

## DAFTAR PUSTAKA

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## LAMPIRAN

**Lampiran 1.** Data pasien ibu hamil dengan indikasi DMG selama masa kehamilan

Waktu	status	$X_1$	$X_2$	$X_3$	$X_4$	$X_5$	$X_6$	$X_7$
1	Pulang Atas Permintaan Sendiri	21	56	150	24,89	Ya	195	3300
1	Dinyatakan Sembuh	26	70	163	26,35	Ya	152	2500
1	Di izinkan pulang	28	60	156	24,65	Tidak	210	2400
1	Di izinkan pulang	25	63	151	27,63	Ya	152	3200
1	Di izinkan pulang	21	66	158	26,44	Ya	145	3000
1	Dinyatakan Sembuh	32	73	155	30,39	Ya	280	4700
2	Di izinkan pulang	25	52	148	23,74	Ya	281	3500
2	Dinyatakan Sembuh	29	66	158	26,44	Ya	190	4000
2	Di izinkan pulang	29	88,5	158	35,45	Ya	240	3650
2	Dinyatakan Sembuh	29	87	146	40,81	Ya	226	2800
2	Dirujuk Ke RS Lain	27	67	152	29,00	Ya	130	3650
2	Dinyatakan Sembuh	25	65	155	27,06	Ya	274	3800
2	Pulang Atas Permintaan Sendiri	20	65	150	28,89	Ya	218	3650
2	Di izinkan pulang	25	82	155	34,13	Tidak	174	3350
2	Dinyatakan Sembuh	29	63	151	27,63	Ya	134	3250
2	Di izinkan pulang	24	52	160	20,31	Ya	234	3500
2	Dinyatakan Sembuh	26	52	164	19,33	Ya	215	2600
2	Di izinkan pulang	24	61	156	25,07	Tidak	155	3000
2	Dinyatakan Sembuh	32	52	150	23,11	Tidak	154	2800
2	Dirujuk Ke RS Lain	28	63	158	25,24	Ya	180	2550
2	Pulang Atas Permintaan Sendiri	26	51	150	22,67	Ya	180	2500
2	Dinyatakan Sembuh	29	64	162	24,39	Ya	180	2400
2	Di izinkan pulang	29	57	155	23,73	Ya	168	2800
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
14	meninggal	40	82	155	34,13	Ya	161	3350
14	Dinyatakan Sembuh	36	63	144	30,38	Ya	189	3000
14	Dirujuk Ke RS Lain	34	67	148	30,59	Ya	190	2700
14	Di izinkan pulang	25	60	157	22,73	Tidak	156	2800
15	Di izinkan pulang	40	70	160	27,34	Ya	195	2800

Keterangan:

$X_1$  : Usia

$X_2$  : Berat Badan (Kg)

$X_3$  : Tinggi Badan (Cm)

$X_4$  : Indeks Massa Tubuh (Kg/m<sup>2</sup>)

$X_5$  : Riwayat DM dalam keluarga

$X_6$  : Gula Darah Puasa (mg/dl)

$X_7$ : Berat Badan Bayi (Gram)

