## one\_way\_anova

(3.46342327748778, 0.031513596310710636)

## t\_test

t\_statistic p\_value  
pre\_diabetes vs no\_diabetes 1.756018 0.079270  
diabetes vs no\_diabetes 2.311373 0.020923

## tukey\_hsd

Multiple Comparison of Means - Tukey HSD, FWER=0.05   
==============================================================  
 group1 group2 meandiff p-adj lower upper reject  
--------------------------------------------------------------  
 diabetes no\_diabetes -0.0197 0.0643 -0.0403 0.0009 False  
 diabetes pre\_diabetes 0.0007 0.9985 -0.0331 0.0346 False  
no\_diabetes pre\_diabetes 0.0205 0.2322 -0.0089 0.0498 False  
--------------------------------------------------------------

## covariance\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.136003 1.0 6.923686 0.008573  
C(pre\_diabetes) 0.001014 1.0 0.051634 0.820267  
C(diabetes) 0.004291 1.0 0.218438 0.640285  
Age 0.451150 1.0 22.967366 0.000002  
Residual 38.598670 1965.0 NaN NaN

## interaction\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.005292 1.0 0.269303 0.603858  
C(pre\_diabetes) 0.001114 1.0 0.056713 0.811793  
C(diabetes) 0.004291 1.0 0.218353 0.640350  
Age 0.451150 1.0 22.958423 0.000002  
C(diabetes):Age 0.004615 1.0 0.234828 0.628021  
Residual 38.594055 1964.0 NaN NaN

## interaction\_analysis2

dfn dfd F PR(>F)  
diabetes 1.0 1827.0 0.434073 0.510080  
pre\_diabetes 1.0 1837.0 0.548373 0.459078

## chi\_square\_test

condition chi2 p\_value dof  
0 no\_diabetes 5.945014 0.014759 1  
1 pre\_diabetes 1.126961 0.288424 1  
2 diabetes 3.397261 0.065305 1

## relative\_risk\_analysis

condition relative\_risk ci p\_value  
0 no\_diabetes 0.016032 0.010712 4.707742e-90  
1 pre\_diabetes 0.037594 0.015394 2.962226e-13  
2 diabetes 0.036789 0.020156 2.739759e-27

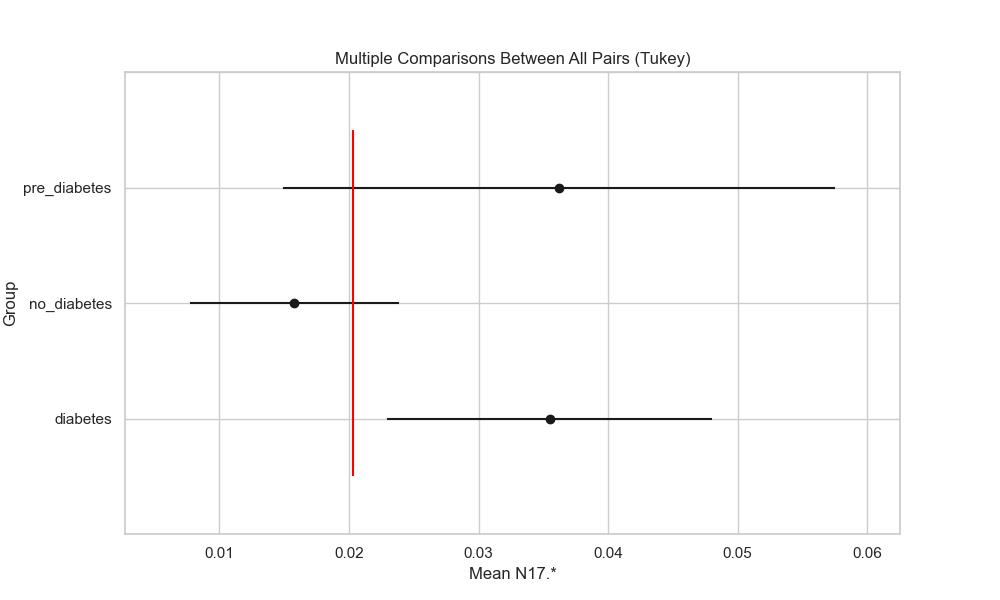
## odds\_ratio\_analysis

condition odds\_ratio ci p\_value  
0 no\_diabetes 2.310185 1.543508 0.012626  
1 pre\_diabetes 0.518374 0.212268 0.196901  
2 diabetes 0.483603 0.264950 0.047810

