

Conditional Sampling

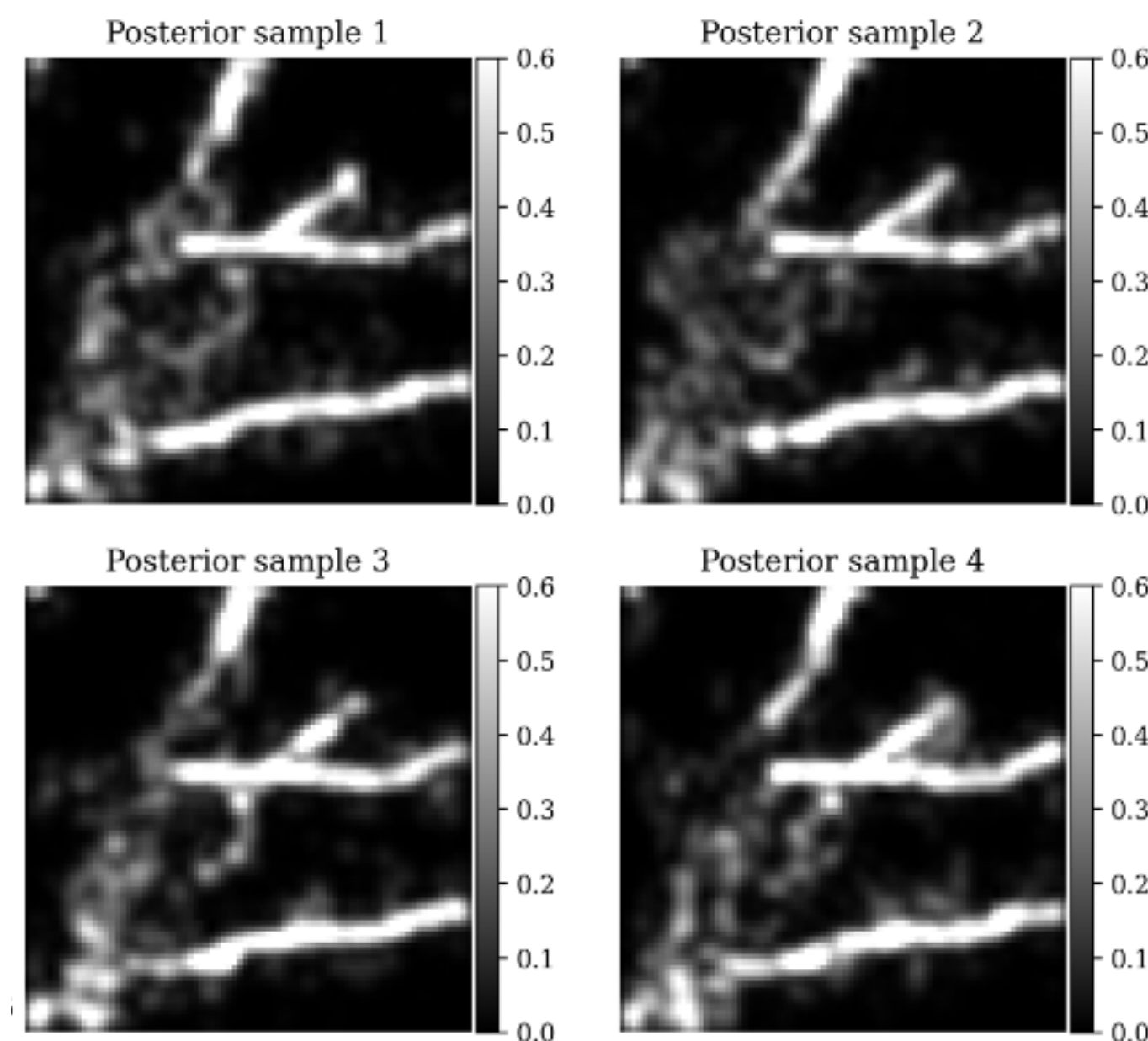
Goal: learn to sample from the conditional distribution: $p(\mathbf{x} | \mathbf{y})$

This describes a general inverse problem:

