N17

## one\_way\_anova

(10.295664403684896, 3.604217453752248e-05)

## t\_test

t\_statistic p\_value  
pre\_diabetes vs no\_diabetes -1.743308 0.081500  
diabetes vs no\_diabetes 3.827755 0.000135

## tukey\_hsd

Multiple Comparison of Means - Tukey HSD, FWER=0.05   
===============================================================  
 group1 group2 meandiff p-adj lower upper reject  
---------------------------------------------------------------  
 diabetes no\_diabetes -0.0511 0.0002 -0.081 -0.0212 True  
 diabetes pre\_diabetes -0.0732 0.0001 -0.1149 -0.0315 True  
no\_diabetes pre\_diabetes -0.0221 0.2717 -0.0557 0.0115 False  
---------------------------------------------------------------

## covariance\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.025097 1.0 0.809532 0.368392  
C(pre\_diabetes) 0.293832 1.0 9.477700 0.002115  
C(diabetes) 0.332603 1.0 10.728285 0.001077  
Age 0.403298 1.0 13.008585 0.000319  
Residual 50.223913 1620.0 NaN NaN

## interaction\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.024916 1.0 0.804007 0.370031  
C(pre\_diabetes) 0.011146 1.0 0.359677 0.548770  
C(diabetes) 0.332603 1.0 10.732659 0.001075  
Age 0.403298 1.0 13.013888 0.000319  
C(diabetes):Age 0.051456 1.0 1.660409 0.197732  
Residual 50.172457 1619.0 NaN NaN

## interaction\_analysis2

dfn dfd F PR(>F)  
diabetes 1.0 1487.0 4.166674 0.041403  
pre\_diabetes 1.0 1494.0 8.520375 0.003565

## chi\_square\_test

condition chi2 p\_value dof  
0 no\_diabetes 3.031522 0.081661 1  
1 pre\_diabetes 3.559954 0.059189 1  
2 diabetes 16.353291 0.000053 1

## relative\_risk\_analysis

condition relative\_risk ci p\_value  
0 no\_diabetes 0.028620 0.020352 4.437402e-93  
1 pre\_diabetes 0.005780 0.000810 1.384981e-07  
2 diabetes 0.085714 0.052967 7.381002e-24

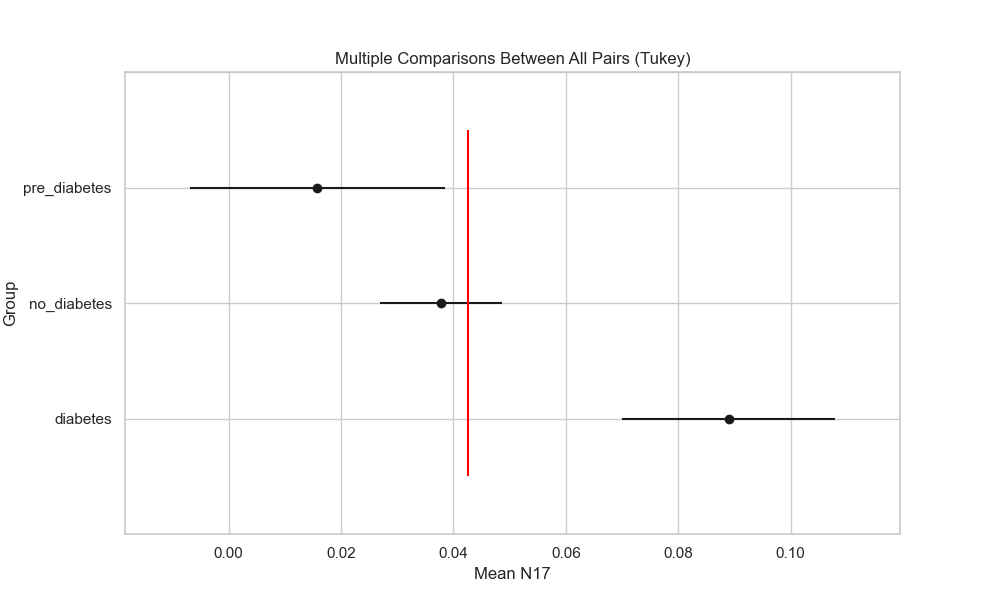
## odds\_ratio\_analysis

condition odds\_ratio ci p\_value  
0 no\_diabetes 1.733374 1.232646 0.073496  
1 pre\_diabetes 6.434907 0.901331 0.038026  
2 diabetes 0.300024 0.185398 0.000155