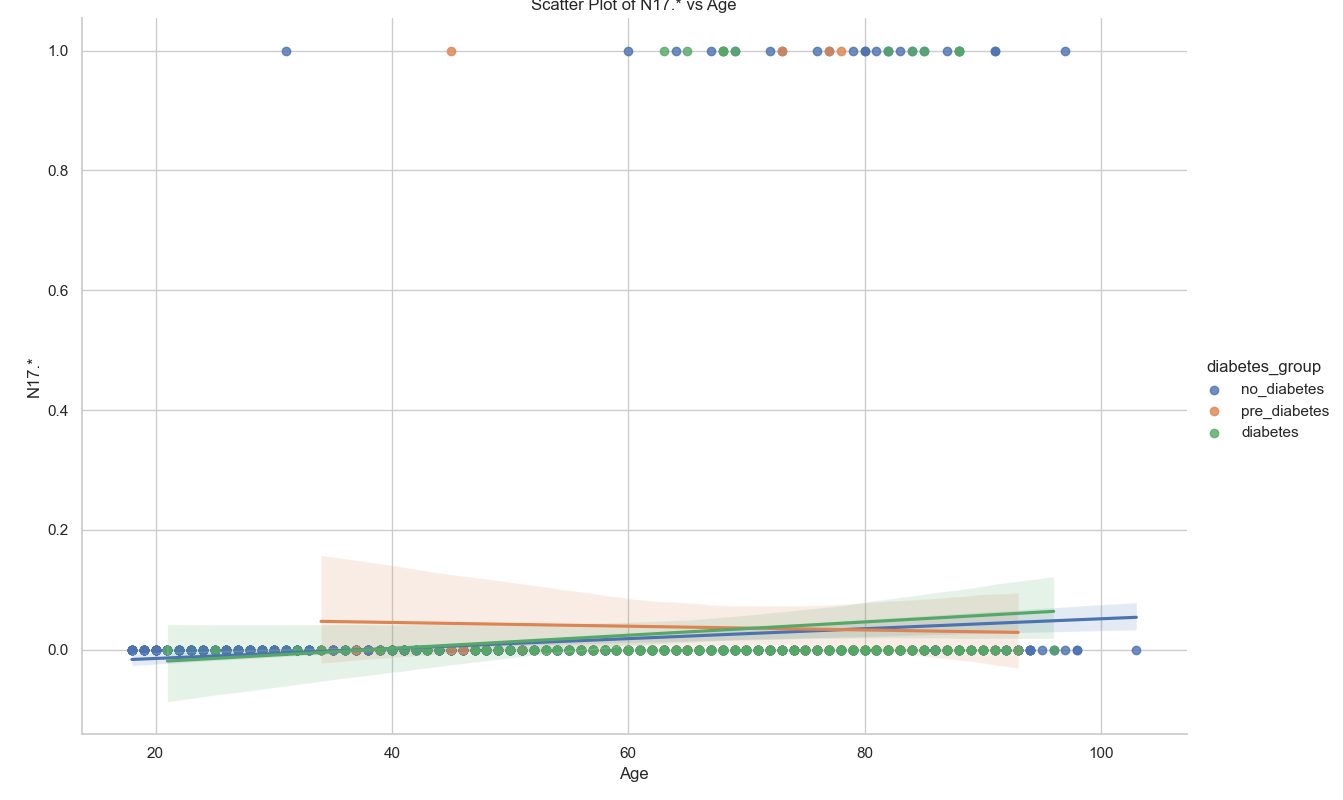
## relative\_risk\_by\_age

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 5.571429 0.283553 0.783170  
4 40-60 Pre-Diabetes 0.055449 0.105463 0.007553  
5 40-60 Diabetes inf 1.000000 NaN  
0 60+ No Diabetes 1.343464 0.382002 0.878570  
1 60+ Pre-Diabetes 0.922757 0.782792 0.339735  
2 60+ Diabetes 0.730354 0.431284 0.399023

