

Generating plots in the documentation (section Examples)

Emmanuelle Comets

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Objective

Generate the plots for the LaTeX user guide

Setup

loading libraries

Install package in development mode

```
dev_mode() # development mode
```

```
## v Dev mode: ON
```

```
install.packages(pkgs=file.path(libDir,"npde_3.3.tar.gz"),repos=NULL)
```

```
## Installation du package dans '/home/eco/R-dev'
```

```
## (car 'lib' n'est pas spécifié)
```

```
library(npde)
```

Run examples

- remove warnings (name.ipred empty, etc...) **Romain** fait

```
## -----
## Distribution of npde :
##      nb of obs: 120
##      mean= 0.0668   (SE= 0.095 )
##      variance= 1.074   (SE= 0.14 )
##      skewness= 0.511
##      kurtosis= 0.2912
## -----
## Statistical tests (adjusted p-values):
##   t-test           : 1
##   Fisher variance test : 1
##   SW test of normality : 0.00819 **
##   Global test       : 0.00819 **
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----
## -----
## Distribution of npde :
##      nb of obs: 300
```

```

##          mean= -0.07644   (SE= 0.057 )
##      variance= 0.9856   (SE= 0.081 )
##      skewness= -0.2286
##      kurtosis= 0.1919
## -----
## Statistical tests (adjusted p-values):
##      t-test           : 0.55
##      Fisher variance test : 1
##      SW test of normality : 0.713
##      Global test       : 0.55
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----

## -----
## Distribution of npde :
##      nb of obs: 169
##          mean= 0.1433   (SE= 0.07 )
##      variance= 0.8186   (SE= 0.089 )
##      skewness= -0.03812
##      kurtosis= -0.3733
## -----
## Statistical tests (adjusted p-values):
##      t-test           : 0.123
##      Fisher variance test : 0.247
##      SW test of normality : 1
##      Global test       : 0.123
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----

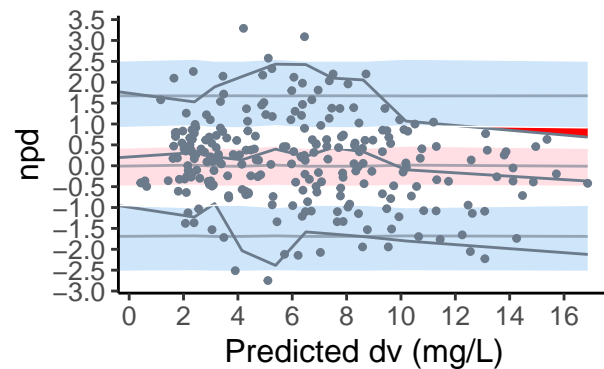
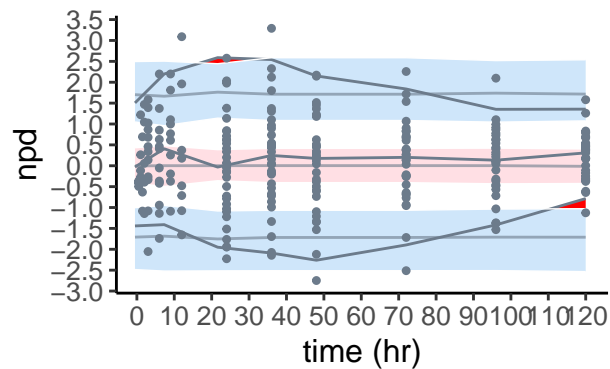
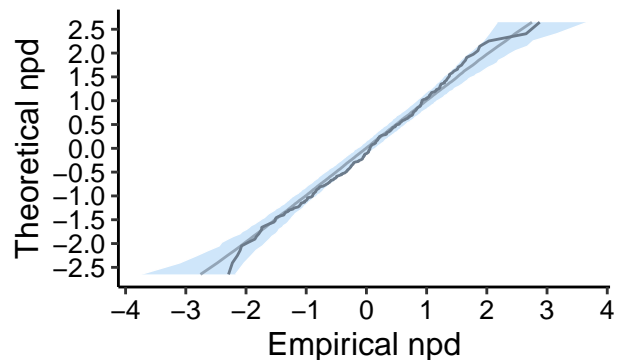
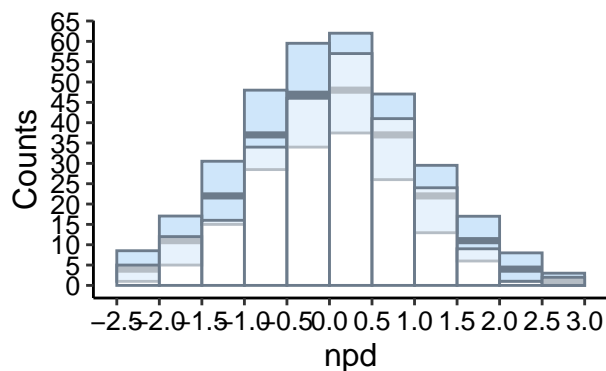
## -----
## Distribution of npde :
##      nb of obs: 300
##          mean= 0.03101   (SE= 0.057 )
##      variance= 0.9715   (SE= 0.079 )
##      skewness= -0.006498
##      kurtosis= 0.8122
## -----
## Statistical tests (adjusted p-values):
##      t-test           : 1
##      Fisher variance test : 1
##      SW test of normality : 0.00364 **
##      Global test       : 0.00364 **
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----

## -----
## Distribution of npde :
##      nb of obs: 300
##          mean= 0.03058   (SE= 0.062 )
##      variance= 1.164   (SE= 0.095 )
##      skewness= 0.04433
##      kurtosis= -0.05092

