Supplementary Information

# Spatial Transcriptomics of the Epipharynx in Long COVID Identifies SARS-CoV-2 Signalling Pathways and the Therapeutic Potential of Epipharyngeal Abrasive Therapy

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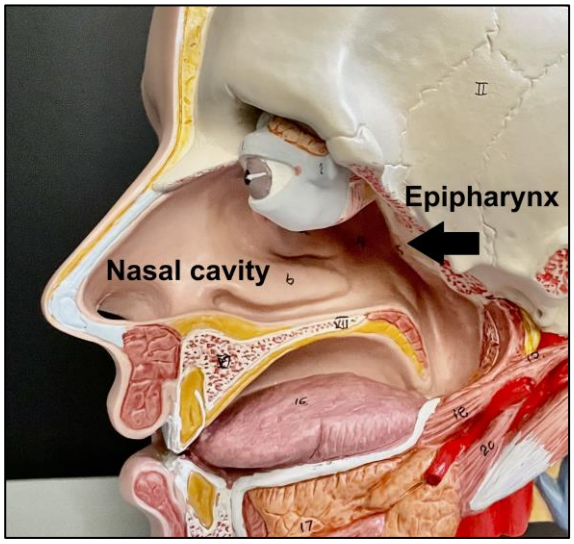
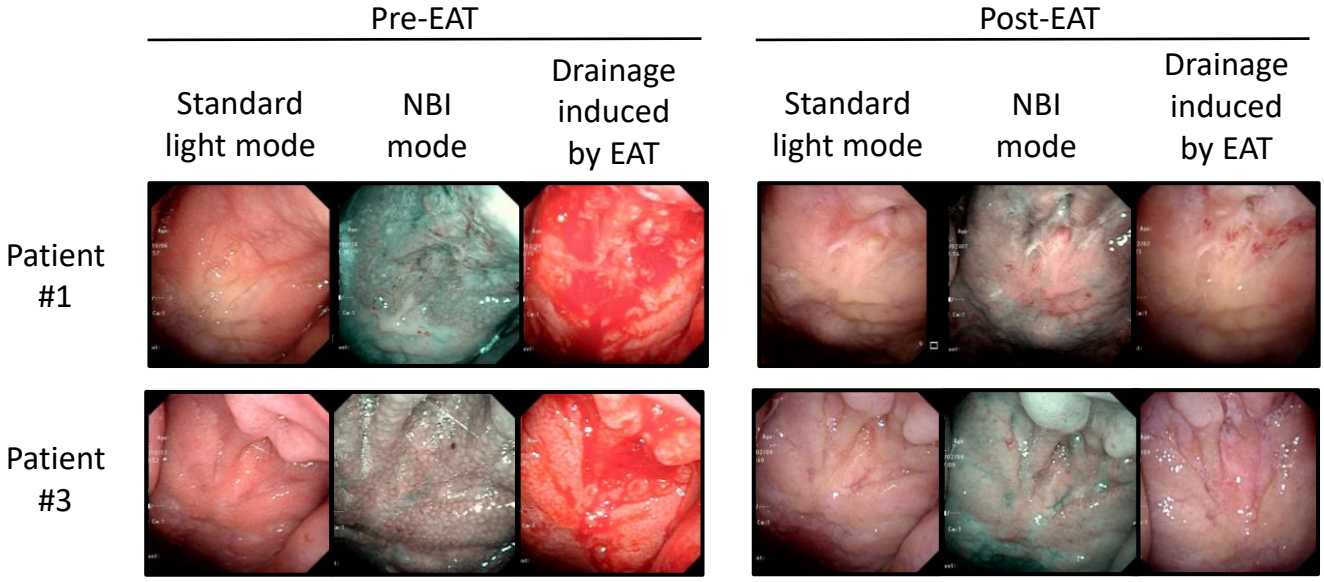
Supplementary Figure 1



