
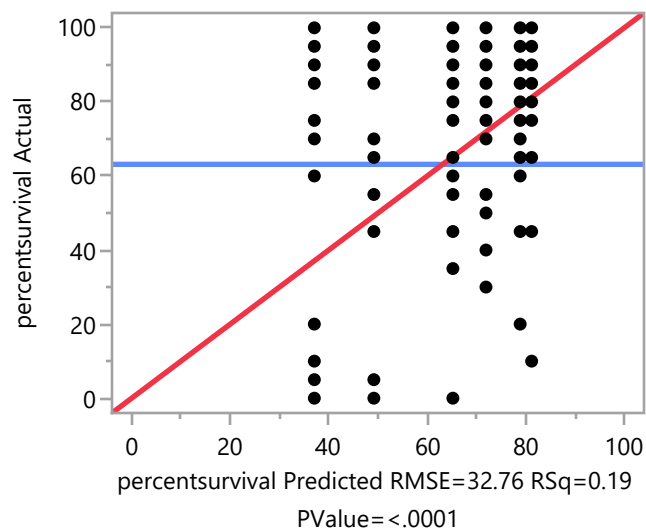


**Response percentsurvival****Whole Model****Effect Summary**

Source	Logworth		PValue
vpos	5.337		0.00000
vpos*hpos	1.603		0.02497
hpos	0.408		0.39087 ^

**Actual by Predicted Plot****Summary of Fit**

RSquare	0.193477
RSquare Adj	0.162693
Root Mean Square Error	32.76
Mean of Response	63.13869
Observations (or Sum Wgts)	137

**Parameter Estimates**

Term	Estimate	Std Error	DFDen	t Ratio	Prob> t
Intercept	63.903365	2.803922	129	22.79	<.0001*
vpos[buried]	13.422141	2.805189	129.1	4.78	<.0001*
hpos[down]	-4.767943	3.98465	129.1	-1.20	0.2337
hpos[mid]	0.1083227	3.990191	129.3	0.03	0.9784
vpos[buried]*hpos[down]	8.6348344	3.98465	129.1	2.17	0.0321*
vpos[buried]*hpos[mid]	1.4277671	3.990191	129.3	0.36	0.7211



**Response percentsurvival****Whole Model****REML Variance Component Estimates**

Random Effect	Var Ratio	Var Component	Std Error	95% Lower	95% Upper	Wald p-Value	Pct of Total
subsample	-0.019621	-21.05735	15.091231	-50.63562	8.5209234	0.1629	0.000
nest	0.0008776	0.9418138	2.2582749	-3.484324	5.3679513	0.6766	0.088
Residual		1073.2174	133.61673	852.87548	1392.0206		99.912
Total		1074.1592	133.55716	853.86825	1392.7316		100.000

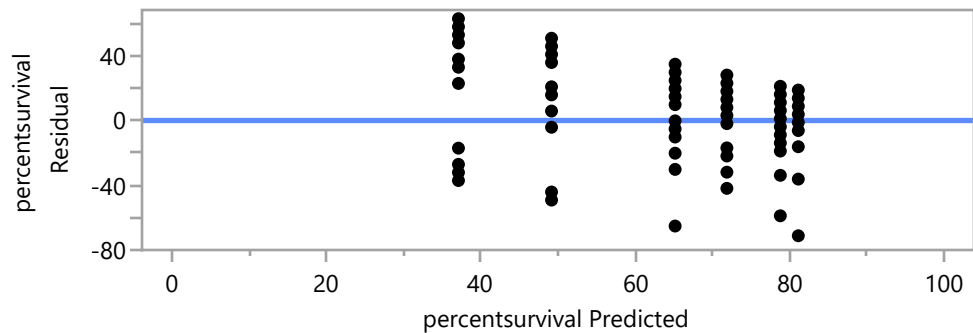
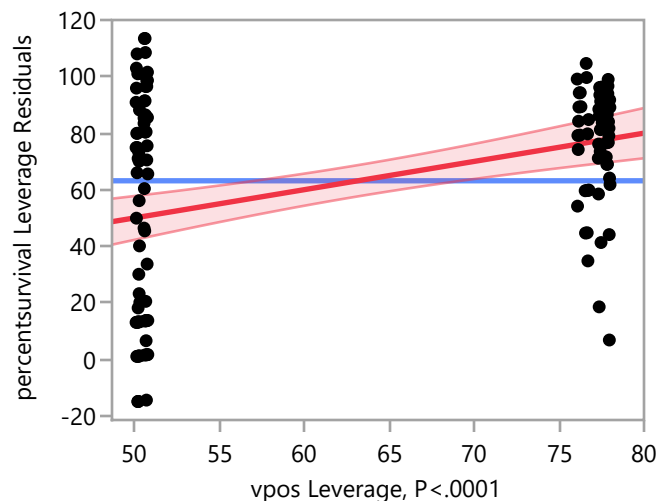
-2 Residual Log Likelihood = 1313.0258813

