Definition of $z_\alpha$

Let $z$ denote a standard normal random variable. For a value of $\alpha$ between 0 and 1, $z_\alpha$ is defined to be the number such that

$$P(z > z_\alpha) = \alpha.$$ 

In other words, the area under the standard normal curve to the \textit{RIGHT} of $z_\alpha$ is equal to $\alpha$.

Examples:

$$
\begin{align*}
  z_{.1} &= 1.28 \\
  z_{.05} &= 1.65 \\
  z_{.025} &= 1.96 \\
  z_{.01} &= 2.33 \\
\end{align*}
$$