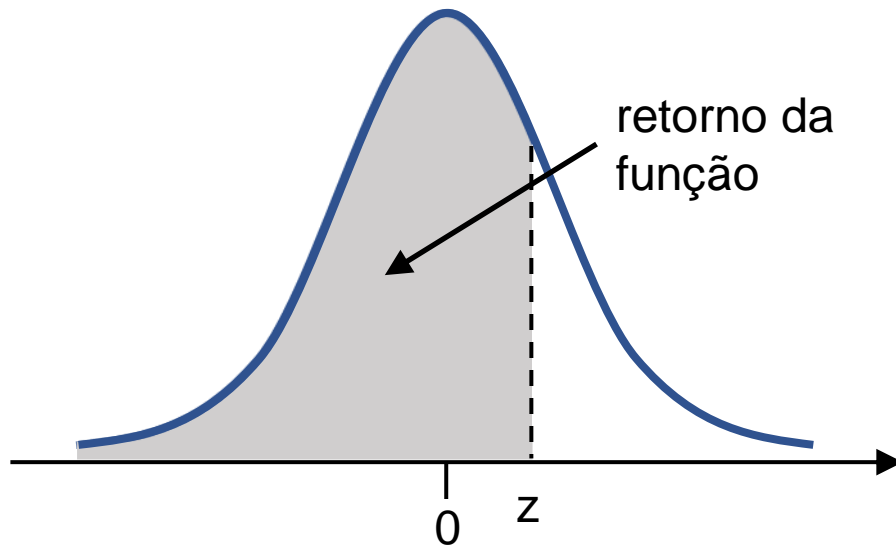


Teste Unicaudal Inferior

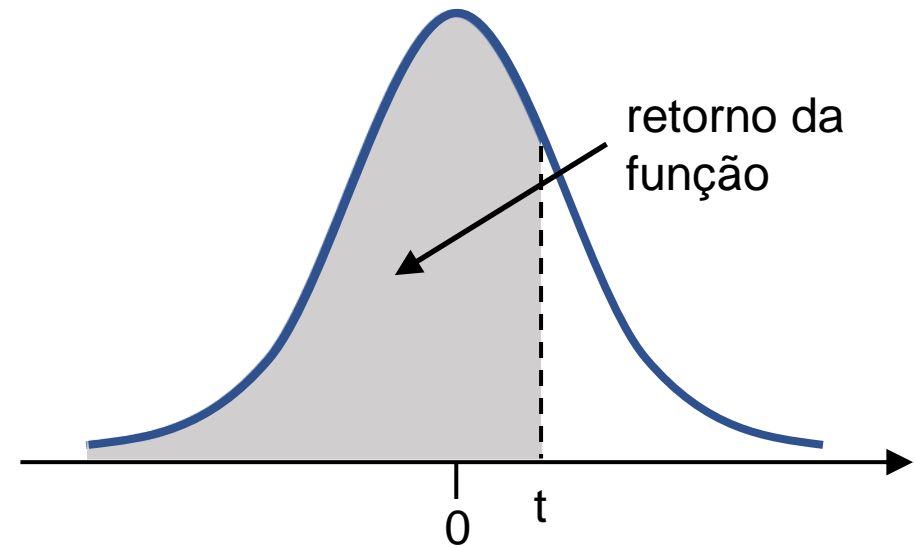
$$\text{Hipóteses} \Rightarrow \begin{cases} H_0: \mu \geq \mu_0 \\ H_1: \mu < \mu_0 \end{cases}$$

p_valor = pnorm(z, lower.tail = TRUE)



NORMAL

p_valor = pt(t, df, lower.tail = TRUE)

