



**Supplemental Figure 11.** Each plot shows the distribution of the delta UMAP metric for 100 sampled pairs of volumes for different Chew et al. stages. The labels at the top of each chart are the Chew et al. stages for the pairs sampled. Then the leading diagonal plots show samples from the same Chew et al. stage and the delta UMAP metric of these pairs are symmetrical about 0. The off diagonals are distributions of delta UMAP metric of less severe to more severe stages. The delta UMAP metric becomes increasingly negative as the step between the pair's Chew et al. stages increase.