**Lampiran 2.** Data Pasien DMG hasil penyensoran

waktu	status	$X_1$	$X_2$	$X_3$	$X_4$	$X_5$	$X_6$	$X_7$
1	0	40	56	150	24,89	1	195	3300
1	1	40	70	163	26,35	1	152	2500
1	0	28	60	156	24,65	1	210	2400
1	0	33	63	151	27,63	0	152	3200
1	0	33	66	158	26,44	1	145	3000
1	1	32	73	155	30,39	1	280	4700
2	0	25	52	148	23,74	1	281	3500
2	1	29	66	158	26,44	1	190	4000
2	0	29	88,5	158	35,45	1	240	3650
2	1	29	87	146	40,81	1	226	2800
2	0	27	67	152	29,00	1	130	3650
2	1	25	65	155	27,06	1	274	3800
2	0	38	65	150	28,89	1	218	3650
2	0	25	82	155	34,13	1	174	3350
2	1	29	63	151	27,63	0	134	3250
2	0	24	52	160	20,31	1	234	3500
2	1	34	52	164	19,33	1	215	2600
2	0	40	61	156	25,07	1	155	3000
2	1	32	52	150	23,11	0	154	2800
2	0	28	63	158	25,24	0	180	2550
2	0	36	51	150	22,67	1	180	2500
2	1	29	64	162	24,39	1	180	2400
2	0	29	57	155	23,73	1	168	2800
2	1	28	65	157	26,37	1	190	3450
2	0	23	72	163	27,10	0	170	3000
2	1	35	85	156	34,93	1	150	2750
2	0	24	60	160	23,44	1	186	3550
2	0	25	45	148	20,54	1	162	3000
2	1	29	79	160	30,86	0	175	2500
2	1	32	78	155	32,47	1	158	3450
3	0	29	73	155	30,39	1	155	3550
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
14	1	25	60	157	22,73	0	156	2800
15	1	40	70	160	27,34	1	195	2800

### Lampiran 3. Pemodelan Cox Proportional Hazard dengan Estimasi Partial Likelihood Efron

#### A. Pengujian Asumsi *Proportional Hazard* Pada Pendekatan *Efron*

```
> prp5= cox.zph(coxph(Surv(waktu,status)~U+BB+TB+IMT+RDM+GDP+BBL, data = datas4, method = "efron"))
> prp5
```

	chisq	df	p
U	0.226	1	0.63
BB	2.055	1	0.15
TB	0.732	1	0.39
IMT	0.865	1	0.35
RDM	0.988	1	0.32
GDP	0.244	1	0.62
BBL	0.553	1	0.46
GLOBAL	5.209	7	0.63

#### B. Estimasi Parameter dengan metode *Partial Likelihood Efron*

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM +
      GDP + BBL, data = datas4, method = "efron")
```

n= 151, number of events= 102

	coef	exp(coef)	se(coef)	z	Pr(> z )
U	-0.0863488	0.9172742	0.0247632	-3.487	0.000489 ***
BB	-0.3049183	0.7371836	0.1129191	-2.700	0.006927 **
TB	0.2826999	1.3267069	0.0999890	2.827	0.004694 **
IMT	0.7303558	2.0758190	0.2568826	2.843	0.004467 **
RDM	-0.4069147	0.6657010	0.2512390	-1.620	0.105311
GDP	-0.0037191	0.9962878	0.0033810	-1.100	0.271330
BBL	0.0001757	1.0001757	0.0002838	0.619	0.535919

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

	exp(coef)	exp(-coef)	lower .95	upper .95
U	0.9173	1.0902	0.8738	0.9629
BB	0.7372	1.3565	0.5908	0.9198
TB	1.3267	0.7537	1.0906	1.6139
IMT	2.0758	0.4817	1.2547	3.4344
RDM	0.6657	1.5022	0.4068	1.0893
GDP	0.9963	1.0037	0.9897	1.0029
BBL	1.0002	0.9998	0.9996	1.0007

Concordance= 0.641 (se = 0.035 )  
Likelihood ratio test= 23.44 on 7 df, p=0.001  
Wald test = 21.15 on 7 df, p=0.004  
Score (logrank) test = 21.89 on 7 df, p=0.003

#### C. Pemilihan Model Terbaik dengan Eliminasi *Backward*

##### Tahap 1

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM +
      GDP, data = datas4, method = "efron")
```

	coef	exp(coef)	se(coef)	z	p
U	-0.084664	0.918821	0.024639	-3.436	0.00059
BB	-0.287998	0.749763	0.108893	-2.645	0.00817
TB	0.267875	1.307184	0.096462	2.777	0.00549
IMT	0.691214	1.996136	0.247160	2.797	0.00516
RDM	-0.381975	0.682512	0.246948	-1.547	0.12192
GDP	-0.004062	0.995947	0.003370	-1.205	0.22804

