Metabolite

Jonas Gehrlein

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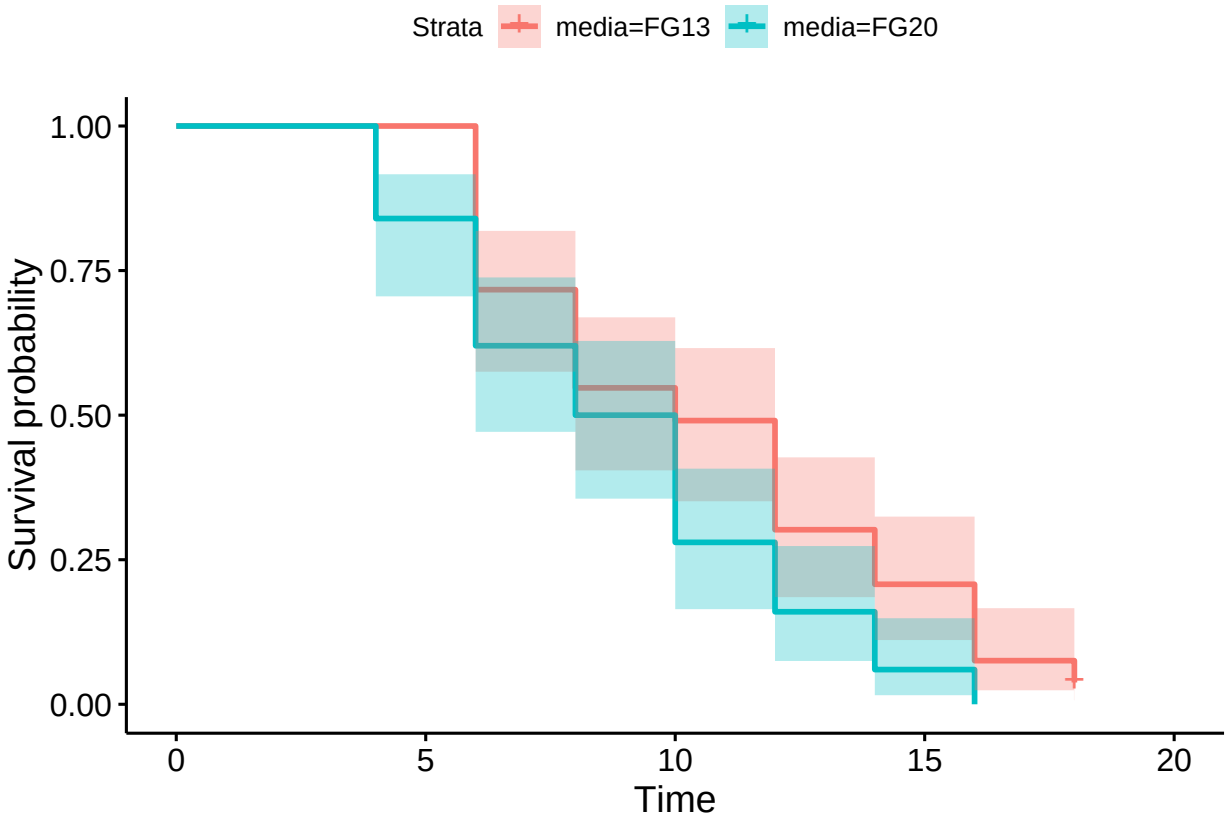
```
data <- read.table(here('data','Worm_4days.csv'), header = TRUE,
                   sep = ';')
data_2 <- read.table(here('data','Worm_second.csv'), header = TRUE,
                   sep = ';')
colnames(data_2) <- c('Time', 'media','Metabolite', 'status')
data_met <- subset(data_2, Metabolite == 1)
d_OP50 <- subset(data_2, media == 'OP50')
```

```
data_met$Survobj <- with(data_met,Surv(data_met$Time, event = data_met$status))
d_OP50$Survobj <- with(d_OP50,Surv(d_OP50$Time, event = d_OP50$status))

km <- survfit(Survobj ~ media, data = data_met,conf.type = "log-log", error = "greenwood")
s_km <- summary(km)
ggsurvplot(km, conf.int = TRUE)
```




```
data_met_50 <- rbind(data_met, d_OP50)
fit <- coxph(Surv(Time,status) ~ media, data = data_met_50)
summary(fit)
```

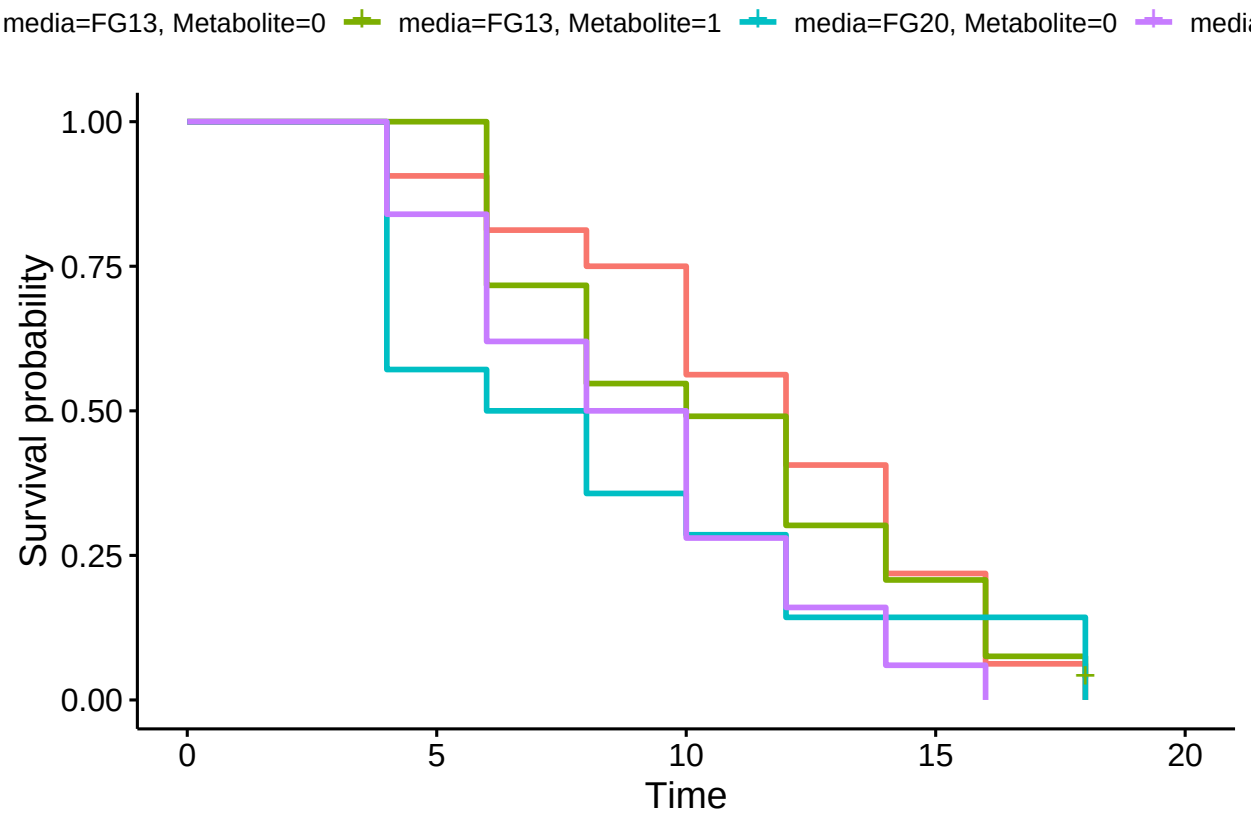
```
## Call:
## coxph(formula = Surv(Time, status) ~ media, data = data_met_50)
##
##   n= 149, number of events= 139
##
##              coef exp(coef) se(coef)      z Pr(>|z|)
## mediaFG20  0.5076    1.6613   0.2029  2.502  0.01235 *
## mediaOP50 -0.6345    0.5302   0.2177 -2.915  0.00356 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##           exp(coef) exp(-coef) lower .95 upper .95
## mediaFG20    1.6613      0.602    1.1162    2.4724
## mediaOP50    0.5302      1.886    0.3461    0.8123
##
## Concordance= 0.639  (se = 0.025 )
## Rsquare= 0.16   (max possible= 1 )
## Likelihood ratio test= 26.05  on 2 df,   p=2e-06
## Wald test            = 25.11  on 2 df,   p=4e-06
## Score (logrank) test = 26.78  on 2 df,   p=2e-06
```

```
data_met_50$media <- factor(data_met_50$media, c('OP50','FG13','FG20'))
fit <- coxph(Surv(Time,status) ~ media, data = data_met_50)
summary(fit)
```

```
## Call:
## coxph(formula = Surv(Time, status) ~ media, data = data_met_50)
##
##   n= 149, number of events= 139
##
##             coef exp(coef) se(coef)     z Pr(>|z|)
## mediaFG13 0.6345    1.8861   0.2177 2.915  0.00356 **
## mediaFG20 1.1421    3.1333   0.2279 5.011 5.43e-07 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##           exp(coef) exp(-coef) lower .95 upper .95
## mediaFG13     1.886     0.5302     1.231     2.890
## mediaFG20     3.133     0.3191     2.004     4.898
##
## Concordance= 0.639  (se = 0.025 )
## Rsquare= 0.16   (max possible= 1 )
## Likelihood ratio test= 26.05  on 2 df,   p=2e-06
## Wald test            = 25.11  on 2 df,   p=4e-06
## Score (logrank) test = 26.78  on 2 df,   p=2e-06
```

