The CONTENTS Procedure

Data Set Name	WORK.IMPORT	Observations	38
Member Type	DATA	Variables	10
Engine	V9	Indexes	0
Created	11/16/2019 20:06:20	Observation Length	88
Last Modified	11/16/2019 20:06:20	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	743
Obs in First Data Page	38
Number of Data Set Repairs	0
Filename	/tmp/SAS_workB826000009E1_localhost.localdomain/SAS_work981B000009E1_localhost.localdomain/import.sas7bdat
Release Created	9.0401M6
Host Created	Linux
Inode Number	671590
Access Permission	rw-rw-r--
Owner Name	sasdemo
File Size	128KB
File Size (bytes)	131072

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
7	Alpha	Num	8	BEST12.	BEST32.
4	DF	Num	8	BEST12.	BEST32.
2	Estimate	Num	8	BEST12.	BEST32.
10	Gradient	Num	8	BEST12.	BEST32.
8	Lower	Num	8	BEST12.	BEST32.
1	Parameter	Char	15	$15.	$15.
6	Probt	Num	8	BEST12.	BEST32.
3	StandardError	Num	8	BEST12.	BEST32.

The CONTENTS Procedure

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
9	Upper	Num	8	BEST12.	BEST32.
5	tValue	Num	8	BEST12.	BEST32.

The CONTENTS Procedure

Data Set Name	WORK.COPD	Observations	1979
Member Type	DATA	Variables	24
Engine	V9	Indexes	0
Created	11/16/2019 20:46:35	Observation Length	192
Last Modified	11/16/2019 20:46:35	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	6
First Data Page	1
Max Obs per Page	340
Obs in First Data Page	315
Number of Data Set Repairs	0
Filename	/tmp/SAS_workB826000009E1_localhost.localdomain/SAS_work981B000009E1_localhost.localdomain/copd.sas7bdat
Release Created	9.0401M6
Host Created	Linux
Inode Number	671633
Access Permission	rw-rw-r--
Owner Name	sasdemo
File Size	448KB
File Size (bytes)	458752

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
8	BMI	Num	8	BEST12.	BEST32.
20	ID	Num	8	BEST12.	BEST32.
24	OPTIMAL	Num	8	BEST12.	BEST32.
6	age	Num	8	BEST12.	BEST32.
3	death	Num	8	BEST12.	BEST32.
14	event_season2	Num	8	BEST12.	BEST32.
15	event_season3	Num	8	BEST12.	BEST32.
16	event_season4	Num	8	BEST12.	BEST32.
10	fev1fvcratio	Num	8	BEST12.	BEST32.

The CONTENTS Procedure

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
9	fev1pp	Num	8	BEST12.	BEST32.
1	gaptime	Num	8	BEST12.	BEST32.
21	male	Num	8	BEST12.	BEST32.
22	nowsmk	Num	8	BEST12.	BEST32.
17	num_re1	Num	8	BEST12.	BEST32.
18	num_re2	Num	8	BEST12.	BEST32.
19	num_re3	Num	8	BEST12.	BEST32.
23	oxygen	Num	8	BEST12.	BEST32.
7	packyears	Num	8	BEST12.	BEST32.
11	rand_season2	Num	8	BEST12.	BEST32.
12	rand_season3	Num	8	BEST12.	BEST32.
13	rand_season4	Num	8	BEST12.	BEST32.
2	recurrent_event	Num	8	BEST12.	BEST32.
4	trtSal	Num	8	BEST12.	BEST32.
5	trtSal_Flu	Num	8	BEST12.	BEST32.

The NLMIXED Procedure

Specifications	
Data Set	WORK.COPD
Dependent Variable	gaptime
Distribution for Dependent Variable	General
Random Effects	z
Distribution for Random Effects	Normal
Subject Variable	ID
Optimization Technique	Dual Quasi-Newton
Integration Method	Adaptive Gaussian Quadrature

Dimensions	
Observations Used	1979
Observations Not Used	0
Total Observations	1979
Subjects	1521
Max Obs per Subject	9
Parameters	38
Quadrature Points	6

Initial Parameters										
ln_gamma	**ln_gamma_d**	**b_0**	**b_trtSal**	**b_trtSal_Flu**	**b_age**	**b_BMI**	**b_fev1pp**	**b_fev1fvcratio**	**b_rand_season2**	**b_rand_season3**
0.1183	0.1417	-0.7753	0.32	0.244	-0.513	-1.14	-1.515	0.25	-0.49	-0.3

Initial Parameters								
b_rand_season4	**b_num_re1**	**b_num_re2**	**b_num_re3**	**b_event_season2**	**b_event_season3**	**b_event_season4**	**b_male**	**b_nowsmk**
-0.14	-0.44	-0.35	-0.776	-0.125	-0.3564	-0.37	0.066	0.07

Initial Parameters									
b_oxygen	**b_OPTIMAL**	**b_d_0**	**b_d_trtSal**	**b_d_trtSal_Flu**	**b_d_age**	**b_d_packyears**	**b_d_BMI**	**b_d_fev1pp**	**b_d_fev1fvcratio**
0.516	0.126	-3.2636	-0.1	-0.2645	1.87	0.5176	-1.2	-4.376	-0.0588

Initial Parameters								Negative Log Likelihood
b_d_num_re1	**b_d_num_re2**	**b_d_num_re3**	**b_d_male**	**b_d_nowsmk**	**b_d_oxygen**	**kinv**	**ln_v**	
1.16	1.53	1.87	0.578	0.65	0.57	50	0.7128	1080.49835

The NLMIXED Procedure

			Iteration History		
Iteration	Calls	Negative Log Likelihood	Difference	Maximum Gradient	Slope
1	6	1080.1235	0.374894	8.24747	-268.935
2	10	1079.3820	0.741454	13.3187	-0.29589
3	12	1078.6036	0.778421	18.2518	-2.36223
4	15	1078.0877	0.515909	4.97687	-2.96368
5	19	1077.5454	0.542296	4.66161	-0.58259
6	22	1077.4651	0.080255	5.35872	-0.33823
7	26	1077.1382	0.326893	7.06952	-0.39580
8	28	1076.6314	0.506795	1.34932	-0.31395
9	31	1076.5026	0.128875	2.09027	-0.16863
10	34	1076.4211	0.081499	1.00028	-0.06688
11	36	1076.3644	0.056701	1.63812	-0.04716
12	38	1076.3181	0.046211	0.80247	-0.06519
13	40	1076.2637	0.054477	0.69328	-0.04273
14	44	1076.1209	0.142737	1.12481	-0.05109
15	47	1076.0408	0.080085	0.65712	-0.05432
16	50	1075.9976	0.04328	1.12146	-0.04057
17	53	1075.9734	0.024143	1.32349	-0.02091
18	55	1075.9552	0.018188	1.07548	-0.01460
19	57	1075.9303	0.024894	0.49233	-0.02243
20	59	1075.8913	0.039041	0.72956	-0.01947
21	62	1075.8662	0.025124	0.60899	-0.02486
22	64	1075.8435	0.022633	0.57006	-0.01465
23	67	1075.8297	0.01388	0.26742	-0.01380
24	69	1075.8208	0.008827	0.48650	-0.00744
25	71	1075.8091	0.011708	0.25842	-0.01233
26	75	1075.7739	0.035244	0.73747	-0.00966
27	77	1075.7633	0.010584	0.75725	-0.01411
28	81	1075.7312	0.032089	0.29954	-0.04757
29	84	1075.7098	0.021368	0.42690	-0.01083
30	86	1075.6817	0.028163	0.53467	-0.00921
31	88	1075.6730	0.008653	1.35568	-0.01214
32	92	1075.6520	0.021011	0.22744	-0.03505
33	95	1075.6414	0.010649	0.28521	-0.00539
34	98	1075.6382	0.003195	0.32232	-0.00217

