



DVH Analytics



Statistical Models

☒ Include this ind. var. in multi-var regression



Select an Independent Variable (x-axis)

PTV Distance (Min)

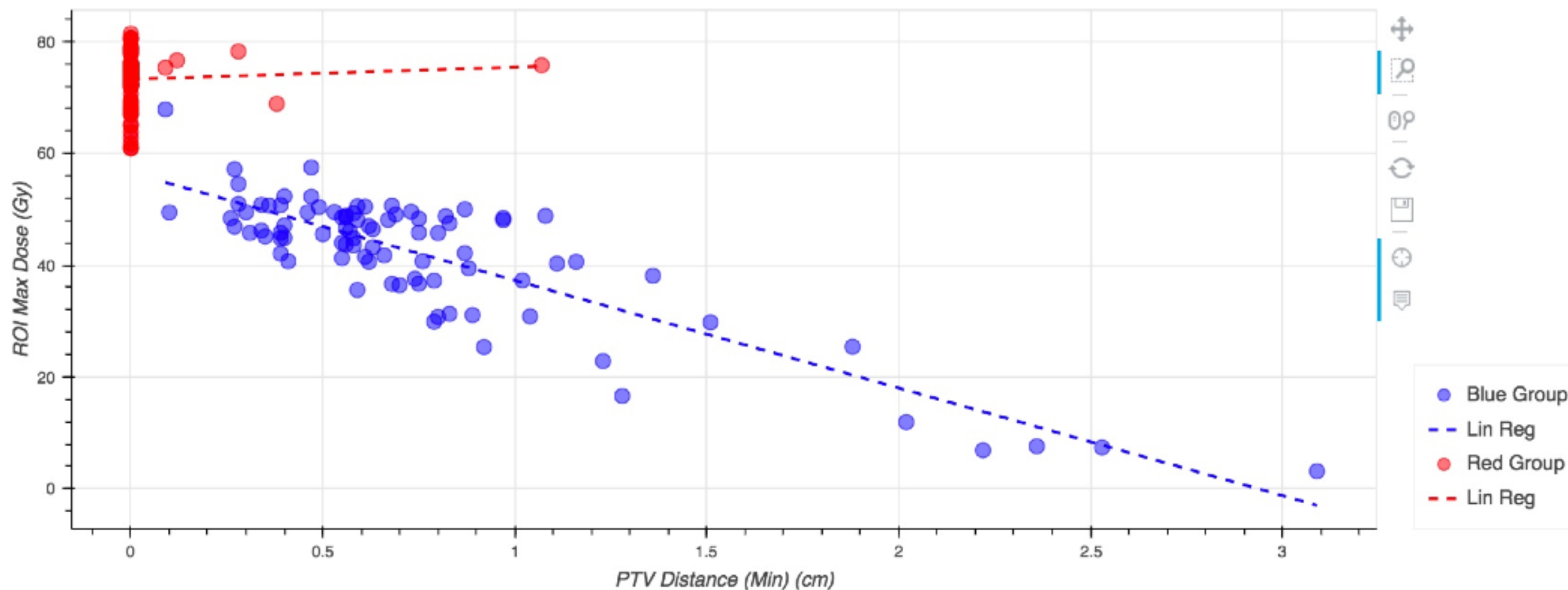


Select a Dependent Variable (y-axis)

ROI Max Dose

Single-Var Regression	Blue Group	Red Group
slope	-19.25	2.149
y-intercept	56.533	73.248
R-squared	0.734	0.004
p-value	0	0.595
std. err.	1.249	4.029
sample size	88	75

Variables for Multi-Var Regression
PTV Distance (Mean)
PTV Distance (Min)
SSD (Max)



Regression Model	Independent Variable	Coefficient	p-value
Model 1 ( $R^2 = 0.819$ , $p = 0.000$ )	Constant	-80.62	0.005
	PTV Distance (Mean)	-6.932	0.000
	PTV Distance (Min)	-8.028	0.005
	SSD (Max)	1.547	0.000

