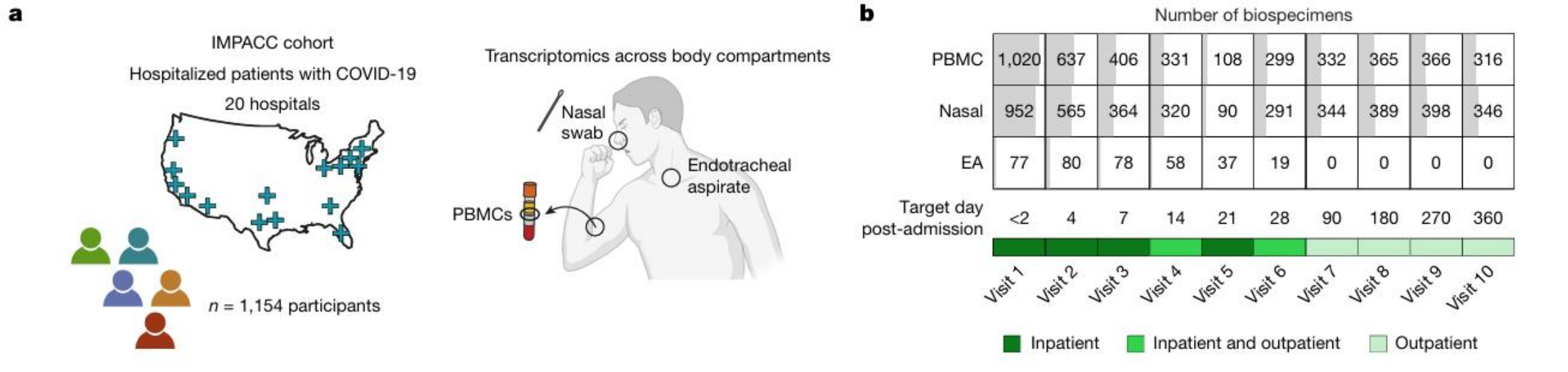


Virus reactivation in acute and long COVID-19

Yiqing Yang

8.21.2026

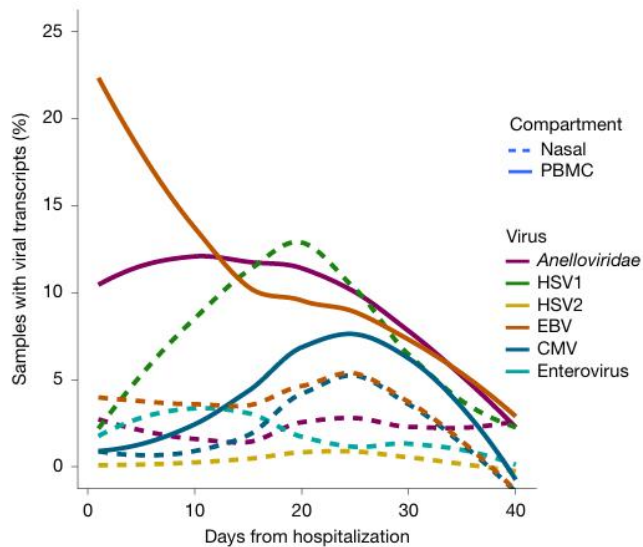
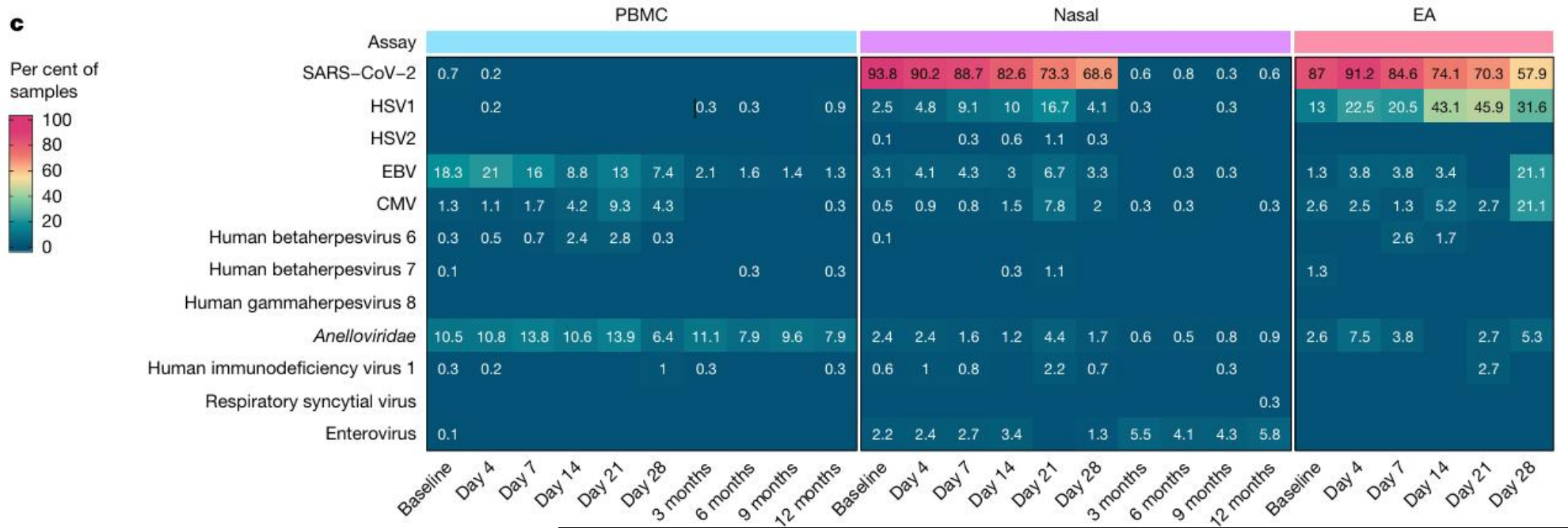
IMPACC cohort



