

Table D13: Outcomes reported in the trials assessing effectiveness of CRT-D

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|---------|--|------------|----------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| 6 minute hall walk distance | | | | | | | | | |
| Abraham,2004 ³⁴ MIRACLE ICD II | Control | 6 minute hall walk distance Unit:Meters | 101 | Mean: 383 SD: 108 | 6 months | 93 | Mean: 33 SD: 98 | 33 | NR |
| | CRT | 6 minute hall walk distance Unit:Meters | 85 | Mean: 355 SD: 125 | 6 months | 78 | Mean: 38 SD: 109 | 38 | NR |
| Higgins,2003 ⁴⁰ VENTAK CHF/CONTAK CD | CRT | 6 minute hall walk distance Unit:Meters | 245 | Mean: 316 SD: 119 | 6 months | 224 | Mean: NR SD: NR | 35 | NR |
| | No CRT | 6 minute hall walk distance Unit:Meters | 245 | Mean: 320 SD: 121 | 6 months | 220 | Mean: NR SD: NR | 15 | NR |
| Young,2003 ²⁶ MIRACLE ICD | Control | 6 minute hall walk distance Unit:Meters | 182 | Mean: 243 SD: 117 | 6 months | 153 | Mean: NR SD: NR | 53 | NR |
| | CRT | 6 minute hall walk distance Unit:Meters | 187 | Mean: 243 SD: 129 | 6 months | 152 | Mean: NR SD: NR | 55 | NR |
| Healey,2012 ²⁵ | ICD | 6 minute hall walk distance Unit:Meters | 68 | Mean: 343 SD: 108 | 12 | 68 | Mean: 360 SD: 122 | 16 +/- 76 | NR |
| | CRT-ICD | 6 minute hall walk distance Unit:Meters | 69 | Mean: 334 SD: 92 | 12 | 69 | Mean: 353 SD: 113 | 19 +/- 84 | NR |
| Pinter,2009 ⁴² | CRT ON | 6 minute hall walk distance | 36 | Mean: 314 SD: 114 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|---------|--|------------|------------------------|-----------|-------------------|-------------------------|--------------------------------------|----------------------------|
| | | Unit:Meters | | | | | | 53.3 | |
| | CRT OFF | 6 minute hall walk distance Unit:Meters | 36 | Mean: 338 SD: 110 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline 27.3 | NR |
| Minnesota Living with Heart Failure Inventory Score | | | | | | | | | |
| Healey,2012 ²⁵ | ICD | Minnesota Living with Heart Failure Inventory Score Unit:NA | 95 | Mean: 33 SD: 20 | 12 months | 95 | Mean: 28 SD: 20 | -5 +/- 21 | NR |
| | CRT-ICD | Minnesota Living with Heart Failure Inventory Score Unit:NA | 101 | Mean: 41 SD: 21 | 12 months | 101 | Mean: 31 SD: 21 | -11 +/- 18 | NR |
| Pinter,2009 ⁴² | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 42.3 SD: 20.8 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline -7.8 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 42.8 SD: 24.9 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline -0.2 | NR |
| | CRT ON | Minnesota Living with | 36 | Mean: 20.1 SD: 9.2 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------|--|------------|------------------------|-----------|-------------------|-------------------------|--------------------------------------|----------------------------|
| | | Heart Failure Inventory Score Unit:NA | | | | | | -5 | |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 17.7 SD: 9.8 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline -0.6 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 8.5 SD: 6.4 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline -1.3 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 9.1 SD: 7.6 | 6 months | 36 | Mean: NR SD: NR | Mean change from baseline 0.3 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 46.7 SD: 24.9 | 6 months | 36 | Mean: NR SD: NR | 11.2 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 44.5 SD: 26.5 | 6 months | 36 | Mean: NR SD: NR | 6.3 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Score Unit:NA | | | | | | | |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 14 SD: 26.9 | 6 months | 36 | Mean: NR SD: NR | 19.6 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 12.4 SD: 23.9 | 6 months | 36 | Mean: NR SD: NR | 21.6 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 93 SD: 11.4 | 6 months | 36 | Mean: NR SD: NR | -3.3 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 95.3 SD: 11 | 6 months | 36 | Mean: NR SD: NR | -2.3 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score | 36 | Mean: 59.4 SD: 12.7 | 6 months | 36 | Mean: NR SD: NR | -5.8 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Unit:NA | | | | | | | |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 59 SD: 9.6 | 6 months | 36 | Mean: NR SD: NR | -5.8 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 43.9 SD: 19.4 | 6 months | 36 | Mean: NR SD: NR | 1.4 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 42.8 SD: 25.2 | 6 months | 36 | Mean: NR SD: NR | 1.3 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 59.4 SD: 27.1 | 6 months | 36 | Mean: NR SD: NR | 4.7 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 61.7 SD: 29 | 6 months | 36 | Mean: NR SD: NR | 2.6 | NR |
| | CRT ON | Minnesota | 36 | Mean: 46.7 | 6 months | 36 | Mean: NR | 12.5 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------|--|------------|-----------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Living with Heart Failure Inventory Score Unit:NA | | SD: 46 | | | SD: NR | | |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 54 SD: 47.5 | 6 months | 36 | Mean: NR SD: NR | 5.4 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 65.3 SD: 20 | 6 months | 36 | Mean: NR SD: NR | 29.5 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 69 SD: 22.9 | 6 months | 36 | Mean: NR SD: NR | 3.3 | NR |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 39.5 SD: 5.7 | 6 months | 36 | Mean: NR SD: NR | 4.5 | NR |
