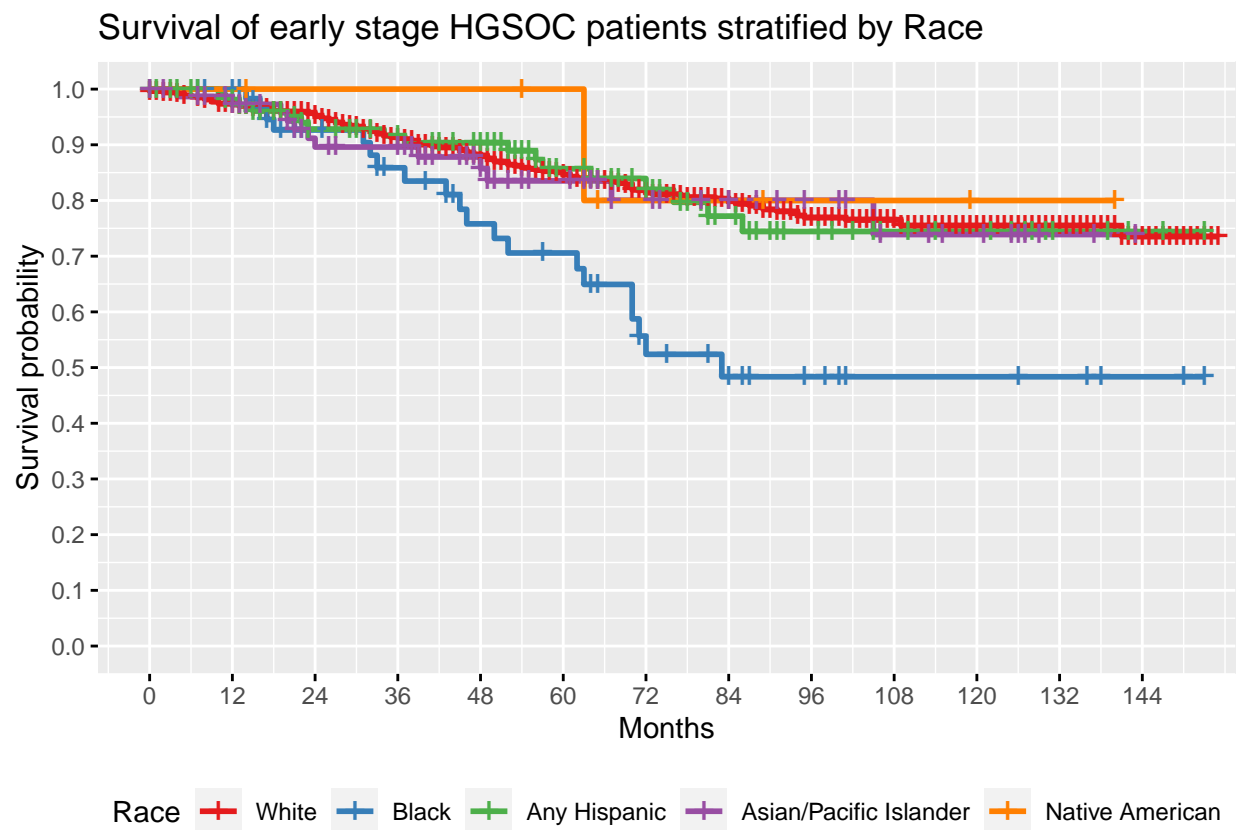


Outcome Inequality by Race in Early Stage High Grade Serous Ovarian Cancer

Kevin Kremer

10/8/2020

Survival of early-stage HGSOC by race

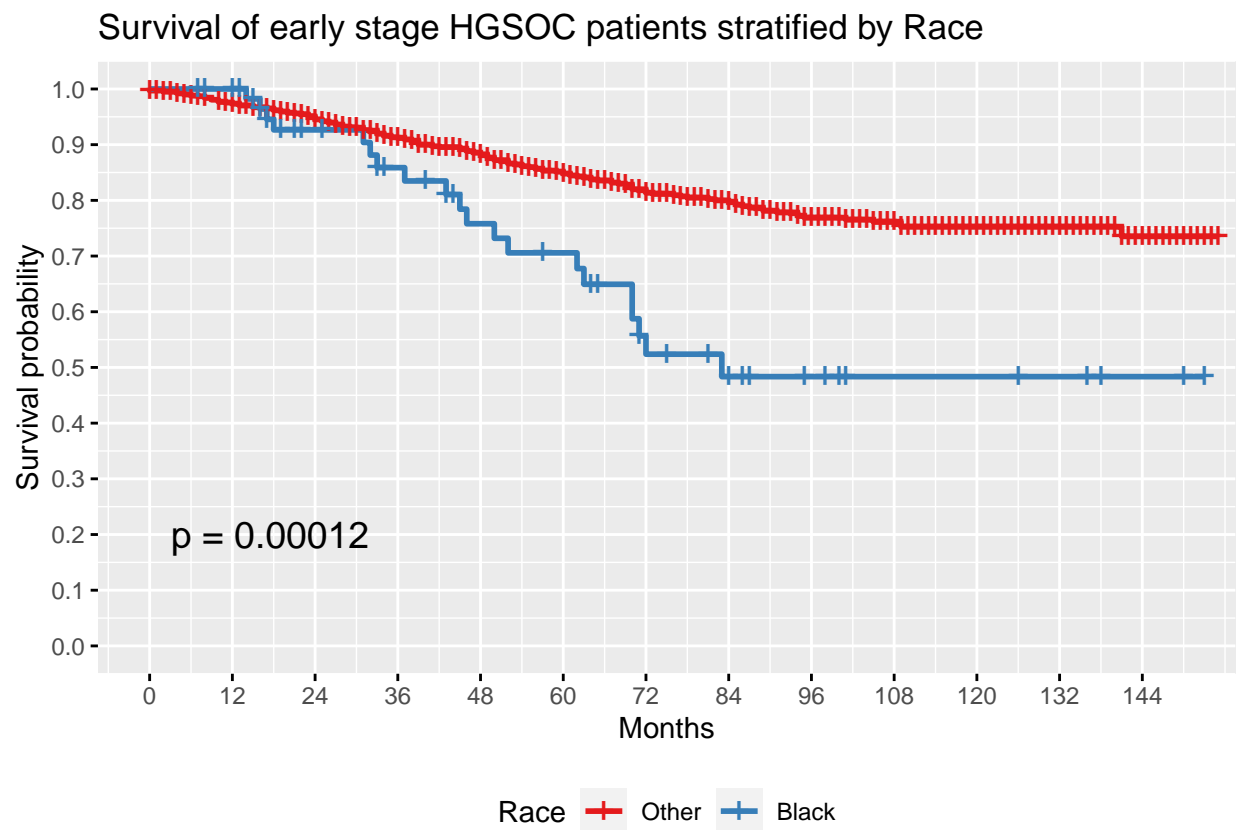


```
##
## Pairwise comparisons using Log-Rank test
##
## data: HGS.ES and Race
##
##      White Black  Hisp   API
## Black 0.0013 -      -      -
## Hisp  0.9541 0.0289 -      -
```