1,154 patients across 20 US hospitals

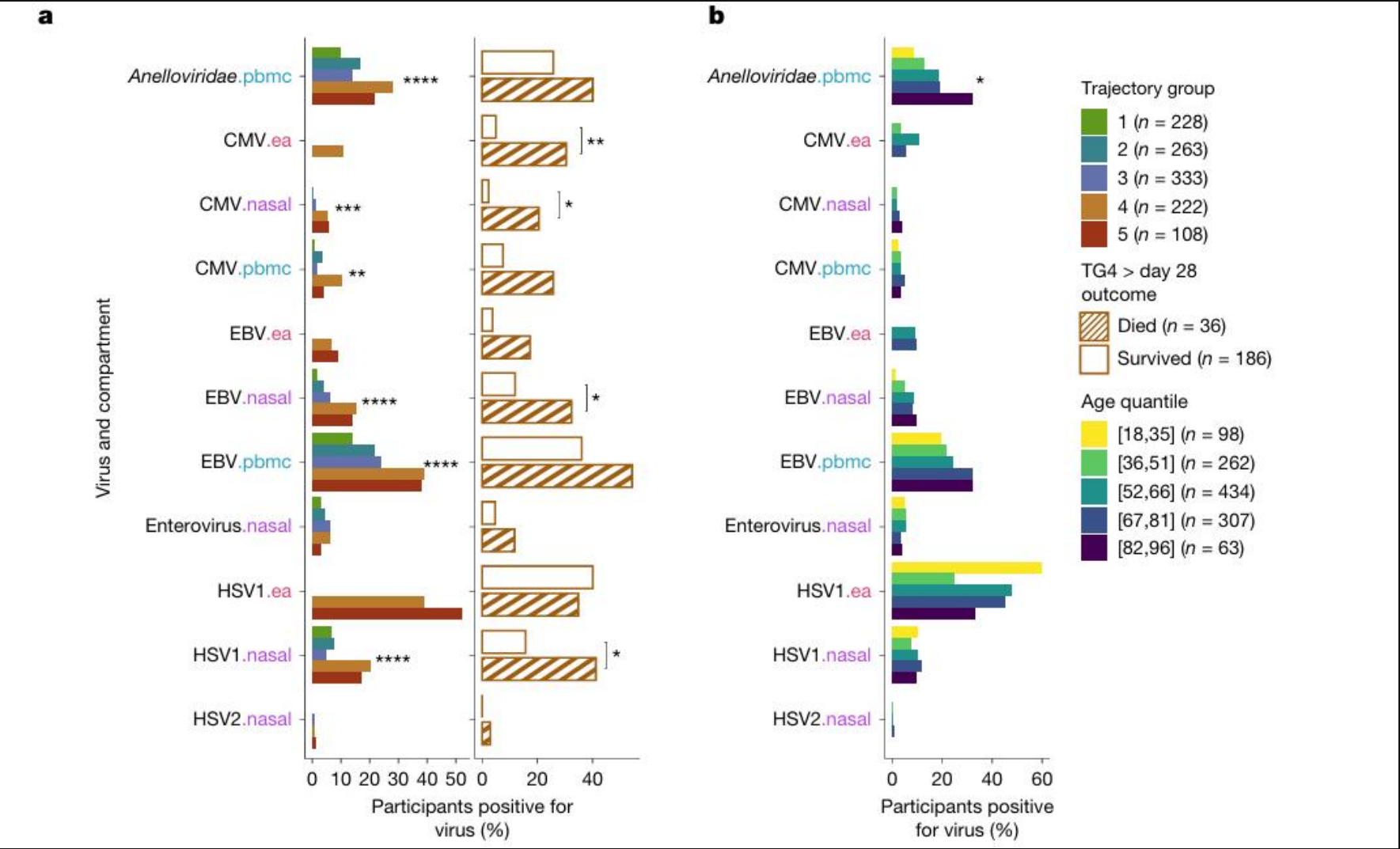
COVID-19 vaccine-naïve at the time of enrolment

RNA-seq of reactivated virome