| | CRT OFF | Minnesota Living with Heart Failure | 36 | Mean: 39.1 SD: 5.7 | 6 months | 36 | Mean: NR SD: NR | 0.1 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|-------------------------|---------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Inventory Score Unit:NA | | | | | | | |
| | CRT ON | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 43.7 SD: 11.6 | 6 months | 36 | Mean: NR SD: NR | 5.1 | NR |
| | CRT OFF | Minnesota Living with Heart Failure Inventory Score Unit:NA | 36 | Mean: 46 SD: 13.7 | 6 months | 36 | Mean: NR SD: NR | 0.5 | NR |
| Diab,2011 ³⁸ | Arm 1 | Minnesota Living with Heart Failure Inventory Score Unit:NA | 27 | Mean: 22 SD: 7 | 6 months | 26 | Mean: 26 SD: 9 | NR | NR |
| | Arm 2 | Minnesota Living with Heart Failure Inventory Score Unit:NA | 46 | Mean: SD: | | | Mean: SD: | NR | NR |
| | Arm 3 | Minnesota Living with Heart Failure Inventory Score | 24 | Mean: 43 SD: 25 | 6 months | 21 | Mean: 27 SD: 21 | NR | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|-----------------|--|------------|------------------------|-----------|-------------------|-------------------------|----------------------------|----------------------------|
| | | Unit:NA | | | | | | | |
| | Arm 4 | Minnesota Living with Heart Failure Inventory Score Unit:NA | 22 | Mean: 42 SD: 21 | 6 months | UNCLEAR (19?) | Mean: 44 SD: 27 | NR | NR |
| Abraham,2004 ³⁴ MIRACLE ICD II | Control | Minnesota Living with Heart Failure Inventory Score Unit:NA | 101 | Mean: 39.8 SD: 21.2 | 6 months | 96 | Mean: NR SD: NR | "-10.7(mean difference) | NR |
| | CRT | Minnesota Living with Heart Failure Inventory Score Unit:NA | 85 | Mean: 41.8 SD: 25.1 | 6 months | 81 | Mean: NR SD: NR | "-13.3(mean difference) | NR |
| Higgins,2003 ⁴⁰ VENTAK CHF/CONTAK CD | CRT(Overall) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 245 | Mean: 44 SD: 25 | 6 months | 234 | Mean: NR SD: NR | -7 | NR |
| | No CRT(Overall) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 245 | Mean: 40 SD: 23 | 6 months | 220 | Mean: NR SD: NR | 5 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|----------------------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | CRT(Class III/IV) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 117 | Mean: 56 SD: 22 | 6 months | 107 | Mean: NR SD: NR | -16 | NR |
| | No CRT(Class III/IV) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 110 | Mean: 49 SD: 21 | 6 months | 96 | Mean: NR SD: NR | -5 | NR |
| | CRT(Class I/II) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 128 | Mean: NR SD: NR | 6 months | 127 | Mean: NR SD: NR | -1 | NR |
| | No CRT(Class I/II) | Minnesota Living with Heart Failure Inventory Score Unit:NA | 135 | Mean: NR SD: NR | 6 months | 129 | Mean: NR SD: NR | -4 | NR |
| Young,2003 ²⁶ MIRACLE ICD | Control | Minnesota Living with Heart Failure Inventory Score Unit:NA | 182 | Mean: 55.2 SD: 22.6 | 6 months | 153 | Mean: NR SD: NR | -11 | NR |
| | CRT | Minnesota Living with | 187 | Mean: 56.8 SD: 22.6 | 6 months | 152 | Mean: NR SD: NR | -17.5 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|---------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Heart Failure Inventory Score Unit:NA | | | | | | | |
| SF -36 | | | | | | | | | |
| Pinter,2009 ⁴² | CRT ON | SF -36 Unit:NA | 36 | Mean: 46.7 SD: 24.9 | 6 months | 36 | Mean: NR SD: NR | 11.2 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 44.5 SD: 26.5 | 6 months | 36 | Mean: NR SD: NR | 6.3 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 14 SD: 26.9 | 6 months | 36 | Mean: NR SD: NR | 19.6 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 12.4 SD: 23.9 | 6 months | 36 | Mean: NR SD: NR | 21.6 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 93 SD: 11.4 | 6 months | 36 | Mean: NR SD: NR | -3.3 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 95.3 SD: 11 | 6 months | 36 | Mean: NR SD: NR | -2.3 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 59.4 SD: 12.7 | 6 months | 36 | Mean: NR SD: NR | -5.8 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 59 SD: 9.6 | 6 months | 36 | Mean: NR SD: NR | -5.8 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 43.9 SD: 19.4 | 6 months | 36 | Mean: NR SD: NR | 1.4 | NR |
| | CRT OFF | SF -36 | 36 | Mean: 42.8 SD: 25.2 | 6 months | 36 | Mean: NR SD: NR | 1.3 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|---------|-------------------------------------|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Unit:NA | | | | | | | |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 59.4 SD: 27.1 | 6 months | 36 | Mean: NR SD: NR | 4.7 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 61.7 SD: 29 | 6 months | 36 | Mean: NR SD: NR | 2.6 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 46.7 SD: 46 | 6 months | 36 | Mean: NR SD: NR | 12.5 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 54 SD: 47.5 | 6 months | 36 | Mean: NR SD: NR | 5.4 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 65.3 SD: 20 | 6 months | 36 | Mean: NR SD: NR | 29.5 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 69 SD: 22.9 | 6 months | 36 | Mean: NR SD: NR | 3.3 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 39.5 SD: 5.7 | 6 months | 36 | Mean: NR SD: NR | 4.5 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 39.1 SD: 5.7 | 6 months | 36 | Mean: NR SD: NR | 0.1 | NR |
| | CRT ON | SF -36 Unit:NA | 36 | Mean: 43.7 SD: 11.6 | 6 months | 36 | Mean: NR SD: NR | 5.1 | NR |
| | CRT OFF | SF -36 Unit:NA | 36 | Mean: 46 SD: 13.7 | 6 months | 36 | Mean: NR SD: NR | 0.5 | NR |
| Left ventricular end systolic volume | | | | | | | | | |