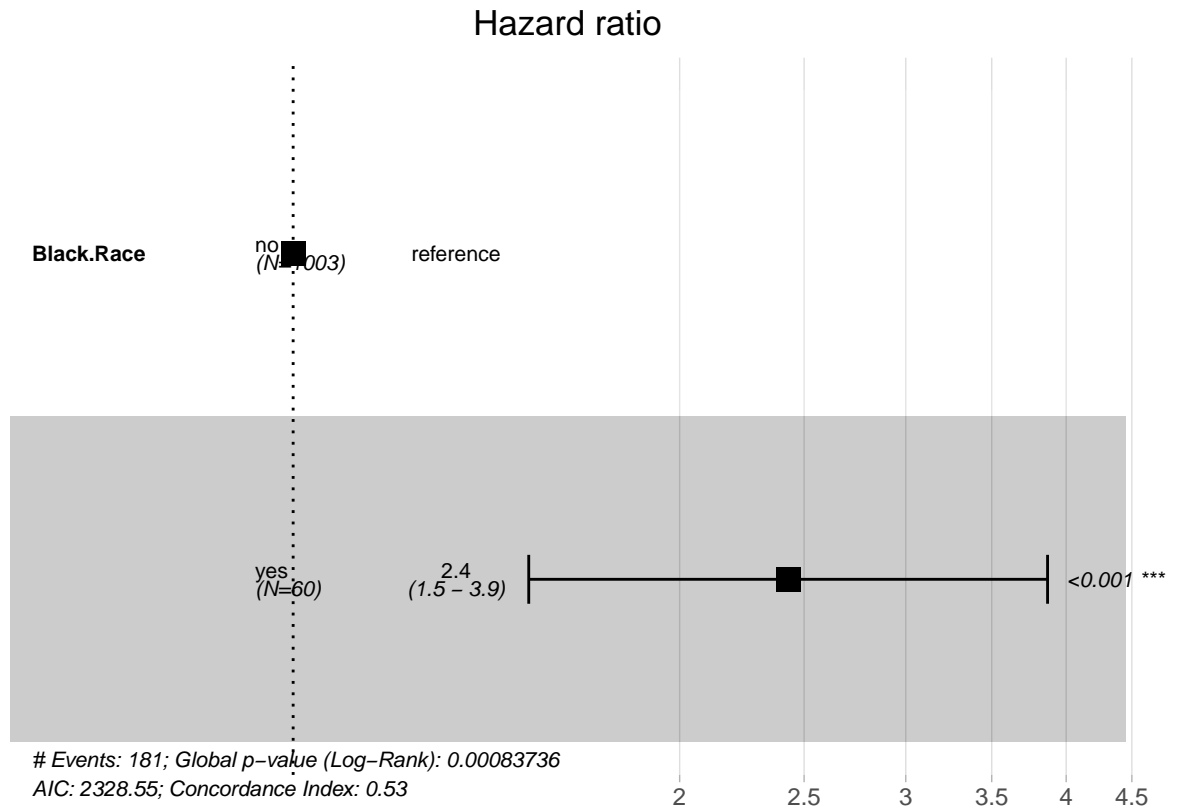
```
## API      0.9170 0.0870 0.9170 -
## Native 0.9170 0.5159 0.9170 0.9170
##
## P value adjustment method: BH
```