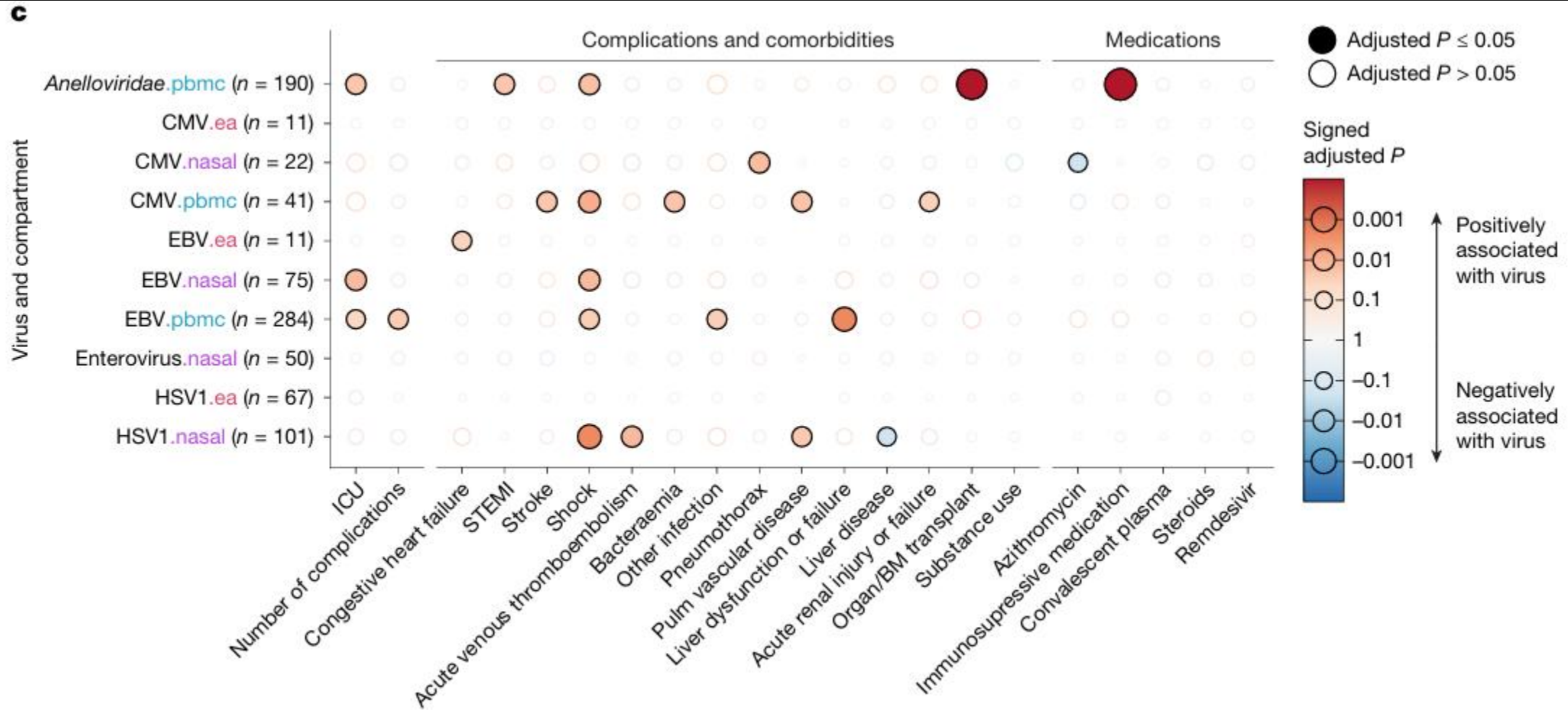
Each viral species displayed unique temporal dynamics of reactivation relative to hospital admission