| Abraham,2004 34 | Control | Left ventricular end systolic | 101 | Mean: 252 SD: 98 | 6 months | 85 | Mean: NR SD: NR | -14 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|----------------|--|------------|------------------------|-----------|-------------------|-------------------------|------------------------------------|----------------------------|
| MIRACLE ICD II | | volume Unit:ml | | | | | | | |
| | CRT | Left ventricular end systolic volume Unit:ml | 85 | Mean: 260 SD: 134 | 6 months | 68 | Mean: NR SD: NR | -42 | NR |
| Moss,2009 ⁹ MADIT CRT | ICD | Left ventricular end systolic volume Unit:ml | 731 | Mean: 179 SD: 53 | 1 year | 620 | Mean: NR SD: NR | Mean change from baseline 18 | NR |
| | CRT-D | Left ventricular end systolic volume Unit:ml | 1098 | Mean: 175 SD: 48 | 1 year | 746 | Mean: NR SD: NR | Mean change from baseline 57 | NR |
| Young,2003 ²⁶ MIRACLE ICD | Control | Left ventricular end systolic volume Unit:ml | 182 | Mean: NR SD: NR | 6 months | 133 | Mean: NR SD: NR | -8.2 | NR |
| | CRT | Left ventricular end systolic volume Unit:ml | 187 | Mean: NR SD: NR | 6 months | 132 | Mean: NR SD: NR | -22.2 | NR |
| Hsu,2012 ¹⁴ | hyporesponders | Left ventricular end systolic volume | 187 | Mean: 85.9 SD: 20.3 | 12 months | 187 | Mean: -12.6 SD: 10.7 | NR | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|------------------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| | responders | Left ventricular end systolic volume Unit:ml | 367 | Mean: 90.2 SD: 21.9 | 12 months | 367 | Mean: -29.8 SD: 10 | NR | NR |
| | super responders | Left ventricular end systolic volume Unit:ml | 188 | Mean: 87.6 SD: 20.6 | 12 months | 188 | Mean: 87.6 SD: 20.6 | NR | NR |
| Pinter,2009 ⁴² | CRT ON | Left ventricular end systolic volume Unit:ml | 36 | Mean: 242 SD: 96 | 6 months | 36 | Mean: NR SD: NR | -7 | NR |
| | CRT OFF | Left ventricular end systolic volume Unit:ml | 36 | Mean: 251 SD: 147 | 6 months | 36 | Mean: NR SD: NR | -30 | NR |
| | CRT ON | Left ventricular end systolic volume Unit:ml | 36 | Mean: 217 SD: 72 | 6 months | 36 | Mean: NR SD: NR | -21 | NR |
| | CRT OFF | Left ventricular end systolic volume | 36 | Mean: 213 SD: 101 | 6 months | 36 | Mean: NR SD: NR | -5 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|----------------|--|------------|----------------------------|-----------|-------------------|-------------------------|---------------------------|---------------------------------------|
| | | Unit:ml | | | | | | | |
| Solomon,2010 ¹⁹ MADIT CRT Sub Study | ICD | Left ventricular end systolic volume Unit:ml | 623 | Mean: 179.2 SD: 51.9 | 12 months | 623 | Mean: 161.2 SD: 49.8 | -18.1 | NR |
| | CRT-D | Left ventricular end systolic volume Unit:ml | 749 | Mean: 177.2 SD: 44.9 | 12 months | 749 | Mean: 119.8 SD: 41.6 | -57.3 | NR |
| Tompkins,2013 ²⁰ MADIT CRT Sub Study | ICD | Left ventricular end systolic volume Unit:ml | 87 | Mean: 80 SD: 17.6 | 12 months | 74 | Mean: NR SD: NR | NR | NR |
| | CRT-D LAFB | Left ventricular end systolic volume Unit:ml | 80 | Mean: 77.5 SD: 17.7 | 12 months | 48 | Mean: NR SD: NR | NR | Mean change (nonLFAB- LFAB): -7 |
| | CRT-D non-LAFB | Left ventricular end systolic volume Unit:ml | 52 | Mean: 76.4 SD: 15.7 | 12 months | 31 | Mean: NR SD: NR | NR | Mean change (nonLFAB- ICD): -17 |
| Diab,2011 ³⁸ | Arm 3 | Left ventricular end systolic volume Unit:ml | 24 | Mean: 175 SD: 48 | 6 months | 21 | Mean: 158.4 SD: 56 | NR | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|-------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | Arm 4 | Left ventricular end systolic volume Unit:ml | 22 | Mean: 188 SD: 71 | 6 months | UNCLEAR (19?) | Mean: 169 SD: 46 | NR | NR |
| | Arm 1 | Left ventricular end systolic volume Unit:ml | 27 | Mean: 210 SD: 89 | 6 months | 26 | Mean: SD: | NR | NR |
| Arshad,2011 ¹⁰ | ICD,Women | Left ventricular end systolic volume Unit:ml | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | Median change from baseline -10 | NR |
| | ICD, Men | Left ventricular end systolic volume Unit:ml | 469 | Mean: NR SD: NR | 6 months | 469 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | CRT D Women | Left ventricular end systolic volume Unit:ml | 184 | Mean: NR SD: NR | 6 months | 184 | Mean: NR SD: NR | Median change from baseline -31 | NR |
| | CRT D Men | Left ventricular end systolic volume Unit:ml | 565 | Mean: NR SD: NR | 6 months | 565 | Mean: NR SD: NR | Median change from baseline -27 | NR |
| | ICD,Women, | Left | | 40 | Mean: NR | 6 months | 40 | Mean: NR | Median |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | Ischemic heart disease | ventricular end systolic volume Unit:ml | | SD: NR | | | SD: NR | change from baseline -11 | |
| | ICD,men, Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 294 | Mean: NR SD: NR | 6 months | 294 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | CRT D,Women, Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 52 | Mean: NR SD: NR | 6 months | 52 | Mean: NR SD: NR | Median change from baseline -28 | NR |
| | CRT D,men, Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 359 | Mean: NR SD: NR | 6 months | 359 | Mean: NR SD: NR | Median change from baseline -25 | NR |
| | ICD,Women, Non Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 114 | Mean: NR SD: NR | 6 months | 114 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD,men, Non Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 175 | Mean: NR SD: NR | 6 months | 175 | Mean: NR SD: NR | Median change from baseline -10 | NR |
| | CRT D,Women, Non Ischemic heart | Left ventricular | 132 | Mean: NR SD: NR | 6 months | 132 | Mean: NR SD: NR | Median change from | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | disease | end systolic volume Unit:ml | | | | | | baseline -33 | |