Race	Count
White	807
Black	60
Hisp	112
API	77
Native	7

Comparing Black Race to All Other Races Combined

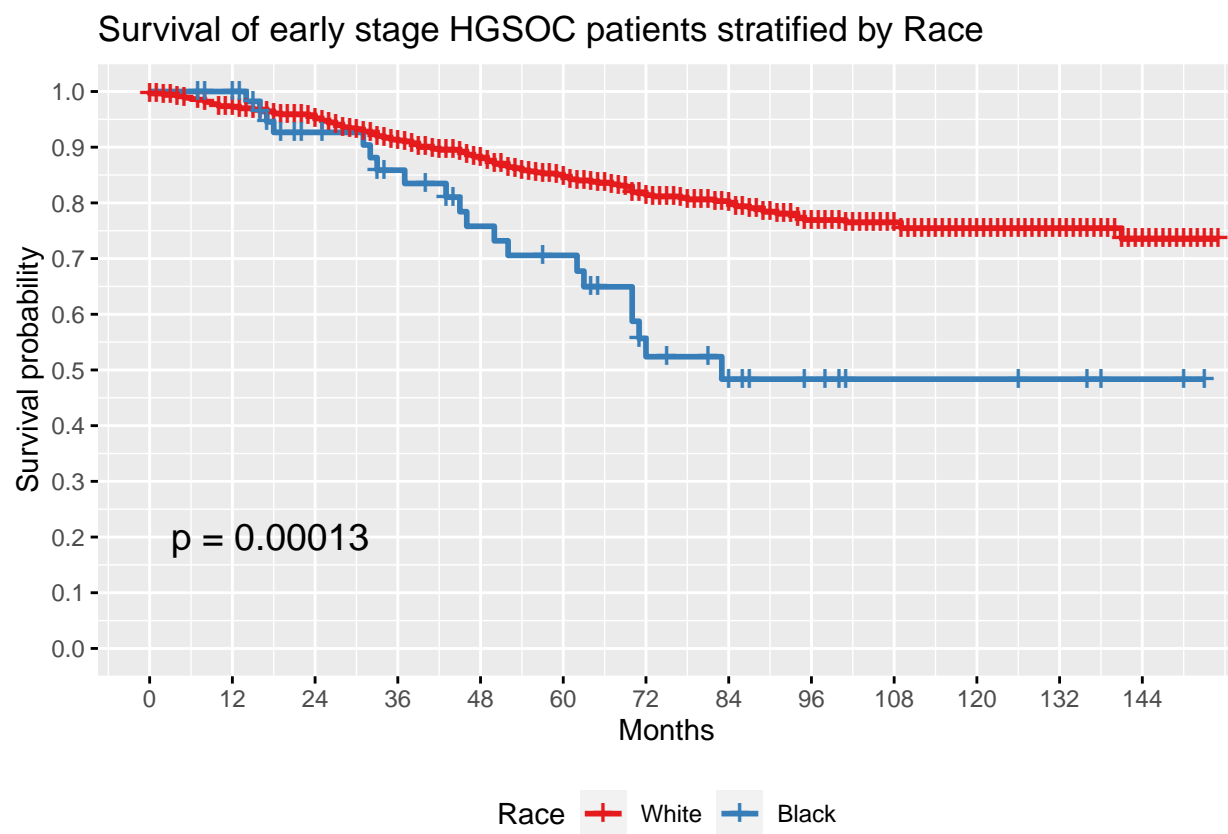


Race	Count
no	1003
yes	60

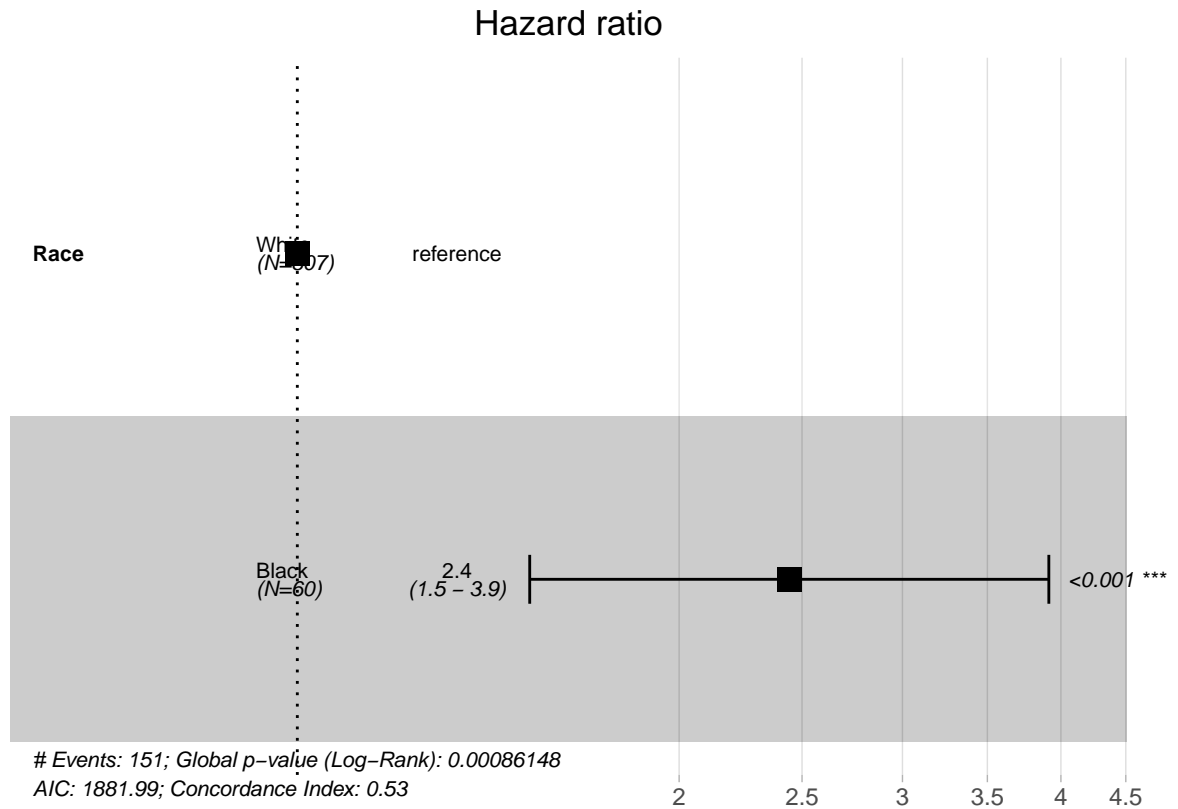


```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Black.Race, data = HGS.ES)
##
##      n= 1063, number of events= 181
##
##              coef exp(coef) se(coef)      z Pr(>|z|)
## Black.Raceyes 0.8877    2.4296   0.2374  3.74 0.000184 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##              exp(coef) exp(-coef) lower .95 upper .95
## Black.Raceyes      2.43      0.4116    1.526    3.869
##
## Concordance= 0.527 (se = 0.011 )
## Likelihood ratio test= 11.16 on 1 df,  p=8e-04
## Wald test               = 13.99 on 1 df,  p=2e-04
## Score (logrank) test = 14.93 on 1 df,  p=1e-04
```