- Plot any variable available in correlation matrix against another

# Multi-Variate Regression



**Results from multi-variable regressions for the maximum brainstem doses contained within the previous slide.**

# DVH Analytics

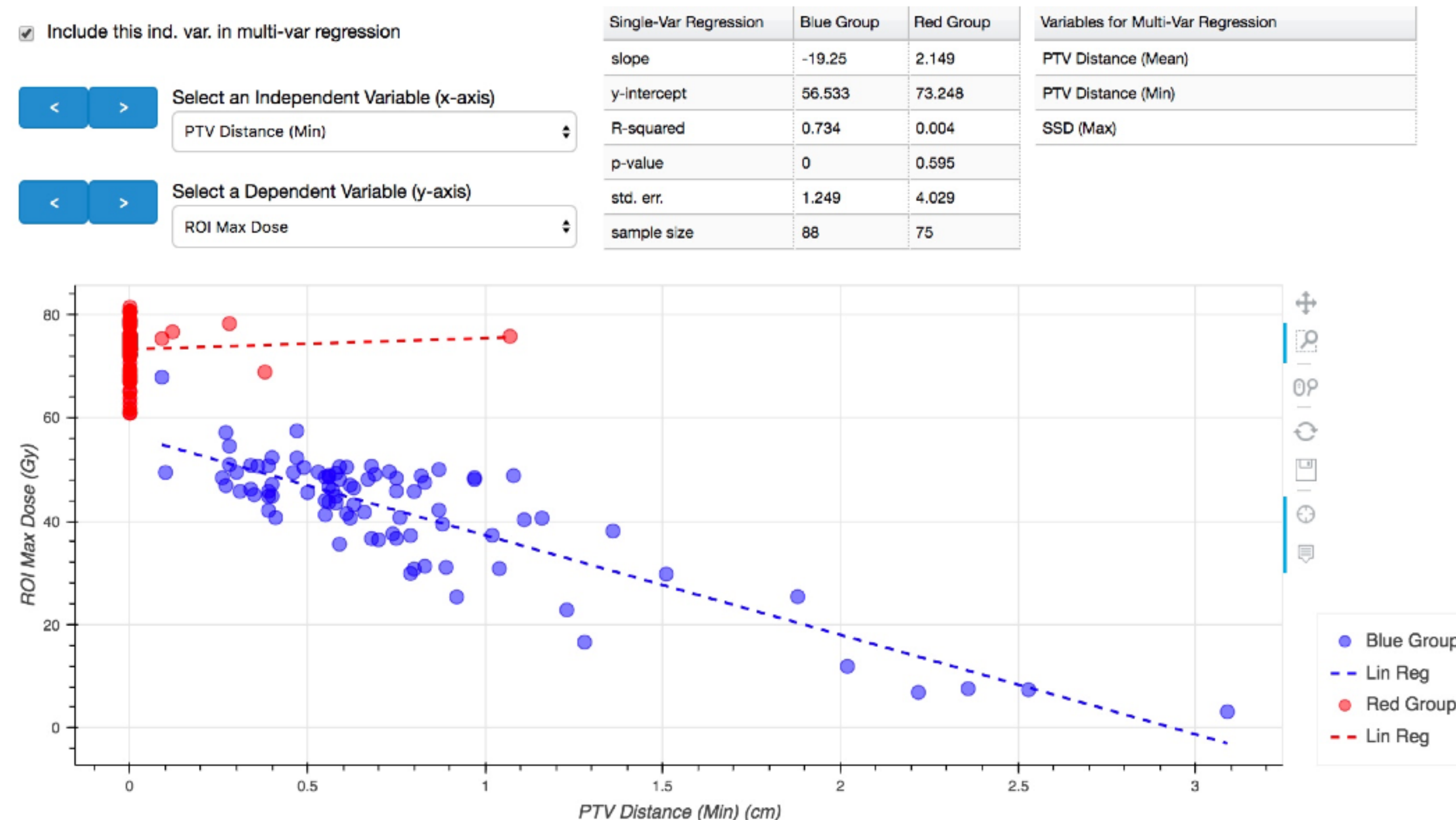
## Statistical Modules

### Multi-Variable Regression

- Plot any variable available in correlation matrix against another

Results from multi-variable regressions for the maximum brainstem doses contained within the previous slide.

Regression Model	Independent Variable	Coefficient	p-value
Model 1 ( $R^2 = 0.819$ , $p = 0.000$ )	Constant	-80.62	0.005
	PTV Distance (Mean)	-6.932	0.000
	PTV Distance (Min)	-8.028	0.005
	SSD (Max)	1.547	0.000



# DVH Analytics

## Statistical Modules

### Multi-Variable Regression

- Plot any variable available in correlation matrix against another
- Displays linear regression results using Statsmodels

Results from multi-variable regressions for the maximum brainstem doses contained within the previous slide.

Regression Model	Independent Variable	Coefficient	p-value
Model 1 ( $R^2 = 0.819$ , $p = 0.000$ )	Constant	-80.62	0.005
	PTV Distance (Mean)	-6.932	0.000
	PTV Distance (Min)	-8.028	0.005
	SSD (Max)	1.547	0.000

