

$f(z)$

z_α



The figure shows a bell-shaped curve representing a probability density function $f(z)$ plotted against z . The curve is symmetric and centered at the origin. A vertical line is drawn at a point labeled z_α on the horizontal axis. The area under the curve to the right of this line is shaded in red, representing the tail probability $P(Z > z_\alpha)$. The background features a light gray grid.