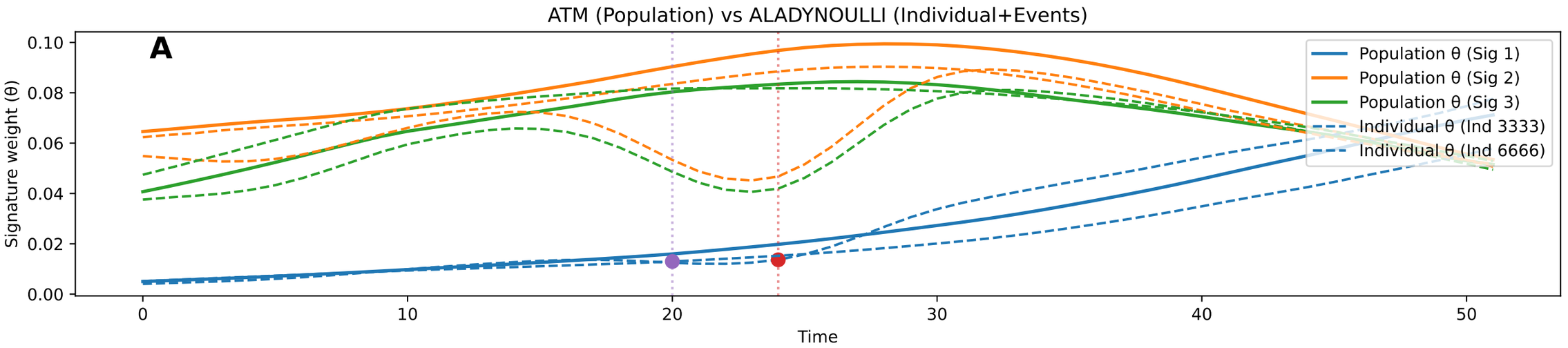

B

$$\lambda_{i,k} \sim \mathcal{GP}(r_k + \Gamma_k^T g_i, K_\lambda)$$
$$\downarrow \theta_{i,k,t} = \frac{\exp(\lambda_{i,k,t})}{\sum \exp(\lambda_{i,k,t})}$$
$$\downarrow \pi_{i,d,t} = \sum_k \theta_{i,k,t} \cdot \text{sigmoid}(\phi_{k,d,t})$$
$$\downarrow Y_{i,d,t} \sim \text{Bernoulli}(\pi_{i,d,t})$$

Individual-specific latent variables with GP dynamics
Signature weights vary over time for each individual
Disease-specific probabilities computed from signature mixtures
Actual disease events modeled as Bernoulli outcomes