**Appendix**

Supplemental Table 1 Comparisons of left ventricular regional strain between *KCNQ1*-R190W mutation carriers and non-mutation subjects

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | CS (%) |  | RS (%) |  | LS (%) |  | 3D Strain (%) |
| Mutation | Non-mutation  | p value |  | Mutation | Non-mutation  | p value |  | Mutation | Non-mutation  | p value |  | Mutation | Non-mutation  | p value |
| ***Basal Segments*** |
| Posteroseptal | -26.42±4.21 | -22.56±7.85 | NS |  | 37.57±0.22 | 31.17±9.23 | NS |  | -16.87±5.88 | -17.39±6.23 | NS |  | -34.22±1.55 | -30.67±5.92  | NS |
| Lateral | -28.64±1.06 | -25.72±7.22 | NS |  | 45.94±1.70 | 40.84±9.13 | NS |  | -24.41±2.48 | -25.13±7.80 | NS |  | -34.00±0.75 | -33.38±5.93  | NS |
| Anterior | -31.91±2.84 | -31.28±3.54 | NS |  | 44.31±1.90 | 43.84±4.35 | NS |  | -20.72±3.49 | -22.50±7.25 | NS |  | -30.00±2.29 | -33.58±3.96  | NS |
| Inferior | -30.95±4.75 | -30.06±7.61 | NS |  | 45.94±7.64 | 40.16±6.19 | NS |  | -21.46±2.72 | -22.76±7.07 | NS |  | -35.80±1.92 | -35.62±3.85 | NS |
| Anteroseptal | -26.32±2.18 | -21.91±4.31 | NS |  | 36.52±4.89 | 33.11±2.85 | NS |  | -15.67±7.31 | -19.24±9.39 | NS |  | -31.22±1.96 | -29.99±4.10 | NS |
| Posterior | -26.29±2.62 | -22.47±6.16 | NS |  | 44.40±6.37 | 36.37±6.70 | NS |  | -23.99±4.50 | -27.11±5.74 | NS |  | -33.42±2.62 | -31.80±4.05 | NS |
| ***Mid Segments*** |  |
| Posteroseptal | -46.62±12.47 | -36.95±7.19 | NS |  | 54.22±9.55 | 42.76±7.93 | NS |  | -18.44±5.41 | -15.99±4.51 | NS |  | -52.12±9.18 | -44.97±3.84 | NS |
| Lateral | -35.52±4.61 | -32.54±4.51 | NS |  | 48.79±4.21 | 43.92±5.21 | NS |  | -18.76±8.47 | -19.84±5.12 | NS |  | -36.73±3.70 | -37.40±5.66 | NS |
| Anterior | -30.27±5.95 | -31.81±3.79 | NS |  | 42.76±4.52 | 42.69±5.75 | NS |  | -18.60±2.05 | -21.02±4.45 | NS |  | -29.47±1.27 | -33.27±3.51 | NS |
| Inferior | -36.02±6.03 | -38.82±6.29 | NS |  | 48.13±6.18 | 48.82±7.81 | NS |  | -20.51±1.57 | -20.43±5.09 | NS |  | -38.52±2.45 | -47.94±6.54 | NS |
| Anteroseptal | -39.51±4.59 | -33.07±6.11 | NS |  | 47.41±2.76 | 40.88±4.42 | NS |  | -16.62±5.16 | -16.43±2.29 | NS |  | -41.47±7.44 | -39.32±8.21 | NS |
| Posterior | -34.14±3.78 | -28.52±4.32 | NS |  | 47.37±4.33 | 40.28±7.36 | NS |  | -19.42±5.38 | -19.08±5.65 | NS |  | -34.87±1.60 | -35.30±3.72 | NS |
| ***Apical Segments*** |
| Septal | -45.45±12.35 | -35.31±2.32 | NS |  | 51.54±8.60 | 43.89±4.19 | NS |  | -15.61±4.91 | -20.29±8.28 | NS |  | -45.80±9.75 | -39.98±2.92 | NS |
| Lateral | -37.96±7.92 | -33.01±2.33 | NS |  | 52.91±7.24 | 44.60±3.78 | NS |  | -21.34±3.71 | -17.98±3.33 | NS |  | -37.47±6.88 | -39.87±8.99 | NS |
| Anterior | -38.28±10.55 | -34.92±3.49 | NS |  | 48.61±7.11 | 45.07±5.35 | NS |  | -17.14±4.29 | -17.82±0.86 | NS |  | -37.74±8.59 | -38.32±5.27 | NS |
| Inferior | -39.34±9.04 | -38.05±3.01 | NS |  | 49.92±6.59 | 50.14±6.32 | NS |  | -19.17±3.98 | -20.99±6.23 | NS |  | -37.43±4.42 | -46.01±7.52 | NS |

Abbreviations as in table 3.