Likelihood ratio test=23.07 on 6 df, p=0.0007745  
n= 151, number of events= 102

#### Lampiran 4. Pemodelan Cox Proportional Hazard dengan Estimasi Partial Likelihood Efron (Lanjutan)

Tahap 2

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM,
      data = datas4, method = "efron")
```

	coef	exp(coef)	se(coef)	z	p
U	-0.08565	0.91791	0.02430	-3.525	0.000423
BB	-0.24683	0.78128	0.10360	-2.383	0.017194
TB	0.23692	1.26734	0.09294	2.549	0.010798
IMT	0.60366	1.82880	0.23634	2.554	0.010644
RDM	-0.42247	0.65543	0.24349	-1.735	0.082724

Likelihood ratio test=21.54 on 5 df, p=0.000639  
n= 151, number of events= 102

Tahap Akhir

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT, data = datas4,
      method = "efron")
```

n= 151, number of events= 102

	coef	exp(coef)	se(coef)	z	Pr(> z )
U	-0.08381	0.91961	0.02418	-3.466	0.000528 ***
BB	-0.23580	0.78994	0.10438	-2.259	0.023887 *
TB	0.22832	1.25649	0.09325	2.449	0.014342 *
IMT	0.56728	1.76346	0.23753	2.388	0.016928 *

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

	exp(coef)	exp(-coef)	lower .95	upper .95
U	0.9196	1.0874	0.8770	0.9642
BB	0.7899	1.2659	0.6438	0.9693
TB	1.2565	0.7959	1.0466	1.5085
IMT	1.7635	0.5671	1.1071	2.8090

Concordance= 0.626 (se = 0.036 )  
Likelihood ratio test= 18.7 on 4 df, p=9e-04  
Wald test = 17.95 on 4 df, p=0.001  
Score (logrank) test = 18.18 on 4 df, p=0.001

## Lampiran 5. Pemodelan Cox Proportional Hazard dengan Estimasi Partial Likelihood Exact

### A. Pengujian Asumsi *Proportional Hazard*

```
> #asumsi proportional hazard
> prp6=cox.zph(ext)
> prp6
```

	chisq	df	p
U	0.0295	1	0.86
BB	2.2047	1	0.14
TB	0.8839	1	0.35
IMT	0.8662	1	0.35
RDM	0.8339	1	0.36
GDP	0.1307	1	0.72
BBL	0.3965	1	0.53
GLOBAL	4.9775	7	0.66

### B. Estimasi Parameter dengan metode *Partial Likelihood Exact*

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM +
      GDP + BBL, data = datas4, method = "exact")

n= 151, number of events= 102

      coef exp(coef) se(coef)      z Pr(>|z|)
U -0.0977209  0.9069020  0.0284292 -3.437 0.000587 ***
BB -0.3562246  0.7003153  0.1323219 -2.692 0.007100 **
TB  0.3319928  1.3937429  0.1170465  2.836 0.004562 **
IMT 0.8520980  2.3445606  0.3022787  2.819 0.004819 **
RDM -0.4542591  0.6349182  0.2841353 -1.599 0.109878
GDP -0.0044442  0.9955657  0.0038179 -1.164 0.244402
BBL 0.0001849  1.0001850  0.0003169  0.584 0.559500
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

      exp(coef) exp(-coef) lower .95 upper .95
U      0.9069      1.1027      0.8578      0.9589
BB      0.7003      1.4279      0.5403      0.9077
TB      1.3937      0.7175      1.1080      1.7531
IMT     2.3446      0.4265      1.2965      4.2400
RDM     0.6349      1.5750      0.3638      1.1081
GDP     0.9956      1.0045      0.9881      1.0030
BBL     1.0002      0.9998      0.9996      1.0008