Clinical outcomes of viral reactivation

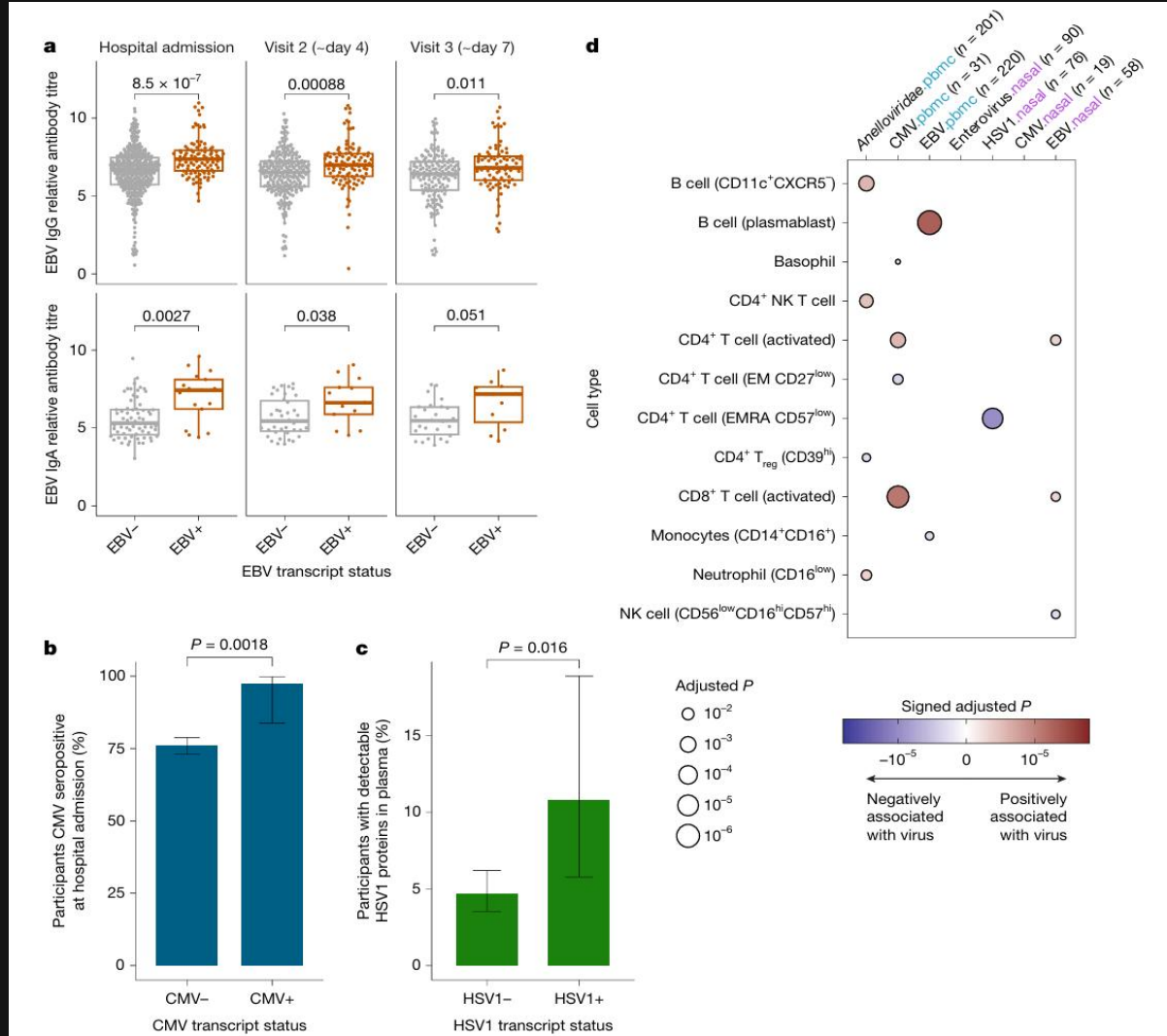


TG1	mild	228
TG2	moderate	263
TG3	severe	333
TG4	critical	222
