**Supplemental Digital Content 3.** The average of CT density and their differences between warped (processed) and original images was calculated. Each three-dimensional image was separated in three anterior to posterior regions. CT densities of each region had comparable values between the original and the warped image with a maximum difference of 35 HU (not significant), which we considered acceptable. Warping adapted the prone image to fit the size and shape of the target supine image, but densities remained unchanged between processed and unprocessed images. This confirms that no tissue type was over-represented at the expense of the others, suggesting that distortion artifacts were minimal.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | ***PEEP5*** | ***PEEP10*** |
|  |  | ***Anterior*** | ***Middle*** | ***Posterior*** | ***Anterior*** | ***Middle*** | ***Posterior*** |
| ***Healthy EI*** | ***Warped Prone*** | -684.2 | -715.5 | -648.2 | -732.0 | -753.9 | -701.5 |
| ***Original Prone*** | -685.7 | -713.5 | -675.4 | -740.8 | -749.7 | -721.8 |
| ***Difference*** | ***1.5*** | ***-2.0*** | ***27.2*** | ***8.7*** | ***-4.2*** | ***20.3*** |
|  |  |  |  |  |  |  |  |
| ***Injured EI*** | ***Warped Prone*** | -677.8 | -671.3 | -530.4 | -700.5 | -695.6 | -600.2 |
| ***Original Prone*** | -674.2 | -663.7 | -552.2 | -703.0 | -692.4 | -635.2 |
| ***Difference*** | ***-3.6*** | ***-7.6*** | ***21.7*** | ***2.5*** | ***-3.2*** | ***35.0*** |