

**Supplemental table 1. Reference values for regional strain in the healthy population**

|                                    | n   | Mean + SD    | Limits of Normal |         |
|------------------------------------|-----|--------------|------------------|---------|
| <b>Longitudinal (four-chamber)</b> |     |              |                  |         |
| Basal Lateral                      | 494 | -15.6 ± -5.3 | [ -26.2          | -5.1 ]  |
| Mid Lateral                        | 473 | -15.1 ± -4.8 | [ -24.7          | -5.5 ]  |
| Apical Lateral                     | 419 | -11.6 ± -4.2 | [ -20.0          | -3.2 ]  |
| Basal Septal                       | 492 | -12.3 ± -2.9 | [ -18.1          | -6.6 ]  |
| Mid Septal                         | 509 | -19.4 ± -3.1 | [ -25.6          | -13.3 ] |
| Apical Septal                      | 503 | -20.3 ± -4.9 | [ -30.1          | -10.6 ] |
| <b>Longitudinal (two-chamber)</b>  |     |              |                  |         |
| Basal Anterior                     | 378 | -16.6 ± -4.7 | [ -25.9          | -7.2 ]  |
| Mid Anterior                       | 349 | -15.6 ± -4.8 | [ -25.2          | -5.9 ]  |
| Apical Anterior                    | 260 | -10.3 ± -4.1 | [ -18.4          | -2.1 ]  |
| Basal Inferior                     | 388 | -16.0 ± -4.3 | [ -24.7          | -7.3 ]  |
| Mid Inferior                       | 390 | -19.0 ± -3.7 | [ -26.4          | -11.6 ] |
| Apical Inferior                    | 376 | -20.0 ± -5.2 | [ -30.4          | -9.6 ]  |
| <b>Circumferential</b>             |     |              |                  |         |
| Anterior                           | 477 | -13.7 ± -4.6 | [ -22.9          | -4.5 ]  |
| Lateral                            | 475 | -13.4 ± -4.7 | [ -22.8          | -4.1 ]  |
| Posterior                          | 496 | -15.4 ± -5.8 | [ -26.9          | -3.9 ]  |
| Inferior                           | 504 | -15.6 ± -4.6 | [ -24.8          | -6.4 ]  |
| Anteroseptal                       | 519 | -18.9 ± -4.7 | [ -28.4          | -9.5 ]  |
| Inferoseptal                       | 518 | -16.9 ± -4.0 | [ -25.0          | -8.8 ]  |
| <b>Radial</b>                      |     |              |                  |         |
| Anterior                           | 475 | 34.7 ± -18.5 | [ -2.3           | 71.7 ]  |
| Lateral                            | 472 | 34.0 ± -19.2 | [ -4.4           | 72.5 ]  |
| Posterior                          | 497 | 47.7 ± -21.8 | [ 4.2            | 91.3 ]  |
| Inferior                           | 503 | 39.6 ± -18.8 | [ 1.9            | 77.2 ]  |
| Anteroseptal                       | 518 | 30.2 ± -12.3 | [ 5.5            | 54.8 ]  |
| Inferoseptal                       | 518 | 34.6 ± -16.1 | [ 2.5            | 66.7 ]  |

Limits of normal are based on prediction intervals. Longitudinal strain was measured at apical four-chamber and two-chamber views. Circumferential and radial strains were measured at parasternal short-axis view at mid-ventricular level. n = number of exams analyzed. SD = standard deviation.