TG5	DEAD in 28 days	108

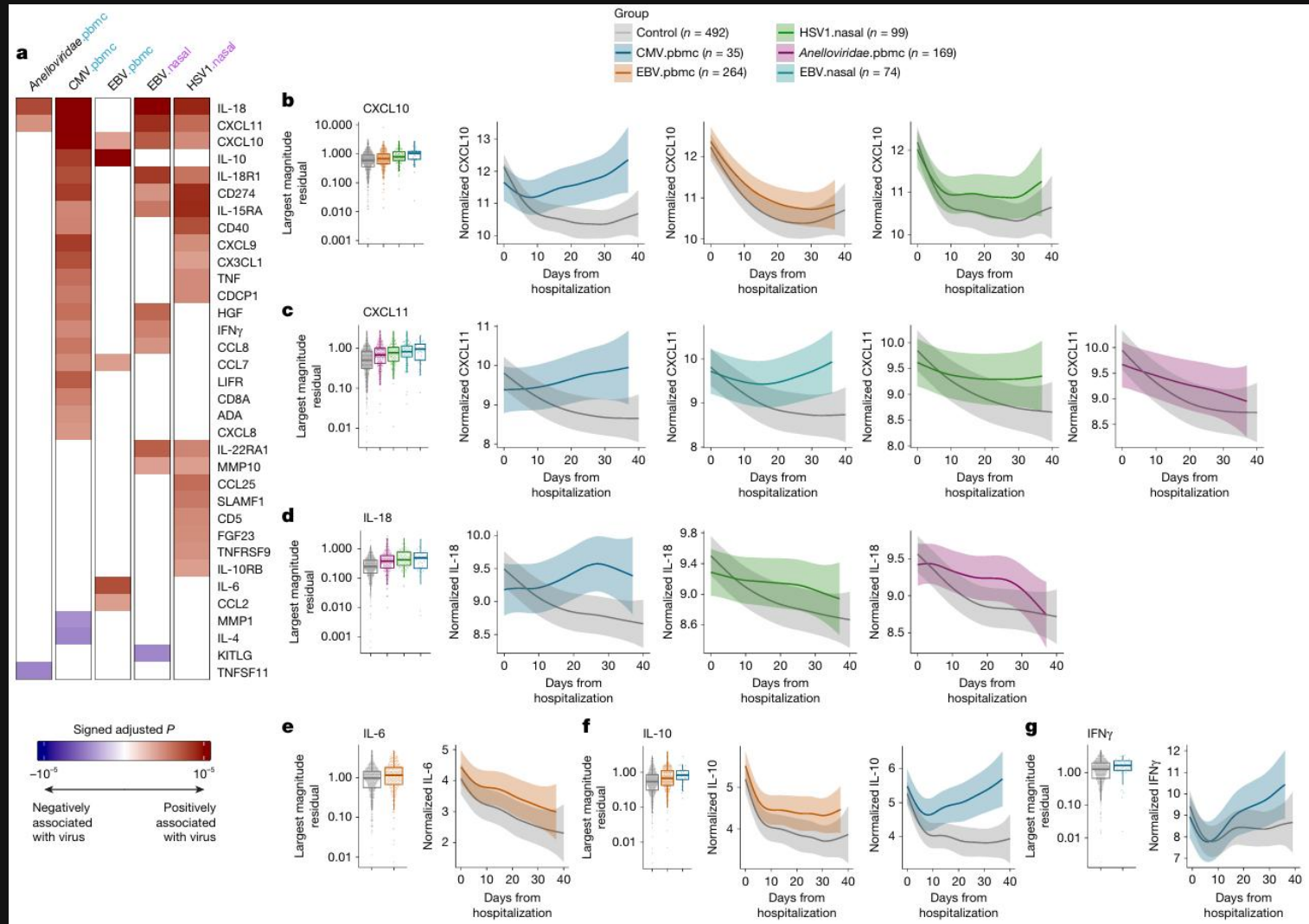
Association of viral transcripts with comorbidities, medications and clinical complications