Comparing Black Race to White Race

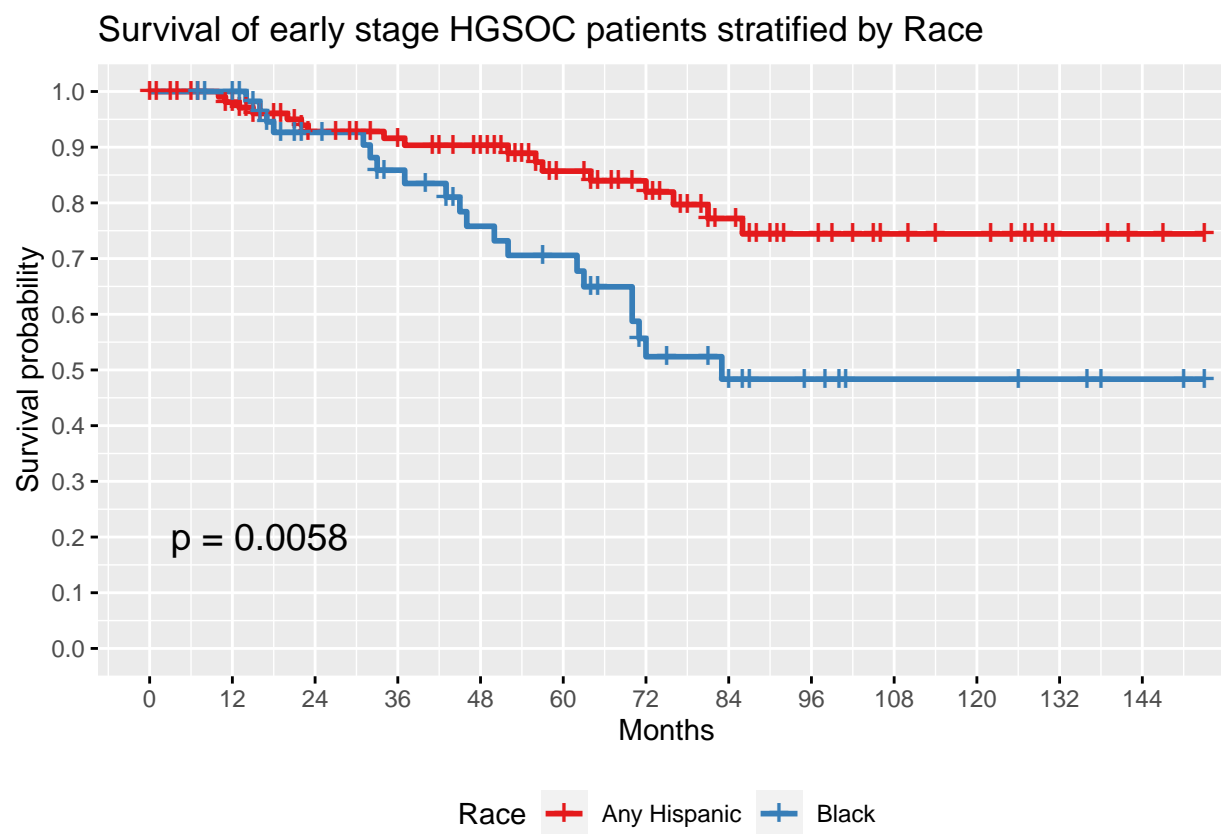


Race	Count
White	807
Black	60

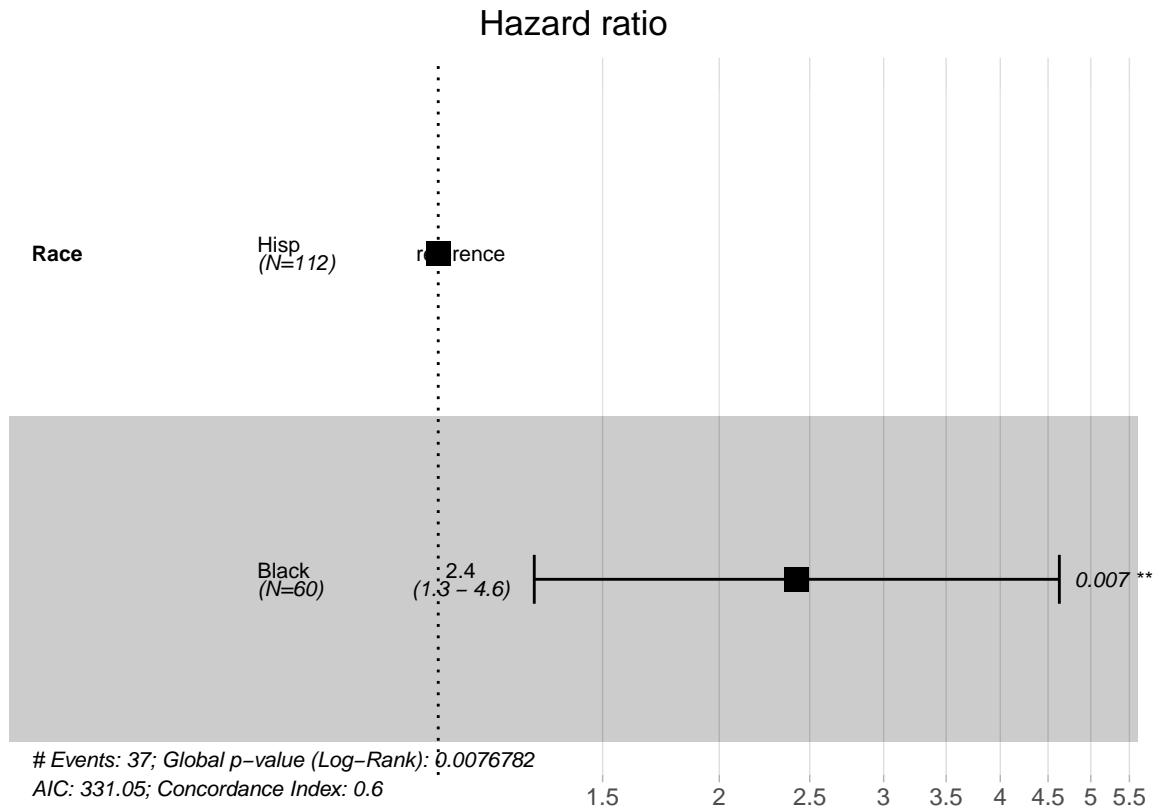


```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Race, data = HGS.ES.WB)
##
## n= 867, number of events= 151
##
##           coef exp(coef) se(coef)      z Pr(>|z|)
## RaceBlack 0.8931    2.4427   0.2404 3.715 0.000203 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##           exp(coef) exp(-coef) lower .95 upper .95
## RaceBlack    2.443    0.4094    1.525    3.913
##
## Concordance= 0.532 (se = 0.013 )
## Likelihood ratio test= 11.1 on 1 df,  p=9e-04
## Wald test               = 13.8 on 1 df,  p=2e-04
## Score (logrank) test = 14.74 on 1 df,  p=1e-04
```