Alo lower survival for FG20 if only including survival and higher survival for OP50 which is higher than if we had compared with fly gut which isn´t only metabolites. If we include metabolites in a cox model without OP50

```
data_2_fly <- subset(data_2, media != 'OP50' )
data_2_fly$Survobj <- with(data_2_fly,Surv(data_2_fly$Time, event = data_2_fly$status))
km_fly <- survfit(Survobj ~ media + Metabolite, data = data_2_fly,conf.type = "log-log", error = "greenw
ggsurvplot(km_fly)
```



No big difference on the plot between metabolite or without if we fit a model of both media and metabolite

```
fit_fly_meta <- coxph(Survobj ~ media + Metabolite , data = data_2_fly)
summary(fit_fly_meta)
```

```
## Call:
## coxph(formula = Survobj ~ media + Metabolite, data = data_2_fly)
##
##   n= 149, number of events= 147
##
##               coef exp(coef) se(coef)     z Pr(>|z|)
## mediaFG20  0.49618   1.64243  0.17022 2.915  0.00356 **
## mediaOP50       NA        NA  0.00000    NA       NA
## Metabolite 0.08789   1.09186  0.18127 0.485  0.62778
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##            exp(coef) exp(-coef) lower .95 upper .95
## mediaFG20      1.642     0.6089    1.1765     2.293
## mediaOP50         NA         NA        NA        NA
## Metabolite     1.092     0.9159    0.7654     1.558
##
## Concordance= 0.59  (se = 0.027 )
## Rsquare= 0.059   (max possible= 1 )
## Likelihood ratio test= 9.07  on 2 df,   p=0.01
## Wald test            = 9.31  on 2 df,   p=0.01
```

```
## Score (logrank) test = 9.5  on 2 df,   p=0.009
```

```
AIC(fit_fly_meta)
```

```
## [1] 1193.565
```

```
fit_fly_med <- coxph(Survobj ~ media , data = data_2_fly)
summary(fit_fly_med)
```

```
## Call:
## coxph(formula = Survobj ~ media, data = data_2_fly)
##
##   n= 149, number of events= 147
##
##             coef exp(coef) se(coef)     z Pr(>|z|)
## mediaFG20 0.5080    1.6619   0.1684 3.016  0.00256 **
## mediaOP50     NA        NA   0.0000    NA       NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##           exp(coef) exp(-coef) lower .95 upper .95
## mediaFG20     1.662     0.6017     1.195     2.312
## mediaOP50        NA         NA        NA        NA
##
## Concordance= 0.586  (se = 0.025 )
## Rsquare= 0.058   (max possible= 1 )
## Likelihood ratio test= 8.83  on 1 df,   p=0.003
## Wald test            = 9.1  on 1 df,   p=0.003
## Score (logrank) test = 9.28  on 1 df,   p=0.002
```

