms ^a	100.0%	82.0%	64.6%	49.3%	37.5%	28.0%	6.37	1.44
NYHA I, QRS duration ≥ 150ms ^a	100.0%	80.8%	62.7%	46.9%	35.0%	25.7%	6.06	1.19
NYHA II, QRS duration < 120ms	100.0%	89.3%	77.9%	66.8%	57.0%	48.3%	10.61	1.78
NYHA II, QRS duration ≥ 120ms and < 150ms	100.0%	83.4%	67.1%	52.5%	40.8%	31.4%	7.00	1.54
NYHA II, QRS duration ≥ 150ms	100.0%	82.4%	65.4%	50.4%	38.7%	29.4%	6.66	1.28
NYHA III, QRS duration < 120ms	100.0%	78.3%	59.0%	43.2%	31.9%	23.4%	5.78	2.14
NYHA III, QRS duration ≥ 120ms and < 150ms	100.0%	69.8%	46.3%	29.7%	19.3%	12.6%	4.08	1.91
NYHA III, QRS duration ≥ 150ms	100.0%	66.3%	41.5%	25.0%	15.4%	9.5%	3.58	1.49
NYHA IV, QRS duration < 120ms	100.0%	52.0%	25.3%	11.7%	5.5%	2.6%	2.32	1.94
NYHA IV, QRS duration ≥ 120ms and < 150ms	100.0%	45.5%	19.9%	8.7%	4.1%	2.0%	2.02	2.03
NYHA IV, QRS duration ≥ 150ms	100.0%	42.6%	17.0%	6.5%	2.6%	1.0%	1.82	1.59
<i>Individuals with LBBB morphology</i>								
NYHA I, QRS duration ≥ 120ms and < 150ms ^a	100.0%	83.4%	67.2%	52.7%	41.2%	31.9%	7.23	1.58
NYHA I, QRS duration ≥ 150ms ^a	100.0%	82.1%	64.8%	49.6%	37.8%	28.5%	6.56	1.27

NYHA II, QRS duration≥120ms and <150ms	100.0%	84.8%	69.7%	55.9%	44.8%	35.5%	7.82	1.66
NYHA II, QRS duration≥150ms	100.0%	85.0%	70.2%	56.5%	45.4%	36.2%	7.90	1.45
NYHA III, QRS duration≥120ms and <150ms	100.0%	69.8%	46.6%	30.3%	20.1%	13.5%	4.19	1.94
NYHA III, QRS duration≥150ms	100.0%	70.3%	47.2%	30.8%	20.4%	13.6%	4.20	1.68
NYHA IV, QRS duration≥120ms and <150ms	100.0%	46.8%	21.1%	9.7%	5.0%	2.7%	2.16	2.10
NYHA IV, QRS duration≥150ms	100.0%	45.6%	20.1%	8.8%	4.2%	2.0%	2.03	1.73

a) Results in NYHA I and IV patients are based on relatively low patient numbers and may be subject to bias due to the nature of trial inclusion criteria for NYHA I patients. For further detail see main text.

Table S11: Predicted overall survival and lifetime hospitalisation event estimates (ICD, where included as a treatment option)

Pt. group	Predicted overall survival							Hospitalisation count (lifetime)
	0 yrs	2 yrs	4 yrs	6 yrs	8 yrs	10 yrs	Median	
<i>Individuals without LBBB morphology</i>								
NYHA I, QRS duration<120ms ^a	100.0%	90.5%	80.2%	69.9%	60.6%	51.8%	11.08	1.47
NYHA I, QRS duration≥120ms and <150ms ^a	100.0%	88.3%	76.1%	64.1%	53.8%	44.1%	9.25	1.52
NYHA I, QRS duration≥150ms ^a	100.0%	86.1%	71.9%	58.5%	47.4%	37.5%	8.06	1.19
NYHA II, QRS duration<120ms	100.0%	91.9%	83.0%	73.9%	65.6%	57.6%	12.83	1.63
NYHA II, QRS duration≥120ms and <150ms	100.0%	89.2%	77.7%	66.4%	56.5%	47.0%	9.90	1.59
NYHA II, QRS duration≥150ms	100.0%	87.4%	74.3%	61.8%	51.2%	41.6%	8.86	1.27
NYHA III, QRS duration<120ms	100.0%	83.1%	66.9%	52.7%	41.6%	32.4%	7.32	2.05
NYHA III, QRS duration≥120ms and <150ms	100.0%	79.4%	60.7%	45.2%	33.7%	24.5%	6.00	2.10
NYHA III, QRS duration≥150ms	100.0%	74.8%	53.4%	37.0%	25.8%	17.6%	4.89	1.55
<i>Individuals with LBBB morphology</i>								
NYHA I, QRS duration≥120ms and <150ms ^a	100.0%	88.2%	75.8%	63.8%	53.5%	44.1%	9.48	1.55
NYHA I, QRS duration≥150ms ^a	100.0%	86.0%	71.7%	58.3%	47.2%	37.5%	8.12	1.20
NYHA II, QRS duration≥120ms and <150ms	100.0%	89.0%	77.4%	66.0%	56.1%	46.9%	10.05	1.60
NYHA II, QRS duration≥150ms	100.0%	88.2%	75.9%	64.0%	53.9%	44.7%	9.60	1.33
NYHA III, QRS duration≥120ms and <150ms	100.0%	77.3%	57.5%	41.7%	30.5%	22.0%	5.61	1.98
NYHA III, QRS duration≥150ms	100.0%	75.3%	54.4%	38.3%	27.2%	19.1%	5.11	1.58