Antibody response, proteomics, and circulating cellular immunophenotyping validates chronic viral reactivation in COVID-19



Effects of chronic viral reactivation on cytokine and chemokine dynamics over time

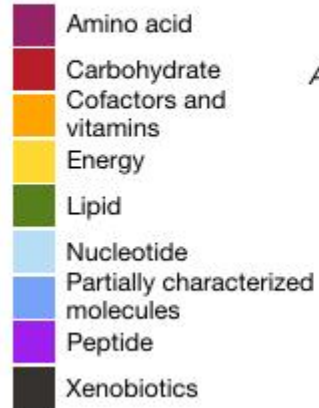


The control group comprised 492 participants without any detected chronic virus transcripts in the acute period (up to 40 days post hospitalization)

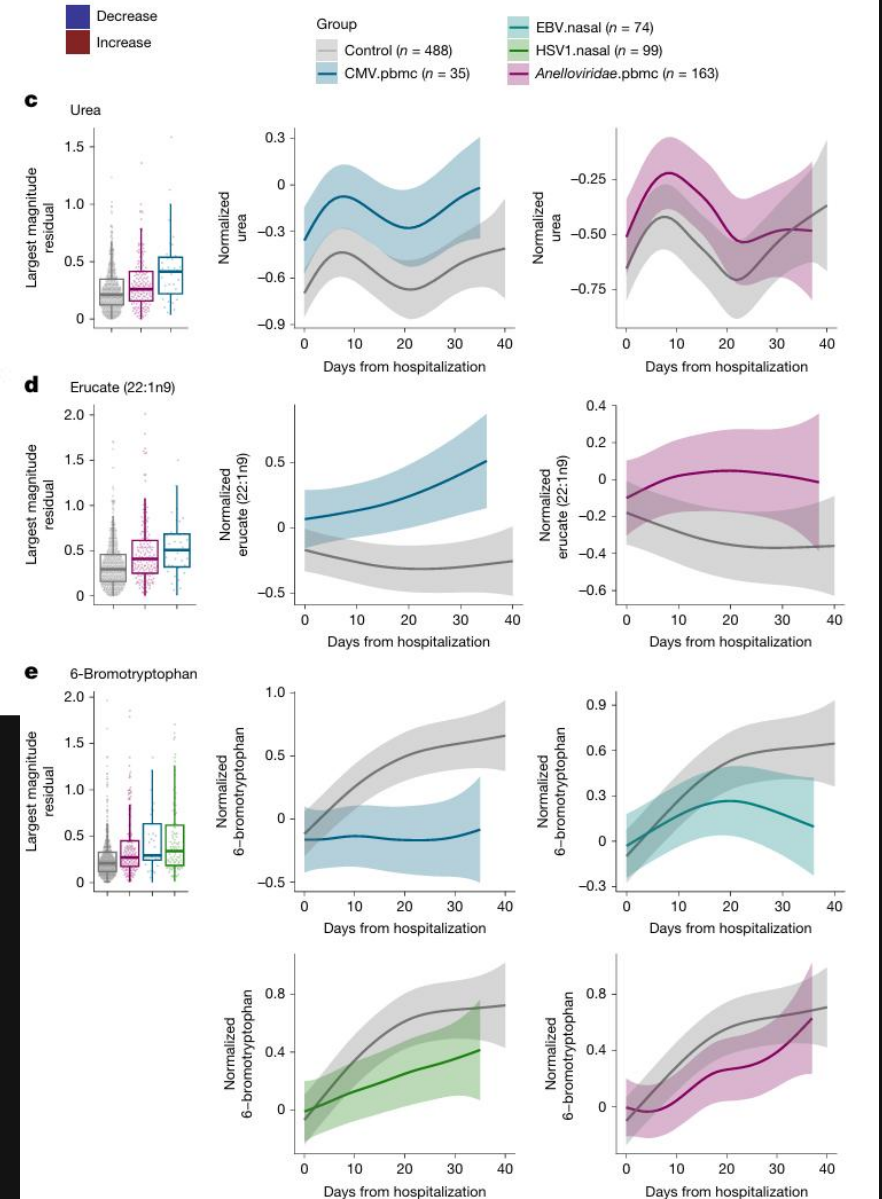