The NLMIXED Procedure

Iteration History					
Iteration	**Calls**	**Negative Log Likelihood**	**Difference**	**Maximum Gradient**	**Slope**
35	101	1075.6366	0.001619	0.086075	-0.00151
36	104	1075.6356	0.000952	0.14097	-0.00036
37	106	1075.6341	0.001482	0.096602	-0.00096
38	109	1075.6334	0.000716	0.11310	-0.00067
39	111	1075.6322	0.001241	0.067179	-0.00060
40	114	1075.6318	0.000393	0.058690	-0.00061
41	116	1075.6311	0.000686	0.059190	-0.00016
42	118	1075.6306	0.000437	0.21427	-0.00057
43	120	1075.6299	0.000743	0.10455	-0.00077
44	122	1075.6290	0.000939	0.063505	-0.00087
45	125	1075.6285	0.00049	0.061974	-0.00045
46	129	1075.6265	0.001963	0.063538	-0.00018
47	132	1075.6263	0.000253	0.065982	-0.00019
48	134	1075.6258	0.000434	0.059786	-0.00023
49	137	1075.6257	0.000174	0.050104	-0.00022
50	141	1075.6244	0.001251	0.019352	-0.00012
51	144	1075.6244	0.000022	0.020235	-0.00002
52	148	1075.6243	0.000045	0.012776	-0.00002
53	151	1075.6243	8.673E-6	0.010734	-7.68E-6

NOTE: GCONV convergence criterion satisfied.

Fit Statistics	
-2 Log Likelihood	2151.2
AIC (smaller is better)	2227.2
AICC (smaller is better)	2228.8
BIC (smaller is better)	2429.7

Parameter Estimates								
Parameter	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**95% Confidence Limits**		**Gradient**
ln_gamma	0.1105	0.05050	1520	2.19	0.0288	0.01143	0.2095	-0.00341
ln_gamma_d	0.2844	0.1041	1520	2.73	0.0064	0.08009	0.4886	-0.00597
b_0	-0.9149	0.6759	1520	-1.35	0.1761	-2.2407	0.4109	0.002380
b_trtSal	0.3104	0.1376	1520	2.26	0.0242	0.04048	0.5804	-0.00172

The NLMIXED Procedure

Parameter	Estimate	Standard Error	DF	t Value	Pr > |t|	95% Confidence Limits		Gradient
b_trtSal_Flu	0.2323	0.2872	1520	0.81	0.4187	-0.3310	0.7956	-0.00817
b_age	-0.4846	0.8350	1520	-0.58	0.5617	-2.1225	1.1532	-0.00361
b_BMI	-1.0580	1.1330	1520	-0.93	0.3506	-3.2805	1.1644	-0.00566
b_fev1pp	-1.4140	0.6651	1520	-2.13	0.0337	-2.7186	-0.1094	-0.00136
b_fev1fvcratio	0.1997	0.7563	1520	0.26	0.7918	-1.2838	1.6832	0.010734
b_rand_season2	-0.5667	0.2139	1520	-2.65	0.0081	-0.9863	-0.1472	0.000427
b_rand_season3	-0.1873	0.2253	1520	-0.83	0.4059	-0.6293	0.2547	-0.00151
b_rand_season4	-0.01054	0.2070	1520	-0.05	0.9594	-0.4166	0.3955	-0.00406
b_num_re1	-0.3937	0.1925	1520	-2.05	0.0410	-0.7712	-0.01609	-0.00152
b_num_re2	-0.2427	0.2606	1520	-0.93	0.3518	-0.7538	0.2684	-0.00234
b_num_re3	-0.8495	0.3005	1520	-2.83	0.0048	-1.4390	-0.2600	-0.00017
b_event_season2	0.05042	0.1606	1520	0.31	0.7536	-0.2645	0.3654	0.001774
b_event_season3	-0.3697	0.1777	1520	-2.08	0.0376	-0.7183	-0.02114	0.006567
b_event_season4	-0.4141	0.1647	1520	-2.51	0.0120	-0.7372	-0.09104	0.003588
b_male	0.06739	0.1348	1520	0.50	0.6173	-0.1971	0.3319	0.000519
b_nowsmk	0.07210	0.1691	1520	0.43	0.6698	-0.2595	0.4037	-0.00218
b_oxygen	0.4877	0.1581	1520	3.08	0.0021	0.1775	0.7978	-0.00039
b_OPTIMAL	0.1131	0.1955	1520	0.58	0.5631	-0.2704	0.4966	0.001630
b_d_0	-2.3177	0.9802	1520	-2.36	0.0182	-4.2404	-0.3950	0.001162
b_d_trtSal	-0.1579	0.1884	1520	-0.84	0.4020	-0.5274	0.2116	-0.00188
b_d_trtSal_Flu	-0.4092	0.4657	1520	-0.88	0.3798	-1.3226	0.5043	0.000819
b_d_age	0.8547	1.2197	1520	0.70	0.4836	-1.5378	3.2472	0.000486
b_d_packyears	0.5898	0.5922	1520	1.00	0.3195	-0.5719	1.7515	0.001136
b_d_BMI	-1.8690	1.7100	1520	-1.09	0.2746	-5.2231	1.4852	0.002660
b_d_fev1pp	-3.1508	1.0841	1520	-2.91	0.0037	-5.2773	-1.0243	0.004068
b_d_fev1fvcratio	0.4184	1.0290	1520	0.41	0.6844	-1.6000	2.4368	-0.00171
b_d_num_re1	1.2445	0.2425	1520	5.13	<.0001	0.7689	1.7201	0.000132
b_d_num_re2	1.5989	0.3975	1520	4.02	<.0001	0.8192	2.3786	0.001475
b_d_num_re3	2.1029	0.4328	1520	4.86	<.0001	1.2539	2.9518	-0.00075
b_d_male	0.4181	0.2128	1520	1.96	0.0497	0.000625	0.8356	0.003490
b_d_nowsmk	0.4823	0.2209	1520	2.18	0.0292	0.04903	0.9156	0.001260
b_d_oxygen	0.3647	0.2199	1520	1.66	0.0975	-0.06670	0.7961	0.002648
kinv	50.0076	155.62	1520	0.32	0.7480	-255.24	355.25	-0.00100
ln_v	0.6746	0.1837	1520	3.67	0.0002	0.3142	1.0350	-0.00099

