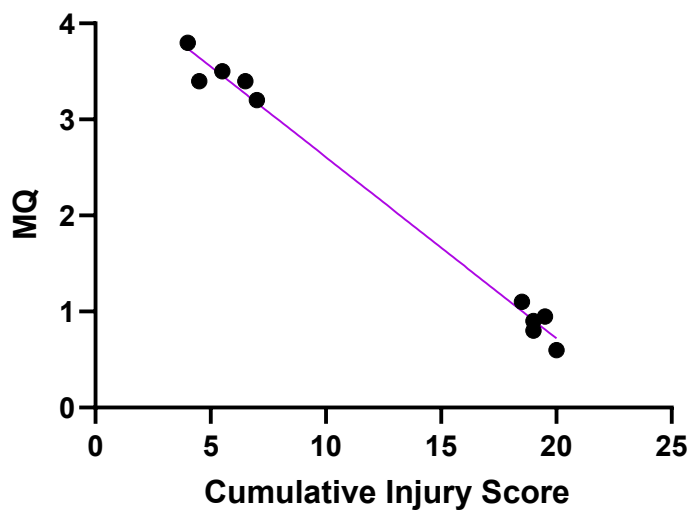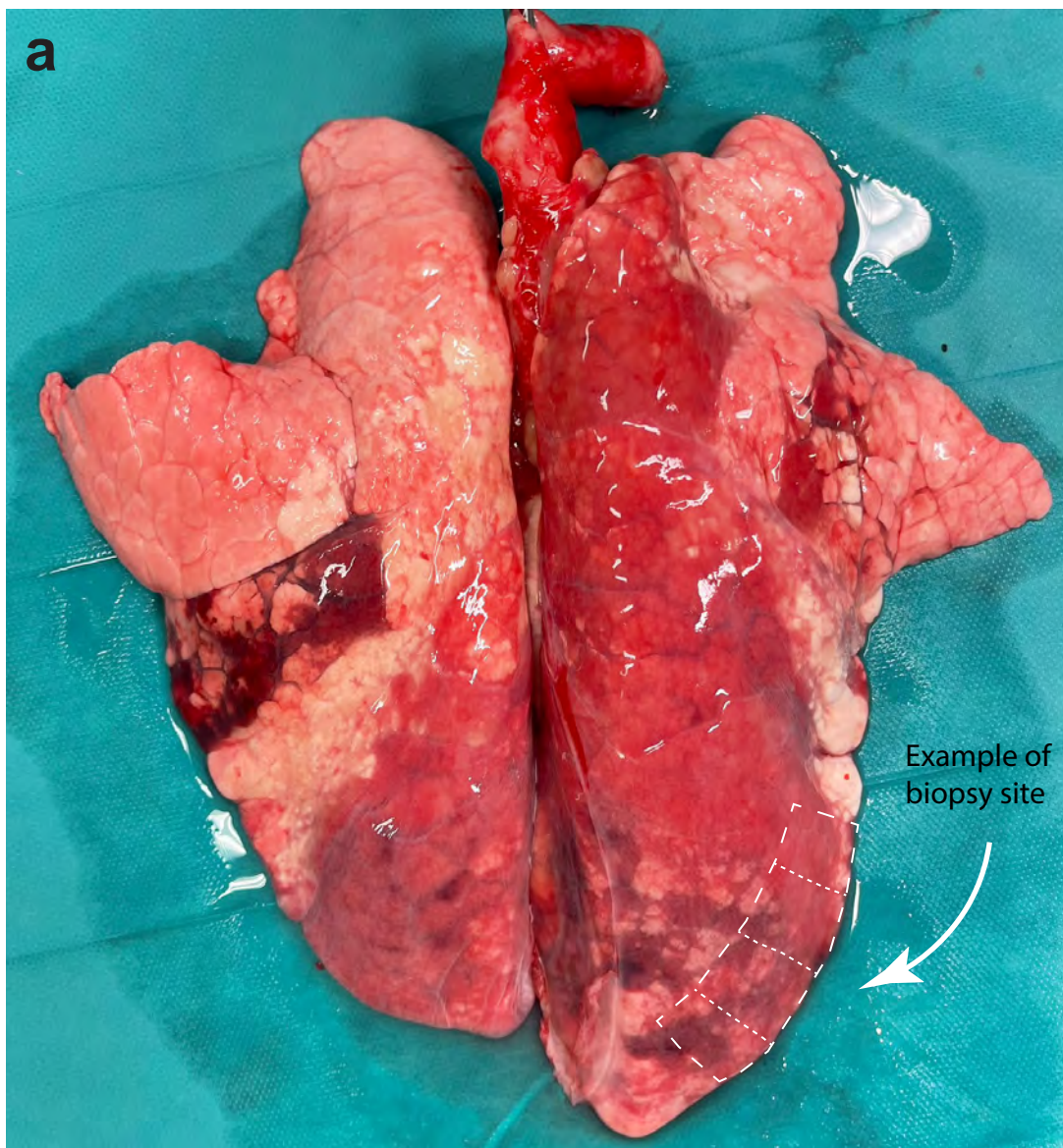S1:
a) Representative image of baseline tissue after H&E staining/imaging. b) Representative image of injury tissue after H&E staining/imaging. c) Quantification of total injury score between baseline and lung injury tissue. d) Quantification alveolar immune cell infiltration score between baseline and lung injury tissue. e) Quantification interstitial immune cell infiltration score between baseline and lung injury tissue. f) Quantification alveolar septal thickening score between baseline and lung injury tissue. g) Quantification of degree of proteinaceous debris between baseline and lung injury tissue. h) Quantification of degree of hameorrhage between baseline and lung injury tissue. n=5 animals/group.*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, ****$p < 0.0001$.

S2:
Simple linear regression to assess correlation between MQ variable and cumulative injury score. R-squared=0.9919, p<0.0001. n=10.

a

Example of biopsy site

S3:
Image of lungs harvested after induction of acute lung injury wit schematic showing sample location.