```
AIC(fit_fly_med)
```

```
## [1] 1191.803
```

It certainly isn´t a good predictor in the model. and is centered around 0. But very uncertain about the exact size on the size of the predictor. The only real difference is for FG13 where metabolite has worse survival

```
data_bac <- subset(data_2_fly, Metabolite == 0)
data_bac$Survobj <- with(data_bac,Surv(data_bac$Time, event = data_bac$status))
km_bac <- survfit(Survobj ~ media, data = data_bac,conf.type = "log-log", error = "greenwood")
s_km_bac <- summary(km_bac)

df_13_bac <- data.frame(c(0,s_km_bac$time[1:8]),c(1,s_km_bac$surv[1:8]),
                        c(0,s_km_bac$std.err[1:8]))
colnames(df_13_bac) <- c('Time','Surv','Std.error')
df_20_bac <- data.frame(c(0,s_km_bac$time[9:14]),c(1,s_km_bac$surv[9:14]),
                        c(0,s_km_bac$std.err[9:14]))
colnames(df_20_bac) <- c('Time','Surv','Std.error')

data_meta <- subset(data_met, media != 'OP50')
```

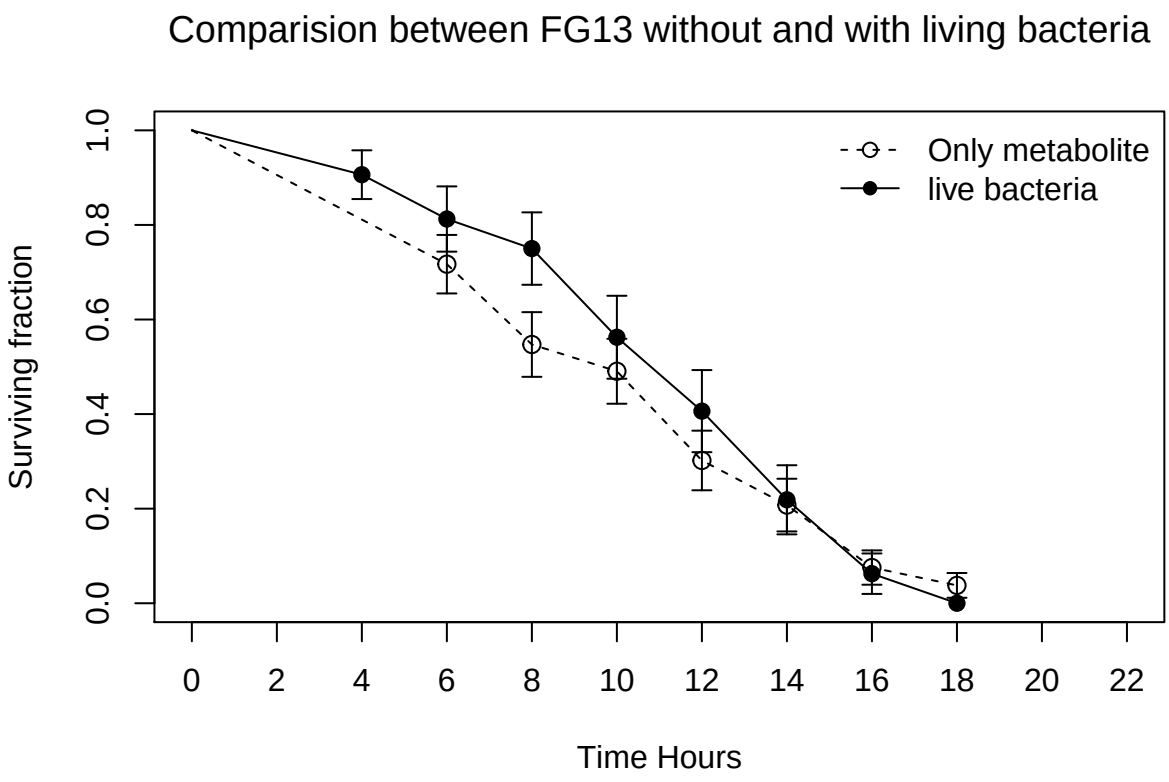
```r
km_meta <- survfit(Survobj ~ media, data = data_meta,conf.type = "log-log", error = "greenwood")
s_km_meta <- summary(km_meta)

df_13_meta <- data.frame(c(0,s_km_meta$time[1:7]),c(1,s_km_meta$surv[1:7]),
                         c(0,s_km_meta$std.err[1:7]))
colnames(df_13_meta) <- c('Time','Surv','Std.error')
df_20_meta <- data.frame(c(0,s_km_meta$time[8:14]),c(1,s_km_meta$surv[8:14]),
                         c(0,s_km_meta$std.err[8:14]))
colnames(df_20_meta) <- c('Time','Surv','Std.error')

plot(df_13_bac$Time[2:9],df_13_bac$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time Hours',
     ylab = 'Surviving fraction',
     main = expression('Comparision between FG13 without and with living bacteria'),
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
lines(df_13_bac$Time,df_13_bac$Surv)
arrows(df_13_bac$Time, df_13_bac$Surv-df_13_bac$Std.error, df_13_bac$Time,
       df_13_bac$Surv+df_13_bac$Std.error, length=0.05, angle=90, code=3, col = 'black')
```

```
## Warning in arrows(df_13_bac$Time, df_13_bac$Surv - df_13_bac$Std.error, :
## zero-length arrow is of indeterminate angle and so skipped
```

```r
points(df_13_meta$Time[2:9],df_13_meta$Surv[2:9], pch = 1, cex = 1.2)
lines(df_13_meta$Time,df_13_meta$Surv, lty = 2)