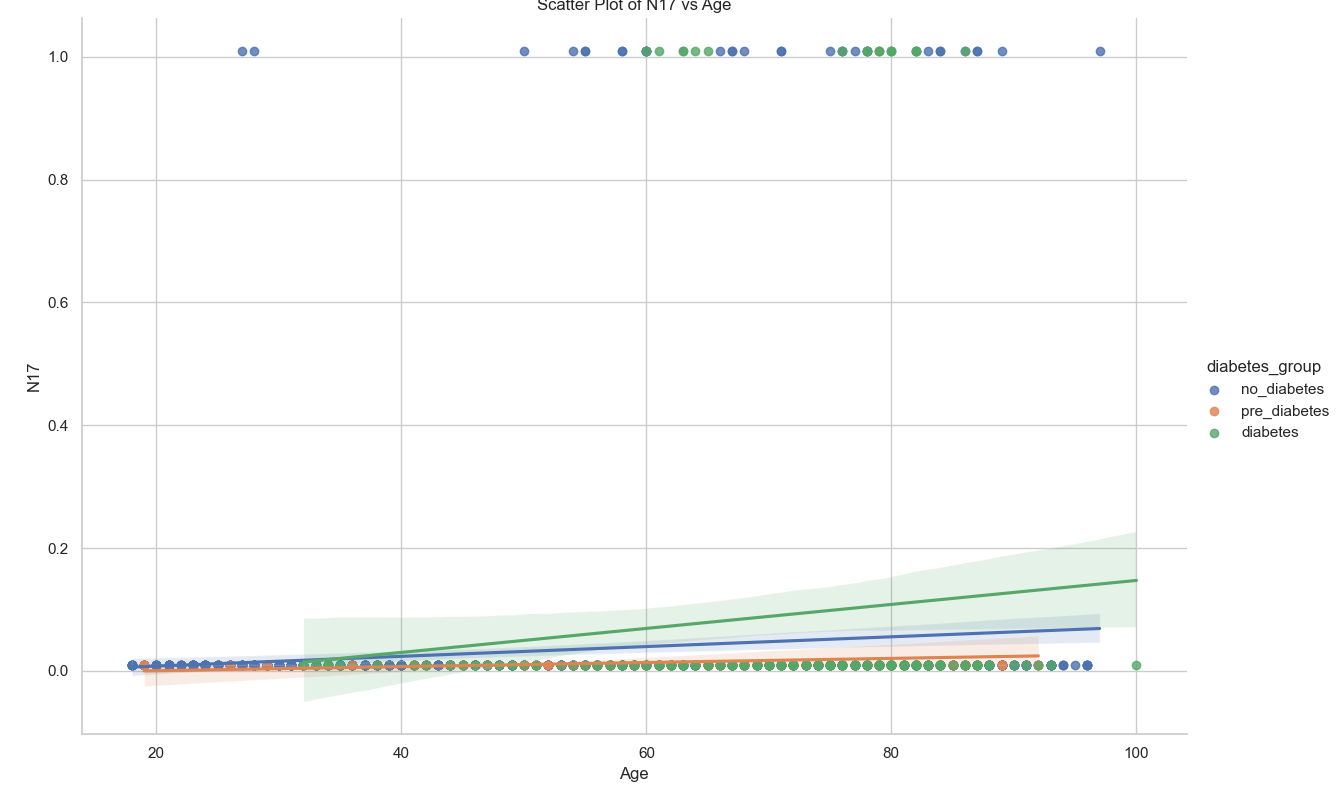
## relative\_risk\_by\_age

age\_group condition relative\_risk p\_value confidence\_interval  
6 18-40 No Diabetes 0.000000 1.000000 0.000000  
7 18-40 Pre-Diabetes inf 1.000000 NaN  
8 18-40 Diabetes inf 1.000000 NaN  
3 40-60 No Diabetes 0.374194 0.472598 0.199564  
4 40-60 Pre-Diabetes inf 0.626096 NaN  
5 40-60 Diabetes 0.997506 1.000000 0.137132  
0 60+ No Diabetes 1.627502 0.170444 1.062814  
1 60+ Pre-Diabetes 6.226891 0.051225 0.869650  
2 60+ Diabetes 0.331623 0.002026 0.201233

