| Recovery cycles with 1, 2 and 5 CS | Treatment | Raw mean baseline | Estimated mean 3h post-dose | Estimated mean 5h post-dose |
|---------------------------------|-----------|-------------------|-----------------------------|-----------------------------|
| **MRRP (ms)**                   | Placebo   | 3.03              | 2.84                        | 3.23                        |
|                                 | Mexiletine| 3.42              | 2.99                        | 3.19                        |
| **ESN (%)**                     | Placebo   | 13.1              | 13.1                        | 11.7                        |
|                                 | Mexiletine| 12.9              | 12.1                        | 11.0                        |
| **ESN@ (ms)**                   | Placebo   | 6.57              | 5.98                        | 6.57                        |
|                                 | Mexiletine| 7.57              | 6.52                        | 6.72                        |
| **5ESN (%)**                    | Placebo   | 13.3              | 14.3                        | 12.5                        |
|                                 | Mexiletine| 12.8              | 11.3                        | 9.9                         |
| **SN20 (%)**                    | Placebo   | 6.60              | 6.77                        | 6.07                        |
|                                 | Mexiletine| 6.52              | 6.39                        | 5.46                        |
| **LSN (%)**                     | Placebo   | 3.49              | 3.55                        | 2.83                        |
|                                 | Mexiletine| 3.32              | 3.55                        | 2.98                        |
| **2XLSN (%)**                   | Placebo   | 2.28              | 2.49                        | 2.44                        |
|                                 | Mexiletine| 2.37              | 2.29                        | 1.86                        |
| **5XLSN (%)**                   | Placebo   | 6.58              | 7.13                        | 6.77                        |
|                                 | Mexiletine| 6.93              | 5.97                        | 5.02                        |
| **RSN (%)**                     | Placebo   | 0.01              | 0.12                        | 0.22                        |
|                                 | Mexiletine| 0.31              | 0.19                        | 0.14                        |
| **5XRSN (%)**                   | Placebo   | 1.11              | 0.98                        | 0.80                        |
|                                 | Mexiletine| 1.26              | 0.87                        | 0.56                        |

| Frequency ramp |                        | Placebo | Mexiletine |
|----------------|-------------------------|---------|------------|
| Lat[15Hz]first (%) | Placebo         | 95.6    | 96.2       | 96.4       |
|                | Mexiletine       | 95.9    | 96.3       | 96.7       |
| Lat[15Hz]last (%) | Placebo         | 86.2    | 85.9       | 87.2       |
|                | Mexiletine       | 86.2    | 89.0       | 89.6       |
| Lat[30Hz]first (%) | Placebo         | 95.8    | 96.8       | 97.5       |
|                | Mexiletine       | 97.0    | 98.2       | 98.2       |
| Lat[30Hz]last (%) | Placebo         | 88.3    | 86.5       | 88.4       |
|                | Mexiletine       | 87.4    | 95.6       | 94.5       |
| Lat[30Hz+30s] (%) | Placebo         | 102     | 101        | 101        |
|                | Mexiletine       | 102     | 102        | 100        |
| Peak[15Hz]first (%) | Placebo         | 113     | 113        | 111        |
|                | Mexiletine       | 114     | 108        | 108        |
| Peak[15Hz]last (%) | Placebo         | 119     | 113        | 102        |
|                | Mexiletine       | 114     | 119        | 102        |
| Peak[30Hz]first (%) | Placebo         | 116     | 116        | 115        |
|                | Mexiletine       | 121     | 109        | 111        |
| Peak[30Hz]last (%) | Placebo         | 95.6    | 92.6       | 84.1       |
|                | Mexiletine       | 102.6   | 93.0       | 86.0       |
| Peak[30-15Hz] (%) | Placebo         | 2.73    | 2.13       | 1.48       |
|                | Mexiletine       | 5.76    | 4.98       | 4.00       |
| Peak[30Hz+30s] (%) | Placebo         | 98.3    | 101        | 97.6       |
|                  | Mexiletine (first) | Placebo (first) | Mexiletine (last) | Placebo (last) |
|------------------|-------------------|-----------------|-------------------|----------------|
| LatMin (%)       | 94.8              | 94.4            | 95.6              | 95.4           |
|                  | 84.7              | 84.9            | 88.7              | 84.3           |
| FreqLatMin (Hz)  | 21.9              | 20.6            | 18.4              | 20.8           |
|                  | 20.7              | 17.7            | 17.9              | 21.2           |

Table S4: Raw mean baseline (pre-dose) values of MVRC endpoints, and estimated means of post-dose measurements at three- and five-hours post-dose, are listed.