SAS 시스템

The PHREG Procedure

Model Information	
Data Set	WORK.PHREG_DATA2
Dependent Variable	start
Dependent Variable	stop
Censoring Variable	bad
Censoring Value(s)	0
Weight Variable	wa1
Ties Handling	BRESLOW
Frailty	LOGNORMAL

Number of Observations Read	5576
Number of Observations Used	5576

Class Level Information		
Class	Value	Design Variables
cat	1	1
	0	0

Class Level Information for Random Effects		
Class	Levels	Values
ID_Eye	378	ZIEL_2 YULI_2 YULI_1 YOKA_2 YOKA_1 WOJA_2 WOJA_1 WIWA_2 WIWA_1 WIMU_2 WIMA_1 WIEL_2 WICR_2 WICR_1 WIAD_2 WEMA_2 WEMA_1 WAMA_2 WAMA_1 WAEL_2 WAEL_1 VIDE_2 VIDE_1 VABR_2 VABR_1 ULDA_1 TOGA_2 TOGA_1 TERI_2 TEDU_2 TAWI_2 TAWI_1 TAMA_2 TAMA_1 SUJO_1 SUAN_2 SUAN_1 STDA_2 STDA_1 SPRO_2 SPRO_1 SOVI_2 SOVI_1 SOJO_2 SOJO_1 SOJA_2 SOJA_1 SOEY_2 SOEY_1 SMPA_2 SMPA_1 SMDO_2 SMDO_1 SLJO_2 SLJO_1 SHYE_1 SHYA_1 SHAN_2 SHAN_1 SCMI_1 SCMA_2 SCMA_1 SAKL_2 SAKL_1 RYWI_2 RYWI_1 RUWI_2 RUWI_1 RUDO_2 RUDO_1 RORE_2 RORE_1 ROKR_2 ROKR_1 ROHA_2 ROGR_2 ROCL_2 ROCL_1 ROCA_2 ROCA_1 ROAR_2 ROAR_1 RIHE_1 RAMU_2 RAMU_1 QUYO_2 PUGL_2 PUGL_1 PRRI_2 PRRI_1 POYU_1 PENI_2 PENI_1 PEAS_2 PEAS_1 PASK_2 PASK_1 PAMA_2 PAMA_1 OHJA_2 OHJA_1 OGED_2 OBTH_2 OBTH_1 OBPA_2 OBPA_1 NOZH_2 NOZH_1 NORE_2 NORE_1 NONE_2 NONE_1 NOKR_1 NODE_2 NODE_1 NODEJ_2 NGMA_2 NGMA_1 NEPA_2 NEPA_1 NENA_2 NAMI_2 NAMI_1 NAKI_2 MYBR_2 MYBR_1 MUUD_2 MUUD_1 MUSH_2 MUSH_1 MUJO_2 MOTE_2 MOTE_1 MOMO_2 MOMO_1 MOGI_2 MOGI_1 MIME_2 MIDA_2 MIDA_1 MIDAV_1 MEED_2 MEED_1 MCSA_1 MCMA_2 MCMA_1 MCKE_2 MCKE_1 MCED_2 MCBR_2 MCBR_1 MAZH_2 MAZH_1 MAVI_2 MAVI_1 MATA_2 MARI_2 MAPAO_1 MAMU_2 MAMU_1 MAMI_2 MAMI_1 MAKE_2 MAKE_1 MAIO_2 MAIO_1 MAGU_2 MAGU_1 MAGUA_2 MAGUA_1 MAGR_1 MAGA_2 MAGA_1 MAFO_2 MAFO_1 MAFL_2 MACR_2 MACR_1 MACH_1 MACA_2 MACA_1 MABE_2 MABE_1 LYLI_2 LUGA_2 LUGA_1 LOTH_2 LOTH_1 LOLE_2 LOLE_1 LIRA_2 LIRA_1 LIGR_2 LIGR_1 LEHO_2 LEHO_1 LEGR_2 LEGR_1 LECA_2 LECA_1 LAGR_2 LAGR_1 KUAL_1 KIPU_2 KIPU_1 KHEM_2 KHEM_1 KELO_2 KELO_1 KECH_2 KECH_1 KASA_2 KASA_1 KAJO_2 KAJO_1 KACL_2 KACL_1

