Supporting Information

Lung tissue biomechanics imaged with synchrotron phase contrast microtomography in live rats

Jose-Luis Cercos-Pita, Luca Fardin, Hugo Leclerc, Bertrand Maury, Gaetano Perchiazzi, Alberto Bravin and Sam Bayat\*

D:\Document Sam\Publications\2020 Cercos 6 micron rat\Figures\Figures final\Suppl_Figure-1.tif

**Supplemental Figure S1.** Sample tracings of respiratory flow, airway pressure (Paw) and electrocardiogram (ECG) in a sample animal during imaging.

D:\Document Sam\Publications\2020 Cercos 6 micron rat\Figures\Figures final\Suppl_Figure-2.tif

**Supplemental Figure S2.** image processing scheme. Sequential images were reconstructed at successive phases of breathing and heart contraction. Pairwise image registrations were performed between each time step and the immediately previous one. Deformation as a result of breathing or cardiac activity was computed and mapped. The presence of alveolar recruitment was investigating by comparing segmentations of the airspaces at each time step to the segmentation at time t=0, properly realigned according to the results of image registration.