arrows(df_13_meta$Time, df_13_meta$Surv-df_13_meta$Std.error, df_13_meta$Time, df_13_meta$Surv+df_13_me
```

```
## Warning in arrows(df_13_meta$Time, df_13_meta$Surv -
## df_13_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

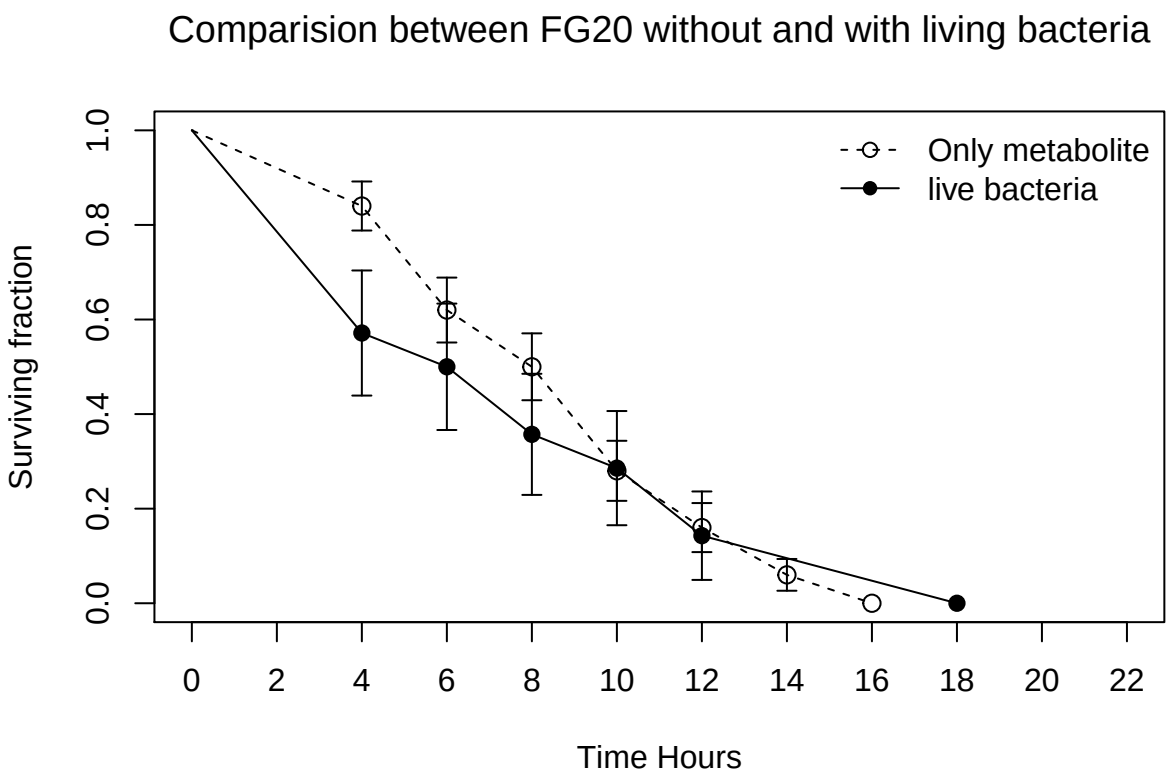
```r
legend('topright', pch = c(1,16), lty = c(2,1), bty = 'n',
       legend = c('Only metabolite','live bacteria'))
```




```
plot(df_20_bac$Time[2:9],df_20_bac$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time Hours',
     ylab = 'Surviving fraction',
     main = expression('Comparision between FG20 without and with living bacteria'),
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
lines(df_20_bac$Time,df_20_bac$Surv)
arrows(df_20_bac$Time[2:9], df_20_bac$Surv[2:9]-df_20_bac$Std.error[2:9], df_13_bac$Time[2:9],
       df_20_bac$Surv[2:9]+df_20_bac$Std.error[2:9], length=0.05, angle=90, code=3, col = 'black')
points(df_20_meta$Time[2:9],df_20_meta$Surv[2:9], pch = 1, cex = 1.2)
lines(df_20_meta$Time,df_20_meta$Surv, lty = 2)
arrows(df_20_meta$Time, df_20_meta$Surv-df_20_meta$Std.error, df_20_meta$Time, df_20_meta$Surv+df_20_me
```

```
## Warning in arrows(df_20_meta$Time, df_20_meta$Surv -
## df_20_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

```
legend('topright', pch = c(1,16), lty = c(2,1), bty = 'n',
       legend = c('Only metabolite','live bacteria'))
```




```
d_OP50$Survobj <- with(d_OP50,Surv(d_OP50$Time, event = d_OP50$status))
km_OP50 <- survfit(Survobj ~ media, data = d_OP50,conf.type = "log-log", error = "greenwood")
s_km_OP50 <- summary(km_OP50)

df_OP50 <- data.frame(c(0,s_km_OP50$time[1:8]),c(1,s_km_OP50$surv[1:8]),
                      c(0,s_km_OP50$std.err[1:8]))
colnames(df_OP50) <- c('Time','Surv','Std.error')
plot(df_13_bac$Time[2:9],df_13_bac$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time (hours)',
     ylab = 'Surviving fraction', col = 'blue',
     main = expression('Heat knockdown survival of' ~ italic(C.)~italic(elegans)~ 'replicate 2'),
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
lines(df_13_bac$Time,df_13_bac$Surv, col = 'blue')
arrows(df_13_bac$Time, df_13_bac$Surv-df_13_bac$Std.error, df_13_bac$Time,
       df_13_bac$Surv+df_13_bac$Std.error, length=0.05, angle=90, code=3,
       col = 'blue')
```

```
## Warning in arrows(df_13_bac$Time, df_13_bac$Surv - df_13_bac$Std.error, :
## zero-length arrow is of indeterminate angle and so skipped
```

