One-sample t-test

Structure of a 1-sample t-test in R

Code to run test

```
> t.test(dat$temp,
+          mu = normal.temp)

        One Sample t-test

data:  dat$temp
t = -5.4548, df = 129, p-value = 2.411e-07
alternative hypothesis: true mean is not equal to 98.6
95 percent confidence interval:
 98.12200 98.37646
sample estimates:
mean of x
 98.24923
```

Structure of a 1-sample t-test in R

Null Hypothesized value for the true population mean (**μ**)

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Degrees of Freedom
For 1-sample t-test this is **n-1**

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Degrees of Freedom

For 1-sample t-test this is **n-1**

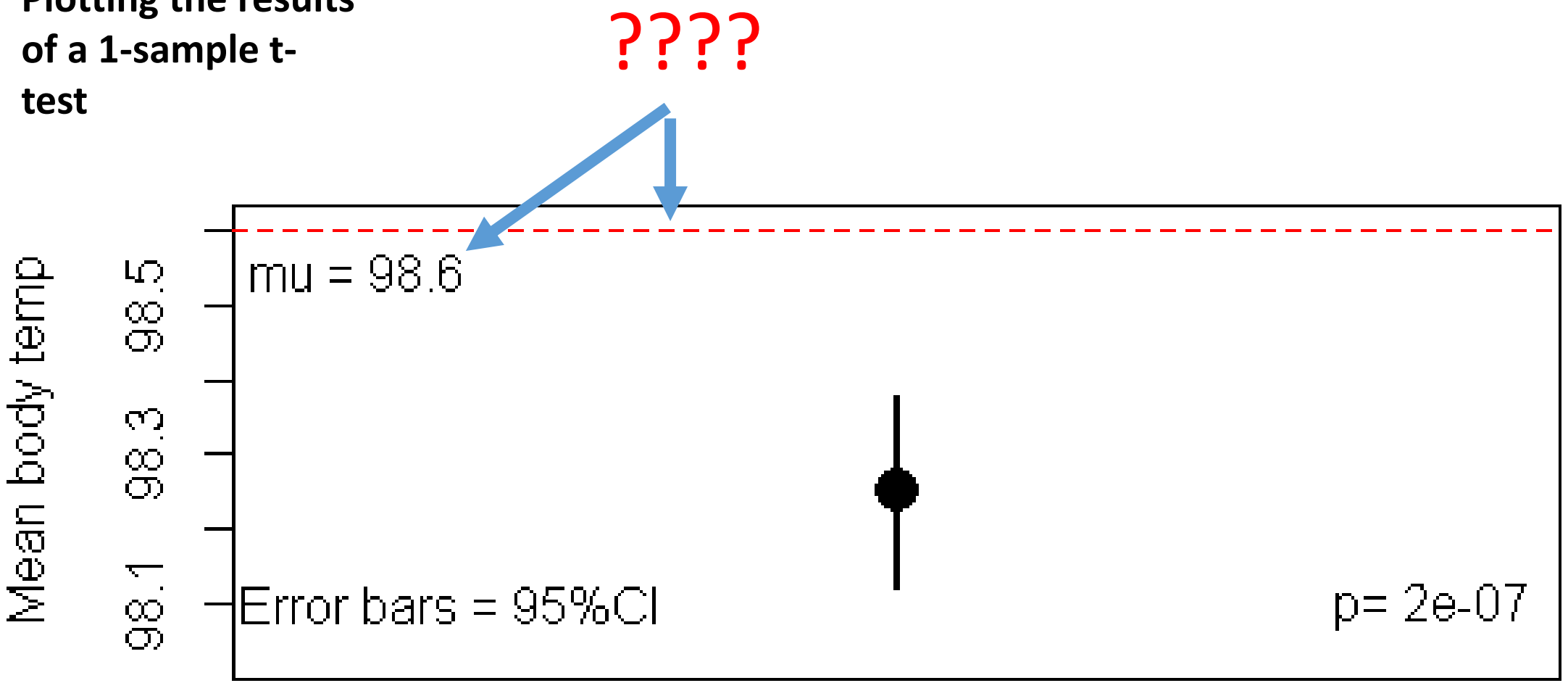
P value

95% Confidence Interval around **sample mean y.bar**

Sample mean **(y.bar)**

Visualizing a one-sample t-test

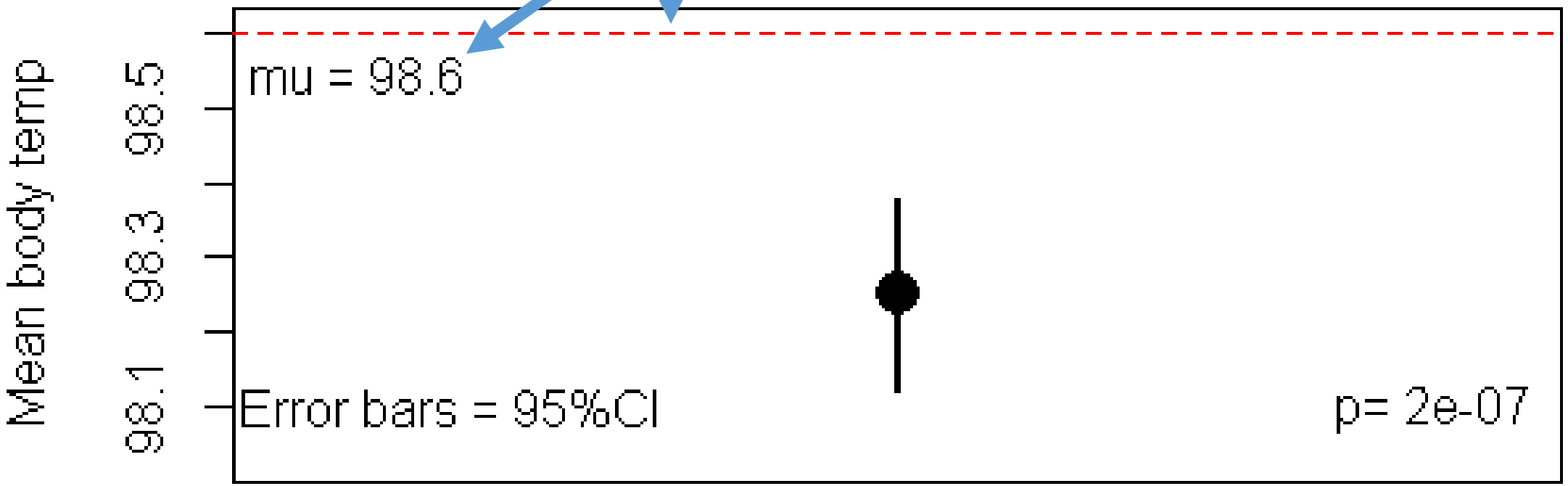
Plotting the results of a 1-sample t-test



Plotting the results of a 1-sample t-test

Dashed Red line: the “conventional wisdom”