Note: Total is the sum of the positive variance components.

Total including negative estimates = 1053.1018

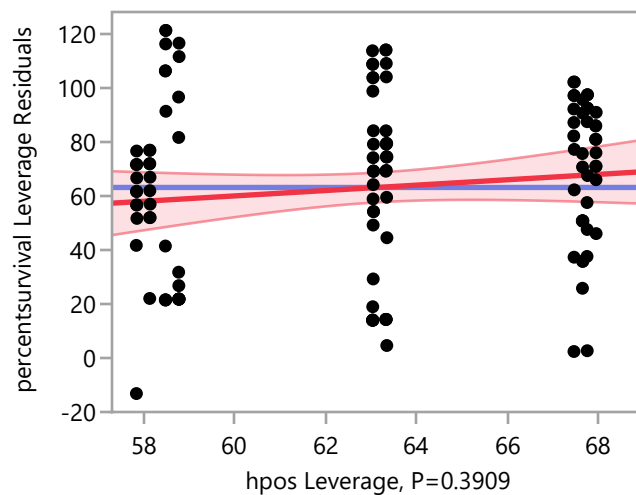
**Fixed Effect Tests**

Source	Nparm	DF	DFDen	F Ratio	Prob > F
vpos	1	1	129.1	22.8939	<.0001*
hpos	2	2	129.3	0.9462	0.3909
vpos*hpos	2	2	129.3	3.7973	0.0250*

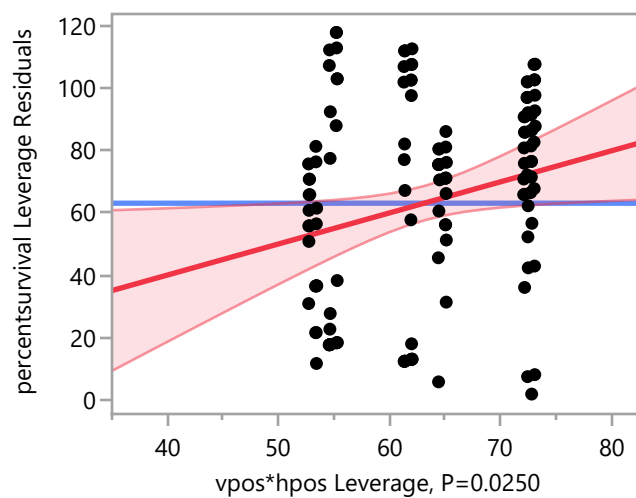
**Residual by Predicted Plot****vpos****Leverage Plot**

**Response percentsurvival****vpos****Least Squares Means Table**

Level	Least Sq Mean	Std Error	0	20	40	60	80	100
buried	77.3255	4.067						
unburied	50.4812	3.861						

**hpos****Leverage Plot****Least Squares Means Table**

Level	Least Sq Mean	Std Error	0	20	40	60	80	100
down	59.1354	4.894						
mid	64.0117	4.896						
up	68.5630	4.779						

**vpos\*hpos****Leverage Plot**

**Response percentsurvival****vpos\*hpos****Least Squares Means Table**

Level	Least Sq Mean	Std Error	0	20	40	60	80	100
buried,down	81.1924	7.148						
buried,mid	78.8616	7.152						
buried,up	71.9225	6.829						
unburied,down	37.0784	6.687						
unburied,mid	49.1618	6.687						
unburied,up	65.2034	6.687						