```
points(df_13_meta$Time[2:9],df_13_meta$Surv[2:9], pch = 1, cex = 1.2,
       col = 'blue' )
lines(df_13_meta$Time,df_13_meta$Surv, lty = 2, col = 'blue')
arrows(df_13_meta$Time, df_13_meta$Surv-df_13_meta$Std.error, df_13_meta$Time, df_13_meta$Surv+df_13_me
       col = 'blue')
```

```
## Warning in arrows(df_13_meta$Time, df_13_meta$Surv -
```

```
## df_13_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

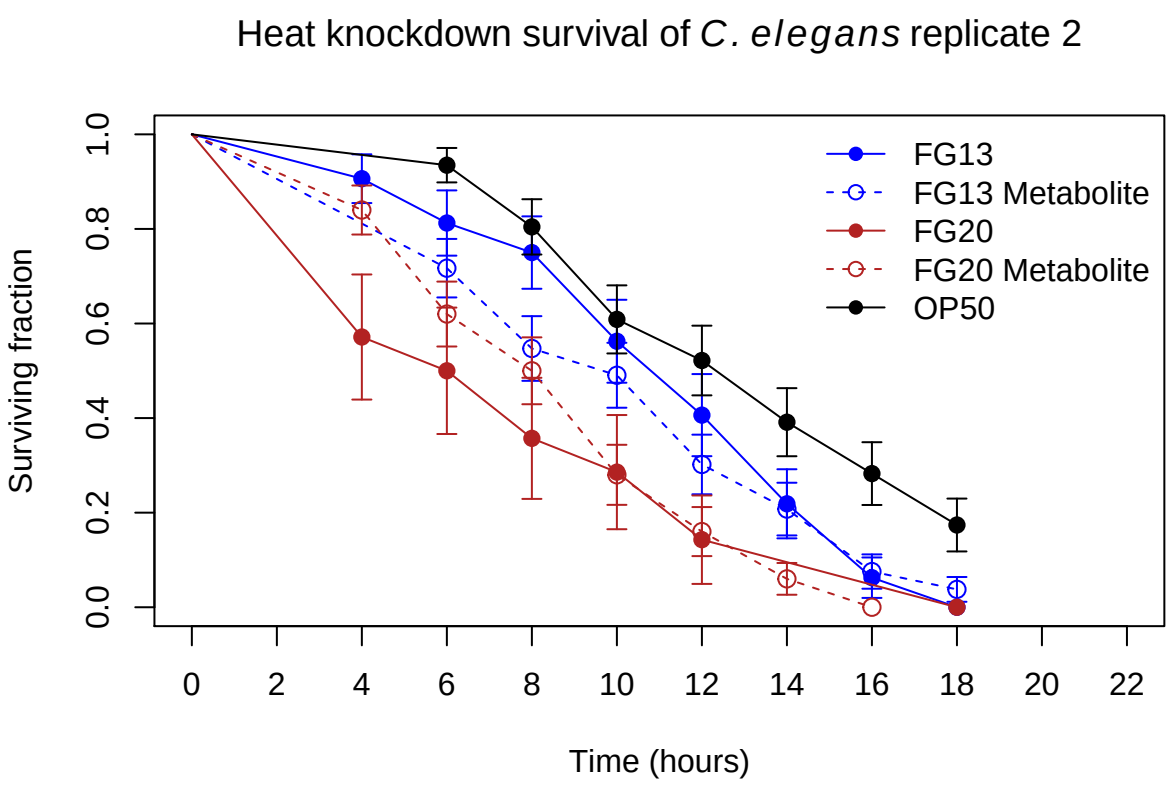
```
points(df_20_bac$Time[2:9],df_20_bac$Surv[2:9], pch = 16, cex = 1.2,
       col = 'firebrick')
lines(df_20_bac$Time,df_20_bac$Surv,col = 'firebrick')
arrows(df_20_bac$Time[2:9], df_20_bac$Surv[2:9]-df_20_bac$Std.error[2:9], df_20_bac$Time[2:9],
       df_20_bac$Surv[2:9]+df_20_bac$Std.error[2:9], length=0.05, angle=90, code=3, col = 'firebrick')
points(df_20_meta$Time[2:9],df_20_meta$Surv[2:9], pch = 1, cex = 1.2,
       col = 'firebrick')
lines(df_20_meta$Time,df_20_meta$Surv, lty = 2,col = 'firebrick')
arrows(df_20_meta$Time, df_20_meta$Surv-df_20_meta$Std.error, df_20_meta$Time, df_20_meta$Surv+df_20_me
       col = 'firebrick')
```

```
## Warning in arrows(df_20_meta$Time, df_20_meta$Surv -
## df_20_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

```
points(df_OP50$Time[2:9],df_OP50$Surv[2:9], pch = 16, cex = 1.2)
lines(df_OP50$Time,df_OP50$Surv, lty = 1)
arrows(df_OP50$Time, df_OP50$Surv-df_OP50$Std.error, df_OP50$Time, df_OP50$Surv+df_OP50$Std.error, leng
```

```
## Warning in arrows(df_OP50$Time, df_OP50$Surv - df_OP50$Std.error,
## df_OP50$Time, : zero-length arrow is of indeterminate angle and so skipped
```

```
legend('topright', pch = c(16,1,16,1,16), lty = c(1,2,1,2,1), bty = 'n',
       col = c('blue','blue','firebrick','firebrick', 'black'),
legend = c('FG13','FG13 Metabolite','FG20','FG20 Metabolite',
           'OP50'))
```




```
plot(df_13_bac$Time[2:9],df_13_bac$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time (hours)',
     ylab = 'Surviving fraction',
     main = expression('Heat knockdown survival of'
                       ~ italic(C.)~italic(elegans)~ 'replicate 2'),
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
lines(df_13_bac$Time,df_13_bac$Surv)
arrows(df_13_bac$Time, df_13_bac$Surv-df_13_bac$Std.error, df_13_bac$Time,
       df_13_bac$Surv+df_13_bac$Std.error, length=0.05, angle=90, code=3)
```

```