```

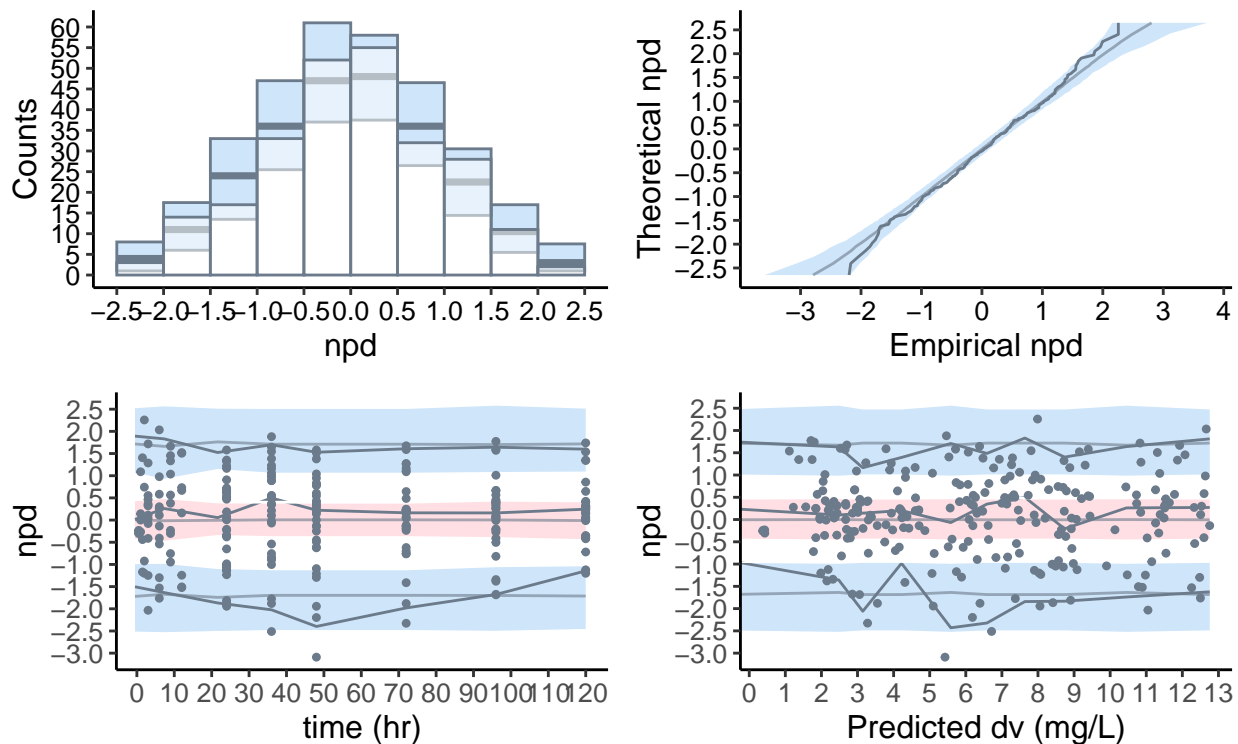
```
## -----
## Statistical tests (adjusted p-values):
##   t-test      : 1
##   Fisher variance test : 0.162
##   SW test of normality : 1
##   Global test   : 0.162
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----

## -----
## Distribution of npde :
##   nb of obs: 247
##   mean= 0.03419 (SE= 0.06 )
##   variance= 0.8753 (SE= 0.079 )
##   skewness= -0.1149
##   kurtosis= -0.0497
## -----
## Statistical tests (adjusted p-values):
##   t-test      : 1
##   Fisher variance test : 0.471
##   SW test of normality : 1
##   Global test   : 0.471
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----
```



```
## -----
## Distribution of npde :
##   nb of obs: 247
##   mean= 0.02928 (SE= 0.059 )
```

```
##      variance= 0.8549   (SE= 0.077 )
##      skewness= -0.07211
##      kurtosis= -0.4172
## -----
## Statistical tests (adjusted p-values):
##      t-test           : 1
##      Fisher variance test : 0.288
##      SW test of normality : 1
##      Global test       : 0.288
## ---
## Signif. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
## -----
```

