$\mu = 120 \, mm \, Hg$

Honolulu Heart Study : $n = 100$ $\bar{x} = 130.1 \, mm \, Hg$ $S = 21$

Is the group significantly different? Hypothesis (null) : Groups are statistically Similar

Using t-Student test:

$$t = \frac{(\bar{x} - \mu)}{\frac{S_x}{\sqrt{n}}}$$

$$t = \frac{130.1 - 120}{21.21 / \sqrt{100}} = \frac{10.1}{2.121} = 4.7619 \simeq 4.76$$

Absence of $\supset$ $\Rightarrow$ t critical will be used

$t_c \Rightarrow d.f = 100 - 1 = 99$

$\Rightarrow$ confidence level = 95%

$\Rightarrow t_c = 1.660$

$t_c \lll t$

t crosses t_c meaning that we fail to accept the null hypothesis