An insurance policy pays for a random loss $X$ subject to a deductible of $C$, where $0 < C < 1$. The loss amount is modeled as a continuous random variable with density function

$$f(x) = \begin{cases} 2x & \text{for } 0 < x < 1 \\ 0 & \text{otherwise.} \end{cases}$$

Given a random loss $X$, the probability that the insurance payment is less than 0.5 is equal to 0.64.

Calculate $C$.

(A) 0.1  
(B) 0.3  
(C) 0.4  
(D) 0.6  
(E) 0.8