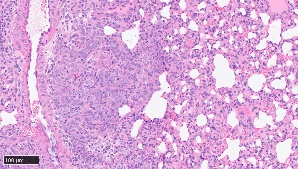
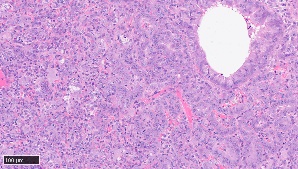
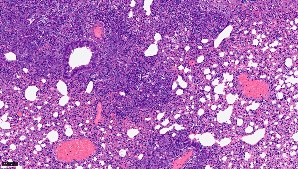
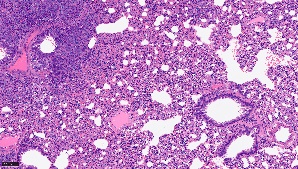
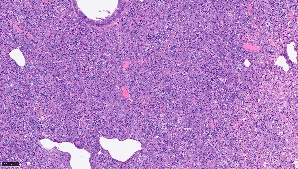
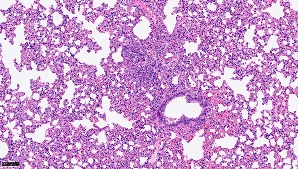


**Supplementary Figure 1: Assessment of live viral titre in throat swabs 2 DPI.** A focus formation assay was performed on throat swabs from 2 days post infection. Box plots show medians and 25th to 75th percentiles, and whiskers represent minimum and maximum values; all data points are shown.

  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
**Supplementary Figure 2: Assessment of viral shedding from respiratory tract and viral load in the lung against earlier Omicron sub-lineages and ancestral virus VIC01.** (A) Time-course of viral shedding from the upper respiratory tract and (B) viral load in the lung at 7 days post infection. Graphs shows geometric mean and SD. Statistical analyses were performed using unpaired t test with Welch’s correction on log10 transformed data.





BA.1

BA.2

BA.2.12.1

BA.4

BA.5.2.1

VIC01

**Supplementary Figure 3: Comparison histopathological analysis of nasal cavity and lung 7 days post infection to previous Omicron sub-lineages and ancestral virus.** (A) Viral load in the lung. (B) Semiquantitative scoring to evaluate the presence of viral RNA in the nasal cavity. (C) H&E sections of lung tissue (bar represents 100µm). (D) Heatmap to show comparison of the severity of the lung lesions in the cranial and caudal lung lobe tissue sections. Box plots show medians and 25th to 75th percentiles, and whiskers represent minimum and maximum values; all data points are shown. Statistical analyses were performed using Kruskal Wallis test with Dunn’s multiple comparison