The **null hypothesis** (**Ho**) that **population mean** mu = 98.6



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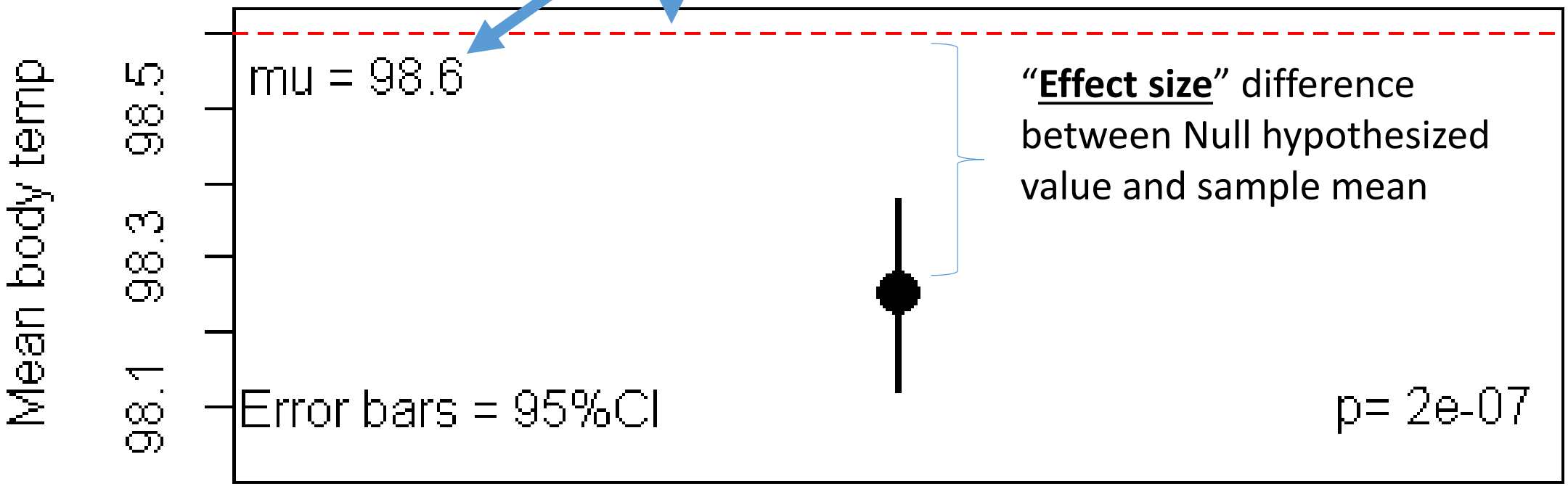

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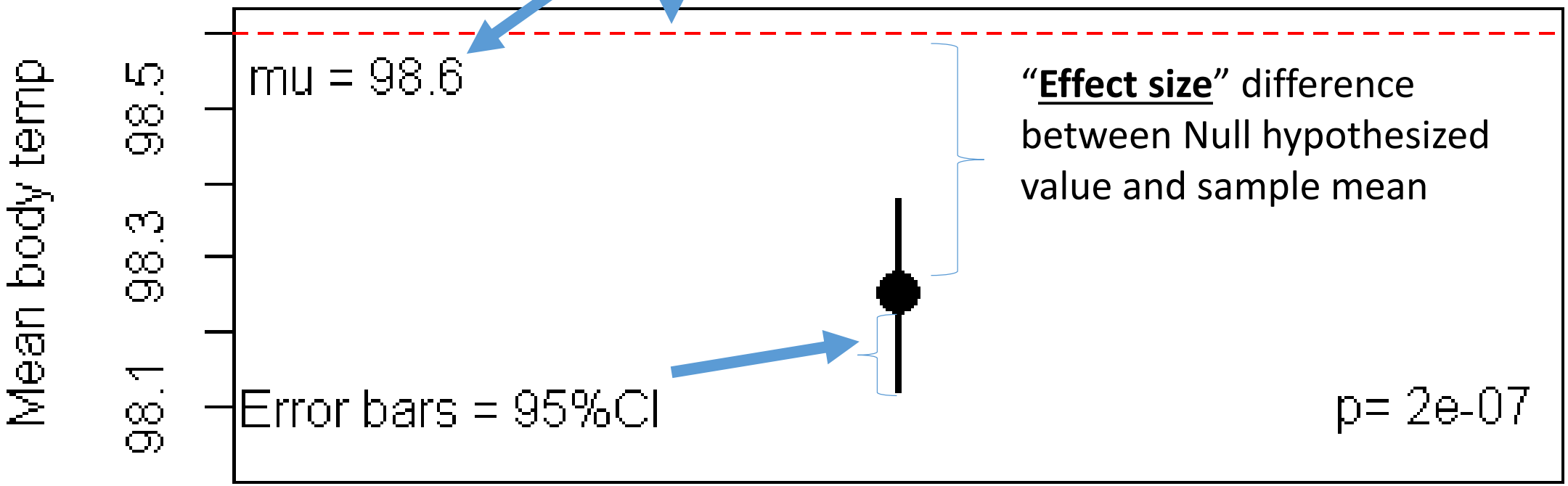