## Warning in arrows(df_13_bac$Time, df_13_bac$Surv - df_13_bac$Std.error, :
## zero-length arrow is of indeterminate angle and so skipped
```

```
points(df_13_meta$Time[2:9],df_13_meta$Surv[2:9], pch = 1, cex = 1.2)
lines(df_13_meta$Time,df_13_meta$Surv, lty = 2)
arrows(df_13_meta$Time, df_13_meta$Surv-df_13_meta$Std.error, df_13_meta$Time, df_13_meta$Surv+df_13_me
```

```
## Warning in arrows(df_13_meta$Time, df_13_meta$Surv -
## df_13_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

```
points(df_20_bac$Time[2:9],df_20_bac$Surv[2:9], pch = 17, cex = 1.2)
lines(df_20_bac$Time,df_20_bac$Surv)
arrows(df_20_bac$Time[2:9], df_20_bac$Surv[2:9]-df_20_bac$Std.error[2:9], df_20_bac$Time[2:9],
       df_20_bac$Surv[2:9]+df_20_bac$Std.error[2:9], length=0.05, angle=90, code=3)
```

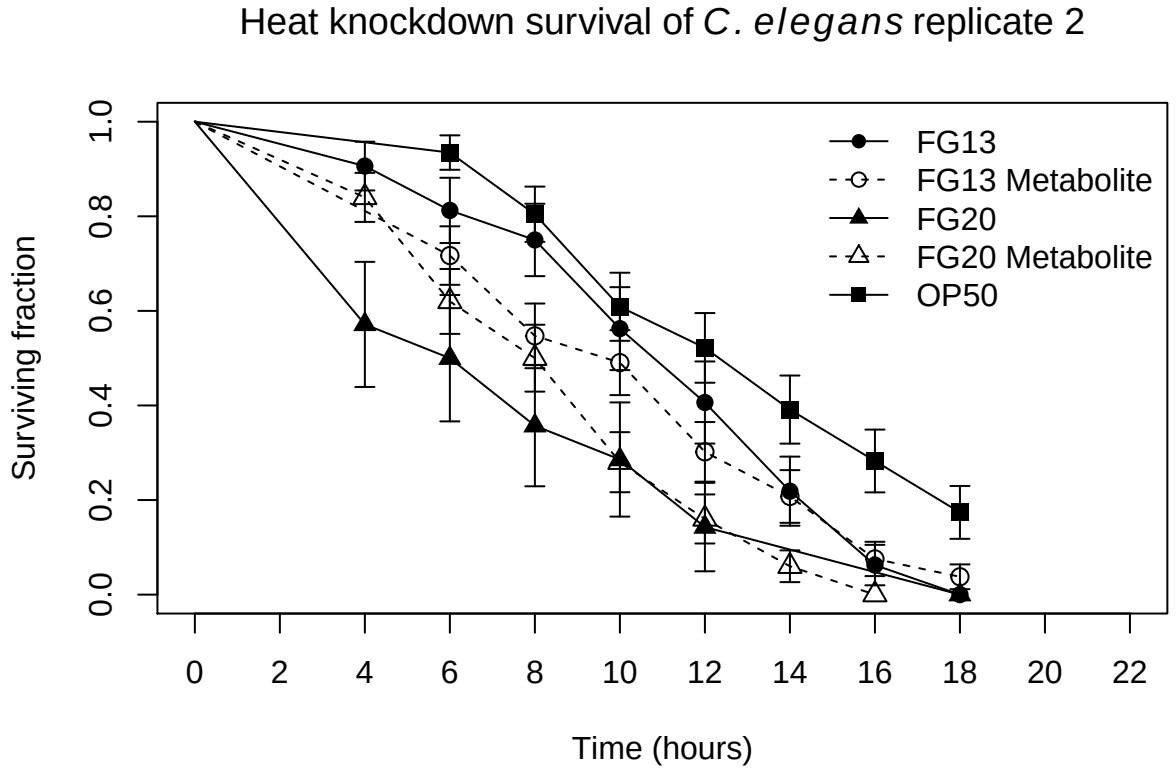
```
points(df_20_meta$Time[2:9],df_20_meta$Surv[2:9], pch = 2, cex = 1.2)
lines(df_20_meta$Time,df_20_meta$Surv, lty = 2)
arrows(df_20_meta$Time, df_20_meta$Surv-df_20_meta$Std.error, df_20_meta$Time, df_20_meta$Surv+df_20_me
```

```
## Warning in arrows(df_20_meta$Time, df_20_meta$Surv -
## df_20_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

```
points(df_OP50$Time[2:9],df_OP50$Surv[2:9], pch = 15, cex = 1.2)
lines(df_OP50$Time,df_OP50$Surv, lty = 1)
arrows(df_OP50$Time, df_OP50$Surv-df_OP50$Std.error, df_OP50$Time, df_OP50$Surv+df_OP50$Std.error, leng
```

```
## Warning in arrows(df_OP50$Time, df_OP50$Surv - df_OP50$Std.error,
## df_OP50$Time, : zero-length arrow is of indeterminate angle and so skipped
```

```
legend('topright', pch = c(16,1,17,2,15), lty = c(1,2,1,2,1), bty = 'n',
legend = c('FG13','FG13 Metabolite','FG20','FG20 Metabolite',
           'OP50'))
```




```
plot(df_20_bac$Time[2:9],df_20_bac$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time Hours',
     ylab = 'Surviving fraction',
     main = expression('Comparision between FG20 and FG13'),
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
```

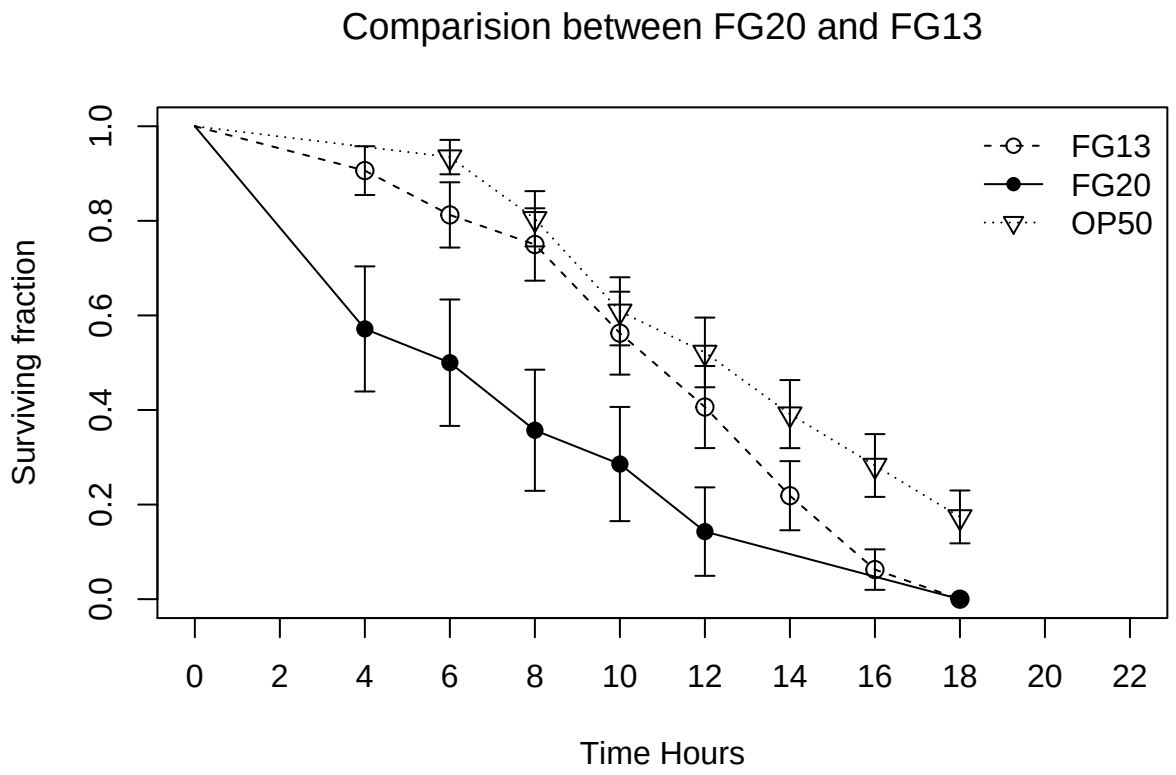
```
lines(df_20_bac$Time,df_20_bac$Surv)
arrows(df_20_bac$Time[2:9], df_20_bac$Surv[2:9]-df_20_bac$Std.error[2:9], df_20_bac$Time[2:9],
       df_20_bac$Surv[2:9]+df_20_bac$Std.error[2:9], length=0.05, angle=90, code=3, col = 'black')
points(df_13_bac$Time[2:9],df_13_bac$Surv[2:9], pch = 1, cex = 1.2)
lines(df_13_bac$Time,df_13_bac$Surv, lty = 2)
arrows(df_13_bac$Time, df_13_bac$Surv-df_13_bac$Std.error, df_13_bac$Time, df_13_bac$Surv+df_13_bac$Std