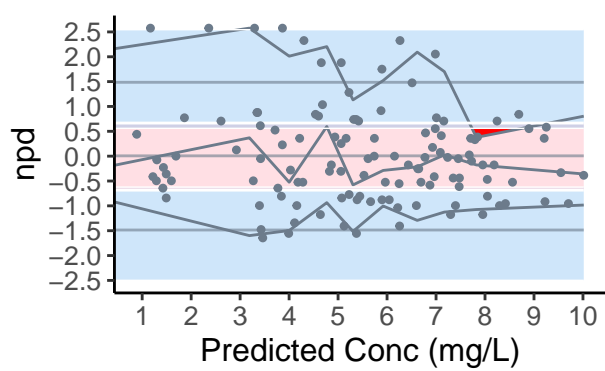
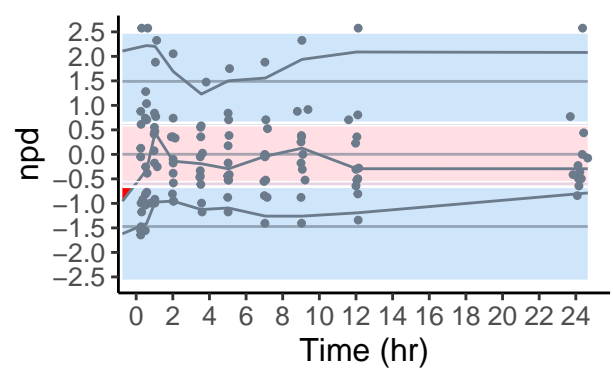
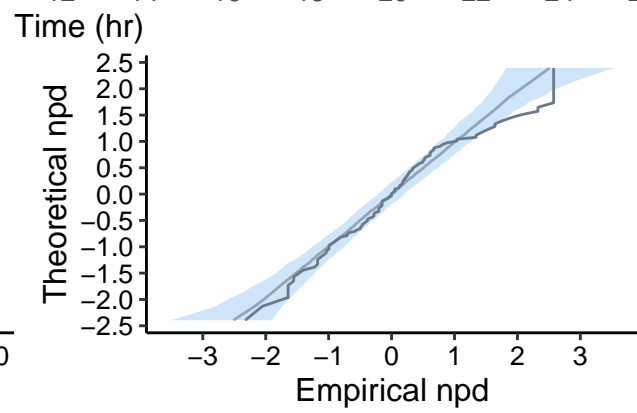