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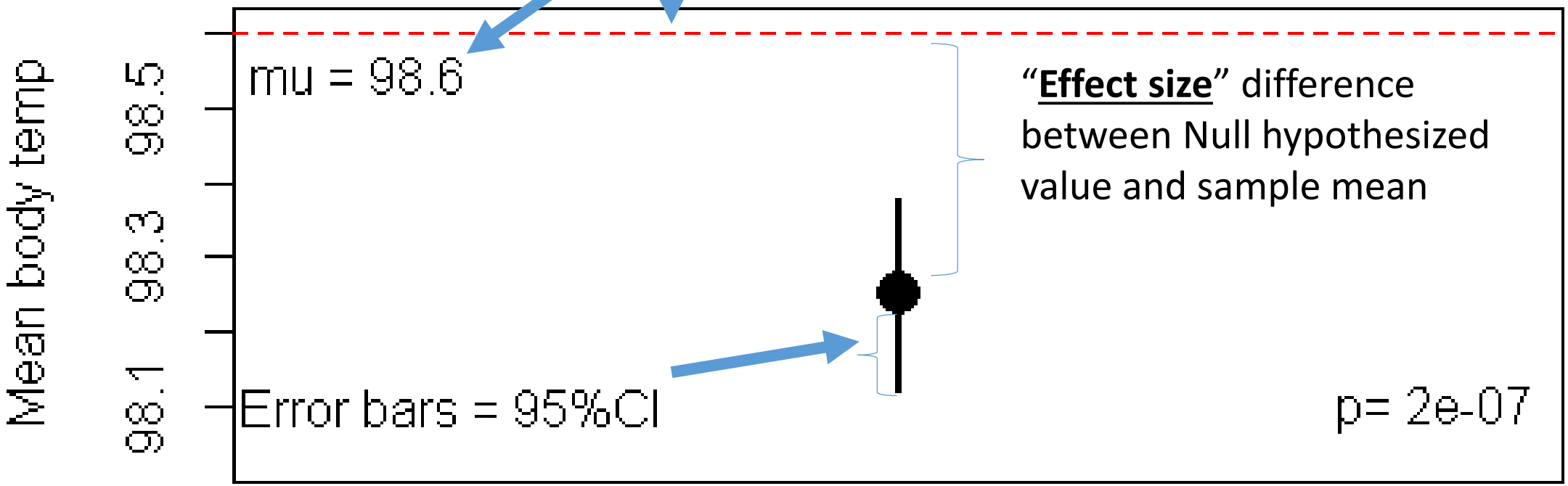

