

pdf of  $\pi_{pos,b}^+ p(x|\underline{\theta}_1^+) + (1 - \pi_{pos,b}^+) p(x|\underline{\theta}_1^-)$

$\pi_{pos,b}^+ p(x|\underline{\theta}_2^+) + (1 - \pi_{pos,b}^+) p(x|\underline{\theta}_2^-)$

with randomly drawn  
 $\pi_{pos,1}^+$  and  $\pi_{pos,2}^+$