| | CRT D,men, Non Ischemic heart disease | Left ventricular end systolic volume Unit:ml | 206 | Mean: NR SD: NR | 6 months | 206 | Mean: NR SD: NR | Median change from baseline -31 | NR |
| | ICD,Women, QRS <150ms | Left ventricular end systolic volume Unit:ml | 45 | Mean: NR SD: NR | 6 months | 45 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD, Men,QRS <150ms | Left ventricular end systolic volume Unit:ml | 166 | Mean: NR SD: NR | 6 months | 166 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | CRT D Women,QRS <150ms | Left ventricular end systolic volume Unit:ml | 58 | Mean: NR SD: NR | 6 months | 58 | Mean: NR SD: NR | Median change from baseline -27 | NR |
| | CRT D Men,QRS <150ms | Left ventricular end systolic volume Unit:ml | 200 | Mean: NR SD: NR | 6 months | 200 | Mean: NR SD: NR | Median change from baseline -23 | NR |
| | ICD,Women, QRS >/=150ms | Left ventricular end systolic | 109 | Mean: NR SD: NR | 6 months | 109 | Mean: NR SD: NR | Median change from baseline -10 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|--------------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | volume Unit:ml | | | | | | | |
| | ICD, Men,QRS >/=150ms | Left ventricular end systolic volume Unit:ml | 303 | Mean: NR SD: NR | 6 months | 303 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | CRT D Women,QRS >/=150ms | Left ventricular end systolic volume Unit:ml | 126 | Mean: NR SD: NR | 6 months | 126 | Mean: NR SD: NR | Median change from baseline -36 | NR |
| | CRT D Men,QRS >/=150ms | Left ventricular end systolic volume Unit:ml | 365 | Mean: NR SD: NR | 6 months | 365 | Mean: NR SD: NR | Median change from baseline -29 | NR |
| | ICD,Women,Non LBBB | Left ventricular end systolic volume Unit:ml | 20 | Mean: NR SD: NR | 6 months | 20 | Mean: NR SD: NR | Median change from baseline -10 | NR |
| | ICD, Men,Non LBBB | Left ventricular end systolic volume Unit:ml | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | CRT D Women,Non LBBB | Left ventricular end systolic volume | 25 | Mean: NR SD: NR | 6 months | 25 | Mean: NR SD: NR | Median change from baseline -25 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|-----------------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| | CRT D Men,Non LBBB | Left ventricular end systolic volume Unit:ml | 192 | Mean: NR SD: NR | 6 months | 192 | Mean: NR SD: NR | Median change from baseline -22 | NR |
| | ICD,Women,LBBB | Left ventricular end systolic volume Unit:ml | 134 | Mean: NR SD: NR | 6 months | 134 | Mean: NR SD: NR | Median change from baseline -10 | NR |
| | ICD, Men,LBBB | Left ventricular end systolic volume Unit:ml | 309 | Mean: NR SD: NR | 6 months | 309 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | CRT D Women,LBBB | Left ventricular end systolic volume Unit:ml | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline -33 | NR |
| | CRT D Men,LBBB | Left ventricular end systolic volume Unit:ml | 373 | Mean: NR SD: NR | 6 months | 373 | Mean: NR SD: NR | Median change from baseline -29 | NR |
| Zareba,2011 ²¹ MADIT CRT Sub Study | ICD LBBB | Left ventricular end systolic volume | 443 | Mean: NR SD: NR | 6 months | 443 | Mean: NR SD: NR | Mean change from baseline -18.3 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| | ICD Non LBBB | Left ventricular end systolic volume Unit:ml | 179 | Mean: NR SD: NR | 6 months | 179 | Mean: NR SD: NR | Mean change from baseline -17.5 | NR |
| | CRT D LBBB | Left ventricular end systolic volume Unit:ml | 532 | Mean: NR SD: NR | 6 months | 532 | Mean: NR SD: NR | Mean change from baseline -62.1 | NR |
| | CRTD Non LBBB | Left ventricular end systolic volume Unit:ml | 216 | Mean: NR SD: NR | 6 months | 216 | Mean: NR SD: NR | Mean change from baseline -45.7 | NR |
| | ICD LBBB | Left ventricular end systolic volume Unit:ml | 443 | Mean: NR SD: NR | 6 months | 443 | Mean: NR SD: NR | % change from baseline -10.1 | NR |
| | ICD Non LBBB | Left ventricular end systolic volume Unit:ml | 179 | Mean: NR SD: NR | 6 months | 179 | Mean: NR SD: NR | % change from baseline -10.2 | NR |
| | CRT D LBBB | Left ventricular end systolic volume Unit:ml | 532 | Mean: NR SD: NR | 6 months | 532 | Mean: NR SD: NR | % change from baseline -34.8 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|--|---|------------|----------------------|-----------|-------------------|-------------------------|------------------------------------|----------------------------|
| | CRTD Non LBBB | Left ventricular end systolic volume Unit:ml | 216 | Mean: NR SD: NR | 6 months | 216 | Mean: NR SD: NR | % change from baseline -26.3 | NR |
| Barsheshet,20 11 ¹¹ MADIT CRT Sub Study | CRTD Ischemic Cardiomyopathy | Left ventricular end systolic volume Unit:ml | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | % change from baseline -29 | NR |
| | CRTD Non Ischemic Cardiomyopathy | Left ventricular end systolic volume Unit:ml | 477 | Mean: NR SD: NR | 6 months | 477 | Mean: NR SD: NR | % change from baseline -37 | NR |
| | ICD Ischemic Cardiomyopathy | Left ventricular end systolic volume Unit:ml | 194 | Mean: NR SD: NR | 6 months | 194 | Mean: NR SD: NR | % change from baseline -10 | NR |
| | ICD Non Ischemic Cardiomyopathy | Left ventricular end systolic volume Unit:ml | 592 | Mean: NR SD: NR | 6 months | 592 | Mean: NR SD: NR | % change from baseline -11 | NR |
| Left ventricular end diastolic volume/ volume index | | | | | | | | | |
