Supplementary Digital Content 2. Second order polynomial equations used to scale breast kinematic variables.

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| **Kinematic variable (y)** | **Second order polynomial equation****(BM=breast mass)** |
| Anterior-posterior displacement  | Y = 2.733+4.973BM-1.794BM2 |
| Vertical displacement  | Y = 2.365+13.901BM-6.757BM2 |
| Anterior-posterior velocity  | Y = 25.400+173.840BM-92.209BM2 |
| Medial-lateral velocity  | Y=19.956+253.731BM-134.348BM2 |
| Vertical velocity  | Y=44.790+302.606BM-141.403BM2 |
| Medial-lateral acceleration  | Y=1.471+5.643BM-2.454BM2 |
| Vertical acceleration  | Y=1.061+11.328BM-6.402BM2 |