```

```
## Warning in arrows(df_13_bac$Time, df_13_bac$Surv - df_13_bac$Std.error, :
## zero-length arrow is of indeterminate angle and so skipped
```

```
points(df_OP50$Time[2:9],df_OP50$Surv[2:9], pch = 6, cex = 1.2)
lines(df_OP50$Time,df_OP50$Surv, lty = 3)
arrows(df_OP50$Time, df_OP50$Surv-df_OP50$Std.error, df_OP50$Time, df_OP50$Surv+df_OP50$Std.error, leng
```

```
## Warning in arrows(df_OP50$Time, df_OP50$Surv - df_OP50$Std.error,
## df_OP50$Time, : zero-length arrow is of indeterminate angle and so skipped
```

```
legend('topright', pch = c(1,16,6), lty = c(2,1,3), bty = 'n',
       legend = c('FG13','FG20','OP50'))
```




```
plot(df_20_meta$Time[2:9],df_20_meta$Surv[2:9], pch = 16, cex = 1.2, xlab = 'Time Hours',
     ylab = 'Surviving fraction',
     main = expression('Comparision between FG20 and FG13 for Metabolite'),
```

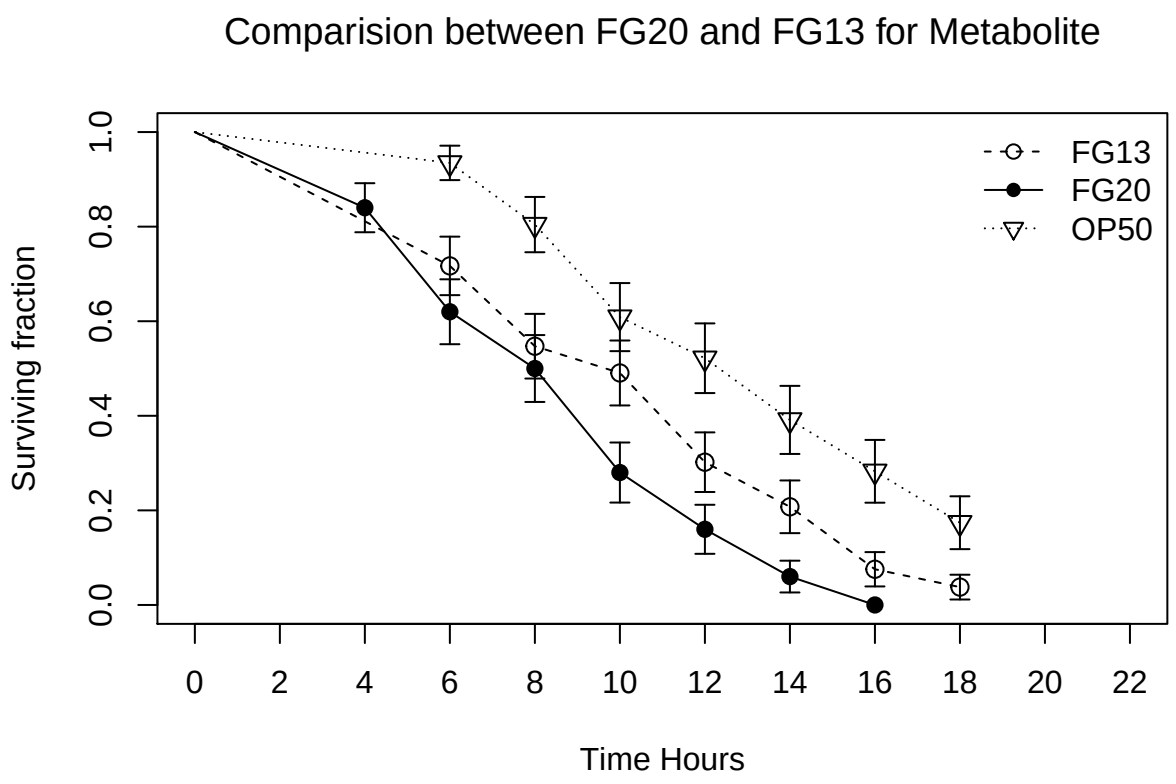
```
     xlim = c(0,22), ylim = c(0,1), xaxp = c(0,22,11))
lines(df_20_meta$Time,df_20_meta$Surv)
arrows(df_20_meta$Time[2:9], df_20_meta$Surv[2:9]-df_20_meta$Std.error[2:9], df_20_meta$Time[2:9],
       df_20_meta$Surv[2:9]+df_20_meta$Std.error[2:9], length=0.05, angle=90, code=3, col = 'black')
points(df_13_meta$Time[2:9],df_13_meta$Surv[2:9], pch = 1, cex = 1.2)
lines(df_13_meta$Time,df_13_meta$Surv, lty = 2)
arrows(df_13_meta$Time, df_13_meta$Surv-df_13_meta$Std.error, df_13_meta$Time, df_13_meta$Surv+df_13_me
```

```
## Warning in arrows(df_13_meta$Time, df_13_meta$Surv -
## df_13_meta$Std.error, : zero-length arrow is of indeterminate angle and so
## skipped
```

```
points(df_OP50$Time[2:9],df_OP50$Surv[2:9], pch = 6, cex = 1.2)
lines(df_OP50$Time,df_OP50$Surv, lty = 3)
arrows(df_OP50$Time, df_OP50$Surv-df_OP50$Std.error, df_OP50$Time, df_OP50$Surv+df_OP50$Std.error, leng
```

```
## Warning in arrows(df_OP50$Time, df_OP50$Surv - df_OP50$Std.error,
## df_OP50$Time, : zero-length arrow is of indeterminate angle and so skipped
```

```
legend('topright', pch = c(1,16,6), lty = c(2,1,3), bty = 'n',
       legend = c('FG13','FG20','OP50'))
```



```
d_13_m <- subset(data_meta,media == 'FG13')
d_20_m <- subset(data_meta,media == 'FG20')
d_1350_m <- rbind(d_13_m, d_OP50)
d_2050_m <- rbind(d_20_m,d_OP50)
d_13_b <- subset(data_bac, media =='FG13')
d_20_b <- subset(data_bac, media =='FG20')
d_13_bm <- rbind(d_13_m,d_13_b)
d_20_bm <- rbind(d_20_b,d_20_m)
