

APTS - Survival Analysis

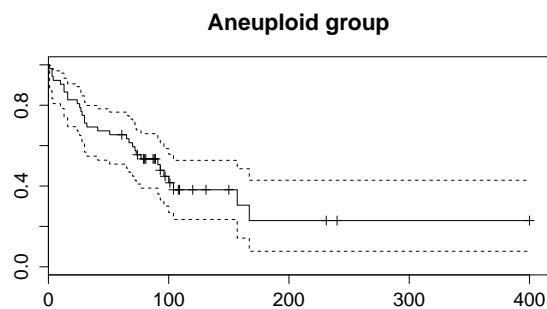
Lab Session 1 - Solutions

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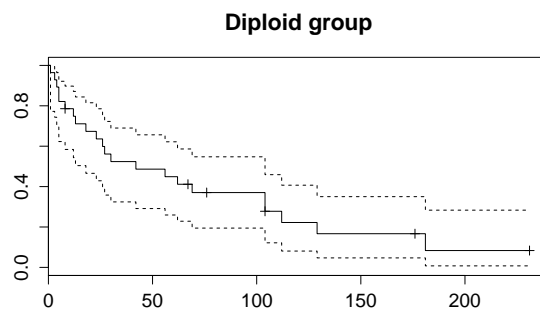
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```
1. > install.packages("survival")
> library("survival")
> install.packages("KMsurv")
> library("KMsurv")
> data(tongue)
> tongue

> ane=subset(tongue,type==1)
> fit_ane=survfit(Surv(time,delta)~1,data=ane,conf.type="log-log")
> plot(fit_ane)
> title(main="Aneuploid group")
```



```
> dip=subset(tongue,type==2)
> fit_dip=survfit(Surv(time,delta)~1,data=dip,conf.type="log-log")
> plot(fit_dip)
> title(main="Diploid group")
```



```
> fit_ane
Call: survfit(formula = Surv(time, delta) ~ 1, data = ane, conf.type = "log-log")
```

n	events	median	0.95LCL	0.95UCL
52	31	93	65	157

```
> fit_dip
Call: survfit(formula = Surv(time, delta) ~ 1, data = dip, conf.type = "log-log")
```

n	events	median	0.95LCL	0.95UCL
28	22	42	18	104

```
2. > data(burn)
```

```
> burn
```

```
> survdiff(Surv(T3,D3)~Z1,data=burn)
```

```
Call:
```

```
survdiff(formula = Surv(T3, D3) ~ Z1, data = burn)
```

	N	Observed	Expected	(O-E) ² /E	(O-E) ² /V
Z1=0	70	28	21.4	2.07	3.79
Z1=1	84	20	26.6	1.66	3.79

```
Chisq= 3.8 on 1 degrees of freedom, p= 0.0515
```

```
> attach(burn)
```

```
> burn$area[Z4<=29] = 1
```

```
> burn$area[Z4>=30 & Z4<=50] = 2
```

```
> burn$area[Z4>=51] = 3
```

```
> survdiff(Surv(T3,D3)~Z1+strata(area),data=burn)
```

```
Call:
```

```
survdiff(formula = Surv(T3, D3) ~ Z1 + strata(area), data = burn)
```

	N	Observed	Expected	(O-E) ² /E	(O-E) ² /V
Z1=0	70	28	21.6	1.87	3.61
Z1=1	84	20	26.4	1.53	3.61

```
Chisq= 3.6 on 1 degrees of freedom, p= 0.0574
```