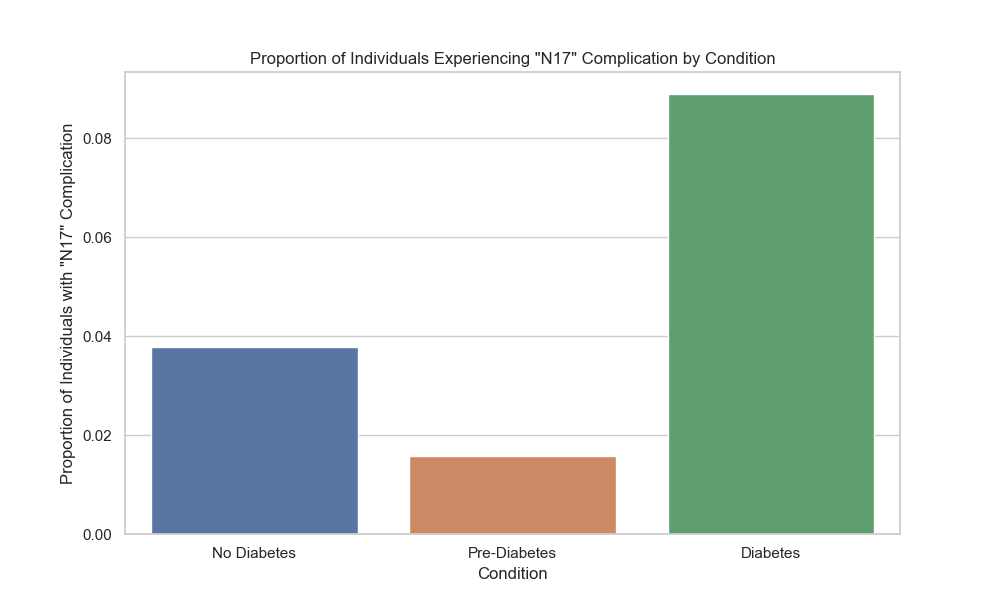
## visualize\_tukey\_results



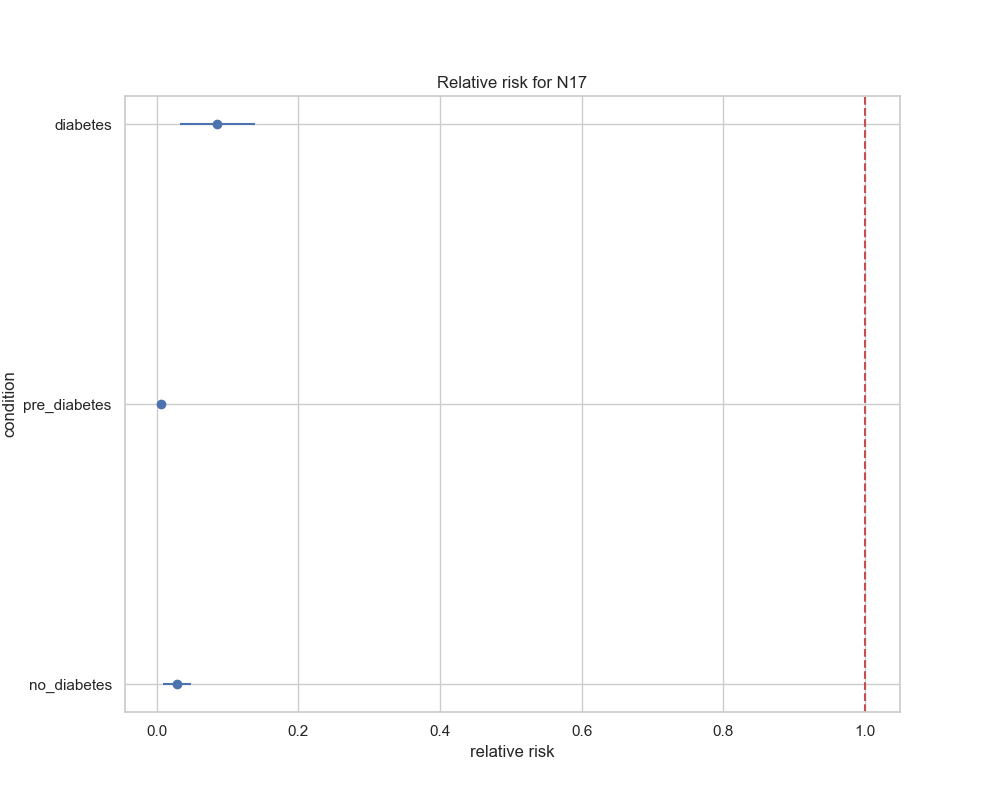
## plot\_interaction\_analysis



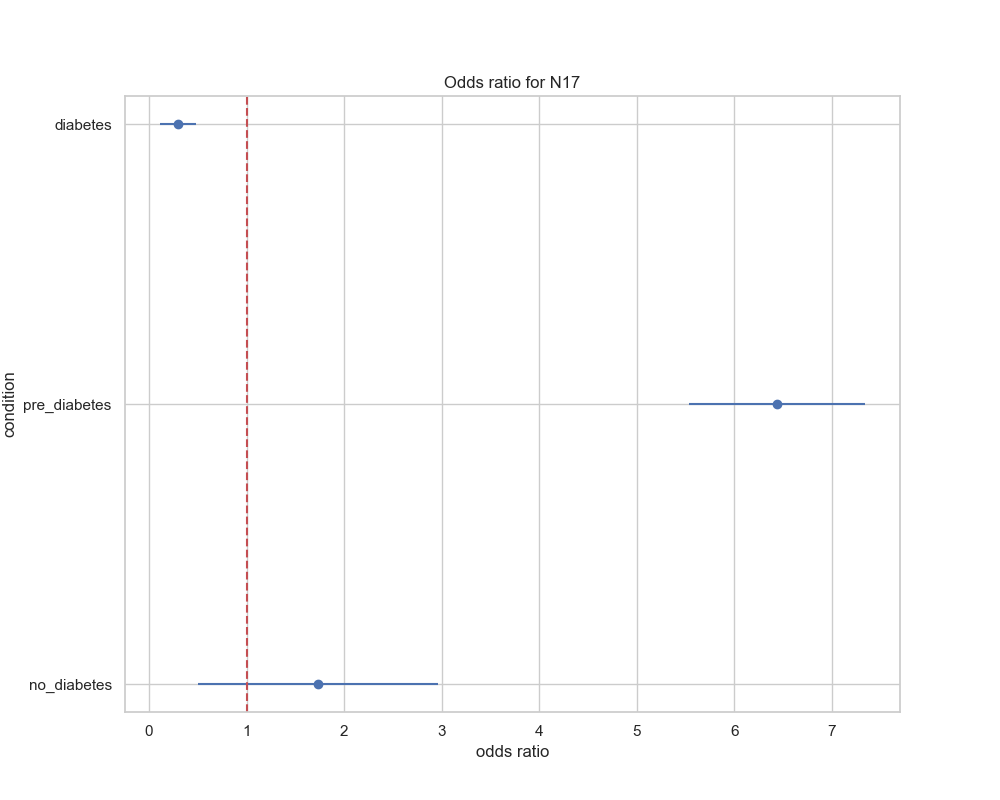
## visualize\_chi\_square\_results



## visualize\_relative\_risk\_results



## visualize\_odds\_ratio\_results



## visualize\_relative\_risk\_by\_age\_results