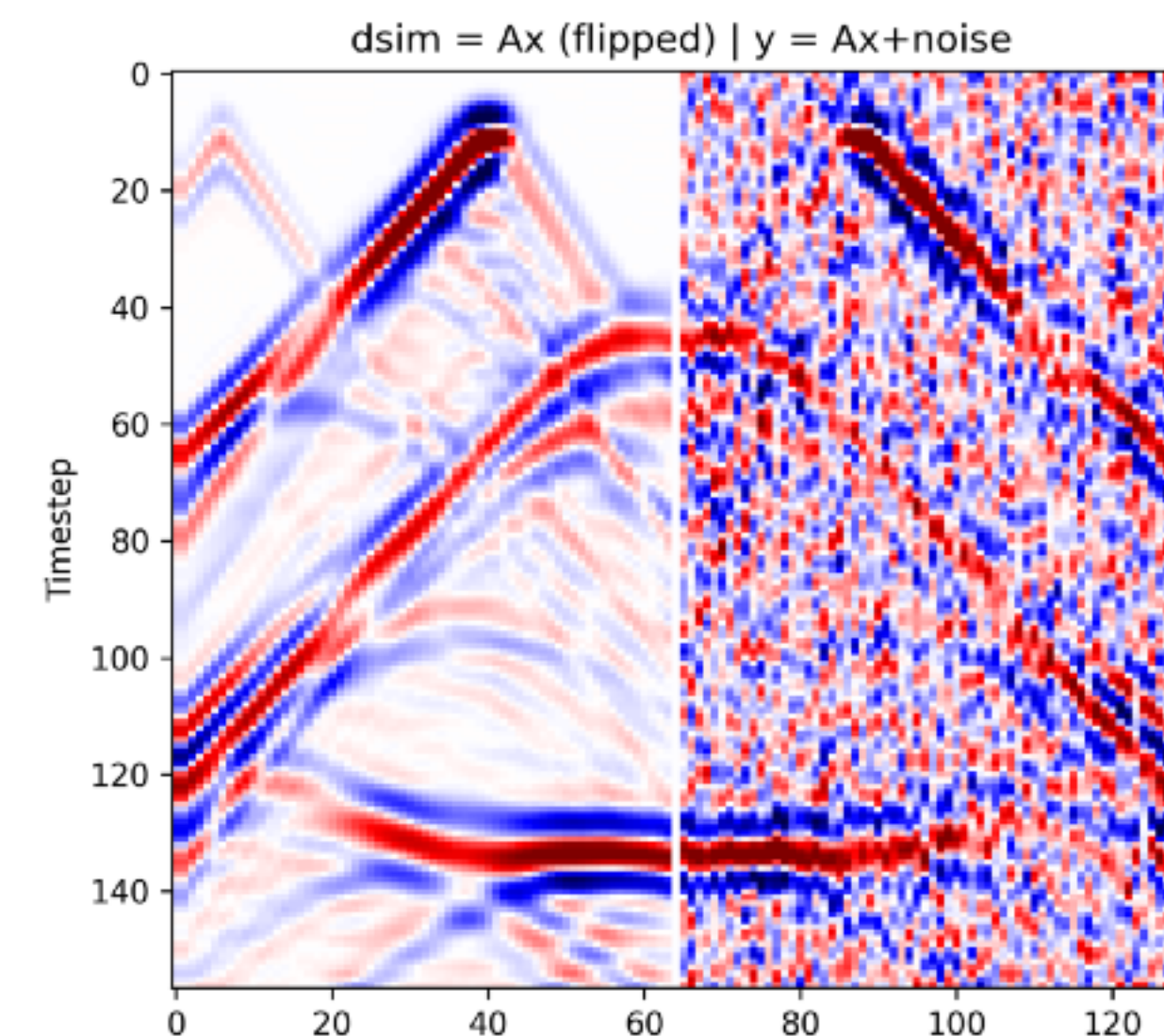
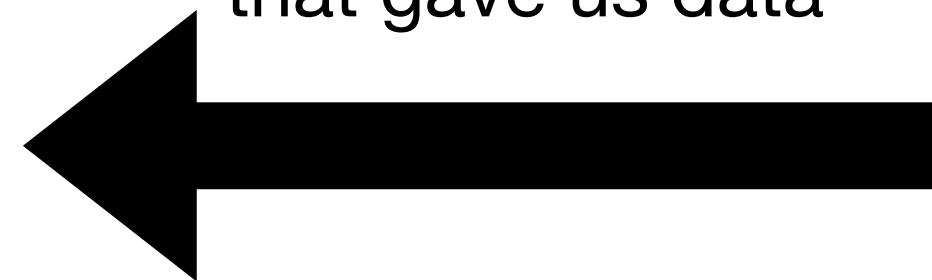
“given data \mathbf{y} , which image \mathbf{x} corresponds to it?”

We learn the whole distribution so we answer a more powerful question:

“given data \mathbf{y} , **which set of images** $\mathbf{x} \sim p(\mathbf{x} | \mathbf{y})$ corresponds to it?”



Invert Forward process
that gave us data



How to make Conditional NF

We want a method of **Variational Inference** to approximate this distribution

$$q_{\theta}(\mathbf{x} | \mathbf{y}) \approx p(\mathbf{x} | \mathbf{y})$$

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