Comparing Black Race to Hispanic Race



Race	Count
Hisp	112
Black	60

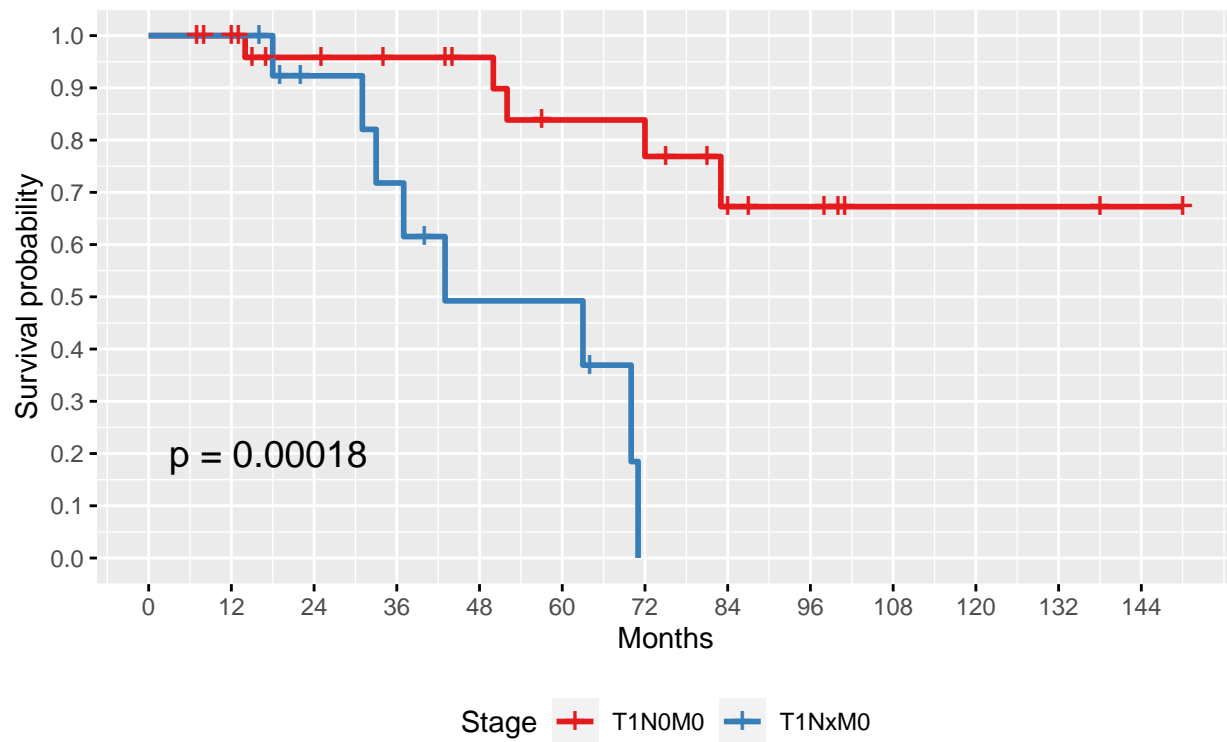


```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Race, data = HGS.ES.HB)
##
##      n= 172, number of events= 37
##
##              coef exp(coef) se(coef)      z Pr(>|z|)
## RaceBlack 0.8844    2.4216   0.3304 2.677  0.00743 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##              exp(coef) exp(-coef) lower .95 upper .95
## RaceBlack    2.422      0.413    1.267    4.627
##
## Concordance= 0.597 (se = 0.044 )
## Likelihood ratio test= 7.11 on 1 df,  p=0.008
## Wald test            = 7.16 on 1 df,  p=0.007
## Score (logrank) test = 7.64 on 1 df,  p=0.006
```