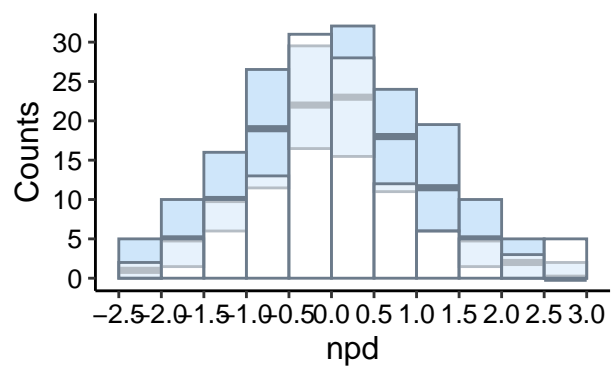
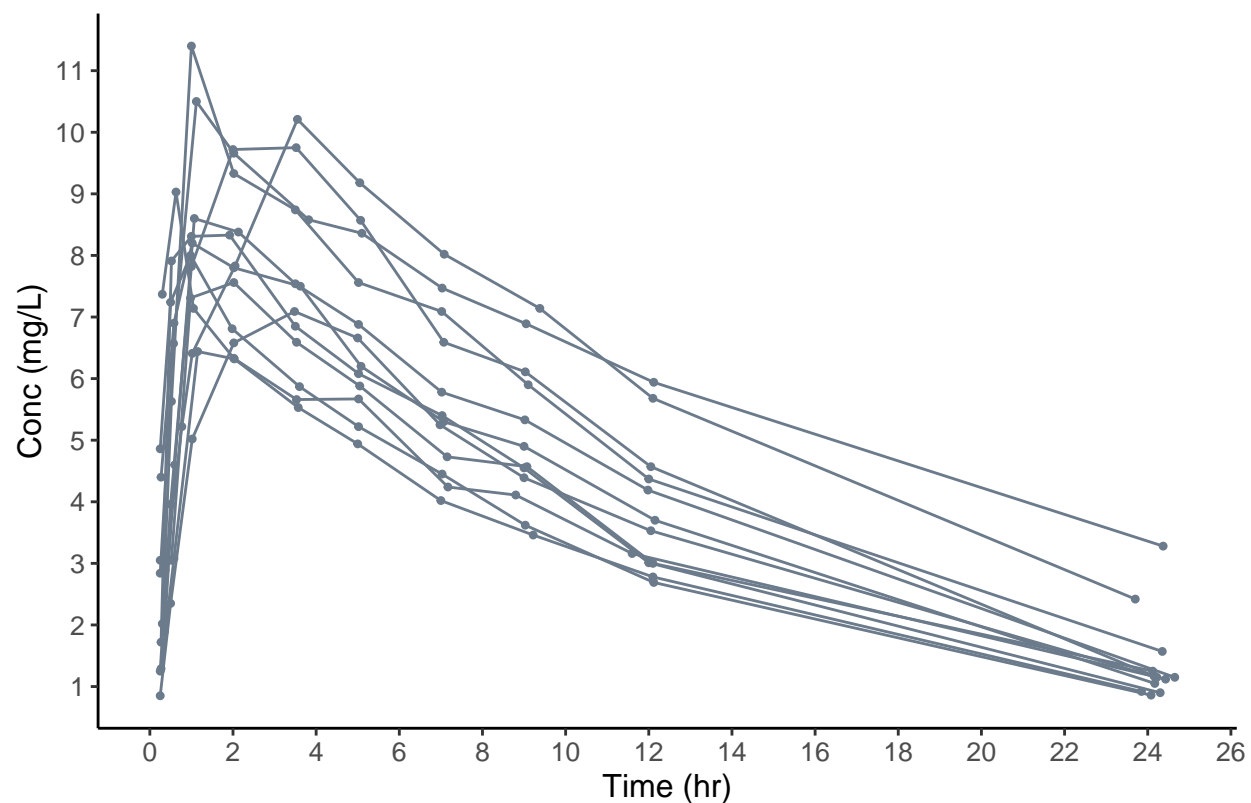