		JUTY_1 JOSH_2 JOSH_1 JOSC_1 JOSA_2 JOSA_1 JONO_2 JONO_1 JOLE_1 JOBU_2 JOBU_1 JENA_2 JENA_1 JATH_1 JASU_2 JASU_1 JACH_1 IVNA_2 IVNA_1 IVAR_2 IVAR_1 ISMO_2 ISMO_1 IRDY_2 IRDY_1 HYDA_2 HYDA_1 HUMU_2 HUMU_1 HSCH_1 HOWI_2 HOWI_1 HOTY_2 HOTY_1 HAVA_2 HAVA_1 HAGO_2 HAGO_1 GRPA_2 GRPA_1 GRDO_2 GRDO_1 GLST_2 GITI_2 GITI_1 GIHU_2 GIHU_1 GABU_2 GABU_1 FRNI_2 FOSH_2 FOSH_1 FOGA_2 FOGA_1 FELU_1 FAZO_2 FAZO_1 ELSU_2 ELSO_1 EDFL_2 DUJU_1 DUFL_2 DUFL_1 DUDI_2 DUDI_1 DRNA_2 DRNA_1 DORJO_1 DOMU_2 DIPH_2 DIPH_1 DIAN_2 DIAN_1 DEJO_2 DEJO_1 DASI_1 DARU_2 DARU_1 DAMO_2 DAMA_2 DAMA_1 DAGE_2 DADE_2 DADE_1 CYRO_2 CUJO_2 CUJO_1 CRLO_2 CRLO_1 CRHO_2 CRHO_1 CORO_2 CORO_1 COPA_2 COPA_1 COJO_2 COJO_1 COJA_2 COJA_1 CLDE_2 CLDE_1 CITH_2 CITH_1 CHZU_2 CHYE_2 CHYE_1 CHSA_2 CHSA_1 CHMA_2 CHMA_1 CHIMA_2 CHIMA_1 CHCO_2 CHCO_1 CHBE_2 CHBE_1 CATH_2 CARO_2 CARO_1 CAPA_1 CAJO_2 CAJO_1 CADE_2 CADE_1 BRAN_1 BRAL_2 BRAJO_2 BRAJO_1 BLED_2 BLED_1 BLDE_2 BLDE_1 BHDE_2 BHDE_1 BEPH_2 BEPH_1 BELY_2 BELY_1 BEAN_2 BEAN_1 BEAL_2 BEAL_1 BASH_2 BASH_1 BASA_2 BASA_1 BAGL_2 BAGL_1 ARLI_2 ARLI_1 ARAN_2 ANSE_2 ANSE_1 ANMC_2 ANMC_1 ANDA_1 ANAH_2 ANAH_1 ALAS_2 ALAS_1 AIAN_1

Summary of the Number of Event and Censored Values

Total	Event	Censored	Percent Censored
5576	35	5541	99.37

Convergence Status
Convergence criterion (PCONV=0.0001) satisfied.

Marginal Loglikelihood	-154.01839

Testing Global Null Hypothesis

Test	Chi-Square	Adjusted DF	Pr > ChiSq
Likelihood Ratio	56.3529	21.58	<.0001
Wald	32.6623	21.58	0.0594

Covariance Parameter Estimates

Cov Parm	REML Estimate	Standard Error
ID_Eye	0.7580	0.6997

Type 3 Tests

Effect	Wald Chi-Square	DF	Pr > ChiSq	Adjusted DF	Adjusted Pr > ChiSq
cat	10.4739	1	0.0012	0.9344	0.0011
ID_Eye	22.5839	.	.	20.5812	0.3424

Analysis of Maximum Likelihood Estimates

								95% Hazard Ratio	

Parameter		DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	Confidence Limits		Label
cat	1	1	-1.64768	0.50912	10.4739	0.0012	0.192	0.071	0.522	cat 1

