Stats Assignment

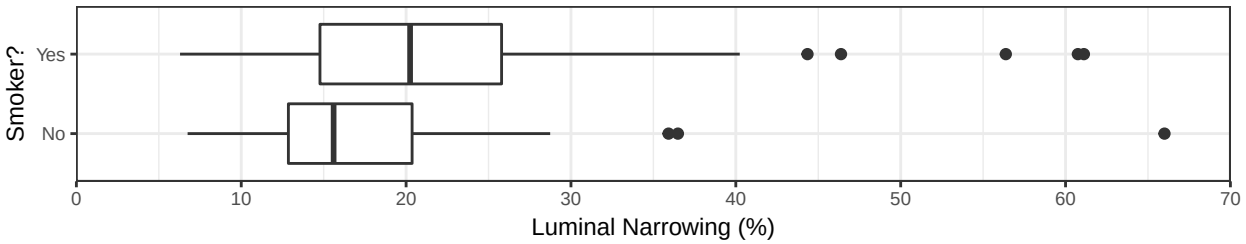
22-07-2017

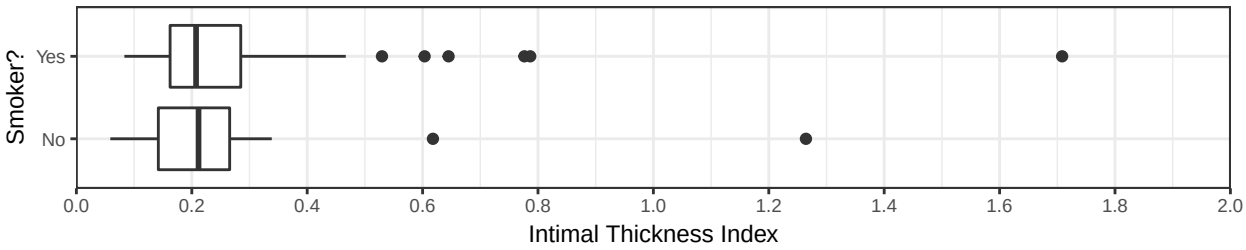
Question 1

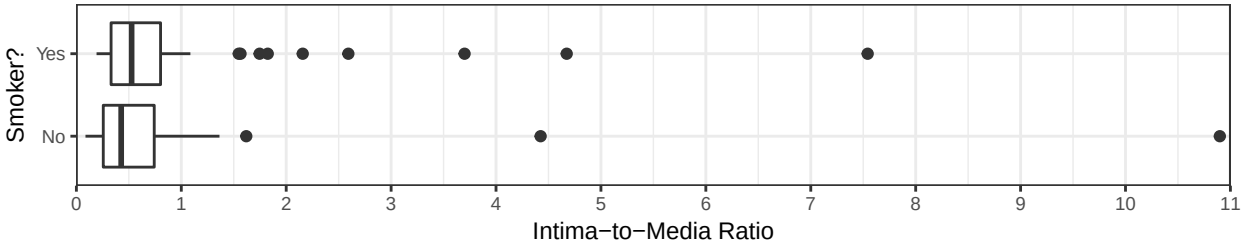
Summary Table for Study Participants Risk Factors

Factor	Summary
Age, years (range, mean (sd))	42-81, 65.77 (9.28)
Gender, n (%)	
Male	98 (89.1)
Female	12 (10.9)
Diabetes, n (%)	27 (24.5)
Smoker, n (%)	73 (66.4)
Peripheral Vascular Disease, n (%)	19 (17.3)
Cerebrovascular Disease, n (%)	11 (10)
Hypercholestrolemia, n (%)	53 (48.2)

Comparison of Indicies for Severity of Disease in Radial Artery for Smokers and Non-Smokers







Difference between Smokers and Non-Smokers on each Index of Disease Severity for Radial Artery