| Abraham,2004 ³⁴ MIRACLE ICD II | Control | Left ventricular end diastolic volume/ volume index | 101 | Mean: 329 SD: 108 | 6 months | 85 | Mean: NR SD: NR | -16 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|----------------|--|------------|----------------------|-----------|-------------------|-------------------------|------------------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| | CRT | Left ventricular end diastolic volume/ volume index Unit:ml | 85 | Mean: 337 SD: 147 | 6 months | 69 | Mean: NR SD: NR | -41 | NR |
| Moss,2009 ⁹ | ICD | Left ventricular end diastolic volume/ volume index Unit:ml | 731 | Mean: 251 SD: 65 | 1 year | 620 | Mean: NR SD: NR | Mean change from baseline 15 | NR |
| | CRT-D | Left ventricular end diastolic volume/ volume index Unit:ml | 1098 | Mean: 245 SD: 60 | 1 year | 746 | Mean: NR SD: NR | Mean change from baseline 52 | NR |
| Young,2003 ²⁶ MIRACLE ICD | Control | Left ventricular end diastolic volume/ volume index Unit:ml | 188 | Mean: 311 SD: 96 | 6 months | 133 | Mean: NR SD: NR | -5.7 | NR |
| | CRT | Left ventricular end diastolic volume/ volume index Unit:ml | 187 | Mean: 322 SD: 100 | 6 months | 132 | Mean: NR SD: NR | -19.9 | NR |
| Hsu,2012 ¹⁴ | hyporesponders | Left | 187 | Mean: | 12 months | 187 | Mean: -11.2 | NR | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|------------------|--|------------|--------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | ventricular end diastolic volume/ volume index Unit:ml | | 122.5 SD: 25.5 | | | SD: 10.1 | | |
| | responders | Left ventricular end diastolic volume/ volume index Unit:ml | 367 | Mean: 126.4 SD: 27 | 12 months | 371 | Mean: -26.5 SD: 11.8 | NR | NR |
| | super responders | Left ventricular end diastolic volume/ volume index Unit:ml | 188 | Mean: 124 SD: 24.7 | 12 months | 191 | Mean: -40.8 SD: 16.8 | NR | NR |
| Pinter,2009 ⁴² | CRT ON | Left ventricular end diastolic volume/ volume index Unit:ml | 36 | Mean: 314 SD: 108 | 6 months | 36 | Mean: NR SD: NR | -7 | NR |
| | CRT OFF | Left ventricular end diastolic volume/ volume index Unit:ml | 36 | Mean: 335 SD: 156 | 6 months | 36 | Mean: NR SD: NR | -34 | NR |
| | CRT ON | Left ventricular end diastolic | 36 | Mean: 270 SD: 74 | 6 months | 36 | Mean: NR SD: NR | -16 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|------------|--|------------|----------------------------|-----------|-------------------|-------------------------|---------------------------|---------------------------------------|
| | | volume/ volume index Unit:ml | | | | | | | |
| | CRT OFF | Left ventricular end diastolic volume/ volume index Unit:ml | 36 | Mean: 272 SD: 106 | 6 months | 36 | Mean: NR SD: NR | -13 | NR |
| Solomon,2010 ¹⁹ MADIT CRT Sub Study | ICD | Left ventricular end diastolic volume/ volume index Unit:ml | 623 | Mean: 250.9 SD: 64.4 | 12 months | 623 | Mean: 236.2 SD: 63.5 | -14.7 | NR |
| | CRT-D | Left ventricular end diastolic volume/ volume index Unit:ml | 749 | Mean: 249.9 SD: 55.6 | 12 months | 749 | Mean: 197.8 SD: 52.7 | -52.2 | NR |
| Tompkins,2013 ²⁰ | ICD | Left ventricular end diastolic volume/ volume index Unit:ml | 87 | Mean: 113.5 SD: 22.4 | 12 months | 74 | Mean: NR SD: NR | NR | NR |
| | CRT-D LAFB | Left ventricular end diastolic volume/ volume index | 80 | Mean: 110.5 SD: 22.8 | 12 months | 48 | Mean: NR SD: NR | NR | Mean change (nonLFAB- LFAB): -5 |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|----------------|--|------------|----------------------------|-----------|-------------------|-------------------------|---------------------------------------|---------------------------------------|
| | | Unit:ml | | | | | | | |
| | CRT-D non-LAFB | Left ventricular end diastolic volume/ volume index Unit:ml | 52 | Mean: 108.6 SD: 20.4 | 12 months | 31 | Mean: NR SD: NR | NR | Mean change (nonLFAB- ICD): -11 |
| Arshad,2011 ¹⁰ | ICD,Women | Left ventricular end diastolic volume/ volume index Unit:ml | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD, Men | Left ventricular end diastolic volume/ volume index Unit:ml | 469 | Mean: NR SD: NR | 6 months | 469 | Mean: NR SD: NR | Median change from baseline -7 | NR |
| | CRT D Women | Left ventricular end diastolic volume/ volume index Unit:ml | 184 | Mean: NR SD: NR | 6 months | 184 | Mean: NR SD: NR | Median change from baseline -29 | NR |
| | CRT D Men | Left ventricular end diastolic volume/ volume index Unit:ml | 565 | Mean: NR SD: NR | 6 months | 565 | Mean: NR SD: NR | Median change from baseline -22 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | ICD,Women, Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 40 | Mean: NR SD: NR | 6 months | 40 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD,men, Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 294 | Mean: NR SD: NR | 6 months | 294 | Mean: NR SD: NR | Median change from baseline 6 | NR |
| | CRT D,Women, Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 52 | Mean: NR SD: NR | 6 months | 52 | Mean: NR SD: NR | Median change from baseline -22 | NR |
| | CRT D,men, Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 359 | Mean: NR SD: NR | 6 months | 359 | Mean: NR SD: NR | Median change from baseline -21 | NR |
| | ICD,Women, Non Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 114 | Mean: NR SD: NR | 6 months | 114 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | ICD,men, Non Ischemic heart | Left ventricular | 175 | Mean: NR SD: NR | 6 months | 175 | Mean: NR SD: NR | Median change from | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | disease | end diastolic volume/ volume index Unit:ml | | | | | | baseline -7 | |
| | CRT D,Women, Non Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 132 | Mean: NR SD: NR | 6 months | 132 | Mean: NR SD: NR | Median change from baseline -30 | NR |