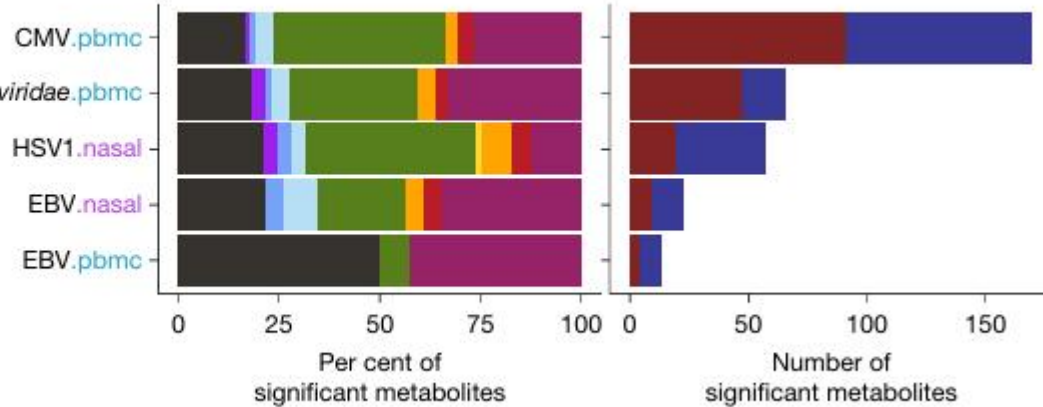
Plasma metabolites in viral reactivation

a

Super metabolic pathway



Direction



Viral reactivation was associated with changes in metabolites, particularly those belonging to amino acid and lipid metabolism

CMV was associated with the greatest number of metabolome changes, including increased urea and long chain fatty acids

Viral reactivation in long COVID