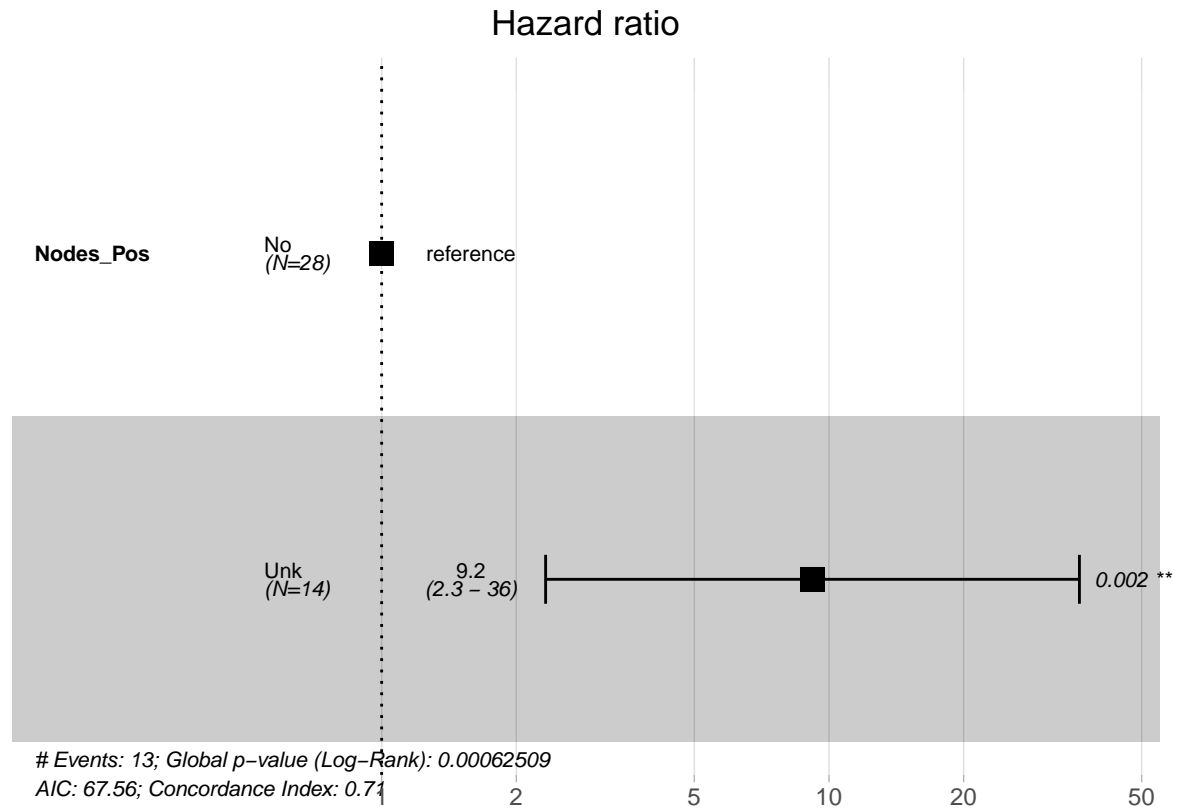
Does use of chemotherapy change outcomes in different races?

Black Race

Survival of Black early stage HGSOc patients that received chemotherapy stratified by Stage