| | CRT D,men, Non Ischemic heart disease | Left ventricular end diastolic volume/ volume index Unit:ml | 206 | Mean: NR SD: NR | 6 months | 206 | Mean: NR SD: NR | Median change from baseline -28 | NR |
| | ICD,Women, QRS <150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 45 | Mean: NR SD: NR | 6 months | 45 | Mean: NR SD: NR | Median change from baseline -7 | NR |
| | ICD, Men,QRS <150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 166 | Mean: NR SD: NR | 6 months | 166 | Mean: NR SD: NR | Median change from baseline -7 | NR |
| | CRT D Women,QRS <150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 58 | Mean: NR SD: NR | 6 months | 58 | Mean: NR SD: NR | Median change from baseline -23 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|------------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | volume index Unit:ml | | | | | | | |
| | CRT D Men,QRS <150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 200 | Mean: NR SD: NR | 6 months | 200 | Mean: NR SD: NR | Median change from baseline -19 | NR |
| | ICD,Women, QRS ≥150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 109 | Mean: NR SD: NR | 6 months | 109 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD, Men,QRS ≥150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 303 | Mean: NR SD: NR | 6 months | 303 | Mean: NR SD: NR | Median change from baseline -7 | NR |
| | CRT D Women,QRS ≥150ms | Left ventricular end diastolic volume/ volume index Unit:ml | 126 | Mean: NR SD: NR | 6 months | 126 | Mean: NR SD: NR | Median change from baseline -32 | NR |
| | CRT D Men,QRS ≥150ms | Left ventricular end diastolic volume/ volume index | 365 | Mean: NR SD: NR | 6 months | 365 | Mean: NR SD: NR | Median change from baseline -25 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|-------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| | ICD,Women,Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 20 | Mean: NR SD: NR | 6 months | 20 | Mean: NR SD: NR | Median change from baseline -9 | NR |
| | ICD, Men,Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline -7 | NR |
| | CRT D Women,Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 25 | Mean: NR SD: NR | 6 months | 25 | Mean: NR SD: NR | Median change from baseline -20 | NR |
| | CRT D Men,Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 192 | Mean: NR SD: NR | 6 months | 192 | Mean: NR SD: NR | Median change from baseline -19 | NR |
| | ICD,Women,LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 134 | Mean: NR SD: NR | 6 months | 134 | Mean: NR SD: NR | Median change from baseline -8 | NR |
| | ICD, Men,LBBB | Left | 309 | Mean: NR | 6 months | 309 | Mean: NR | Median | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|---------------------|--|------------|---------------------|-----------|-------------------|-------------------------|---------------------------------------|----------------------------|
| | | ventricular end diastolic volume/ volume index Unit:ml | | SD: NR | | | SD: NR | change from baseline -6 | |
| | CRT D Women,LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline -30 | NR |
| | CRT D Men,LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 373 | Mean: NR SD: NR | 6 months | 373 | Mean: NR SD: NR | Median change from baseline -25 | NR |
| Zareba,2011 ²¹ MADIT CRT Sub Study | ICD LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 443 | Mean: NR SD: NR | 6 months | 443 | Mean: NR SD: NR | Mean change from baseline -14.8 | NR |
| | ICD Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 179 | Mean: NR SD: NR | 6 months | 179 | Mean: NR SD: NR | Mean change from baseline -14.4 | NR |
| | CRT D LBBB | Left ventricular end diastolic | 532 | Mean: NR SD: NR | 6 months | 532 | Mean: NR SD: NR | Mean change from baseline -56.7 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------------|--|------------|---------------------|-----------|-------------------|-------------------------|-------------------------------------|----------------------------|
| | | volume/ volume index Unit:ml | | | | | | | |
| | CRTD Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 216 | Mean: NR SD: NR | 6 months | 216 | Mean: NR SD: NR | Mean change from baseline -41 | NR |
| | ICD LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 443 | Mean: NR SD: NR | 6 months | 443 | Mean: NR SD: NR | % change from baseline -5.9 | NR |
| | ICD Non LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 179 | Mean: NR SD: NR | 6 months | 179 | Mean: NR SD: NR | % change from baseline -5.9 | NR |
| | CRT D LBBB | Left ventricular end diastolic volume/ volume index Unit:ml | 532 | Mean: NR SD: NR | 6 months | 532 | Mean: NR SD: NR | % change from baseline -22.5 | NR |
| | CRTD Non LBBB | Left ventricular end diastolic volume/ volume index | 216 | Mean: NR SD: NR | 6 months | 216 | Mean: NR SD: NR | % change from baseline -16.4 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|--|--|------------|-----------------------|-----------|-------------------|-------------------------|----------------------------------|----------------------------|
| | | Unit:ml | | | | | | | |
| Barsheshet,20 11 ¹¹ | CRTD Ischemic Cardiomyopathy | Left ventricular end diastolic volume/ volume index Unit:ml | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | % change from baseline -18 | NR |
| | CRTD Non Ischemic Cardiomyopathy | Left ventricular end diastolic volume/ volume index Unit:ml | 477 | Mean: NR SD: NR | 6 months | 477 | Mean: NR SD: NR | % change from baseline -24 | NR |
| | ICD Ischemic Cardiomyopathy | Left ventricular end diastolic volume/ volume index Unit:ml | 194 | Mean: NR SD: NR | 6 months | 194 | Mean: NR SD: NR | % change from baseline -5 | NR |