a) Results in NYHA I and IV patients are based on relatively low patient numbers and may be subject to bias due to the nature of trial inclusion criteria for NYHA I patients. For further detail see main text.

Table S12: Predicted overall survival and lifetime hospitalisation event estimates (CRT-P, where included as a treatment option)

Pt. group	Predicted overall survival							Hospitalisation count (lifetime)
	0 yrs	2 yrs	4 yrs	6 yrs	8 yrs	10 yrs	Median	
<i>Individuals without LBBB morphology</i>								
NYHA III, QRS duration \geq 120ms and <150ms	100.0%	71.4%	48.4%	31.7%	21.0%	13.9%	4.29	1.35
NYHA III, QRS duration \geq 150ms	100.0%	71.9%	49.0%	32.1%	21.2%	13.8%	4.31	1.19
NYHA IV, QRS duration \geq 120ms and <150ms	100.0%	48.5%	22.7%	10.7%	5.4%	2.8%	2.21	1.33
NYHA IV, QRS duration \geq 150ms	100.0%	50.9%	24.2%	11.1%	5.3%	2.4%	2.27	1.18
<i>Individuals with LBBB morphology</i>								
NYHA III, QRS duration \geq 120ms and <150ms	100.0%	74.9%	53.8%	37.7%	26.7%	18.7%	5.05	1.54
NYHA III, QRS duration \geq 150ms	100.0%	78.7%	59.6%	44.0%	32.6%	23.6%	5.82	1.50
NYHA IV, QRS duration \geq 120ms and <150ms	100.0%	54.8%	28.6%	14.8%	8.1%	4.6%	2.67	1.54
NYHA IV, QRS duration \geq 150ms	100.0%	58.7%	32.8%	17.9%	10.1%	5.6%	2.90	1.45

Table S13: Predicted overall survival and lifetime hospitalisation event estimates (CRT-D, where included as a treatment option)

Pt. group	Predicted overall survival							Hospitalisation count (lifetime)
	0 yrs	2 yrs	4 yrs	6 yrs	8 yrs	10 yrs	Median	
<i>Individuals without LBBB morphology</i>								
NYHA I, QRS duration \geq 120ms and <150ms ^a	100.0%	87.0%	73.5%	60.6%	49.6%	39.7%	8.37	1.24
NYHA I, QRS duration \geq 150ms ^a	100.0%	87.7%	74.8%	62.2%	51.5%	41.5%	8.71	1.10
NYHA II, QRS duration \geq 120ms and <150ms	100.0%	88.1%	75.6%	63.4%	52.9%	43.3%	9.15	1.31
NYHA II, QRS duration \geq 150ms	100.0%	88.7%	76.8%	65.1%	54.8%	45.1%	9.48	1.16
NYHA III, QRS duration \geq 120ms and <150ms	100.0%	77.8%	58.0%	42.0%	30.5%	21.6%	5.52	1.72
NYHA III, QRS duration \geq 150ms	100.0%	77.5%	57.5%	41.2%	29.6%	20.6%	5.36	1.46
NYHA IV, QRS duration \geq 120ms and <150ms	100.0%	57.7%	31.7%	17.3%	9.8%	5.5%	2.86	1.95
NYHA IV, QRS duration \geq 150ms	100.0%	58.9%	32.5%	17.2%	9.3%	4.7%	2.81	1.68
<i>Individuals with LBBB morphology</i>								
NYHA I, QRS duration \geq 120ms and <150ms ^a	100.0%	89.5%	78.2%	67.1%	57.3%	47.9%	10.18	1.42
NYHA I, QRS duration \geq 150ms ^a	100.0%	89.9%	79.0%	68.0%	58.3%	48.6%	10.18	1.23
NYHA II, QRS duration \geq 120ms and <150ms	100.0%	90.5%	80.2%	69.9%	60.7%	51.6%	10.99	1.49
NYHA II, QRS duration \geq 150ms	100.0%	91.6%	82.5%	73.1%	64.6%	55.8%	11.85	1.35
NYHA III, QRS duration \geq 120ms and <150ms	100.0%	80.3%	62.2%	47.0%	35.7%	26.4%	6.32	1.90
NYHA III, QRS duration \geq 150ms	100.0%	82.8%	66.4%	51.9%	40.6%	30.8%	7.02	1.77
NYHA IV, QRS duration \geq 120ms and <150ms	100.0%	62.9%	37.6%	22.0%	13.3%	8.0%	3.37	2.21
NYHA IV, QRS duration \geq 150ms	100.0%	65.4%	40.8%	24.8%	15.4%	9.1%	3.56	2.02

