

$$Q_n(X) \xrightarrow{f\#} Q_n(Y)$$

$$\begin{array}{ccc} & \downarrow & \\ \partial_n & & \downarrow \\ & \nwarrow & \\ \end{array}$$

$$Q_{n-1}(X) \xrightarrow{f\#} Q_{n-1}(Y)$$