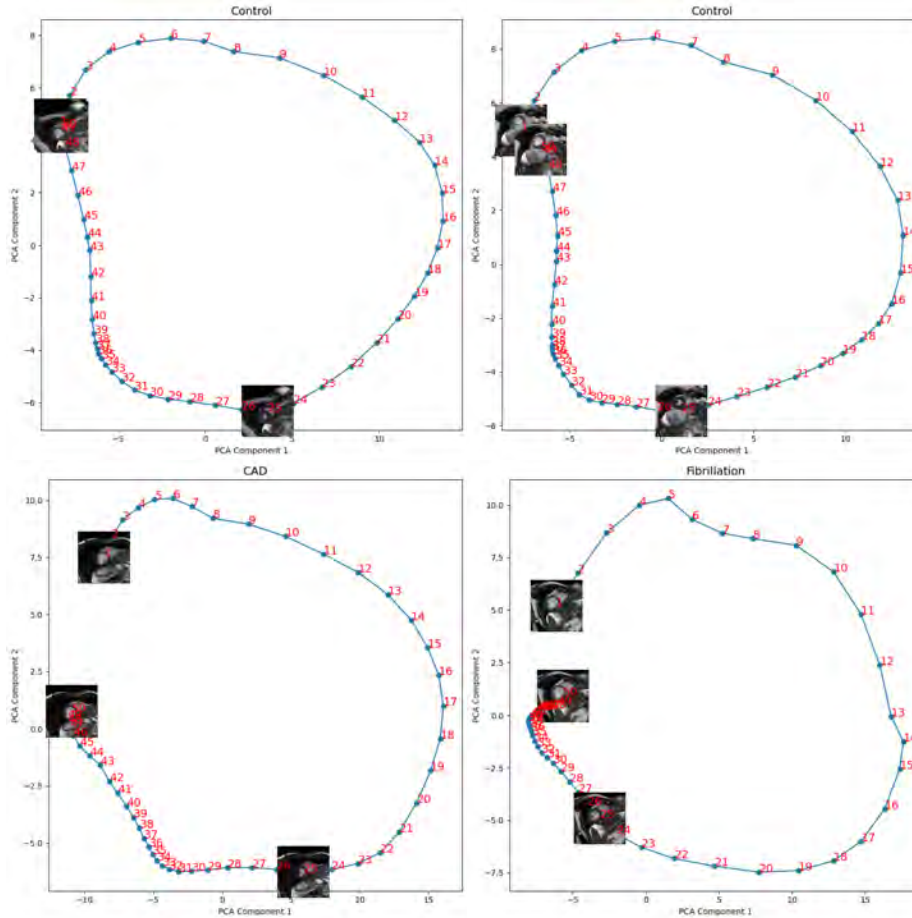# Supplementary Material

Fig. A.1: Visualization of the trajectory of cardiac videos with two control samples and two types of diseases. We plot the first two PCA components of the latent space of the temporal encoder E_T pretrained with our TVRL strategy. Each point on the trajectory represents a frame in the video annotated with the frame index. **Top row:** The trajectories in control samples form a circular shape, matching a periodic pattern in the cardiac cycle. **Bottom row:** There is a notable gap for the embeddings of the sample with CAD between its first and last frame, while the embeddings of fibrillation are irregularly distributed due to irregular heart rhythms. Additionally, we visualize the first, middle, and last frames of each video to provide more visual context.
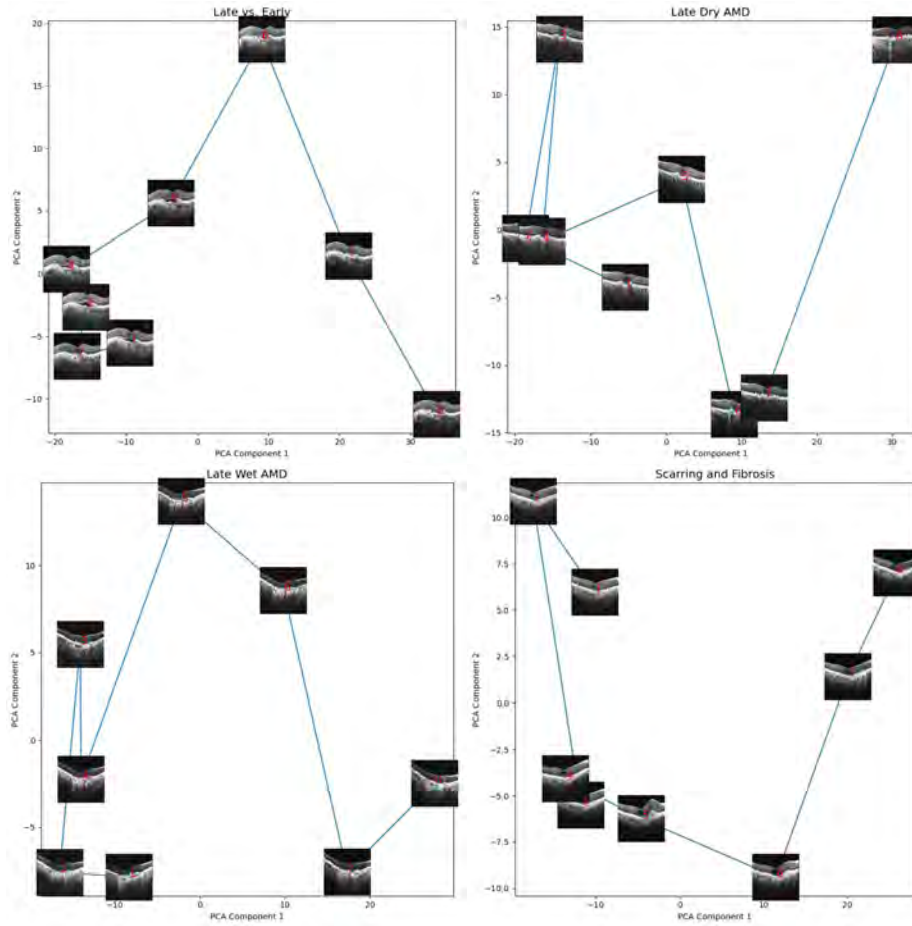
Fig. A.2: Visualization of the trajectory of longitudinal retinal OCT scans with four types of diseases. We plot the first two PCA components of the latent space of the temporal encoder E_T pretrained with our TVRL strategy. Each point on the trajectory corresponds to a scan in the longitudinal sequence. The AMD disease progression has different conversion rates, typically with an initial health stage deterioration (e.g. images 4 and 5 in the plot for scarring at bottom right) before disease conversion.