| | ICD Non Ischemic Cardiomyopathy | Left ventricular end diastolic volume/ volume index Unit:ml | 592 | Mean: NR SD: NR | 6 months | 592 | Mean: NR SD: NR | % change from baseline -7 | NR |
| Left ventricular ejection fraction | | | | | | | | | |
| Abraham,2004 ³⁴ MIRACLE ICD II | Control | Left ventricular ejection fraction Unit:% | 101 | Mean: 24.6 SD: 6.7 | 6 months | 85 | Mean: NR SD: NR | 0.8 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|---------|--|------------|-----------------------|-----------|-------------------|-------------------------|------------------------------------|----------------------------|
| | CRT | Left ventricular ejection fraction Unit: % | 85 | Mean: 24.4 SD: 6.6 | 6 months | 68 | Mean: NR SD: NR | 3.8 | NR |
| Higgins,2003 ⁴⁰ VENTAK CHF/CONTAK CD | CRT | Left ventricular ejection fraction Unit: % | 245 | Mean: 21 SD: 7 | 6 months | 222 | Mean: NR SD: NR | 5.1 | NR |
| | No CRT | Left ventricular ejection fraction Unit: % | 245 | Mean: 22 SD: 7 | 6 months | 216 | Mean: NR SD: NR | 2.8 | NR |
| Moss,2009 ⁹ | ICD | Left ventricular ejection fraction Unit: % | 731 | Mean: 24 SD: 5 | 1 year | 620 | Mean: NR SD: NR | Mean change from baseline 3 | NR |
| | CRT-D | Left ventricular ejection fraction Unit: % | 1098 | Mean: 24 SD: 5 | 1 year | 746 | Mean: NR SD: NR | Mean change from baseline 11 | NR |
| Young,2003 ²⁶ MIRACLE ICD | Control | Left ventricular ejection fraction Unit: % | 182 | Mean: 23.9 SD: 6 | 6 months | 133 | Mean: NR SD: NR | 1.7 | NR |
| | CRT | Left | 187 | Mean: 24.2 | 6 months | 132 | Mean: NR | 2.1 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|--|--------|--|------------|------------------------|-----------|-------------------|-------------------------|---------------------------|----------------------------|
| | | ventricular ejection fraction Unit: % | | SD: 6.5 | | | SD: NR | | |
| Solomon,2010 ¹⁹ MADIT CRT Sub Study | ICD | Left ventricular ejection fraction Unit: % | 623 | Mean: 0.29 SD: 0.03 | 12 months | 623 | Mean: 0.32 SD: 0.04 | 0.03 | NR |
| | CRT-D | Left ventricular ejection fraction Unit: % | 749 | Mean: 0.29 SD: 0.03 | 12 months | 749 | Mean: 0.41 SD: 0.06 | 0.11 | NR |
| Diab, 2011, ³⁸ | Arm 3 | Left ventricular ejection fraction Unit: % | 24 | Mean: 25 SD: 5 | 6 months | 21 | Mean: 29 SD: 9 | NR | NR |
| | Arm 4 | Left ventricular ejection fraction Unit: % | 22 | Mean: 26 SD: 6 | 6 months | UNCLEAR (19?) | Mean: 27 SD: 8 | NR | NR |
| | Arm 1 | Left ventricular ejection fraction Unit: % | 27 | Mean: 210 SD: 89 | 6 months | 27 | Mean: 198 SD: 72 | NR | NR |
| Pinter,2009 ⁴² | CRT ON | Left ventricular | 36 | Mean: 24.2 SD: 7.5 | 6 months | 36 | Mean: NR SD: NR | 1.7 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---------------------------|-------------|--|------------|-----------------------|-----------|-------------------|-------------------------|--|----------------------------|
| | | ejection fraction Unit: % | | | | | | | |
| | CRT OFF | Left ventricular ejection fraction Unit: % | 36 | Mean: 26.8 SD: 8.4 | 6 months | 36 | Mean: NR SD: NR | 0.6 | NR |
| | CRT ON | Left ventricular ejection fraction Unit: % | 36 | Mean: 21.2 SD: 7.9 | 6 months | 36 | Mean: NR SD: NR | 3.9 | NR |
| | CRT OFF | Left ventricular ejection fraction Unit: % | 36 | Mean: 24 SD: 8.3 | 6 months | 36 | Mean: NR SD: NR | 1.9 | NR |
| Arshad,2011 ¹⁰ | ICD,Women | Left ventricular ejection fraction Unit: % | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | ICD, Men | Left ventricular ejection fraction Unit: % | 469 | Mean: NR SD: NR | 6 months | 469 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D Women | Left ventricular ejection | 184 | Mean: NR SD: NR | 6 months | 184 | Mean: NR SD: NR | Median change from baseline 0.13 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---------------------------------------|---|------------|---------------------|-----------|-------------------|-------------------------|----------------------------------|----------------------------|
| | | fraction Unit: % | | | | | | | |
| | CRT D Men | Left ventricular ejection fraction Unit: % | 565 | Mean: NR SD: NR | 6 months | 565 | Mean: NR SD: NR | Median change from baseline 0.1 | NR |
| | ICD,Women, Ischemic heart disease | Left ventricular ejection fraction Unit: % | 40 | Mean: NR SD: NR | 6 months | 40 | Mean: NR SD: NR | Median change from baseline 0.04 | NR |
| | ICD,men, Ischemic heart disease | Left ventricular ejection fraction Unit: % | 294 | Mean: NR SD: NR | 6 months | 294 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D,Women, Ischemic heart disease | Left ventricular ejection fraction Unit: % | 52 | Mean: NR SD: NR | 6 months | 52 | Mean: NR SD: NR | Median change from baseline 0.13 | NR |
| | CRT D,men, Ischemic heart disease | Left ventricular ejection fraction Unit: % | 359 | Mean: NR SD: NR | 6 months | 359 | Mean: NR SD: NR | Median change from baseline 0.1 | NR |
| | ICD,Women, Non Ischemic heart disease | Left ventricular ejection fraction | 114 | Mean: NR SD: NR | 6 months | 114 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|---|--|------------|---------------------|-----------|-------------------|-------------------------|--|----------------------------|
| | | Unit: % | | | | | | | |
| | ICD,men, Non Ischemic heart disease | Left ventricular ejection fraction Unit: % | 175 | Mean: NR SD: NR | 6 months | 175 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D,Women, Non Ischemic heart disease | Left ventricular ejection fraction Unit: % | 132 | Mean: NR SD: NR | 6 months | 132 | Mean: NR SD: NR | Median change from baseline 0.13 | NR |