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates								
	ln_gamma	**ln_gamma_d**	**b_0**	**b_trtSal**	**b_trtSal_Flu**	**b_age**	**b_BMI**	**b_fev1pp**	**b_fev1fvcratio**
ln_gamma	0.002550	-2.3E-8	0.000845	-0.00019	0.000102	0.001320	0.001216	-0.00047	0.000286
ln_gamma_d	-2.3E-8	0.01084	0.000093	-6.98E-6	-0.00004	-0.00010	0.000130	-0.00003	-0.00001
b_0	0.000845	0.000093	0.4568	-0.00852	-0.00873	-0.4563	-0.3433	0.03365	-0.07362
b_trtSal	-0.00019	-6.98E-6	-0.00852	0.01894	0.01088	-0.00377	0.002952	-0.00311	0.000864
b_trtSal_Flu	0.000102	-0.00004	-0.00873	0.01088	0.08247	0.002711	0.004023	-0.00932	0.008053
b_age	0.001320	-0.00010	-0.4563	-0.00377	0.002711	0.6972	0.1602	-0.1030	0.02081
b_BMI	0.001216	0.000130	-0.3433	0.002952	0.004023	0.1602	1.2837	-0.03475	-0.2096
b_fev1pp	-0.00047	-0.00003	0.03365	-0.00311	-0.00932	-0.1030	-0.03475	0.4423	-0.3194
b_fev1fvcratio	0.000286	-0.00001	-0.07362	0.000864	0.008053	0.02081	-0.2096	-0.3194	0.5720
b_rand_season2	-0.00001	-2.44E-6	-0.00843	0.000441	0.001182	-0.00413	-0.00427	0.007161	-0.00304
b_rand_season3	-0.00084	-0.00002	-0.01033	0.000017	-0.00118	-0.00145	0.000663	0.005038	-0.00416
b_rand_season4	-0.00040	-0.00005	-0.00646	-0.00007	0.001690	-0.00858	0.002928	0.003876	0.000272
b_num_re1	-0.00302	0.000106	0.003822	-0.00146	-0.00214	-0.00176	0.003776	0.01478	-0.00355
b_num_re2	-0.00416	0.000109	0.006991	-0.00208	-0.00222	-0.00280	0.003922	0.01520	-0.00269
b_num_re3	-0.00391	0.000147	0.007224	-0.00245	-0.00286	-0.00050	0.003723	0.01826	-0.00646
b_event_season2	0.000228	-1.73E-6	-0.00437	-0.00037	-0.00171	-0.00050	0.005147	-0.00362	0.002840
b_event_season3	0.001161	-4.23E-6	-0.00402	-0.00029	-0.00068	-0.00024	0.000708	-0.00231	0.001264
b_event_season4	0.000524	0.000027	-0.00627	-0.00034	-0.00193	0.002456	0.000871	-0.00237	0.001858
b_male	-0.00017	0.000014	-0.00672	-0.00023	-0.00081	-0.01077	-0.00460	0.004246	0.004647
b_nowsmk	0.000149	0.000021	-0.03881	-0.00007	0.000803	0.04283	0.02700	-0.00472	-0.01072
b_oxygen	-0.00020	3.773E-6	-0.01234	0.000020	-0.00025	-0.01331	-0.02721	0.02385	0.000189
b_OPTIMAL	-0.00009	0.000022	0.003077	-0.00053	-0.02629	-0.02677	-0.01849	0.005038	0.01016
b_d_0	0.000016	0.02668	0.004617	-0.00009	-0.00015	-0.00458	-0.00269	-0.00003	-0.00079
b_d_trtSal	2.252E-6	0.002275	0.000012	0.000165	0.000046	-0.00013	0.000123	-0.00006	-4.6E-6
b_d_trtSal_Flu	3.125E-6	0.004857	0.000060	0.000077	0.000463	-0.00025	0.000064	-0.00008	0.000125
b_d_age	-3.45E-6	-0.01183	-0.00428	-0.00005	-0.00020	0.005948	0.001461	-0.00063	0.000203
b_d_packyears	4.237E-6	-0.00668	-0.00011	0.000029	0.000055	0.000048	-0.00012	0.000016	0.000033
b_d_BMI	-0.00001	0.02030	-0.00354	0.000030	5.141E-6	0.001726	0.01179	-0.00015	-0.00178
b_d_fev1pp	-0.00002	0.03523	0.000111	-8.65E-6	0.000058	-0.00053	-0.00041	0.003775	-0.00286
b_d_fev1fvcratio	1.654E-6	-0.00309	-0.00073	-4.57E-7	0.000084	0.000132	-0.00186	-0.00285	0.005277
b_d_num_re1	-0.00006	-0.00995	-0.00089	0.000032	0.000339	0.001114	-0.00138	0.000583	0.000063
b_d_num_re2	-0.00006	-0.00965	-0.00141	0.000058	0.000539	0.001730	-0.00216	0.000851	0.000053

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates							
b_rand_season2	b_rand_season3	b_rand_season4	b_num_re1	b_num_re2	b_num_re3	b_event_season2	b_event_season3
-0.00001	-0.00084	-0.00040	-0.00302	-0.00416	-0.00391	0.000228	0.001161
-2.44E-6	-0.00002	-0.00005	0.000106	0.000109	0.000147	-1.73E-6	-4.23E-6
-0.00843	-0.01033	-0.00646	0.003822	0.006991	0.007224	-0.00437	-0.00402
0.000441	0.000017	-0.00007	-0.00146	-0.00208	-0.00245	-0.00037	-0.00029
0.001182	-0.00118	0.001690	-0.00214	-0.00222	-0.00286	-0.00171	-0.00068
-0.00413	-0.00145	-0.00858	-0.00176	-0.00280	-0.00050	-0.00050	-0.00024
-0.00427	0.000663	0.002928	0.003776	0.003922	0.003723	0.005147	0.000708
0.007161	0.005038	0.003876	0.01478	0.01520	0.01826	-0.00362	-0.00231
-0.00304	-0.00416	0.000272	-0.00355	-0.00269	-0.00646	0.002840	0.001264
0.04575	0.02113	0.01977	0.003940	0.003324	0.005387	-0.01636	-0.00672
0.02113	0.05077	0.02111	0.007353	0.009525	0.009598	-0.00737	-0.02196
0.01977	0.02111	0.04286	0.003867	0.004770	0.003674	-0.00692	-0.00929
0.003940	0.007353	0.003867	0.03705	0.03143	0.03335	-1.42E-6	-0.00448
0.003324	0.009525	0.004770	0.03143	0.06789	0.04676	0.002444	-0.00672
0.005387	0.009598	0.003674	0.03335	0.04676	0.09032	0.000809	-0.00559
-0.01636	-0.00737	-0.00692	-1.42E-6	0.002444	0.000809	0.02578	0.01030
-0.00672	-0.02196	-0.00929	-0.00448	-0.00672	-0.00559	0.01030	0.03158
-0.00535	-0.00581	-0.01721	-0.00101	-0.00134	0.001405	0.01024	0.01099
4.461E-6	0.001022	0.000020	0.000334	0.000360	0.000197	6.63E-6	-0.00049
0.000171	0.000292	-0.00056	-0.00139	-0.00140	-0.00140	0.000784	0.000956
-0.00061	-0.00157	-0.00073	-0.00351	-0.00465	-0.00471	0.000024	0.001113
-0.00077	0.001183	-0.00345	-0.00072	-0.00100	-0.00081	0.000566	0.000781
-0.00015	-0.00025	-0.00037	0.000379	0.000371	0.000563	0.000038	0.000042
-0.00002	-0.00003	-0.00006	0.000066	0.000058	0.000096	-4.61E-7	2.781E-6
-0.00003	-0.00006	-0.00012	0.000106	0.000101	0.000159	4.435E-6	0.000010
0.000102	0.000135	0.000206	0.000012	0.000030	4.154E-6	-0.00004	-0.00002
0.000086	0.000024	0.000051	-0.00014	-0.00015	-0.00019	-0.00002	-1.57E-6
0.000145	0.000180	0.000139	-0.00007	3.035E-6	-0.00008	-0.00005	-0.00011
-0.00008	0.000021	0.000020	0.000036	0.000069	-3.61E-8	0.000073	-6.43E-6
0.000079	0.000057	0.000051	-0.00006	-0.00009	-0.00006	-0.00006	-6.99E-6
0.000079	0.000377	0.000609	-0.00061	-0.00063	-0.00103	0.000033	-0.00004
0.000083	0.000514	0.000919	-0.00119	-0.00103	-0.00175	0.000089	-0.00002

