

Types of Hypothesis Tests:
Two-tailed, Left-tailed, Right-
tailed

- La logica del test è basata sulla confutazione di un'ipotesi specifica, H_0
- Rispetto ad un'ipotesi specifica posso trovare una specifica distribuzione di campionamento
- L'ipotesi alternativa contiene, invece, un'infinità di valori $\mu \neq \theta$ e quindi di relative distribuzioni di campionamento

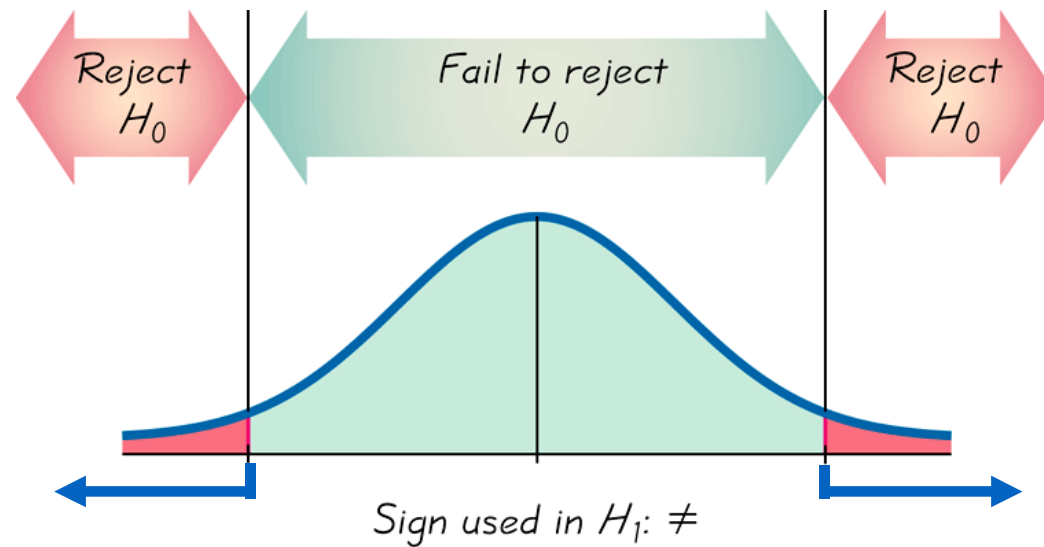
Two-tailed Test

$$H_0: \mu = \mu_0$$

$$H_1: \mu \neq \mu_0$$

α is divided equally between
the two tails of the critical
region

Means less than or greater than



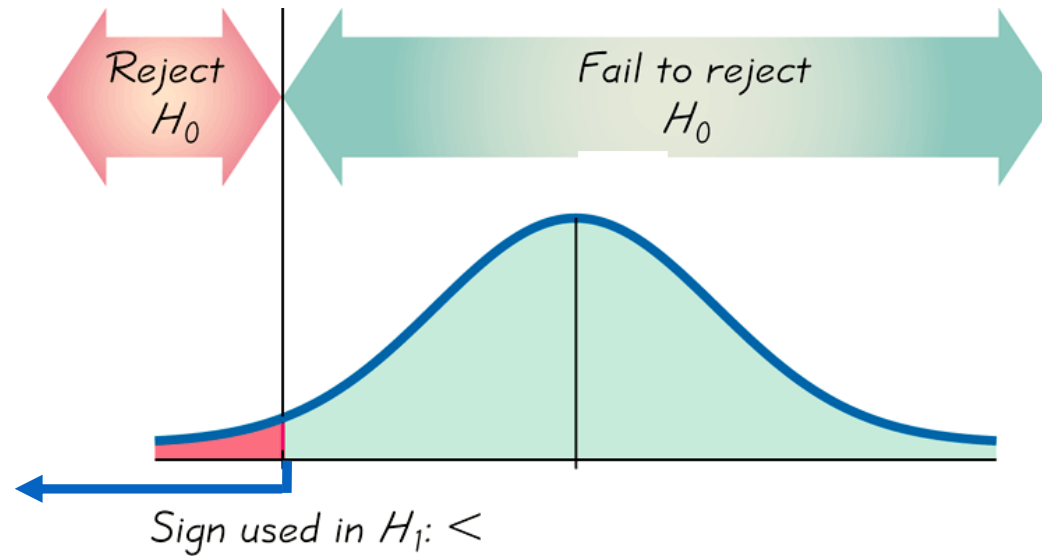
Left-tailed Test

$$H_0: \mu = \mu_0$$

α the left tail

$$H_1: \mu < \mu_0$$

Points Left

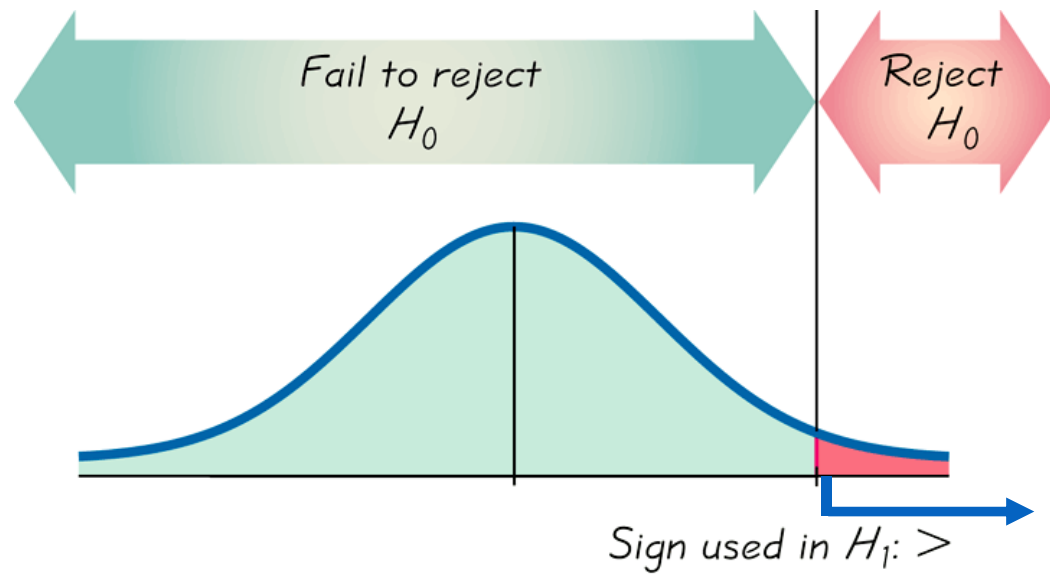


Right-tailed Test

$$H_0: \mu = \mu_0$$

$$H_1: \mu > \mu_0$$

Points Right



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The **tails** in a distribution are the extreme regions bounded by critical values.

Determinations of P -values and critical values are affected by whether a critical region is in two tails, the left tail, or the right tail. It therefore becomes important to correctly characterize a hypothesis test as two-tailed, left-tailed, or right-tailed.