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The PHREG Procedure

Model Information	
Data Set	WORK.ALLPROG2
Dependent Variable	start
Dependent Variable	stop
Censoring Variable	prog
Censoring Value(s)	0
Weight Variable	wa1
Ties Handling	BRESLOW
Frailty	LOGNORMAL

Number of Observations Read	5429
Number of Observations Used	5429

Class Level Information		
Class	Value	Design Variables
cat	1	1
	0	0

Class Level Information for Random Effects		
Class	Levels	Values
ID_Eye	362	ZIEL_2 YULI_2 YULI_1 YOKA_2 YOKA_1 WOJA_2 WOJA_1 WIWA_2 WIMU_2 WIMA_1 WIEL_2 WICR_2 WICR_1 WIAD_2 WEMA_2 WEMA_1 WAMA_2 WAMA_1 WAEL_2 WAEL_1 VIDE_2 VIDE_1 VABR_2 VABR_1 ULDA_1 TOGA_2 TOGA_1 TERI_2 TEDU_2 TAWI_2 TAWI_1 TAMA_2 TAMA_1 SUJO_1 SUAN_2 SUAN_1 STDA_2 STDA_1 SPRO_2 SPRO_1 SOVI_2 SOVI_1 SOJO_2 SOJO_1 SOJA_2 SOJA_1 SOEY_2 SOEY_1 SMPA_2 SMPA_1 SMDO_2 SMDO_1 SLJO_2 SLJO_1 SHYE_1 SHYA_1 SHAN_2 SHAN_1 SCMI_1 SCMA_2 SCMA_1 SAKL_2 SAKL_1 RYWI_2 RYWI_1 RUWI_2 RUWI_1 RUDO_2 RUDO_1 RORE_2 RORE_1 ROKR_2 ROKR_1 ROHA_2 ROGR_2 ROCL_2 ROCL_1 ROCA_2 ROCA_1 ROAR_2 ROAR_1 RIHE_1 RAMU_2 RAMU_1 PUGL_2 PUGL_1 PRRI_2 PRRI_1 POYU_1 PENI_2 PENI_1 PEAS_2 PEAS_1 PASK_2 PAMA_2 PAMA_1 OHJA_2 OHJA_1 OGED_2 OBTH_2 OBTH_1 OBPA_2 OBPA_1 NOZH_2 NOZH_1 NORE_2 NORE_1 NONE_2 NONE_1 NOKR_1 NODE_2 NODE_1 NODEJ_2 NGMA_2 NGMA_1 NEPA_2 NEPA_1 NENA_2 NAMI_2 NAMI_1 NAKI_2 MYBR_2 MYBR_1 MUUD_2 MUUD_1 MUSH_2 MUSH_1 MUJO_2 MOTE_2 MOTE_1 MOMO_2 MOMO_1 MOGI_2 MOGI_1 MIME_2 MIDA_2 MIDA_1 MIDAV_1 MEED_2 MEED_1 MCSA_1 MCMA_2 MCMA_1 MCKE_2 MCKE_1 MCED_2 MCBR_2 MCBR_1 MAZH_2 MAZH_1 MAVI_2 MAVI_1 MATA_2 MARI_2 MAPAO_1 MAMU_2 MAMU_1 MAMI_2 MAMI_1 MAKE_2 MAKE_1 MAIO_2 MAIO_1 MAGU_2 MAGU_1 MAGUA_2 MAGUA_1 MAGR_1 MAGA_2 MAGA_1 MAFO_2 MAFO_1 MAFL_2 MACR_2 MACR_1 MACH_1 MABE_2 MABE_1 LYLI_2 LUGA_2 LUGA_1 LOTH_2 LOTH_1 LOLE_2 LOLE_1 LIRA_2 LIRA_1 LIGR_2 LIGR_1 LEHO_2 LEHO_1 LEGR_2 LEGR_1 LECA_2 LECA_1 LAGR_2 LAGR_1 KUAL_1 KIPU_2 KIPU_1 KHEM_2 KHEM_1 KELO_2 KELO_1 KECH_2 KECH_1 KASA_2 KASA_1