The NLMIXED Procedure

				Covariance Matrix of Parameter Estimates					
b_event_season4	**b_male**	**b_nowsmk**	**b_oxygen**	**b_OPTIMAL**	**b_d_0**	**b_d_trtSal**	**b_d_trtSal_Flu**	**b_d_age**	**b_d_packyears**
0.000524	-0.00017	0.000149	-0.00020	-0.00009	0.000016	2.252E-6	3.125E-6	-3.45E-6	4.237E-6
0.000027	0.000014	0.000021	3.773E-6	0.000022	0.02668	0.002275	0.004857	-0.01183	-0.00668
-0.00627	-0.00672	-0.03881	-0.01234	0.003077	0.004617	0.000012	0.000060	-0.00428	-0.00011
-0.00034	-0.00023	-0.00007	0.000020	-0.00053	-0.00009	0.000165	0.000077	-0.00005	0.000029
-0.00193	-0.00081	0.000803	-0.00025	-0.02629	-0.00015	0.000046	0.000463	-0.00020	0.000055
0.002456	-0.01077	0.04283	-0.01331	-0.02677	-0.00458	-0.00013	-0.00025	0.005948	0.000048
0.000871	-0.00460	0.02700	-0.02721	-0.01849	-0.00269	0.000123	0.000064	0.001461	-0.00012
-0.00237	0.004246	-0.00472	0.02385	0.005038	-0.00003	-0.00006	-0.00008	-0.00063	0.000016
0.001858	0.004647	-0.01072	0.000189	0.01016	-0.00079	-4.6E-6	0.000125	0.000203	0.000033
-0.00535	4.461E-6	0.000171	-0.00061	-0.00077	-0.00015	-0.00002	-0.00003	0.000102	0.000086
-0.00581	0.001022	0.000292	-0.00157	0.001183	-0.00025	-0.00003	-0.00006	0.000135	0.000024
-0.01721	0.000020	-0.00056	-0.00073	-0.00345	-0.00037	-0.00006	-0.00012	0.000206	0.000051
-0.00101	0.000334	-0.00139	-0.00351	-0.00072	0.000379	0.000066	0.000106	0.000012	-0.00014
-0.00134	0.000360	-0.00140	-0.00465	-0.00100	0.000371	0.000058	0.000101	0.000030	-0.00015
0.001405	0.000197	-0.00140	-0.00471	-0.00081	0.000563	0.000096	0.000159	4.154E-6	-0.00019
0.01024	6.63E-6	0.000784	0.000024	0.000566	0.000038	-4.61E-7	4.435E-6	-0.00004	-0.00002
0.01099	-0.00049	0.000956	0.001113	0.000781	0.000042	2.781E-6	0.000010	-0.00002	-1.57E-6
0.02713	0.000081	0.000726	0.000175	0.000527	0.000146	0.000034	0.000072	-2.15E-6	-0.00004
0.000081	0.01818	0.000141	0.000437	0.001189	0.000017	0.000018	0.000027	-0.00011	-0.00003
0.000726	0.000141	0.02858	0.003546	-0.00103	-0.00024	0.000020	0.000023	0.000380	-0.00002
0.000175	0.000437	0.003546	0.02499	0.01146	-0.00014	0.000014	0.000083	0.000022	9.021E-6
0.000527	0.001189	-0.00103	0.01146	0.03822	-4.47E-6	0.000039	0.000056	0.000088	2.535E-6
0.000146	0.000017	-0.00024	-0.00014	-4.47E-6	0.9608	-0.00956	0.01337	-0.9462	-0.00722
0.000034	0.000018	0.000020	0.000014	0.000039	-0.00956	0.03548	0.01737	-0.00696	0.001613
0.000072	0.000027	0.000023	0.000083	0.000056	0.01337	0.01737	0.2169	-0.03066	-0.02433
-2.15E-6	-0.00011	0.000380	0.000022	0.000088	-0.9462	-0.00696	-0.03066	1.4877	-0.1648
-0.00004	-0.00003	-0.00002	9.021E-6	2.535E-6	-0.00722	0.001613	-0.02433	-0.1648	0.3508
-0.00009	-0.00012	0.000195	-0.00021	-0.00006	-0.6996	0.01092	-0.02573	0.2823	0.03542
-0.00002	0.000025	-0.00008	0.000173	-0.00009	0.1371	0.002136	0.002555	-0.2728	-0.05354
-0.00004	0.000057	-0.00012	0.000013	0.000089	-0.1082	0.008122	0.02114	-0.00253	0.01911
-0.00032	-0.00016	-0.00025	-0.00009	-0.00025	-0.04174	-0.00410	-0.00946	0.006795	0.01040
-0.00048	-0.00025	-0.00038	-0.00012	-0.00039	-0.04942	-0.00501	-0.00359	0.01828	0.006447

The NLMIXED Procedure

				Covariance Matrix of Parameter Estimates					
b_d_BMI	**b_d_fev1pp**	**b_d_fev1fvcratio**	**b_d_num_re1**	**b_d_num_re2**	**b_d_num_re3**	**b_d_male**	**b_d_nowsmk**	**b_d_oxygen**	**kinv**
-0.00001	-0.00002	1.654E-6	-0.00006	-0.00006	-0.00005	1.085E-6	1.765E-6	3.318E-6	0.02858
0.02030	0.03523	-0.00309	-0.00995	-0.00965	-0.01373	-0.00418	-0.00549	-0.00409	-0.7674
-0.00354	0.000111	-0.00073	-0.00089	-0.00141	-0.00187	-0.00007	-0.00039	-0.00008	-1.8852
0.000030	-8.65E-6	-4.57E-7	0.000032	0.000058	0.000123	7.035E-6	1.92E-6	-2.91E-6	0.1308
5.141E-6	0.000058	0.000084	0.000339	0.000539	0.000798	0.000012	9.493E-7	0.000022	0.7030
0.001726	-0.00053	0.000132	0.001114	0.001730	0.002278	-0.00009	0.000416	-0.00009	1.9167
0.01179	-0.00041	-0.00186	-0.00138	-0.00216	-0.00302	-0.00012	0.000189	-0.00010	-2.2703
-0.00015	0.003775	-0.00285	0.000583	0.000851	0.000950	0.000042	-0.00003	0.000154	0.3596
-0.00178	-0.00286	0.005277	0.000063	0.000053	0.000183	0.000067	-0.00010	-3.18E-6	0.1916
0.000145	-0.00008	0.000079	0.000079	0.000083	-0.00006	-2.06E-6	0.000029	0.000013	-0.08858
0.000180	0.000021	0.000057	0.000377	0.000514	0.000497	-9.61E-6	0.000011	-0.00002	0.2702
0.000139	0.000020	0.000051	0.000609	0.000919	0.001086	-0.00002	0.000041	-0.00003	0.7748
-0.00007	0.000036	-0.00006	-0.00061	-0.00119	-0.00189	-0.00004	-0.00005	0.000051	-2.1480
3.035E-6	0.000069	-0.00009	-0.00063	-0.00103	-0.00183	-0.00005	-0.00006	0.000047	-2.3706
-0.00008	-3.61E-8	-0.00006	-0.00103	-0.00175	-0.00250	-0.00005	-0.00007	0.000070	-3.1033
-0.00005	0.000073	-0.00006	0.000033	0.000089	0.000148	-1.39E-6	-5.68E-6	-3.61E-6	0.08235
-0.00011	-6.43E-6	-6.99E-6	-0.00004	-0.00002	0.000080	2.347E-6	1.496E-6	-3.87E-6	0.1685
-0.00009	-0.00002	-0.00004	-0.00032	-0.00048	-0.00061	-4.87E-6	-0.00001	0.000021	-0.4410
-0.00012	0.000025	0.000057	-0.00016	-0.00025	-0.00034	0.000162	-1.98E-6	0.000017	-0.2895
0.000195	-0.00008	-0.00012	-0.00025	-0.00038	-0.00050	1.275E-6	0.000258	0.000055	-0.3693
-0.00021	0.000173	0.000013	-0.00009	-0.00012	-0.00015	4.827E-6	0.000039	0.000196	-0.01821
-0.00006	-0.00009	0.000089	-0.00025	-0.00039	-0.00056	2.731E-6	4.215E-6	0.000041	-0.4273
-0.6996	0.1371	-0.1082	-0.04174	-0.04942	-0.08468	-0.03438	-0.08400	-0.03044	-4.8534
0.01092	0.002136	0.008122	-0.00410	-0.00501	-0.01451	-0.00270	-0.00117	-0.00049	-1.0952
-0.02573	0.002555	0.02114	-0.00946	-0.00359	-0.00834	-0.00498	-0.00111	0.01391	-1.6356
0.2823	-0.2728	-0.00253	0.006795	0.01828	0.06820	-0.02622	0.07050	-0.02621	-0.7565
0.03542	-0.05354	0.01911	0.01040	0.006447	0.009486	0.02671	0.01820	0.006667	1.2926
2.9240	-0.1284	-0.4047	-0.00098	0.006658	0.01858	-0.00873	0.05352	-0.04703	3.8365
-0.1284	1.1753	-0.6071	-0.01378	-0.05319	-0.05103	-0.00517	-0.02076	0.05771	3.4962
-0.4047	-0.6071	1.0588	-0.00712	0.02414	-0.00549	0.01562	-0.02150	-0.01337	0.003872
-0.00098	-0.01378	-0.00712	0.05879	0.03622	0.04485	0.005387	0.001201	-0.00078	14.3596
0.006658	-0.05319	0.02414	0.03622	0.1580	0.05476	0.006217	0.005881	-0.00399	22.3134

