$$\Pr(\widehat{Y_3|X_3}) = f(X_3, T_{12}, \{\beta_{12}\}_i, \{\lambda_{12}\}_i, \beta_{12}^e, \lambda_{12}^e, m_{12}^e)$$

$$= f_{12}(X_3)$$

$$\Pr(\widehat{Y_3|X_3}) \perp\!\!\!\perp Y_3 | X_3 \qquad\qquad f_{12}(\cdot) \perp\!\!\!\perp X_3, Y_3$$