a) Results in NYHA I and IV patients are based on relatively low patient numbers and may be subject to bias due to the nature of trial inclusion criteria for NYHA I patients. For further detail see main text.

Appendix 6: Results from additional economic sensitivity analyses

Table S14: Cost-effectiveness results generated using constant treatment effects

Pt. group	C-E Sequence				ICERs			
	1st	2nd	3 rd	4th	1 st	2nd	3 rd	4 th
<i>Individuals without LBBB morphology</i>								
NYHA I, QRS duration < 120ms ^a	MT	ICD	N/A	N/A	Referent	£17,799	N/A	N/A
NYHA I, QRS duration ≥ 120ms and < 150ms ^a	MT	CRTD	ICD	N/A	Referent	Dominated	£12,991	N/A
NYHA I, QRS duration ≥ 150ms ^a	MT	ICD	CRTD	N/A	Referent	£17,390	£19,372	N/A
NYHA II, QRS duration < 120ms	MT	ICD	N/A	N/A	Referent	£17,305	N/A	N/A
NYHA II, QRS duration ≥ 120ms and < 150ms	MT	CRTD	ICD	N/A	Referent	Dominated	£13,210	N/A
NYHA II, QRS duration ≥ 150ms	MT	ICD	CRTD	N/A	Referent	£16,577	£20,796	N/A
NYHA III, QRS duration < 120ms	MT	ICD	N/A	N/A	Referent	£24,187	N/A	N/A
NYHA III, QRS duration ≥ 120ms and < 150ms	MT	CRTP	ICD	CRTD	Referent	£17,350	Ext Dominated	£20,117
NYHA III, QRS duration ≥ 150ms	MT	ICD	CRTP	CRTD	Referent	Dominated	£12,008	£20,692
NYHA IV, QRS duration < 120ms	MT	N/A	N/A	N/A	Referent	N/A	N/A	N/A
NYHA IV, QRS duration ≥ 120ms and < 150ms	MT	CRTP	CRTD	N/A	Referent	£21,805	£37,981	N/A
NYHA IV, QRS duration ≥ 150ms	MT	CRTP	CRTD	N/A	Referent	£16,271	£33,035	N/A
<i>Individuals with LBBB morphology</i>								
NYHA I, QRS duration ≥ 120ms and < 150ms ^a	MT	ICD	CRTD	N/A	Referent	£16,438	£18,239	N/A
NYHA I, QRS duration ≥ 150ms ^a	MT	ICD	CRTD	N/A	Referent	Ext Dominated	£14,058	N/A
NYHA II, QRS duration ≥ 120ms and < 150ms	MT	ICD	CRTD	N/A	Referent	Ext Dominated	£16,318	N/A

NYHA II, QRS duration \geq 150ms	MT	ICD	CRTD	N/A	Referent	Ext Dominated	£13,510	N/A
NYHA III, QRS duration \geq 120ms and <150ms	MT	ICD	CRTP	CRTD	Referent	Dominated	£12,071	£20,255
NYHA III, QRS duration \geq 150ms	MT	ICD	CRTP	CRTD	Referent	Dominated	£8,935	£22,075
NYHA IV, QRS duration \geq 120ms and <150ms	MT	CRTP	CRTD	N/A	Referent	£17,519	£33,833	N/A
NYHA IV, QRS duration \geq 150ms	MT	CRTP	CRTD	N/A	Referent	£13,733	£36,328	N/A

a) Results in NYHA I and IV patients are based on relatively low patient numbers and may be subject to bias due to the nature of trial inclusion criteria for NYHA I patients. For further detail see main text.

Figure S1: Graphic display of cost-effective option across cost-effectiveness threshold values in patients with LBBB morphology (sensitivity analyses – constant all-cause mortality and HRQoL treatment effects)



Legend: Results in NYHA I patients are based on relatively low patient numbers and may be subject to bias due to the nature of trial inclusion criteria for NYHA I patients. For further detail see main text.