| | CRT D,men, Non Ischemic heart disease | Left ventricular ejection fraction Unit: % | 206 | Mean: NR SD: NR | 6 months | 206 | Mean: NR SD: NR | Median change from baseline 0.12 | NR |
| | ICD,Women, QRS <150ms | Left ventricular ejection fraction Unit: % | 45 | Mean: NR SD: NR | 6 months | 45 | Mean: NR SD: NR | Median change from baseline 0.04 | NR |
| | ICD, Men, QRS <150ms | Left ventricular ejection fraction Unit: % | 166 | Mean: NR SD: NR | 6 months | 166 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D Women, QRS <150ms | Left ventricular ejection fraction | 58 | Mean: NR SD: NR | 6 months | 58 | Mean: NR SD: NR | Median change from baseline 0.12 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|-------------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|--|----------------------------|
| | | Unit: % | | | | | | | |
| | CRT D Men, QRS <150ms | Left ventricular ejection fraction Unit: % | 200 | Mean: NR SD: NR | 6 months | 200 | Mean: NR SD: NR | Median change from baseline 0.1 | NR |
| | ICD, Women, QRS ≥150ms | Left ventricular ejection fraction Unit: % | 109 | Mean: NR SD: NR | 6 months | 109 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | ICD, Men, QRS ≥150ms | Left ventricular ejection fraction Unit: % | 303 | Mean: NR SD: NR | 6 months | 303 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D Women, QRS ≥150ms | Left ventricular ejection fraction Unit: % | 126 | Mean: NR SD: NR | 6 months | 126 | Mean: NR SD: NR | Median change from baseline 0.13 | NR |
| | CRT D Men, QRS ≥150ms | Left ventricular ejection fraction Unit: % | 365 | Mean: NR SD: NR | 6 months | 365 | Mean: NR SD: NR | Median change from baseline 0.11 | NR |
| | ICD, Women, Non LBBB | Left ventricular ejection fraction Unit: % | 20 | Mean: NR SD: NR | 6 months | 20 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|-------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|--|----------------------------|
| | ICD, Men,Non LBBB | Left ventricular ejection fraction Unit: % | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D Women,Non LBBB | Left ventricular ejection fraction Unit: % | 25 | Mean: NR SD: NR | 6 months | 25 | Mean: NR SD: NR | Median change from baseline 0.1 | NR |
| | CRT D Men,Non LBBB | Left ventricular ejection fraction Unit: % | 192 | Mean: NR SD: NR | 6 months | 192 | Mean: NR SD: NR | Median change from baseline 0.09 | NR |
| | ICD,Women,LBBB | Left ventricular ejection fraction Unit: % | 134 | Mean: NR SD: NR | 6 months | 134 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | ICD, Men,LBBB | Left ventricular ejection fraction Unit: % | 309 | Mean: NR SD: NR | 6 months | 309 | Mean: NR SD: NR | Median change from baseline 0.03 | NR |
| | CRT D Women,LBBB | Left ventricular ejection fraction Unit: % | 159 | Mean: NR SD: NR | 6 months | 159 | Mean: NR SD: NR | Median change from baseline 0.13 | NR |
| | CRT D Men,LBBB | Left | 373 | Mean: NR | 6 months | 373 | Mean: NR | Median | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|---|---------------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|--------------------------------------|----------------------------|
| | | ventricular ejection fraction Unit: % | | SD: NR | | | SD: NR | change from baseline 0.11 | |
| Zareba,2011 ²¹ MADIT CRT Sub Study | ICD LBBB | Left ventricular ejection fraction Unit: % | 443 | Mean: NR SD: NR | 6 months | 443 | Mean: NR SD: NR | Mean change from baseline 3.4 | NR |
| | ICD Non LBBB | Left ventricular ejection fraction Unit: % | 179 | Mean: NR SD: NR | 6 months | 179 | Mean: NR SD: NR | Mean change from baseline 3.4 | NR |
| | CRT D LBBB | Left ventricular ejection fraction Unit: % | 532 | Mean: NR SD: NR | 6 months | 532 | Mean: NR SD: NR | Mean change from baseline 11.9 | NR |
| | CRTD Non LBBB | Left ventricular ejection fraction Unit: % | 216 | Mean: NR SD: NR | 6 months | 216 | Mean: NR SD: NR | Mean change from baseline 8.8 | NR |
| Barsheshet,20 11 ¹¹ | CRTD Ischemic Cardiomyopathy | Left ventricular ejection fraction Unit: % | 154 | Mean: NR SD: NR | 6 months | 154 | Mean: NR SD: NR | % change from baseline 10 | NR |
| | CRTD Non Ischemic | Left ventricular | 477 | Mean: NR SD: NR | 6 months | 477 | Mean: NR SD: NR | % change from baseline | NR |

| Author,Year Trial | Arm | Outcome Units | Baseline N | Baseline Outcome | Timepoint | N at Timepoint | Outcome at Timepoint | Within Arm Comparisons | Between Arm Comparisons |
|----------------------|------------------------------------|--|------------|---------------------|-----------|-------------------|-------------------------|--------------------------------|----------------------------|
| | Cardiomyopathy | ejection fraction Unit: % | | | | | | 12 | |
| | ICD Ischemic Cardiomyopathy | Left ventricular ejection fraction Unit: % | 194 | Mean: NR SD: NR | 6 months | 194 | Mean: NR SD: NR | % change from baseline 3 | NR |
| | ICD Non Ischemic Cardiomyopathy | Left ventricular ejection fraction Unit: % | 592 | Mean: NR SD: NR | 6 months | 592 | Mean: NR SD: NR | % change from baseline 3 | NR |

CRT-P=Cardiac Resynchronization Therapy Paced, CRT-D=Cardiac Resynchronization Therapy with Defibrillator, ICD=Implantable Cardioverter Defibrillator, N=Number, HR=Hazard Ratio, CI=Confidence Interval, OR=Odds Ratio, RD=Risk Difference, P=P value, NA=Not Applicable, LBBB=Left Bundle Branch Block, LVEF=Left Ventricular Ejection Fraction, CABG=Coronary Artery Bypass Graft, CRT=Cardiac Resynchronization Therapy, Biv=Bi-Ventricular, RV=Right Ventricular, IHD=Ischemic Heart Disease, NR=Not Reported, SD=Standard Deviation, NA=Not Applicable