The American Call

Graph of $V_{\text{call}}$ vs. $S$ for $K = 3$, $\sigma = 0.2$, $t = 0$ and $T$. Dotted line: $\delta = 0$ (no early exercise). Solid line: $\delta = 0.08$.

This diagram shows the value of a European call option when written and at expiry. Note that if no derivatives are paid, one should always hold the option to expiry. If dividends are paid, then the curve dips below the payoff (shaded region), and the option is more valuable if exercised. (Note that the curve is NOT the one for an American option, as the derivative condition isn’t right.)