Two Sample t-test: Non-smoker - Smoker

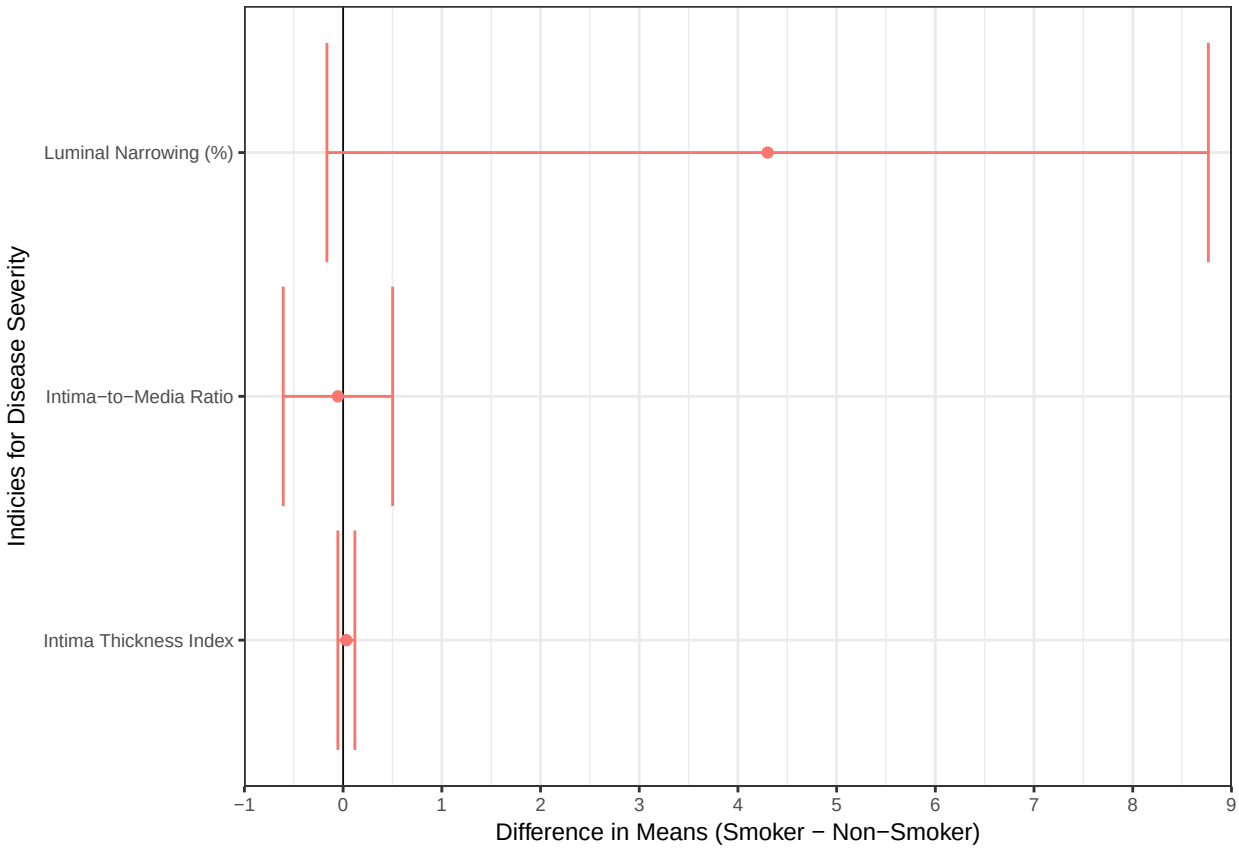
Disease Severity Indicies	Difference	95% CI	t-value	p-value
Luminal Narrowing (%)	-4.301	-8.766, 0.164	-1.909	0.059
Intimal Thickness Index	-0.033	-0.119, 0.053	-0.755	0.452
Intima-to-Media Ratio	0.053	-0.502, 0.607	0.188	0.851

	Mean (st. dev) Smoker
Luminal Narrowing (%)	
Intima Thickness Index	
Intima-to-Media Ratio	

```
differences <- data.frame(x = c('Luminal Narrowing (%)', 'Intima Thickness Index', 'Intima-to-Media Rati

plot4 <- ggplot(differences, aes(x, diff)) +
         geom_hline(yintercept=0, size=0.3) +
         geom_point(aes(x, diff, color="red")) +
         geom_errorbar(aes(x, ymin = min, ymax = max, color="red")) +
         coord_flip() +
         theme_bw(base_size = 9) +
         scale_y_continuous(breaks = seq(-1, 9, 1), limits=c(-1,9), expand=c(0,0)) +
         guides(color=FALSE) +
         labs(
           y='Difference in Means (Smoker - Non-Smoker)',
           x='Indicies for Disease Severity')

plot4
```


Luminal Narrowing (%)
Intima−to−Media Ratio
Intima Thickness Index
Indicies for Disease Severity
−1
0
1
2
3
4
5
6
7
8
9
Difference in Means (Smoker − Non−Smoker)