

Regression Models for Demonstration: Conducting ANCOVA Using PROC GLM

Demonstration Code:

```
proc glm data=mydata.trials;
  class treatment;
  model bpchange = treatment baselinebp
              treatment*baselinebp / solution;
title 'Analysis of Covariance';
run;
quit;
```

Parameter Table (Partial Results)

Parameter	Estimate		Standard Error	t Value	Pr > t
Intercept	15.16097099	B	8.59030873	1.76	0.0811
Treatment Approved Drug	68.37420774	B	13.80649413	4.95	<.0001
Treatment New Drug	83.73827468	B	12.49532810	6.70	<.0001
Treatment Placebo	0.00000000	B	.	.	.
BaselineBP	-0.16733979	B	0.09100548	-1.84	0.0694
BaselineBP*Treatment Approved Drug	-0.75860830	B	0.14588398	-5.20	<.0001
BaselineBP*Treatment New Drug	-0.98130328	B	0.13099717	-7.49	<.0001
BaselineBP*Treatment Placebo	0.00000000	B	.	.	.

Approved Drug

BPChange = (15.1610 + 68.3742) + (-0.1673 - 0.7586) * **BaselineBP** = 83.5352 - 0.9259 * **BaselineBP**

New Drug

BPChange = (15.1610 + 83.7383) + (-0.1673 - 0.9813) * **BaselineBP** = 98.8993 - 1.1486 * **BaselineBP**

Placebo

BPChange = 15.1610 - 0.1673 * **BaselineBP**

Close