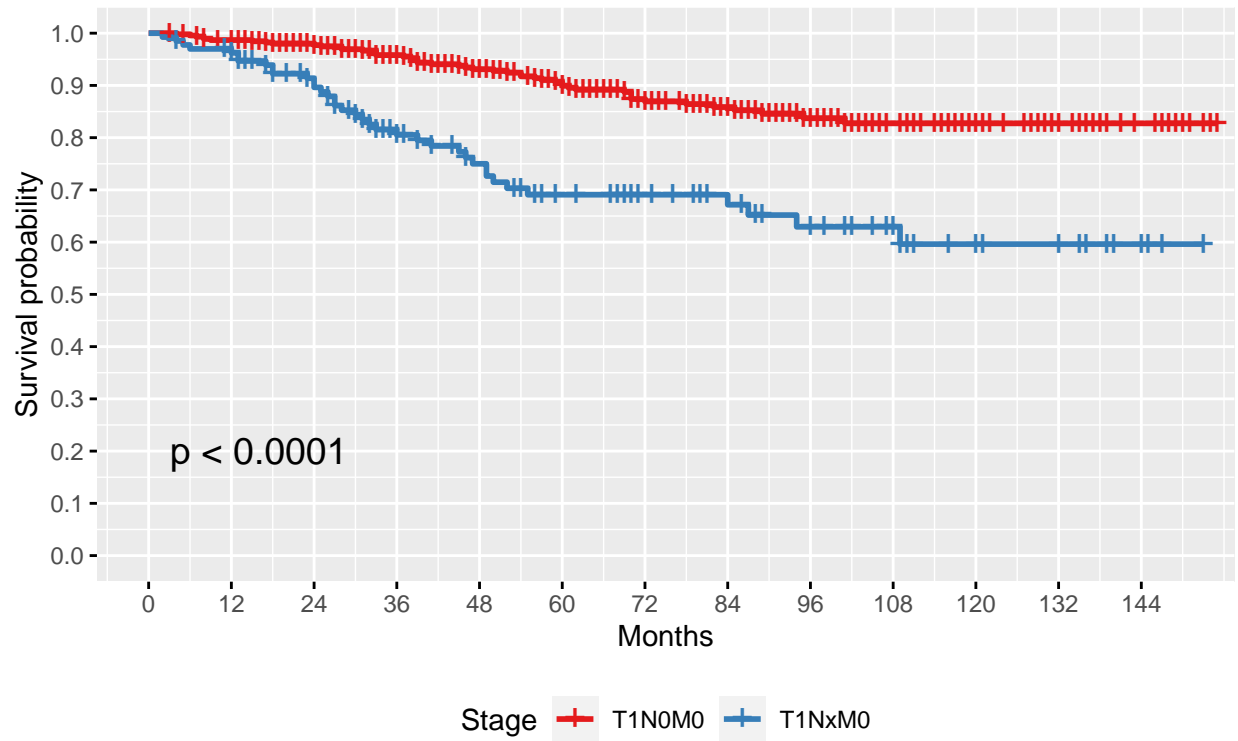
Positive Nodes	Count
No	28
Unk	14



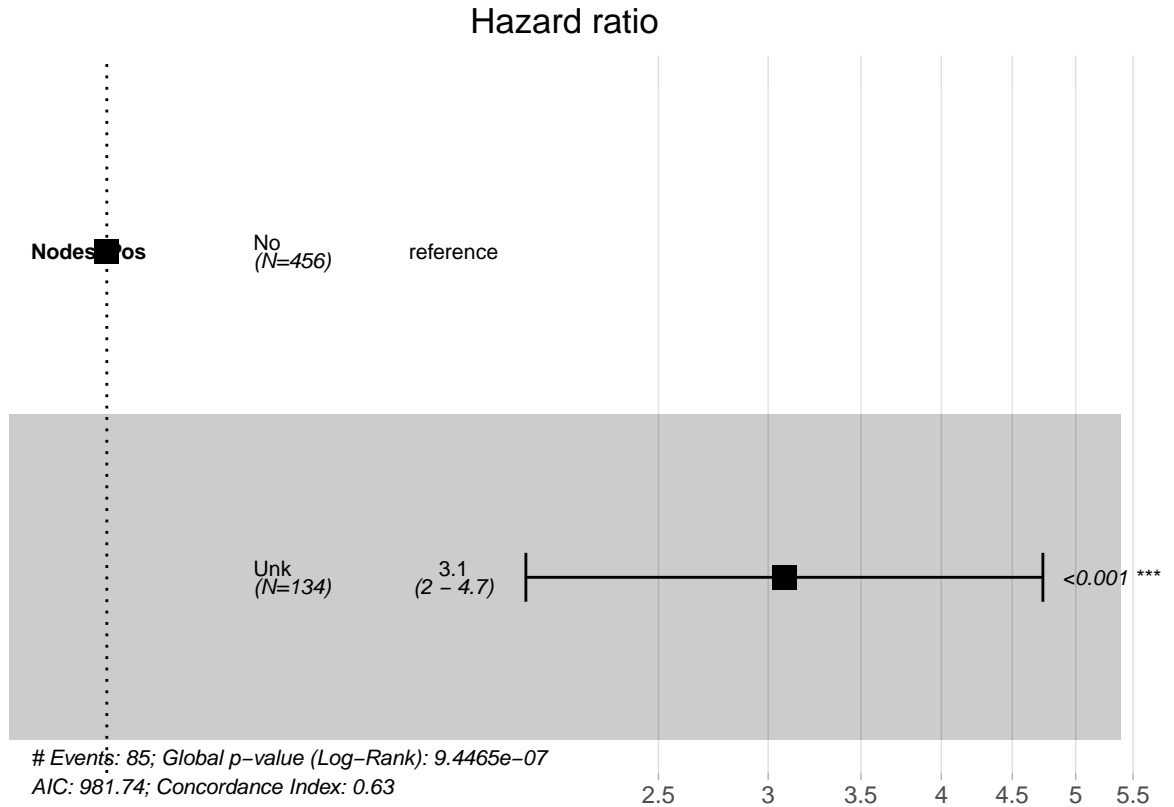
```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Nodes_Pos, data = HGS.ES.Black.Chemo)
##
## n= 42, number of events= 13
##
##           coef exp(coef) se(coef)      z Pr(>|z|)
## Nodes_PosUnk 2.218      9.188   0.701 3.164 0.00156 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##           exp(coef) exp(-coef) lower .95 upper .95
## Nodes_PosUnk      9.187    0.1088    2.326    36.3
##
## Concordance= 0.706 (se = 0.07 )
## Likelihood ratio test= 11.7 on 1 df,  p=6e-04
## Wald test            = 10.01 on 1 df,  p=0.002
## Score (logrank) test = 13.98 on 1 df,  p=2e-04
```

White Race

Survival of White early stage HGSOc patients that received chemotherapy stratified by Stage



