Statistical Inference Project Part 2

Damien Edwards

January 22, 2015

This is an analysis of the ToothGrowth data in the R datasets package. The analysis will provide a basic summary of the data and use confidence intervals and/or hypothesis tests to compare tooth growth by supp and dose. ## Load ToothGrowth data

```
library(datasets)
data(ToothGrowth)
str(ToothGrowth)
```

```
## 'data.frame':    60 obs. of  3 variables:
##  $ len : num  4.2 11.5 7.3 5.8 6.4 10 11.2 11.2 5.2 7 ...
##  $ supp: Factor w/ 2 levels "OJ","VC": 2 2 2 2 2 2 2 2 2 2 ...
##  $ dose: num  0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 ...
```

Summary of ToothGrowth dataset

```
ToothGrowth$dose <- as.factor(ToothGrowth$dose)
summary(ToothGrowth)
```

```
##       len        supp       dose
##  Min.   : 4.20   OJ:30   0.5:20
##  1st Qu.:13.07   VC:30   1  :20
##  Median :19.25           2  :20
##  Mean   :18.81
##  3rd Qu.:25.27
##  Max.   :33.90
```

```
table(ToothGrowth$supp, ToothGrowth$dose)
```

```
##
##      0.5  1  2
##   OJ  10 10 10
##   VC  10 10 10
```

Boxplot of ToothGrowth Dose Summary

Tooth Growth in relation to dose by supp