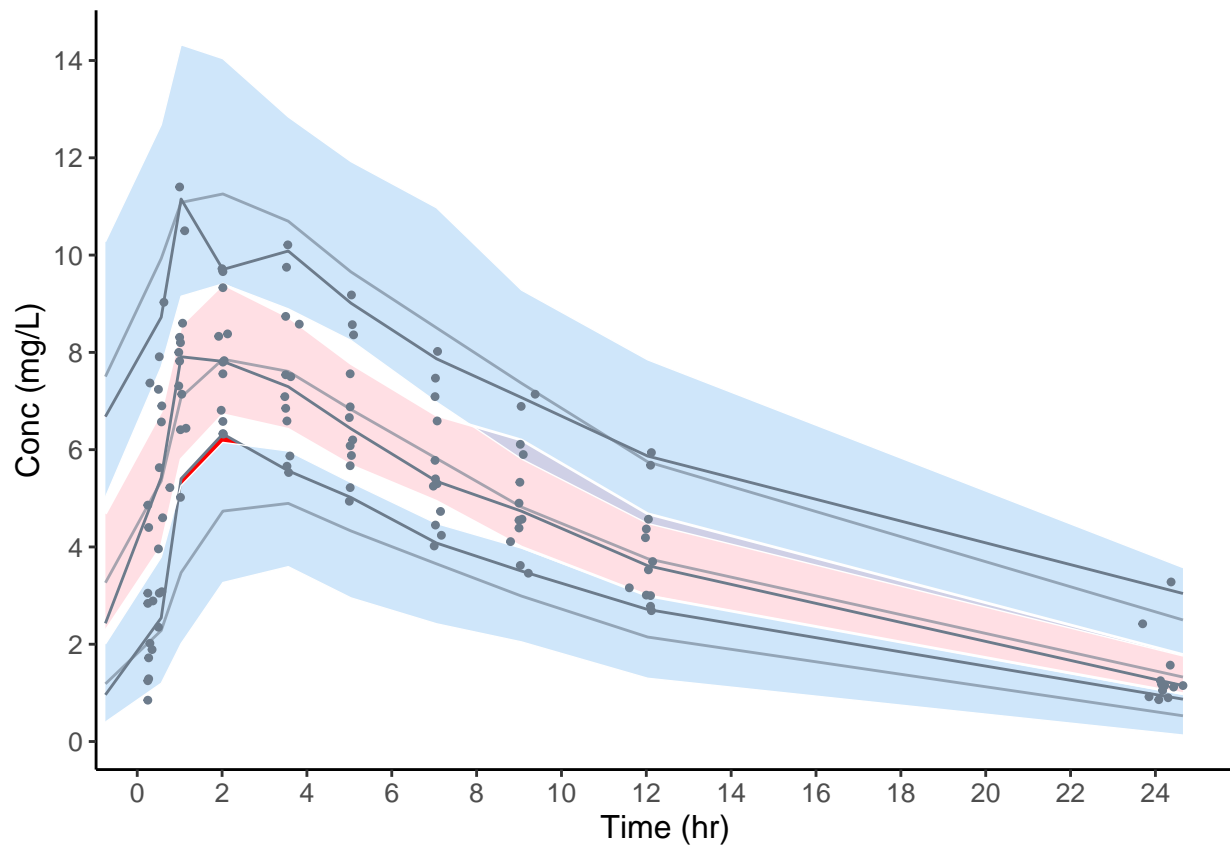
Theophylline example

- data
 - le `plot(npdeData)` ne marche pas **Romain** à faire pour la 3.1 (si possible en essayant d'utiliser le même code de base)
 - pour faire un graphe il faut passer par `plot.type="data"` ou `npde.plot.data()`
- VPC, scatterplot **Eco fait**
 - modifié pour que le tracé des percentiles observés soit fait avec les `linetype` et `size` de `lobs` (pas des bandes), par contre la couleur matche celle de la bande de prédiction correspondante

```
## Warning: Removed 12 rows containing missing values (`geom_point()`).
```