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates
ln_v
0.001450
-0.00008
-0.01196
0.001915
0.002741
0.002239
-0.00381
-0.01807
0.002770
-0.00524
-0.00807
-0.00452
-0.02439
-0.03097
-0.03358
-0.00006
0.004225
0.000876
-0.00021
0.001519
0.004356
0.000329
-0.00026
-0.00004
-0.00007
-2.35E-7
0.000107
-2.77E-6
-0.00007
0.000037
0.000346
0.000731

The NLMIXED Procedure

	ln_gamma	ln_gamma_d	b_0	b_trtSal	b_trtSal_Flu	b_age	b_BMI	b_fev1pp	b_fev1fvcratio
Covariance Matrix of Parameter Estimates									
b_d_num_re3	-0.00005	-0.01373	-0.00187	0.000123	0.000798	0.002278	-0.00302	0.000950	0.000183
b_d_male	1.085E-6	-0.00418	-0.00007	7.035E-6	0.000012	-0.00009	-0.00012	0.000042	0.000067
b_d_nowsmk	1.765E-6	-0.00549	-0.00039	1.92E-6	9.493E-7	0.000416	0.000189	-0.00003	-0.00010
b_d_oxygen	3.318E-6	-0.00409	-0.00008	-2.91E-6	0.000022	-0.00009	-0.00010	0.000154	-3.18E-6
kinv	0.02858	-0.7674	-1.8852	0.1308	0.7030	1.9167	-2.2703	0.3596	0.1916
ln_v	0.001450	-0.00008	-0.01196	0.001915	0.002741	0.002239	-0.00381	-0.01807	0.002770

The NLMIXED Procedure

b_rand_season2	b_rand_season3	b_rand_season4	b_num_re1	b_num_re2	b_num_re3	b_event_season2	b_event_season3
-0.00006	0.000497	0.001086	-0.00189	-0.00183	-0.00250	0.000148	0.000080
-2.06E-6	-9.61E-6	-0.00002	-0.00004	-0.00005	-0.00005	-1.39E-6	2.347E-6
0.000029	0.000011	0.000041	-0.00005	-0.00006	-0.00007	-5.68E-6	1.496E-6
0.000013	-0.00002	-0.00003	0.000051	0.000047	0.000070	-3.61E-6	-3.87E-6
-0.08858	0.2702	0.7748	-2.1480	-2.3706	-3.1033	0.08235	0.1685
-0.00524	-0.00807	-0.00452	-0.02439	-0.03097	-0.03358	-0.00006	0.004225

Covariance Matrix of Parameter Estimates

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates									
b_event_season4	b_male	b_nowsmk	b_oxygen	b_OPTIMAL	b_d_0	b_d_trtSal	b_d_trtSal_Flu	b_d_age	b_d_packyears
-0.00061	-0.00034	-0.00050	-0.00015	-0.00056	-0.08468	-0.01451	-0.00834	0.06820	0.009486
-4.87E-6	0.000162	1.275E-6	4.827E-6	2.731E-6	-0.03438	-0.00270	-0.00498	-0.02622	0.02671
-0.00001	-1.98E-6	0.000258	0.000039	4.215E-6	-0.08400	-0.00117	-0.00111	0.07050	0.01820
0.000021	0.000017	0.000055	0.000196	0.000041	-0.03044	-0.00049	0.01391	-0.02621	0.006667
-0.4410	-0.2895	-0.3693	-0.01821	-0.4273	-4.8534	-1.0952	-1.6356	-0.7565	1.2926
0.000876	-0.00021	0.001519	0.004356	0.000329	-0.00026	-0.00004	-0.00007	-2.35E-7	0.000107

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates									
b_d_BMI	b_d_fev1pp	b_d_fev1fvcratio	b_d_num_re1	b_d_num_re2	b_d_num_re3	b_d_male	b_d_nowsmk	b_d_oxygen	kinv
0.01858	-0.05103	-0.00549	0.04485	0.05476	0.1873	0.004520	0.007573	0.000637	30.3625
-0.00873	-0.00517	0.01562	0.005387	0.006217	0.004520	0.04530	0.002678	0.001841	0.1406
0.05352	-0.02076	-0.02150	0.001201	0.005881	0.007573	0.002678	0.04879	0.009178	0.2450
-0.04703	0.05771	-0.01337	-0.00078	-0.00399	0.000637	0.001841	0.009178	0.04836	-1.2587
3.8365	3.4962	0.003872	14.3596	22.3134	30.3625	0.1406	0.2450	-1.2587	24216
-2.77E-6	-0.00007	0.000037	0.000346	0.000731	0.001297	0.000032	0.000043	-0.00003	1.8407

The NLMIXED Procedure

Covariance Matrix of Parameter Estimates
ln_v
0.001297
0.000032
0.000043
-0.00003
1.8407
0.03376

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates									
	ln_gamma	**ln_gamma_d**	**b_0**	**b_trtSal**	**b_trtSal_Flu**	**b_age**	**b_BMI**	**b_fev1pp**	**b_fev1fvcratio**	**b_rand_season2**
ln_gamma	1.0000	-0.0000	0.0248	-0.0271	0.0070	0.0313	0.0213	-0.0139	0.0075	-0.0010
ln_gamma_d	-0.0000	1.0000	0.0013	-0.0005	-0.0012	-0.0011	0.0011	-0.0005	-0.0002	-0.0001
b_0	0.0248	0.0013	1.0000	-0.0916	-0.0450	-0.8085	-0.4483	0.0749	-0.1440	-0.0583
b_trtSal	-0.0271	-0.0005	-0.0916	1.0000	0.2752	-0.0328	0.0189	-0.0340	0.0083	0.0150
b_trtSal_Flu	0.0070	-0.0012	-0.0450	0.2752	1.0000	0.0113	0.0124	-0.0488	0.0371	0.0192
b_age	0.0313	-0.0011	-0.8085	-0.0328	0.0113	1.0000	0.1693	-0.1854	0.0329	-0.0231
b_BMI	0.0213	0.0011	-0.4483	0.0189	0.0124	0.1693	1.0000	-0.0461	-0.2445	-0.0176
b_fev1pp	-0.0139	-0.0005	0.0749	-0.0340	-0.0488	-0.1854	-0.0461	1.0000	-0.6351	0.0503
b_fev1fvcratio	0.0075	-0.0002	-0.1440	0.0083	0.0371	0.0329	-0.2445	-0.6351	1.0000	-0.0188
b_rand_season2	-0.0010	-0.0001	-0.0583	0.0150	0.0192	-0.0231	-0.0176	0.0503	-0.0188	1.0000
b_rand_season3	-0.0736	-0.0010	-0.0678	0.0006	-0.0183	-0.0077	0.0026	0.0336	-0.0244	0.4384
b_rand_season4	-0.0381	-0.0022	-0.0462	-0.0023	0.0284	-0.0496	0.0125	0.0281	0.0017	0.4465
b_num_re1	-0.3104	0.0053	0.0294	-0.0550	-0.0388	-0.0110	0.0173	0.1155	-0.0244	0.0957
b_num_re2	-0.3162	0.0040	0.0397	-0.0579	-0.0297	-0.0129	0.0133	0.0877	-0.0137	0.0596
b_num_re3	-0.2575	0.0047	0.0356	-0.0592	-0.0331	-0.0020	0.0109	0.0914	-0.0284	0.0838
b_event_season2	0.0282	-0.0001	-0.0403	-0.0170	-0.0370	-0.0037	0.0283	-0.0339	0.0234	-0.4762
b_event_season3	0.1294	-0.0002	-0.0335	-0.0119	-0.0133	-0.0016	0.0035	-0.0196	0.0094	-0.1768
b_event_season4	0.0629	0.0016	-0.0563	-0.0149	-0.0408	0.0179	0.0047	-0.0217	0.0149	-0.1519
b_male	-0.0251	0.0010	-0.0738	-0.0122	-0.0210	-0.0957	-0.0301	0.0473	0.0456	0.0002
b_nowsmk	0.0174	0.0012	-0.3396	-0.0030	0.0165	0.3034	0.1410	-0.0420	-0.0838	0.0047
b_oxygen	-0.0256	0.0002	-0.1155	0.0009	-0.0055	-0.1008	-0.1519	0.2268	0.0016	-0.0181
b_OPTIMAL	-0.0092	0.0011	0.0233	-0.0195	-0.4683	-0.1640	-0.0835	0.0387	0.0687	-0.0185
b_d_0	0.0003	0.2614	0.0070	-0.0006	-0.0005	-0.0056	-0.0024	-0.0001	-0.0011	-0.0007
b_d_trtSal	0.0002	0.1160	0.0001	0.0064	0.0008	-0.0008	0.0006	-0.0005	-0.0000	-0.0004
b_d_trtSal_Flu	0.0001	0.1002	0.0002	0.0012	0.0035	-0.0006	0.0001	-0.0003	0.0004	-0.0003
b_d_age	-0.0001	-0.0932	-0.0052	-0.0003	-0.0006	0.0058	0.0011	-0.0008	0.0002	0.0004
b_d_packyears	0.0001	-0.1083	-0.0003	0.0004	0.0003	0.0001	-0.0002	0.0000	0.0001	0.0007
b_d_BMI	-0.0002	0.1140	-0.0031	0.0001	0.0000	0.0012	0.0061	-0.0001	-0.0014	0.0004
b_d_fev1pp	-0.0004	0.3121	0.0002	-0.0001	0.0002	-0.0006	-0.0003	0.0052	-0.0035	-0.0003
b_d_fev1fvcratio	0.0000	-0.0288	-0.0010	-0.0000	0.0003	0.0002	-0.0016	-0.0042	0.0068	0.0004
b_d_num_re1	-0.0050	-0.3941	-0.0055	0.0010	0.0049	0.0055	-0.0050	0.0036	0.0003	0.0015
b_d_num_re2	-0.0032	-0.2332	-0.0052	0.0011	0.0047	0.0052	-0.0048	0.0032	0.0002	0.0010
b_d_num_re3	-0.0022	-0.3048	-0.0064	0.0021	0.0064	0.0063	-0.0062	0.0033	0.0006	-0.0007
b_d_male	0.0001	-0.1885	-0.0005	0.0002	0.0002	-0.0005	-0.0005	0.0003	0.0004	-0.0000
b_d_nowsmk	0.0002	-0.2385	-0.0026	0.0001	0.0000	0.0023	0.0008	-0.0002	-0.0006	0.0006