		KAJO_2 KAJO_1 KACL_2 KACL_1 JUTY_1 JOSH_2 JOSH_1 JOSC_1 JOSA_2 JOSA_1 JONO_2 JONO_1 JOLE_1 JOBU_2 JENA_2 JENA_1 JATH_1 JASU_2 JASU_1 JACH_1 IVNA_2 IVNA_1 IVAR_2 IVAR_1 ISMO_2 ISMO_1 IRDY_2 IRDY_1 HYDA_2 HYDA_1 HUMU_2 HUMU_1 HSCH_1 HOWI_2 HOWI_1 HOTY_2 HOTY_1 HAVA_2 HAVA_1 GRPA_2 GRPA_1 GRDO_2 GRDO_1 GLST_2 GITI_2 GITI_1 GIHU_2 GIHU_1 GABU_2 GABU_1 FRNI_2 FOSH_2 FOSH_1 FOGA_2 FOGA_1 FELU_1 FAZO_2 FAZO_1 ELSU_2 ELSO_1 EDFL_2 DUJU_1 DUFL_2 DUFL_1 DUDI_2 DUDI_1 DRNA_2 DRNA_1 DORJO_1 DOMU_2 DIPH_2 DIPH_1 DIAN_2 DIAN_1 DEJO_2 DEJO_1 DASI_1 DARU_2 DARU_1 DAMO_2 DAMA_2 DAGE_2 DADE_2 DADE_1 CYRO_2 CUJO_2 CUJO_1 CRLO_2 CRLO_1 CRHO_2 CRHO_1 CORO_2 CORO_1 COPA_2 COPA_1 COJA_2 COJA_1 CLDE_2 CLDE_1 CITH_2 CITH_1 CHZU_2 CHYE_2 CHYE_1 CHSA_2 CHSA_1 CHMA_2 CHMA_1 CHIMA_2 CHIMA_1 CHCO_2 CHCO_1 CHBE_2 CHBE_1 CATH_2 CARO_2 CARO_1 CAPA_1 CADE_2 CADE_1 BRAL_2 BRAJO_2 BRAJO_1 BLED_2 BLED_1 BLDE_2 BLDE_1 BHDE_2 BHDE_1 BELY_2 BELY_1 BEAN_2 BEAN_1 BEAL_2 BEAL_1 BASH_2 BASH_1 BASA_2 BASA_1 BAGL_2 BAGL_1 ARLI_2 ARLI_1 ARAN_2 ANSE_2 ANSE_1 ANMC_2 ANMC_1 ANDA_1 ANAH_2 ANAH_1 ALAS_2 ALAS_1 AIAN_1

Summary of the Number of Event and Censored Values

Total	Event	Censored	Percent Censored
5429	30	5399	99.45

Convergence Status
Convergence criterion (PCONV=0.0001) satisfied.

Marginal Loglikelihood	-136.65652

Testing Global Null Hypothesis

Test	Chi-Square	Adjusted DF	Pr > ChiSq
Likelihood Ratio	57.6350	23.97	0.0001
Wald	33.2694	23.97	0.0978

Covariance Parameter Estimates

Cov Parm	REML Estimate	Standard Error
ID_Eye	0.9696	0.8026

Type 3 Tests

Effect	Wald Chi-Square	DF	Pr > ChiSq	Adjusted DF	Adjusted Pr > ChiSq
cat	7.7250	1	0.0054	0.9192	0.0047
ID_Eye	26.0221	.	.	22.9685	0.2982

Analysis of Maximum Likelihood Estimates

			Parameter	Standard	Chi-		Hazard	95% Hazard Ratio Confidence	

Parameter		DF	Estimate	Error	Square	Pr > ChiSq	Ratio	Limits		Label
cat	1	1	−1.44329	0.51928	7.7250	0.0054	0.236	0.085	0.653	cat 1