**LSMeans Differences Tukey HSD** $\alpha = 0.050$   $Q = 2.89293$ 

		LSMean[j]					
Mean[i]-Mean[j]	buried,d	buried,m	buried,u	unburied	unburied	unburied	
Std Err Dif	own	id	p	,down	,mid	,up	
Lower CL Dif							
Upper CL Dif							
buried,down	0	2.330801	9.269872	44.11395	32.03062	15.98895	
	0	10.1336	9.92138	9.799284	9.799284	9.799284	
	0	-26.985	-19.4319	15.76535	3.682012	-12.3597	
	0	31.64657	37.97169	72.46255	60.37922	44.33755	
buried,mid	-2.3308	0	6.939071	41.78315	29.69982	13.65815	
	10.1336	0	9.948066	9.813415	9.813415	9.813415	
	-31.6466	0	-21.8399	13.39366	1.310329	-14.7313	
	26.98497	0	35.71809	70.17263	58.0893	42.04763	
buried,up	-9.26987	-6.93907	0	34.84408	22.76074	6.719078	
	9.92138	9.948066	0	9.568907	9.568907	9.568907	
	-37.9717	-35.7181	0	7.161937	-4.9214	-20.9631	
	19.43195	21.83995	0	62.52622	50.44289	34.40122	
unburied,down	-44.1139	-41.7831	-34.8441	0	-12.0833	-28.125	
	9.799284	9.813415	9.568907	0	9.456996	9.456996	
	-72.4626	-70.1726	-62.5262	0	-39.4417	-55.4834	
	-15.7653	-13.3937	-7.16194	0	15.27506	-0.76661	
unburied,mid	-32.0306	-29.6998	-22.7607	12.08333	0	-16.0417	
	9.799284	9.813415	9.568907	9.456996	0	9.456996	
	-60.3792	-58.0893	-50.4429	-15.2751	0	-43.4001	
	-3.68201	-1.31033	4.921396	39.44173	0	11.31673	
unburied,up	-15.9889	-13.6581	-6.71908	28.125	16.04167	0	
	9.799284	9.813415	9.568907	9.456996	9.456996	0	
	-44.3376	-42.0476	-34.4012	0.766608	-11.3167	0	
	12.35965	14.73134	20.96306	55.48339	43.40006	0	

**Response percentsurvival****vpos\*hpos****LSMeans Differences Tukey HSD**

Level		Least	
		Sq Mean	Std Error
buried,down	A	81.192	7.1475
buried,mid	A	78.862	7.1520
buried,up	A B	71.923	6.8288
unburied,up	A B	65.203	6.6871
unburied,mid	B C	49.162	6.6871
unburied,down	C	37.078	6.6871

Levels not connected by same letter are significantly different.

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value	-20	0	20
buried,down	unburied,down	44.11395	9.79928	15.7653	72.46255	0.0002*			
buried,mid	unburied,down	41.78315	9.81342	13.3937	70.17263	0.0006*			
buried,up	unburied,down	34.84408	9.56891	7.1619	62.52622	0.0051*			
buried,down	unburied,mid	32.03062	9.79928	3.6820	60.37922	0.0170*			
buried,mid	unburied,mid	29.69982	9.81342	1.3103	58.08930	0.0347*			
unburied,up	unburied,down	28.12500	9.45700	0.7666	55.48339	0.0401*			
buried,up	unburied,mid	22.76074	9.56891	-4.9214	50.44289	0.1715			
unburied,up	unburied,mid	16.04167	9.45700	-11.3167	43.40006	0.5368			
buried,down	unburied,up	15.98895	9.79928	-12.3597	44.33755	0.5793			
buried,mid	unburied,up	13.65815	9.81342	-14.7313	42.04763	0.7319			
unburied,mid	unburied,down	12.08333	9.45700	-15.2751	39.44173	0.7966			
buried,down	buried,up	9.26987	9.92138	-19.4319	37.97169	0.9369			
buried,mid	buried,up	6.93907	9.94807	-21.8399	35.71809	0.9819			
buried,up	unburied,up	6.71908	9.56891	-20.9631	34.40122	0.9814			
buried,down	buried,mid	2.33080	10.13360	-26.9850	31.64657	0.9999			

**subsample****nest**