**Strain distribution descriptive statistics values**

1. Strain in myocardium

## END-SYSTOLIC myofibre and cross-fibre strain in biventricular model

App Table 1. Statistical values of the ES myofibre strain distribution in the healthy and infarcted myocardium

|  |  |
| --- | --- |
|  | myofibre strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | -18.56 | -20.37 | -23.49 | 11.27 |
| 7.38 | -18.40 | -20.10 | -23.29 | 10.98 |
| 40.59 | -17.37 | -18.64 | -22.18 | 10.45 |
| 73.8 | -16.86 | -17.94 | -21.67 | 10.27 |
| 405.9 | -15.26 | -16.11 | -20.39 | 9.94 |
| 738 | -14.63 | -15.53 | -20.06 | 9.87 |
| 4059 | -12.91 | -13.94 | -19.28 | 9.78 |
| 7380 | -12.40 | -13.47 | -19.04 | 9.80 |
| 40590 | -11.42 | -12.49 | -18.57 | 9.93 |
| 73800 | -11.04 | -12.00 | -18.32 | 9.99 |
| 405900 | -10.89 | -11.76 | -18.59 | 10.42 |

App Table 2. Statistical values of the ES cross-fibre strain distribution in the healthy and infarcted myocardium

|  |  |
| --- | --- |
|  | Cross-fibre strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | 5.01 | 6.47 | -0.62 | 12.26 |
| 7.38 | 4.70 | 6.06 | -0.88 | 11.80 |
| 40.59 | 4.08 | 5.53 | -1.72 | 11.04 |
| 73.8 | 4.18 | 5.46 | -1.67 | 11.17 |
| 405.9 | 5.00 | 5.73 | -1.05 | 12.21 |
| 738 | 5.21 | 5.79 | -0.86 | 12.51 |
| 4059 | 5.40 | 5.58 | -0.84 | 12.96 |
| 7380 | 5.37 | 5.47 | -0.91 | 13.01 |
| 40590 | 5.03 | 5.00 | -1.33 | 12.82 |
| 73800 | 5.01 | 4.97 | -1.41 | 12.86 |
| 405900 | 4.57 | 4.58 | -1.86 | 12.36 |

## 1.2 END-DIASTOLIC myofibre and cross-fibre strain in biventricular model

App Table 3. Statistical values of the ED myofibre strain distribution in the healthy and infarcted myocardium

|  |  |
| --- | --- |
|  | myofibre strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | 3.85 | 3.55 | 1.31 | 6.25 |
| 7.38 | 3.81 | 3.44 | 1.22 | 6.32 |
| 40.59 | 3.40 | 2.69 | 0.79 | 5.88 |
| 73.8 | 3.21 | 2.39 | 0.63 | 5.60 |
| 405.9 | 2.72 | 1.68 | 0.25 | 4.94 |
| 738 | 2.59 | 1.48 | 0.15 | 4.77 |
| 4059 | 2.35 | 1.14 | -0.03 | 4.40 |
| 7380 | 2.30 | 1.10 | -0.05 | 4.33 |
| 40590 | 2.20 | 1.02 | -0.08 | 4.19 |
| 73800 | 2.16 | 1.00 | -0.12 | 4.13 |
| 405900 | 2.18 | 1.12 | -0.18 | 4.21 |

App Table 4. Statistical values of the ED cross-fibre strain distribution in the healthy and infarcted myocardium

|  |  |
| --- | --- |
|  | cross-fibre strain (%) |
| Einj (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | -7.46 | -5.96 | -11.00 | -2.99 |
| 7.38 | -7.32 | -5.71 | -11.00 | -2.72 |
| 40.59 | -6.62 | -4.78 | -10.02 | -1.90 |
| 73.8 | -6.34 | -4.45 | -9.60 | -1.62 |
| 405.9 | -5.68 | -3.60 | -8.64 | -0.98 |
| 738 | -5.53 | -3.37 | -8.45 | -0.79 |
| 4059 | -5.23 | -2.95 | -8.12 | -0.44 |
| 7380 | -5.16 | -2.87 | -8.06 | -0.37 |
| 40590 | -5.01 | -2.75 | -7.92 | -0.25 |
| 73800 | -5.00 | -2.68 | -7.93 | -0.21 |
| 405900 | -4.81 | -2.89 | -7.49 | -0.12 |