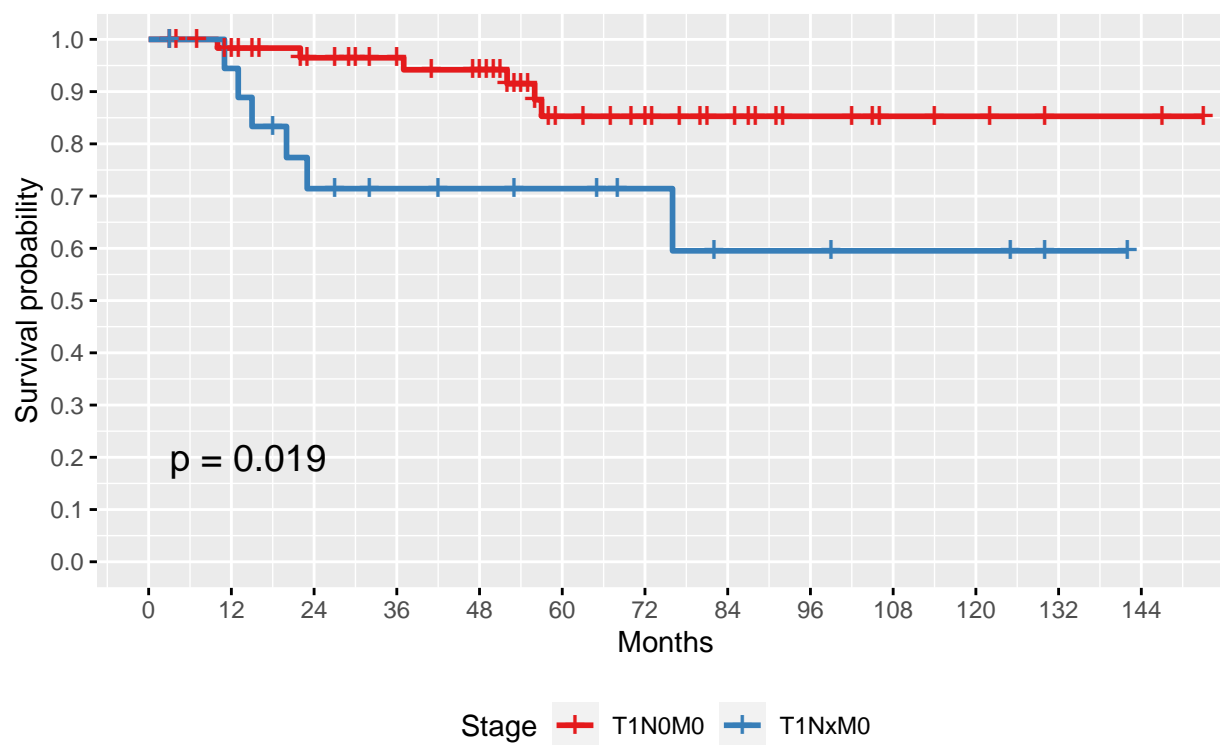
Positive Nodes	Count
No	456
Unk	134



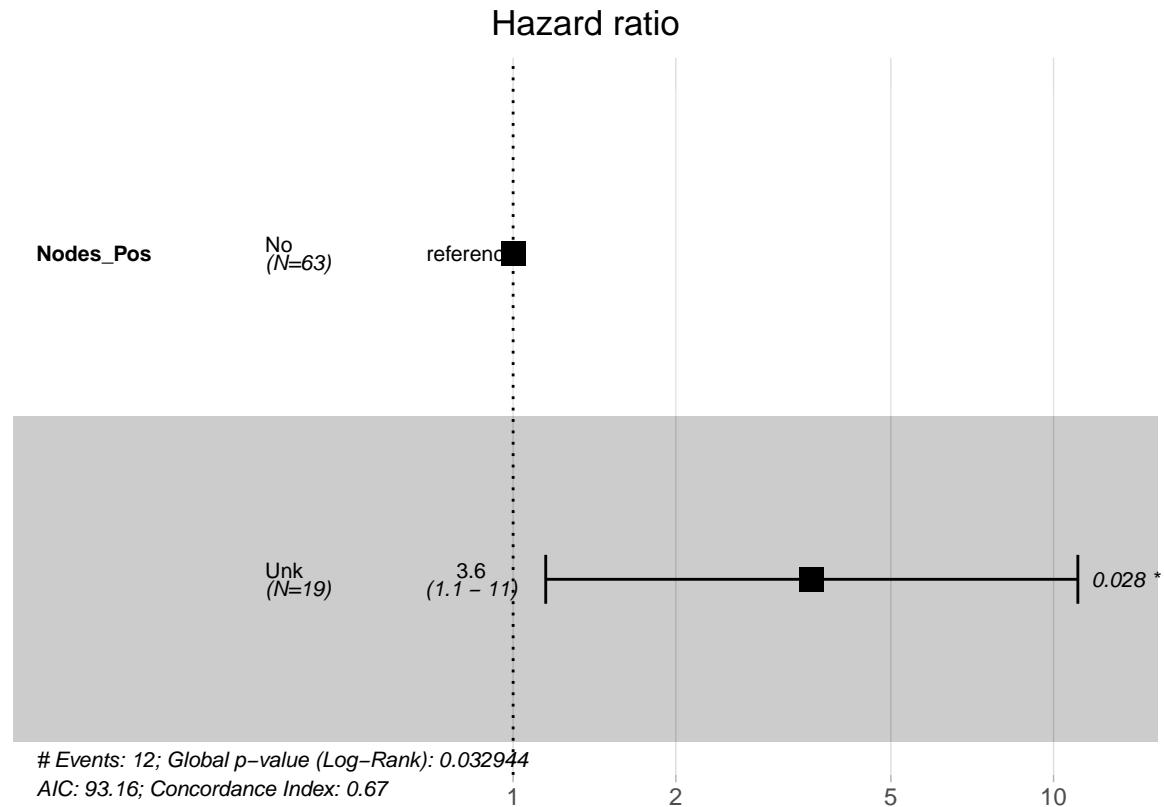
```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Nodes_Pos, data = HGS.ES.White.Chemo)
##
## n= 590, number of events= 85
##
##              coef exp(coef) se(coef)      z Pr(>|z|)
## Nodes_PosUnk 1.1255    3.0818  0.2191  5.137 2.79e-07 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##              exp(coef) exp(-coef) lower .95 upper .95
## Nodes_PosUnk    3.082    0.3245    2.006    4.735
##
## Concordance= 0.633 (se = 0.028 )
## Likelihood ratio test= 24.04 on 1 df,  p=9e-07
## Wald test               = 26.39 on 1 df,  p=3e-07
## Score (logrank) test = 29.28 on 1 df,  p=6e-08
```

Hispanic Race

Survival of Hispanic early stage HGSOc patients that received chemotherapy stratified by Stage



Positive Nodes	Count
No	63
Unk	19



```
## Call:
## coxph(formula = Surv(SurvMonths, COD) ~ Nodes_Pos, data = HGS.ES.Hisp.Chemo)
##
##    n= 82, number of events= 12
##
##              coef exp(coef) se(coef)    z Pr(>|z|)
## Nodes_PosUnk 1.2726    3.5702  0.5784 2.2  0.0278 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##              exp(coef) exp(-coef) lower .95 upper .95
## Nodes_PosUnk      3.57    0.2801    1.149    11.09
##
## Concordance= 0.666 (se = 0.074 )
## Likelihood ratio test= 4.55 on 1 df,  p=0.03
## Wald test               = 4.84 on 1 df,  p=0.03
## Score (logrank) test = 5.52 on 1 df,  p=0.02
```