The NLMIXED Procedure

b_rand_season3	b_rand_season4	b_num_re1	b_num_re2	b_num_re3	b_event_season2	b_event_season3	b_event_season4	b_male
-0.0736	-0.0381	-0.3104	-0.3162	-0.2575	0.0282	0.1294	0.0629	-0.0251
-0.0010	-0.0022	0.0053	0.0040	0.0047	-0.0001	-0.0002	0.0016	0.0010
-0.0678	-0.0462	0.0294	0.0397	0.0356	-0.0403	-0.0335	-0.0563	-0.0738
0.0006	-0.0023	-0.0550	-0.0579	-0.0592	-0.0170	-0.0119	-0.0149	-0.0122
-0.0183	0.0284	-0.0388	-0.0297	-0.0331	-0.0370	-0.0133	-0.0408	-0.0210
-0.0077	-0.0496	-0.0110	-0.0129	-0.0020	-0.0037	-0.0016	0.0179	-0.0957
0.0026	0.0125	0.0173	0.0133	0.0109	0.0283	0.0035	0.0047	-0.0301
0.0336	0.0281	0.1155	0.0877	0.0914	-0.0339	-0.0196	-0.0217	0.0473
-0.0244	0.0017	-0.0244	-0.0137	-0.0284	0.0234	0.0094	0.0149	0.0456
0.4384	0.4465	0.0957	0.0596	0.0838	-0.4762	-0.1768	-0.1519	0.0002
1.0000	0.4526	0.1695	0.1622	0.1417	-0.2037	-0.5485	-0.1565	0.0337
0.4526	1.0000	0.0970	0.0884	0.0591	-0.2082	-0.2524	-0.5046	0.0007
0.1695	0.0970	1.0000	0.6267	0.5764	-0.0000	-0.1311	-0.0320	0.0129
0.1622	0.0884	0.6267	1.0000	0.5972	0.0584	-0.1452	-0.0313	0.0102
0.1417	0.0591	0.5764	0.5972	1.0000	0.0168	-0.1046	0.0284	0.0049
-0.2037	-0.2082	-0.0000	0.0584	0.0168	1.0000	0.3611	0.3871	0.0003
-0.5485	-0.2524	-0.1311	-0.1452	-0.1046	0.3611	1.0000	0.3753	-0.0206
-0.1565	-0.5046	-0.0320	-0.0313	0.0284	0.3871	0.3753	1.0000	0.0037
0.0337	0.0007	0.0129	0.0102	0.0049	0.0003	-0.0206	0.0037	1.0000
0.0077	-0.0159	-0.0426	-0.0317	-0.0276	0.0289	0.0318	0.0261	0.0062
-0.0442	-0.0222	-0.1153	-0.1129	-0.0991	0.0010	0.0396	0.0067	0.0205
0.0269	-0.0853	-0.0190	-0.0197	-0.0138	0.0180	0.0225	0.0164	0.0451
-0.0011	-0.0018	0.0020	0.0015	0.0019	0.0002	0.0002	0.0009	0.0001
-0.0006	-0.0016	0.0018	0.0012	0.0017	-0.0000	0.0001	0.0011	0.0007
-0.0006	-0.0012	0.0012	0.0008	0.0011	0.0001	0.0001	0.0009	0.0004
0.0005	0.0008	0.0001	0.0001	0.0000	-0.0002	-0.0001	-0.0000	-0.0007
0.0002	0.0004	-0.0013	-0.0010	-0.0010	-0.0002	-0.0000	-0.0004	-0.0003
0.0005	0.0004	-0.0002	0.0000	-0.0002	-0.0002	-0.0003	-0.0003	-0.0005
0.0001	0.0001	0.0002	0.0002	-0.0000	0.0004	-0.0000	-0.0001	0.0002
0.0002	0.0002	-0.0003	-0.0003	-0.0002	-0.0004	-0.0000	-0.0002	0.0004
0.0069	0.0121	-0.0131	-0.0100	-0.0142	0.0008	-0.0008	-0.0080	-0.0048
0.0057	0.0112	-0.0155	-0.0099	-0.0146	0.0014	-0.0002	-0.0074	-0.0047
0.0051	0.0121	-0.0226	-0.0162	-0.0192	0.0021	0.0010	-0.0086	-0.0058
-0.0002	-0.0004	-0.0009	-0.0008	-0.0008	-0.0000	0.0001	-0.0001	0.0056
0.0002	0.0009	-0.0011	-0.0010	-0.0010	-0.0002	0.0000	-0.0003	-0.0001