1. Strain in injectate

## END-SYSTOLIC maximum and minimum principal strain in injectate of biventricular model

App Table 5. Statistical values of the ES maximum strain distribution in the injectate in the BV model

|  |  |
| --- | --- |
|  | max principal strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | 38.527 | 38.527 | 30.665 | 49.836 |
| 7.38 | 35.113 | 35.113 | 27.969 | 45.331 |
| 40.59 | 21.359 | 21.359 | 16.176 | 27.217 |
| 73.8 | 16.173 | 16.173 | 12.101 | 20.750 |
| 405.9 | 6.247 | 6.247 | 4.626 | 8.497 |
| 738 | 4.397 | 4.397 | 3.174 | 6.151 |
| 4059 | 1.503 | 1.503 | 0.996 | 2.283 |
| 7380 | 1.018 | 1.018 | 0.653 | 1.583 |
| 40590 | 0.316 | 0.316 | 0.188 | 0.545 |
| 73800 | 0.194 | 0.194 | 0.114 | 0.351 |
| 405900 | 0.060 | 0.060 | 0.033 | 0.117 |

App Table 6. Statistical values of the ES minimum strain distribution in the injectate

|  |  |
| --- | --- |
|  | min principal strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | -38.951 | -38.951 | -54.549 | -28.447 |
| 7.38 | -34.617 | -34.617 | -48.272 | -25.651 |
| 40.59 | -19.873 | -19.873 | -27.509 | -14.752 |
| 73.8 | -15.109 | -15.109 | -20.536 | -11.296 |
| 405.9 | -6.326 | -6.326 | -8.983 | -4.620 |
| 738 | -4.547 | -4.547 | -6.583 | -3.232 |
| 4059 | -1.555 | -1.555 | -2.408 | -1.036 |
| 7380 | -1.041 | -1.041 | -1.658 | -0.684 |
| 40590 | -0.321 | -0.321 | -0.556 | -0.192 |
| 73800 | -0.197 | -0.197 | -0.356 | -0.116 |
| 405900 | -0.062 | -0.062 | -0.123 | -0.03 |

## END-DIASTOLIC maximum and minimum principal strain in injectate of biventricular model

App Table 7. Statistical values of the ED maximum principal strain distribution in the injectate of the BV model

|  |  |
| --- | --- |
|  | max principal strain (%) |
| Einj (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | 5.360 | 5.360 | 2.962 | 8.037 |
| 7.38 | 4.024 | 4.024 | 2.149 | 6.210 |
| 40.59 | 1.484 | 1.484 | 0.782 | 2.576 |
| 73.8 | 0.995 | 0.995 | 0.527 | 1.811 |
| 405.9 | 0.312 | 0.312 | 0.162 | 0.643 |
| 738 | 0.215 | 0.215 | 0.108 | 0.452 |
| 4059 | 0.072 | 0.072 | 0.034 | 0.152 |
| 7380 | 0.047 | 0.047 | 0.022 | 0.099 |
| 40590 | 0.011 | 0.011 | 0.005 | 0.024 |
| 73800 | 0.007 | 0.007 | 0.003 | 0.014 |
| 405900 | 0.001 | 0.001 | 0.001 | 0.003 |

App Table 8. Statistical values of the ED minimum strain distribution in the injectate

|  |  |
| --- | --- |
|  | min principal strain (%) |
| EINJ (kPa) | **Mean** | **Median** | **Q1** | **Q3** |
| 4.059 | -5.419 | -5.419 | -8.615 | -2.994 |
| 7.38 | -3.948 | -3.948 | -6.524 | -2.122 |
| 40.59 | -1.367 | -1.367 | -2.495 | -0.731 |
| 73.8 | -0.914 | -0.914 | -1.698 | -0.476 |
| 405.9 | -0.298 | -0.298 | -0.600 | -0.156 |
| 738 | -0.207 | -0.207 | -0.426 | -0.106 |
| 4059 | -0.072 | -0.072 | -0.145 | -0.035 |
| 7380 | -0.047 | -0.047 | -0.094 | -0.023 |
| 40590 | -0.011 | -0.011 | -0.023 | -0.005 |
| 73800 | -0.007 | -0.007 | -0.014 | -0.003 |
| 405900 | -0.001 | -0.001 | -0.003 | -0.001 |