survdiff(Survobj ~ media, data = data_meta)
```

```
## Call:
## survdiff(formula = Survobj ~ media, data = data_meta)
##
##             N Observed Expected (O-E)^2/E (O-E)^2/V
## media=FG13 53       51     61.3      1.74      6.56
## media=FG20 50       50     39.7      2.69      6.56
##
##  Chisq= 6.6  on 1 degrees of freedom, p= 0.01
```

```
survdiff(Surv(Time,status) ~ media, data = d_1350_m)
```

```
## Call:
## survdiff(formula = Surv(Time, status) ~ media, data = d_1350_m)
##
##             N Observed Expected (O-E)^2/E (O-E)^2/V
## media=FG13 53       51     39.3      3.49       8.4
## media=OP50 46       38     49.7      2.76       8.4
##
##  Chisq= 8.4  on 1 degrees of freedom, p= 0.004
```

```
survdiff(Surv(Time,status) ~ media, data = d_2050_m)
```

```
## Call:
## survdiff(formula = Surv(Time, status) ~ media, data = d_2050_m)
##
##             N Observed Expected (O-E)^2/E (O-E)^2/V
## media=FG20 50       50     31.2     11.38      24.7
## media=OP50 46       38     56.8      6.24      24.7
##
##  Chisq= 24.7  on 1 degrees of freedom, p= 7e-07
```

```
fit_13_mb <- coxph(Surv(Time,status) ~Metabolite, data = d_13_bm)
summary(fit_13_mb)
```

```
## Call:
## coxph(formula = Surv(Time, status) ~ Metabolite, data = d_13_bm)
##
##   n= 85, number of events= 83
##
##               coef exp(coef) se(coef)     z Pr(>|z|)
## Metabolite 0.05413   1.05562  0.22642 0.239    0.811
```

```
##
##            exp(coef) exp(-coef) lower .95 upper .95
## Metabolite     1.056     0.9473    0.6773     1.645
##
## Concordance= 0.529  (se = 0.035 )
## Rsquare= 0.001   (max possible= 0.999 )
## Likelihood ratio test= 0.06  on 1 df,   p=0.8
## Wald test            = 0.06  on 1 df,   p=0.8
## Score (logrank) test = 0.06  on 1 df,   p=0.8
```

```
fit_20_mb <- coxph(Surv(Time,status) ~Metabolite, data = d_20_bm)
summary(fit_20_mb)
```

```
## Call:
## coxph(formula = Surv(Time, status) ~ Metabolite, data = d_20_bm)
##
##   n= 64, number of events= 64
##
##              coef exp(coef) se(coef)     z Pr(>|z|)
## Metabolite 0.1039    1.1095   0.3279 0.317    0.751
##
##            exp(coef) exp(-coef) lower .95 upper .95
## Metabolite      1.11     0.9013    0.5835      2.11
##
## Concordance= 0.465  (se = 0.04 )
## Rsquare= 0.002   (max possible= 0.998 )
## Likelihood ratio test= 0.1  on 1 df,   p=0.7
## Wald test            = 0.1  on 1 df,   p=0.8
## Score (logrank) test = 0.1  on 1 df,   p=0.8
```