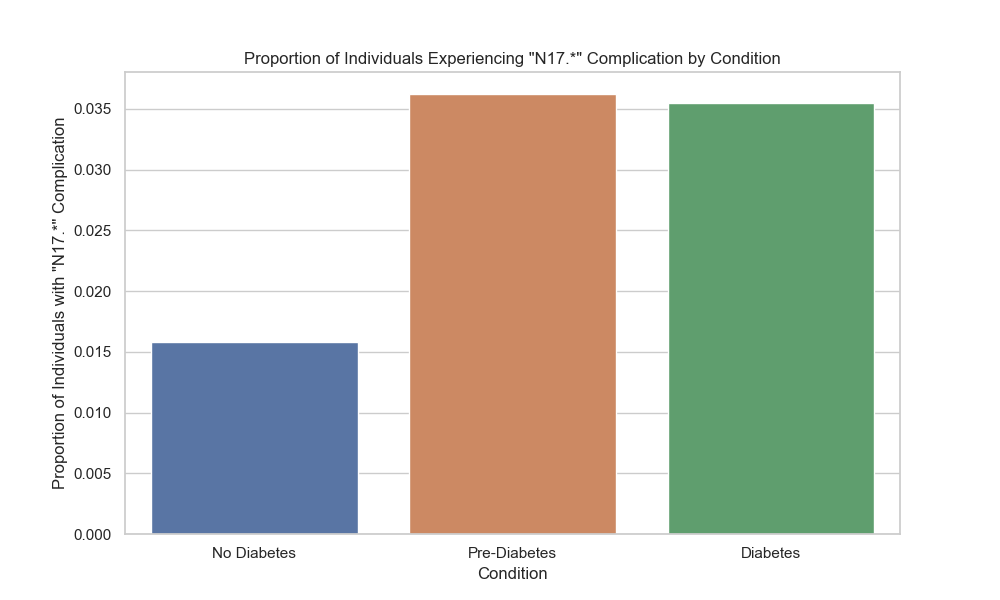
## visualize\_tukey\_results



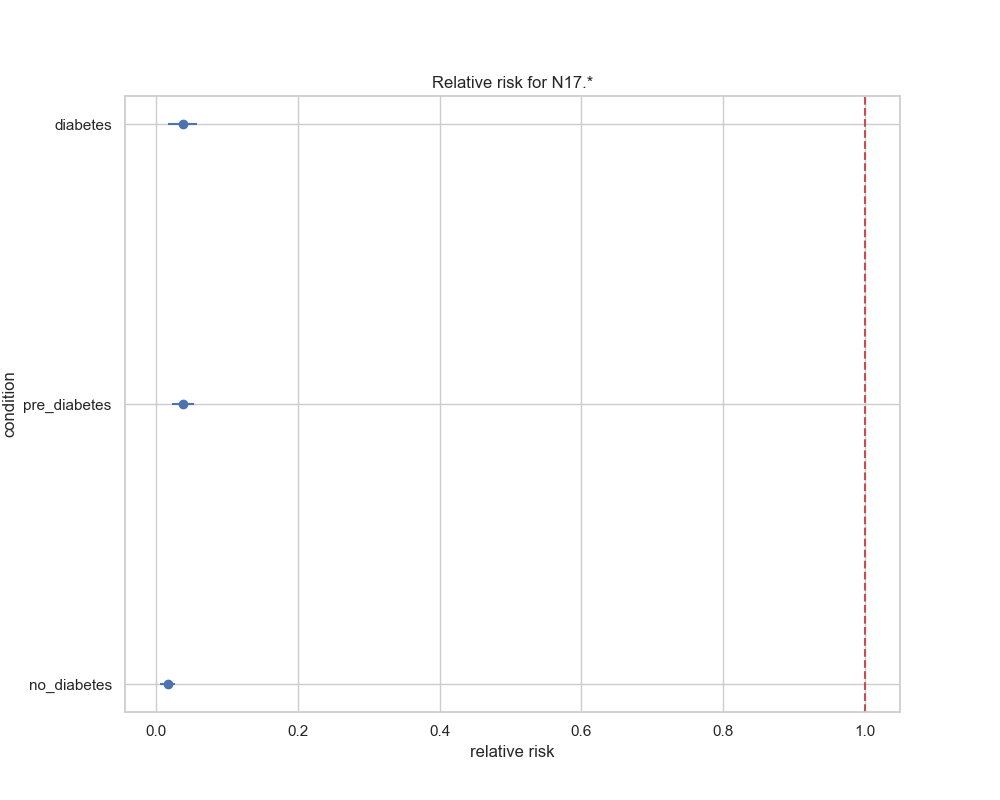
## plot\_interaction\_analysis



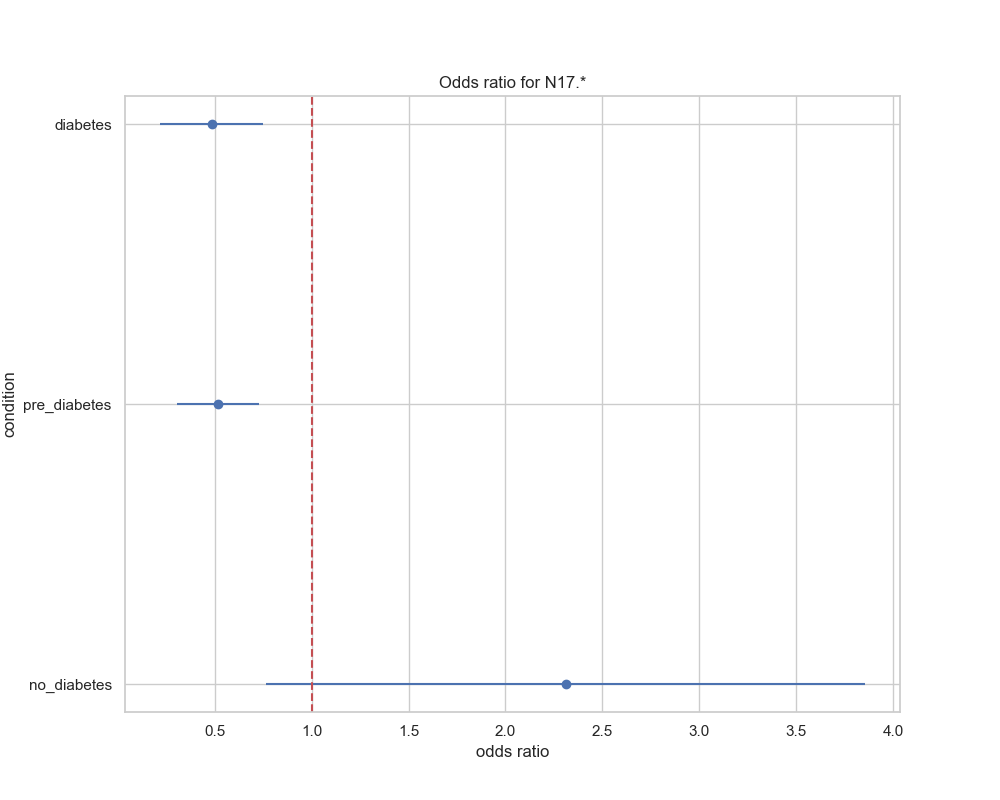
## visualize\_chi\_square\_results



## visualize\_relative\_risk\_results



## visualize\_odds\_ratio\_results



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