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates									
b_nowsmk	**b_oxygen**	**b_OPTIMAL**	**b_d_0**	**b_d_trtSal**	**b_d_trtSal_Flu**	**b_d_age**	**b_d_packyears**	**b_d_BMI**	**b_d_fev1pp**
0.0174	-0.0256	-0.0092	0.0003	0.0002	0.0001	-0.0001	0.0001	-0.0002	-0.0004
0.0012	0.0002	0.0011	0.2614	0.1160	0.1002	-0.0932	-0.1083	0.1140	0.3121
-0.3396	-0.1155	0.0233	0.0070	0.0001	0.0002	-0.0052	-0.0003	-0.0031	0.0002
-0.0030	0.0009	-0.0195	-0.0006	0.0064	0.0012	-0.0003	0.0004	0.0001	-0.0001
0.0165	-0.0055	-0.4683	-0.0005	0.0008	0.0035	-0.0006	0.0003	0.0000	0.0002
0.3034	-0.1008	-0.1640	-0.0056	-0.0008	-0.0006	0.0058	0.0001	0.0012	-0.0006
0.1410	-0.1519	-0.0835	-0.0024	0.0006	0.0001	0.0011	-0.0002	0.0061	-0.0003
-0.0420	0.2268	0.0387	-0.0001	-0.0005	-0.0003	-0.0008	0.0000	-0.0001	0.0052
-0.0838	0.0016	0.0687	-0.0011	-0.0000	0.0004	0.0002	0.0001	-0.0014	-0.0035
0.0047	-0.0181	-0.0185	-0.0007	-0.0004	-0.0003	0.0004	0.0007	0.0004	-0.0003
0.0077	-0.0442	0.0269	-0.0011	-0.0006	-0.0006	0.0005	0.0002	0.0005	0.0001
-0.0159	-0.0222	-0.0853	-0.0018	-0.0016	-0.0012	0.0008	0.0004	0.0004	0.0001
-0.0426	-0.1153	-0.0190	0.0020	0.0018	0.0012	0.0001	-0.0013	-0.0002	0.0002
-0.0317	-0.1129	-0.0197	0.0015	0.0012	0.0008	0.0001	-0.0010	0.0000	0.0002
-0.0276	-0.0991	-0.0138	0.0019	0.0017	0.0011	0.0000	-0.0010	-0.0002	-0.0000
0.0289	0.0010	0.0180	0.0002	-0.0000	0.0001	-0.0002	-0.0002	-0.0002	0.0004
0.0318	0.0396	0.0225	0.0002	0.0001	0.0001	-0.0001	-0.0000	-0.0003	-0.0000
0.0261	0.0067	0.0164	0.0009	0.0011	0.0009	-0.0000	-0.0004	-0.0003	-0.0001
0.0062	0.0205	0.0451	0.0001	0.0007	0.0004	-0.0007	-0.0003	-0.0005	0.0002
1.0000	0.1327	-0.0313	-0.0014	0.0006	0.0003	0.0018	-0.0002	0.0007	-0.0004
0.1327	1.0000	0.3707	-0.0009	0.0005	0.0011	0.0001	0.0001	-0.0008	0.0010
-0.0313	0.3707	1.0000	-0.0000	0.0011	0.0006	0.0004	0.0000	-0.0002	-0.0004
-0.0014	-0.0009	-0.0000	1.0000	-0.0518	0.0293	-0.7914	-0.0124	-0.4174	0.1290
0.0006	0.0005	0.0011	-0.0518	1.0000	0.1980	-0.0303	0.0145	0.0339	0.0105
0.0003	0.0011	0.0006	0.0293	0.1980	1.0000	-0.0540	-0.0882	-0.0323	0.0051
0.0018	0.0001	0.0004	-0.7914	-0.0303	-0.0540	1.0000	-0.2281	0.1353	-0.2063
-0.0002	0.0001	0.0000	-0.0124	0.0145	-0.0882	-0.2281	1.0000	0.0350	-0.0834
0.0007	-0.0008	-0.0002	-0.4174	0.0339	-0.0323	0.1353	0.0350	1.0000	-0.0693
-0.0004	0.0010	-0.0004	0.1290	0.0105	0.0051	-0.2063	-0.0834	-0.0693	1.0000
-0.0007	0.0001	0.0004	-0.1073	0.0419	0.0441	-0.0020	0.0314	-0.2300	-0.5442
-0.0061	-0.0024	-0.0052	-0.1756	-0.0898	-0.0838	0.0230	0.0724	-0.0024	-0.0524
-0.0057	-0.0019	-0.0051	-0.1268	-0.0670	-0.0194	0.0377	0.0274	0.0098	-0.1234
-0.0069	-0.0022	-0.0067	-0.1996	-0.1780	-0.0414	0.1292	0.0370	0.0251	-0.1088
0.0000	0.0001	0.0001	-0.1648	-0.0673	-0.0503	-0.1010	0.2119	-0.0240	-0.0224
0.0069	0.0011	0.0001	-0.3880	-0.0281	-0.0108	0.2617	0.1391	0.1417	-0.0867

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates								
b_d_fev1fvcratio	b_d_num_re1	b_d_num_re2	b_d_num_re3	b_d_male	b_d_nowsmk	b_d_oxygen	kinv	ln_v
0.0000	-0.0050	-0.0032	-0.0022	0.0001	0.0002	0.0003	0.0036	0.1562
-0.0288	-0.3941	-0.2332	-0.3048	-0.1885	-0.2385	-0.1784	-0.0474	-0.0041
-0.0010	-0.0055	-0.0052	-0.0064	-0.0005	-0.0026	-0.0005	-0.0179	-0.0963
-0.0000	0.0010	0.0011	0.0021	0.0002	0.0001	-0.0001	0.0061	0.0757
0.0003	0.0049	0.0047	0.0064	0.0002	0.0000	0.0003	0.0157	0.0519
0.0002	0.0055	0.0052	0.0063	-0.0005	0.0023	-0.0005	0.0148	0.0146
-0.0016	-0.0050	-0.0048	-0.0062	-0.0005	0.0008	-0.0004	-0.0129	-0.0183
-0.0042	0.0036	0.0032	0.0033	0.0003	-0.0002	0.0011	0.0035	-0.1479
0.0068	0.0003	0.0002	0.0006	0.0004	-0.0006	-0.0000	0.0016	0.0199
0.0004	0.0015	0.0010	-0.0007	-0.0000	0.0006	0.0003	-0.0027	-0.1334
0.0002	0.0069	0.0057	0.0051	-0.0002	0.0002	-0.0004	0.0077	-0.1949
0.0002	0.0121	0.0112	0.0121	-0.0004	0.0009	-0.0006	0.0241	-0.1188
-0.0003	-0.0131	-0.0155	-0.0226	-0.0009	-0.0011	0.0012	-0.0717	-0.6898
-0.0003	-0.0100	-0.0099	-0.0162	-0.0008	-0.0010	0.0008	-0.0585	-0.6469
-0.0002	-0.0142	-0.0146	-0.0192	-0.0008	-0.0010	0.0011	-0.0664	-0.6082
-0.0004	0.0008	0.0014	0.0021	-0.0000	-0.0002	-0.0001	0.0033	-0.0019
-0.0000	-0.0008	-0.0002	0.0010	0.0001	0.0000	-0.0001	0.0061	0.1294
-0.0002	-0.0080	-0.0074	-0.0086	-0.0001	-0.0003	0.0006	-0.0172	0.0290
0.0004	-0.0048	-0.0047	-0.0058	0.0056	-0.0001	0.0006	-0.0138	-0.0084
-0.0007	-0.0061	-0.0057	-0.0069	0.0000	0.0069	0.0015	-0.0140	0.0489
0.0001	-0.0024	-0.0019	-0.0022	0.0001	0.0011	0.0056	-0.0007	0.1500
0.0004	-0.0052	-0.0051	-0.0067	0.0001	0.0001	0.0009	-0.0140	0.0092
-0.1073	-0.1756	-0.1268	-0.1996	-0.1648	-0.3880	-0.1412	-0.0318	-0.0014
0.0419	-0.0898	-0.0670	-0.1780	-0.0673	-0.0281	-0.0119	-0.0374	-0.0012
0.0441	-0.0838	-0.0194	-0.0414	-0.0503	-0.0108	0.1358	-0.0226	-0.0008
-0.0020	0.0230	0.0377	0.1292	-0.1010	0.2617	-0.0977	-0.0040	-0.0000
0.0314	0.0724	0.0274	0.0370	0.2119	0.1391	0.0512	0.0140	0.0010
-0.2300	-0.0024	0.0098	0.0251	-0.0240	0.1417	-0.1251	0.0144	-0.0000
-0.5442	-0.0524	-0.1234	-0.1088	-0.0224	-0.0867	0.2421	0.0207	-0.0003
1.0000	-0.0285	0.0590	-0.0123	0.0713	-0.0946	-0.0591	0.0000	0.0002
-0.0285	1.0000	0.3758	0.4274	0.1044	0.0224	-0.0146	0.3806	0.0078
0.0590	0.3758	1.0000	0.3183	0.0735	0.0670	-0.0457	0.3607	0.0100
-0.0123	0.4274	0.3183	1.0000	0.0491	0.0792	0.0067	0.4508	0.0163
0.0713	0.1044	0.0735	0.0491	1.0000	0.0570	0.0393	0.0042	0.0008
-0.0946	0.0224	0.0670	0.0792	0.0570	1.0000	0.1889	0.0071	0.0011