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The PHREG Procedure

Model Information	
Data Set	WORK.PHREG_DATA2
Dependent Variable	start
Dependent Variable	stop
Censoring Variable	pdr
Censoring Value(s)	0
Weight Variable	wa1
Ties Handling	BRESLOW
Frailty	LOGNORMAL

Number of Observations Read	5576
Number of Observations Used	5576

Class Level Information		
Class	Value	Design Variables
cat	1	1
	0	0

Class Level Information for Random Effects		
Class	Levels	Values
ID_Eye	378	ZIEL_2 YULI_2 YULI_1 YOKA_2 YOKA_1 WOJA_2 WOJA_1 WIWA_2 WIWA_1 WIMU_2 WIMA_1 WIEL_2 WICR_2 WICR_1 WIAD_2 WEMA_2 WEMA_1 WAMA_2 WAMA_1 WAEL_2 WAEL_1 VIDE_2 VIDE_1 VABR_2 VABR_1 ULDA_1 TOGA_2 TOGA_1 TERI_2 TEDU_2 TAWI_2 TAWI_1 TAMA_2 TAMA_1 SUJO_1 SUAN_2 SUAN_1 STDA_2 STDA_1 SPRO_2 SPRO_1 SOVI_2 SOVI_1 SOJO_2 SOJO_1 SOJA_2 SOJA_1 SOEY_2 SOEY_1 SMPA_2 SMPA_1 SMDO_2 SMDO_1 SLJO_2 SLJO_1 SHYE_1 SHYA_1 SHAN_2 SHAN_1 SCMI_1 SCMA_2 SCMA_1 SAKL_2 SAKL_1 RYWI_2 RYWI_1 RUWI_2 RUWI_1 RUDO_2 RUDO_1 RORE_2 RORE_1 ROKR_2 ROKR_1 ROHA_2 ROGR_2 ROCL_2 ROCL_1 ROCA_2 ROCA_1 ROAR_2 ROAR_1 RIHE_1 RAMU_2 RAMU_1 QUYO_2 PUGL_2 PUGL_1 PRRI_2 PRRI_1 POYU_1 PENI_2 PENI_1 PEAS_2 PEAS_1 PASK_2 PASK_1 PAMA_2 PAMA_1 OHJA_2 OHJA_1 OGED_2 OBTH_2 OBTH_1 OBPA_2 OBPA_1 NOZH_2 NOZH_1 NORE_2 NORE_1 NONE_2 NONE_1 NOKR_1 NODE_2 NODE_1 NODEJ_2 NGMA_2 NGMA_1 NEPA_2 NEPA_1 NENA_2 NAMI_2 NAMI_1 NAKI_2 MYBR_2 MYBR_1 MUUD_2 MUUD_1 MUSH_2 MUSH_1 MUJO_2 MOTE_2 MOTE_1 MOMO_2 MOMO_1 MOGI_2 MOGI_1 MIME_2 MIDA_2 MIDA_1 MIDAV_1 MEED_2 MEED_1 MCSA_1 MCMA_2 MCMA_1 MCKE_2 MCKE_1 MCED_2 MCBR_2 MCBR_1 MAZH_2 MAZH_1 MAVI_2 MAVI_1 MATA_2 MARI_2 MAPAO_1 MAMU_2 MAMU_1 MAMI_2 MAMI_1 MAKE_2 MAKE_1 MAIO_2 MAIO_1 MAGU_2 MAGU_1 MAGUA_2 MAGUA_1 MAGR_1 MAGA_2 MAGA_1 MAFO_2 MAFO_1 MAFL_2 MACR_2 MACR_1 MACH_1 MACA_2 MACA_1 MABE_2 MABE_1 LYLI_2 LUGA_2 LUGA_1 LOTH_2 LOTH_1 LOLE_2 LOLE_1 LIRA_2 LIRA_1 LIGR_2 LIGR_1 LEHO_2 LEHO_1 LEGR_2 LEGR_1 LECA_2 LECA_1 LAGR_2 LAGR_1 KUAL_1 KIPU_2 KIPU_1 KHEM_2 KHEM_1 KELO_2