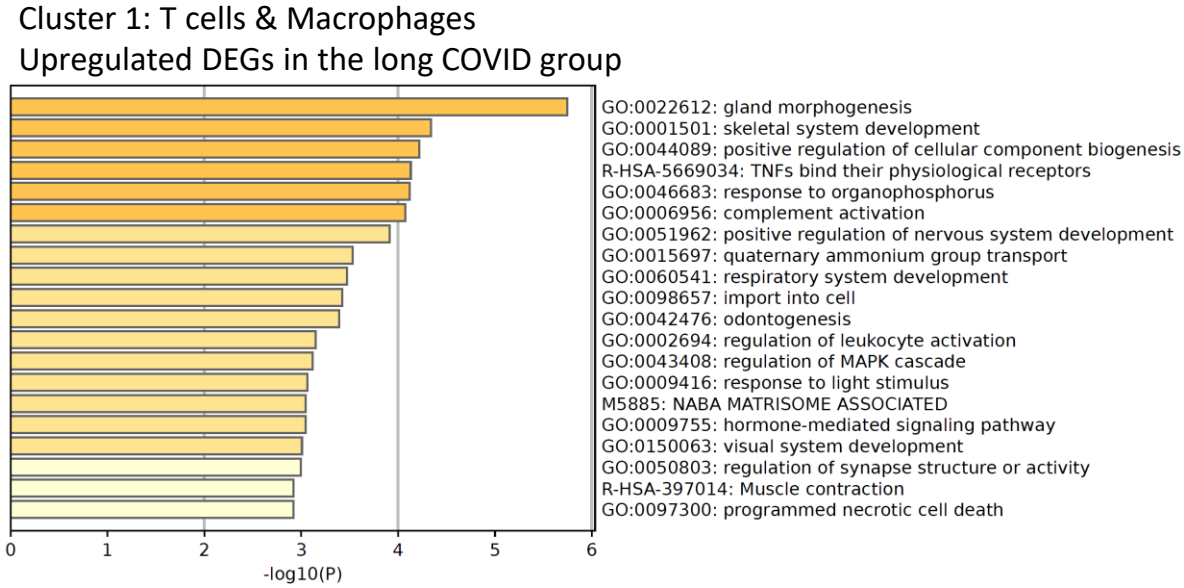

The structure of the epipharynx is illustrated using a 3D model (Nihon 3B Scientific Inc., Niigata, Japan). The black arrow indicates the epipharynx.

Supplementary Figure 2



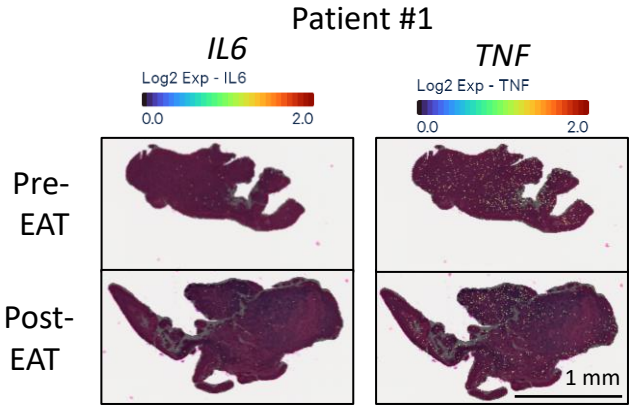

The endoscopic images of the epipharynxes of Patients 1 and 3 before and after 3 months of EAT treatment.

# Supplementary Figure 3




The activation of immune-related pathways in Cluster 1 in patients with long COVID.

Supplementary Figure 4




The spatial gene expression analysis of the inflammation-related cytokines interleukin-6 (IL-6) and tumour necrosis factor-α (TNF-α) in the epipharynx of Patient 1 before and after EAT treatment.

# Supplementary Videos

Supplementary Video 1 demonstrates the endoscopic findings of the epipharynx observed at the initial visit prior to the application of epipharyngeal abrasive therapy (EAT) and during the EAT session for Patient 2. In contrast, Supplementary Video 2 presents the endoscopic findings of the epipharynx taken three months following the commencement of EAT, showcasing the post-EAT condition for the same patient.