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates									
	ln_gamma	**ln_gamma_d**	**b_0**	**b_trtSal**	**b_trtSal_Flu**	**b_age**	**b_BMI**	**b_fev1pp**	**b_fev1fvcratio**	**b_rand_season2**
b_d_oxygen	0.0003	-0.1784	-0.0005	-0.0001	0.0003	-0.0005	-0.0004	0.0011	-0.0000	0.0003
kinv	0.0036	-0.0474	-0.0179	0.0061	0.0157	0.0148	-0.0129	0.0035	0.0016	-0.0027
ln_v	0.1562	-0.0041	-0.0963	0.0757	0.0519	0.0146	-0.0183	-0.1479	0.0199	-0.1334

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates								
b_rand_season3	**b_rand_season4**	**b_num_re1**	**b_num_re2**	**b_num_re3**	**b_event_season2**	**b_event_season3**	**b_event_season4**	**b_male**
-0.0004	-0.0006	0.0012	0.0008	0.0011	-0.0001	-0.0001	0.0006	0.0006
0.0077	0.0241	-0.0717	-0.0585	-0.0664	0.0033	0.0061	-0.0172	-0.0138
-0.1949	-0.1188	-0.6898	-0.6469	-0.6082	-0.0019	0.1294	0.0290	-0.0084

The NLMIXED Procedure

					Correlation Matrix of Parameter Estimates				
b_nowsmk	**b_oxygen**	**b_OPTIMAL**	**b_d_0**	**b_d_trtSal**	**b_d_trtSal_Flu**	**b_d_age**	**b_d_packyears**	**b_d_BMI**	**b_d_fev1pp**
0.0015	0.0056	0.0009	-0.1412	-0.0119	0.1358	-0.0977	0.0512	-0.1251	0.2421
-0.0140	-0.0007	-0.0140	-0.0318	-0.0374	-0.0226	-0.0040	0.0140	0.0144	0.0207
0.0489	0.1500	0.0092	-0.0014	-0.0012	-0.0008	-0.0000	0.0010	-0.0000	-0.0003

The NLMIXED Procedure

Correlation Matrix of Parameter Estimates								
b_d_fev1fvcratio	b_d_num_re1	b_d_num_re2	b_d_num_re3	b_d_male	b_d_nowsmk	b_d_oxygen	kinv	ln_v
-0.0591	-0.0146	-0.0457	0.0067	0.0393	0.1889	1.0000	-0.0368	-0.0006
0.0000	0.3806	0.3607	0.4508	0.0042	0.0071	-0.0368	1.0000	0.0644
0.0002	0.0078	0.0100	0.0163	0.0008	0.0011	-0.0006	0.0644	1.0000

Additional Estimates								
Label	Estimate	Standard Error	DF	t Value	Pr > |t|	Alpha	Lower	Upper
k	0.02000	0.06223	1520	0.32	0.7480	0.05	-0.1021	0.1421
gamma	1.1168	0.05640	1520	19.80	<.0001	0.05	1.0062	1.2274
gamma_d	1.3289	0.1384	1520	9.60	<.0001	0.05	1.0575	1.6003
v	1.9632	0.3607	1520	5.44	<.0001	0.05	1.2557	2.6708
re_trtSal	0.3467	0.1542	1520	2.25	0.0247	0.05	0.04418	0.6492
re_trtSal_Flu	0.2594	0.3211	1520	0.81	0.4192	0.05	-0.3704	0.8892
re_age	-0.5412	0.9321	1520	-0.58	0.5615	0.05	-2.3695	1.2870
re_BMI	-1.1816	1.2655	1520	-0.93	0.3506	0.05	-3.6640	1.3007
re_fev1pp	-1.5792	0.7481	1520	-2.11	0.0350	0.05	-3.0467	-0.1117
re_fev1fvcratio	0.2230	0.8448	1520	0.26	0.7918	0.05	-1.4340	1.8801
re_rand_season2	-0.6329	0.2411	1520	-2.63	0.0087	0.05	-1.1058	-0.1601
re_rand_season3	-0.2092	0.2526	1520	-0.83	0.4078	0.05	-0.7048	0.2864
re_rand_season4	-0.01177	0.2312	1520	-0.05	0.9594	0.05	-0.4653	0.4418
re_num_re1	-0.4396	0.2229	1520	-1.97	0.0487	0.05	-0.8768	-0.00249
re_num_re2	-0.2710	0.2956	1520	-0.92	0.3593	0.05	-0.8509	0.3088
re_num_re3	-0.9488	0.3510	1520	-2.70	0.0070	0.05	-1.6374	-0.2602
re_event_season2	0.05631	0.1794	1520	0.31	0.7537	0.05	-0.2956	0.4083
re_event_season3	-0.4129	0.1968	1520	-2.10	0.0361	0.05	-0.7990	-0.02677
re_event_season4	-0.4625	0.1840	1520	-2.51	0.0120	0.05	-0.8234	-0.1017
re_male	0.07527	0.1505	1520	0.50	0.6171	0.05	-0.2200	0.3705
re_nowsmk	0.08052	0.1889	1520	0.43	0.6700	0.05	-0.2901	0.4511
re_oxygen	0.5446	0.1780	1520	3.06	0.0023	0.05	0.1955	0.8938
re_OPTIMAL	0.1263	0.2184	1520	0.58	0.5631	0.05	-0.3020	0.5546
d_trtSal	-0.2098	0.2487	1520	-0.84	0.3990	0.05	-0.6977	0.2781
d_trtSal_Flu	-0.5437	0.6158	1520	-0.88	0.3774	0.05	-1.7516	0.6641
d_age	1.1358	1.6142	1520	0.70	0.4818	0.05	-2.0304	4.3021
d_packyears	0.7838	0.7824	1520	1.00	0.3166	0.05	-0.7509	2.3185
d_BMI	-2.4837	2.2576	1520	-1.10	0.2714	0.05	-6.9119	1.9446
d_fev1pp	-4.1871	1.3688	1520	-3.06	0.0023	0.05	-6.8720	-1.5023

The NLMIXED Procedure

Additional Estimates								
Label	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**	**Alpha**	**Lower**	**Upper**
d_fev1fvcratio	0.5560	1.3670	1520	0.41	0.6843	0.05	-2.1254	3.2374
d_num_re1	1.6538	0.2996	1520	5.52	<.0001	0.05	1.0662	2.2414
d_num_re2	2.1248	0.5230	1520	4.06	<.0001	0.05	1.0990	3.1506
d_num_re3	2.7945	0.5599	1520	4.99	<.0001	0.05	1.6963	3.8927
d_male	0.5556	0.2778	1520	2.00	0.0457	0.05	0.01070	1.1006
d_nowsmk	0.6409	0.2851	1520	2.25	0.0247	0.05	0.08174	1.2001
d_oxygen	0.4846	0.2876	1520	1.69	0.0921	0.05	-0.07945	1.0487
CON1_0	-0.4396	0.2229	1520	-1.97	0.0487	0.05	-0.8768	-0.00249
CON2_1	0.1686	0.2283	1520	0.74	0.4603	0.05	-0.2792	0.6164
CON3_2	-0.6777	0.2854	1520	-2.37	0.0177	0.05	-1.2376	-0.1179
d_CON1_0	1.6538	0.2996	1520	5.52	<.0001	0.05	1.0662	2.2414
d_CON2_1	0.4710	0.5077	1520	0.93	0.3537	0.05	-0.5248	1.4668
d_CON3_2	0.6697	0.6434	1520	1.04	0.2981	0.05	-0.5924	1.9318