		KELO_1 KECH_2 KECH_1 KASA_2 KASA_1 KAJO_2 KAJO_1 KACL_2 KACL_1 JUTY_1 JOSH_2 JOSH_1 JOSC_1 JOSA_2 JOSA_1 JONO_2 JONO_1 JOLE_1 JOBU_2 JOBU_1 JENA_2 JENA_1 JATH_1 JASU_2 JASU_1 JACH_1 IVNA_2 IVNA_1 IVAR_2 IVAR_1 ISMO_2 ISMO_1 IRDY_2 IRDY_1 HYDA_2 HYDA_1 HUMU_2 HUMU_1 HSCH_1 HOWI_2 HOWI_1 HOTY_2 HOTY_1 HAVA_2 HAVA_1 HAGO_2 HAGO_1 GRPA_2 GRPA_1 GRDO_2 GRDO_1 GLST_2 GITI_2 GITI_1 GIHU_2 GIHU_1 GABU_2 GABU_1 FRNI_2 FOSH_2 FOSH_1 FOGA_2 FOGA_1 FELU_1 FAZO_2 FAZO_1 ELSU_2 ELSO_1 EDFL_2 DUJU_1 DUFL_2 DUFL_1 DUDI_2 DUDI_1 DRNA_2 DRNA_1 DORJO_1 DOMU_2 DIPH_2 DIPH_1 DIAN_2 DIAN_1 DEJO_2 DEJO_1 DASI_1 DARU_2 DARU_1 DAMO_2 DAMA_2 DAMA_1 DAGE_2 DADE_2 DADE_1 CYRO_2 CUJO_2 CUJO_1 CRLO_2 CRLO_1 CRHO_2 CRHO_1 CORO_2 CORO_1 COPA_2 COPA_1 COJO_2 COJO_1 COJA_2 COJA_1 CLDE_2 CLDE_1 CITH_2 CITH_1 CHZU_2 CHYE_2 CHYE_1 CHSA_2 CHSA_1 CHMA_2 CHMA_1 CHIMA_2 CHIMA_1 CHCO_2 CHCO_1 CHBE_2 CHBE_1 CATH_2 CARO_2 CARO_1 CAPA_1 CAJO_2 CAJO_1 CADE_2 CADE_1 BRAN_1 BRAL_2 BRAJO_2 BRAJO_1 BLED_2 BLED_1 BLDE_2 BLDE_1 BHDE_2 BHDE_1 BEPH_2 BEPH_1 BELY_2 BELY_1 BEAN_2 BEAN_1 BEAL_2 BEAL_1 BASH_2 BASH_1 BASA_2 BASA_1 BAGL_2 BAGL_1 ARLI_2 ARLI_1 ARAN_2 ANSE_2 ANSE_1 ANMC_2 ANMC_1 ANDA_1 ANAH_2 ANAH_1 ALAS_2 ALAS_1 AIAN_1

Summary of the Number of Event and Censored Values

Total	Event	Censored	Percent Censored
5576	26	5550	99.53

Warning: Convergence not attained in 25 outer iterations.

Warning: The PHREG procedure continues in spite of the above warning. Results shown are based on the last maximum likelihood iteration. Validity of the model fit is questionable.

Marginal Loglikelihood	-108.65002

Testing Global Null Hypothesis

Test	Chi-Square	Adjusted DF	Pr > ChiSq
Likelihood Ratio	12.4317	1.00	0.0004
Wald	8.4606	1.00	0.0036

Covariance Parameter Estimates

Cov Parm	REML Estimate	Standard Error
ID_Eye	1.987E-8	.

Type 3 Tests

Effect	Wald Chi-Square	DF	Pr > ChiSq	Adjusted DF	Adjusted Pr > ChiSq
cat	8.4606	1	0.0036	1.0000	0.0036

ID_Eye	0.0000	.	.	4.38E-7	<.0001

Analysis of Maximum Likelihood Estimates									
Parameter		DF	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio	95% Hazard Ratio Confidence Limits		Label
cat	1	1	-1.85120	0.63643	8.4606	0.0036	0.157	0.045	0.547	cat 1