Concordance= 0.643 (se = 0.035 )
Likelihood ratio test= 24.24 on 7 df, p=0.001
Wald test              = 21.28 on 7 df, p=0.003
Score (logrank) test = 22.4 on 7 df, p=0.002
```

### C. Pemilihan Model terbaik dengan Eliminasi *Backward*

#### Tahap 1

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM +
      GDP, data = datas4, method = "exact")
```

	coef	exp(coef)	se(coef)	z	p
U	-0.096078	0.908393	0.028323	-3.392	0.000693
BB	-0.338687	0.712705	0.128424	-2.637	0.008358
TB	0.316585	1.372433	0.113585	2.787	0.005317
IMT	0.811640	2.251597	0.292998	2.770	0.005604
RDM	-0.435816	0.646737	0.281825	-1.546	0.122006
GDP	-0.004822	0.995189	0.003786	-1.274	0.202784

```
Likelihood ratio test=23.91 on 6 df, p=0.0005435
n= 151, number of events= 102
```

## Lampiran 6. Pemodelan Cox Proportional Hazard dengan Estimasi Partial Likelihood Exact (Lanjutan)

### Tahap 2

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT + RDM,
      data = datas4, method = "exact")
```

	coef	exp(coef)	se(coef)	z	p
U	-0.09876	0.90596	0.02813	-3.510	0.000448
BB	-0.29060	0.74781	0.12249	-2.372	0.017670
TB	0.28083	1.32422	0.10970	2.560	0.010467
IMT	0.71005	2.03409	0.28099	2.527	0.011505
RDM	-0.48854	0.61352	0.27836	-1.755	0.079248

Likelihood ratio test=22.22 on 5 df, p=0.0004761  
n= 151, number of events= 102

### Tahap 3 dan Model Akhir

```
coxph(formula = Surv(waktu, status) ~ U + BB + TB + IMT, data = datas4,
      method = "exact")
```

n= 151, number of events= 102

	coef	exp(coef)	se(coef)	z	Pr(> z )
U	-0.09602	0.90844	0.02784	-3.449	0.000563 ***
BB	-0.27629	0.75859	0.12195	-2.266	0.023476 *
TB	0.26932	1.30907	0.10889	2.473	0.013388 *
IMT	0.66588	1.94621	0.27886	2.388	0.016945 *

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

	exp(coef)	exp(-coef)	lower .95	upper .95
U	0.9084	1.1008	0.8602	0.9594
BB	0.7586	1.3182	0.5973	0.9634
TB	1.3091	0.7639	1.0575	1.6205
IMT	1.9462	0.5138	1.1267	3.3617

Concordance= 0.626 (se = 0.036 )

Likelihood ratio test= 19.25 on 4 df, p=7e-04

Wald test = 17.63 on 4 df, p=0.001

Score (logrank) test = 18.36 on 4 df, p=0.001



**Lampiran 7.** Pemilihan Model Regresi Cox Proportional Hazard Terbaik Dengan Uji AIC

A. Nilai AIC untuk Model Regresi Cox *Proportional Hazard* Pendekatan *Efron*

```
> #Nilai AIC Efron  
> AIC(coxph(Surv(waktu,status)~U+BB+TB+IMT, data = datas4, method = "efron"))  
[1] 783.2052
```

B. Nilai AIC untuk Model Regresi Cox *Proportional Hazard* Pendekatan *Exact*

```
> #Nilai AIC Exact  
> AIC(coxph(Surv(waktu,status)~U+BB+TB+IMT, data = datas4, method = "exact"))  
[1] 484.8497
```

**Lampiran 6.** Riwayat Hidup Peneliti**A. DATA PRIBADI**

Nama : Nurfaizyeni Basri  
NIM : H051201062  
Tempat, Tanggal Lahir : Tanrutedong, 20 April 2003  
Agama : Islam  
Jenis Kelamin : Perempuan  
Suku : Bugis  
Alamat : Jl. H. Kalla, Perum Rindini Green Life (Blok A no. 29), Kel. Panaikang, Kec. Panakkukang, Kota Makassar  
E-mail : nurfaizyeni24@gmail.com  
No. Handphone : 08127485703

**B. RIWAYAT PENDIDIKAN**

1. SDN 8 Duapitue (2008-2014)
2. SMPN 1 Duapitue (2014-2017)
3. SMAN 3 Sidrap (2017-2020)
4. S1 Program Studi Statistik FMIPA Unhas (2020-2024)