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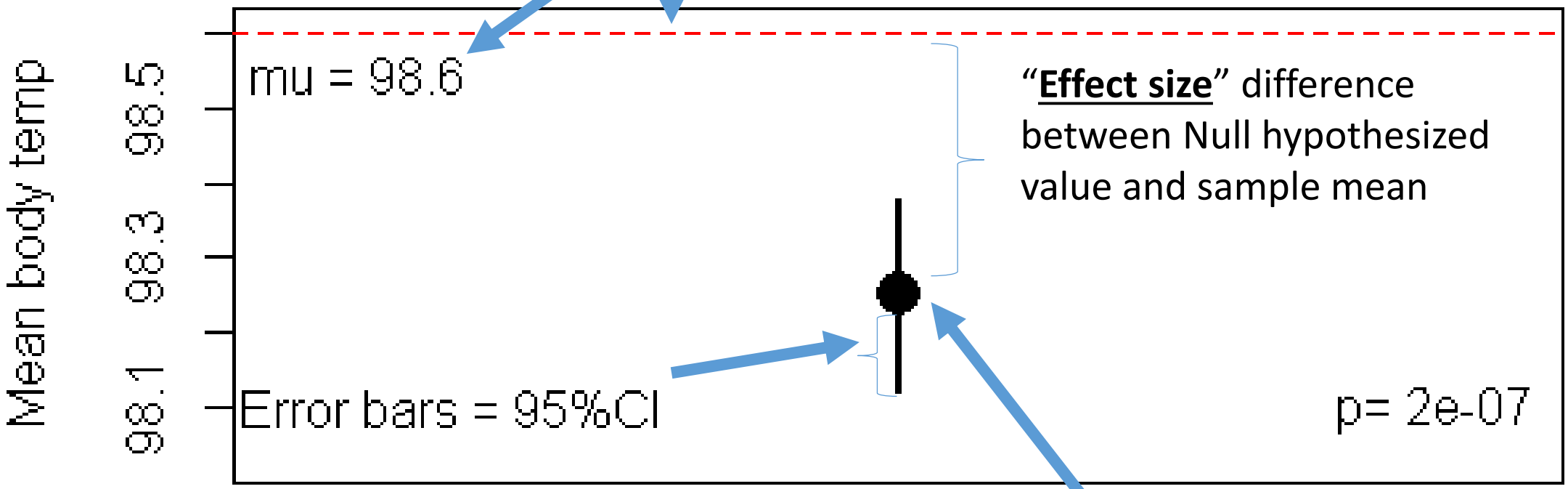

Sample mean
(**y.bar**) from the n= 130 samples

Plotting the results of a 1-sample t-test

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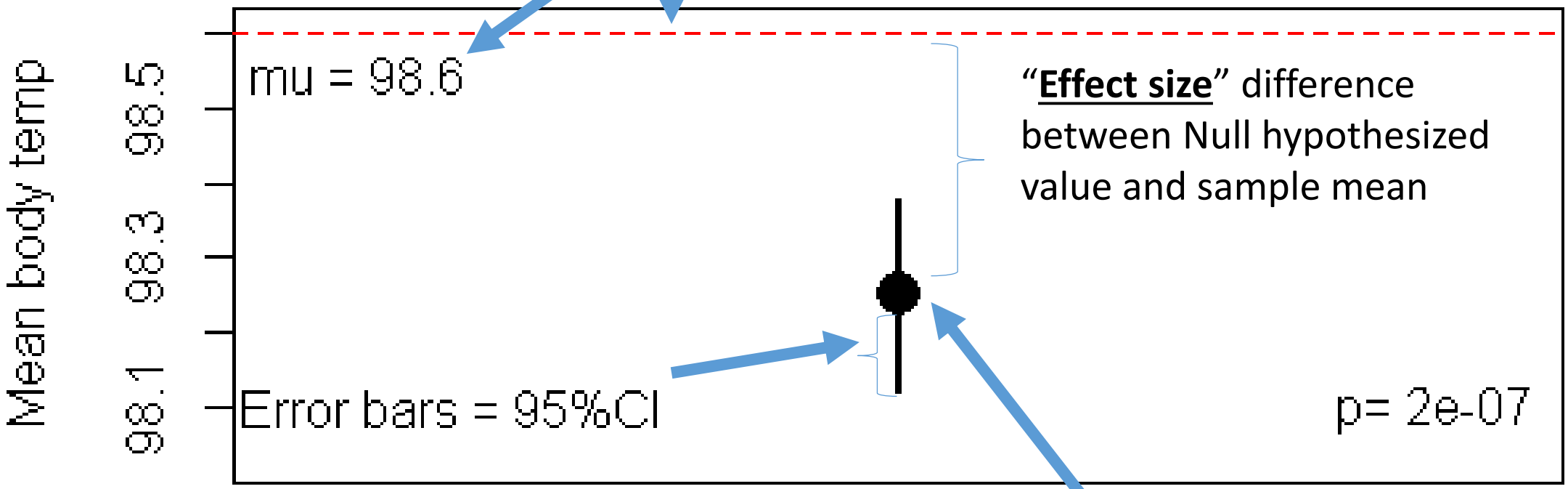