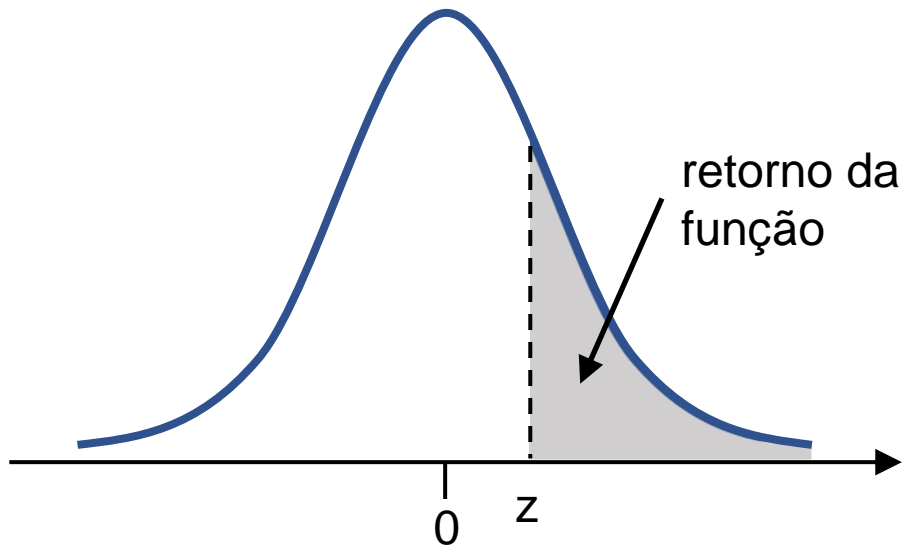


T DE STUDENT

Teste Unicaudal Superior

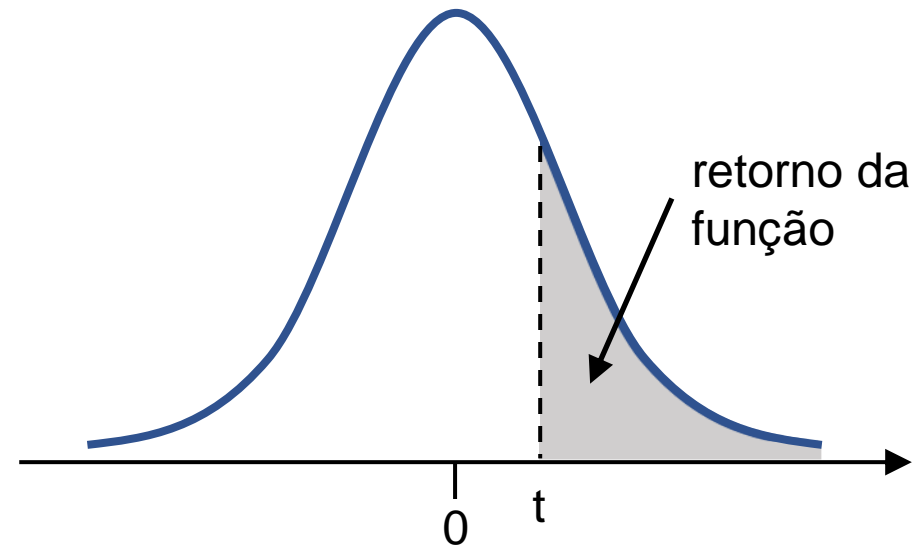
$$\text{Hipóteses} \Rightarrow \begin{cases} H_0: \mu \leq \mu_0 \\ H_1: \mu > \mu_0 \end{cases}$$

p_valor = pnorm(z, lower.tail = FALSE)



NORMAL

p_valor = pt(t, df, lower.tail = FALSE)

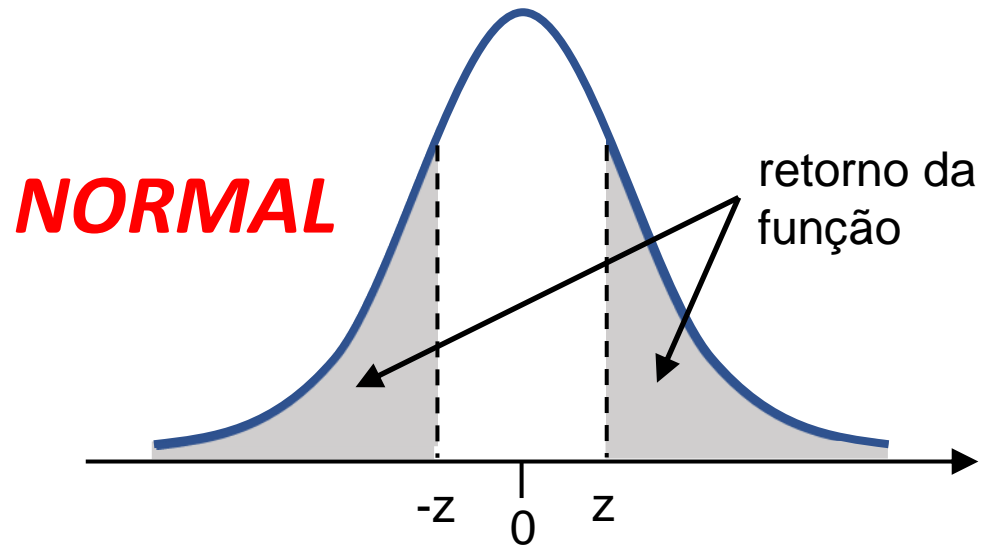


T DE STUDENT

Teste Bicaudal

$$\text{Hipóteses} \Rightarrow \begin{cases} H_0: \mu = \mu_0 \\ H_1: \mu \neq \mu_0 \end{cases}$$

```
if ( z < 0 ){  
    p_valor = 2 * pnorm( z, lower.tail = T )  
} else {  
    p_valor = 2 * pnorm( z, lower.tail = F )  
}
```



```
if ( t < 0 ){  
    p_valor = 2 * pt( t, df, lower.tail = T )  
} else {  
    p_valor = 2 * pt( t, df, lower.tail = F )  
}
```