Sample mean
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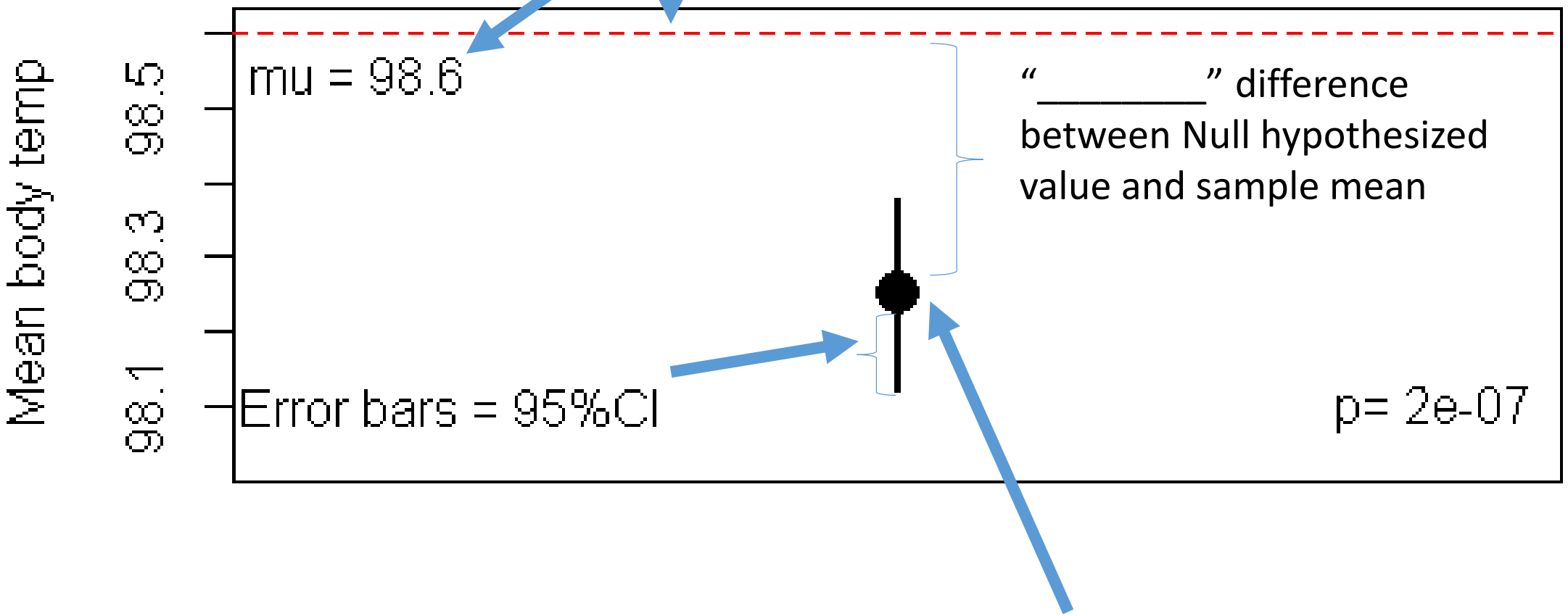
Plotting the results of a 1-sample t-test

Dashed Red line: the “conventional wisdom”

The _____ (___) that _____ mu = 98.6



How does the p-value compare to the confidence interval?

_____ (_____) from the n = 130 samples

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