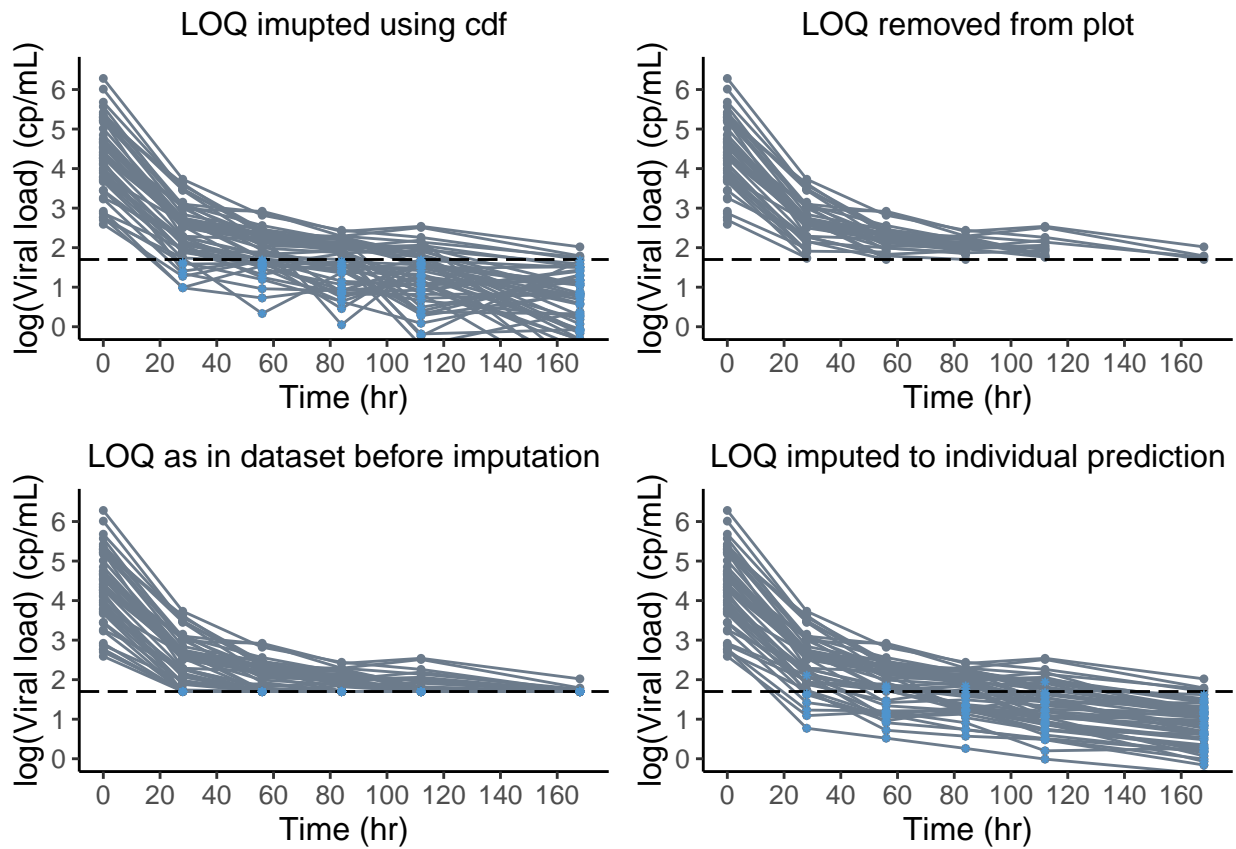
```
## Warning: Removed 12 rows containing missing values (`geom_line()`).
```



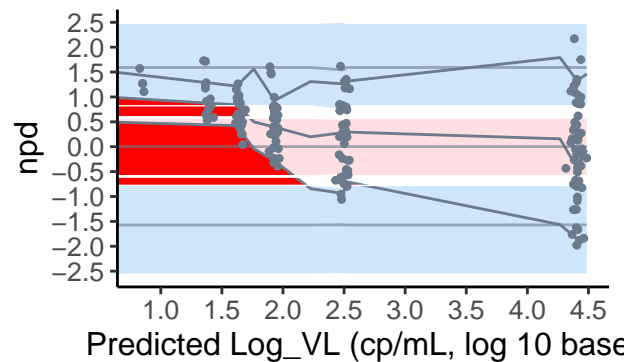
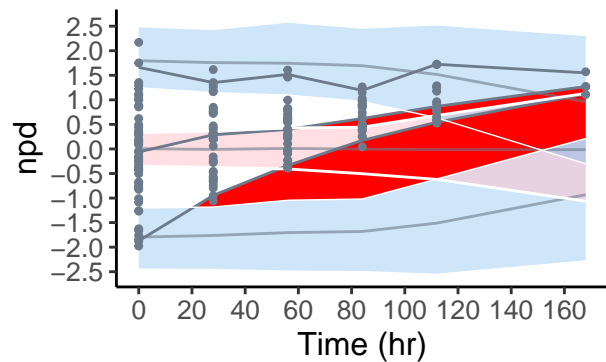
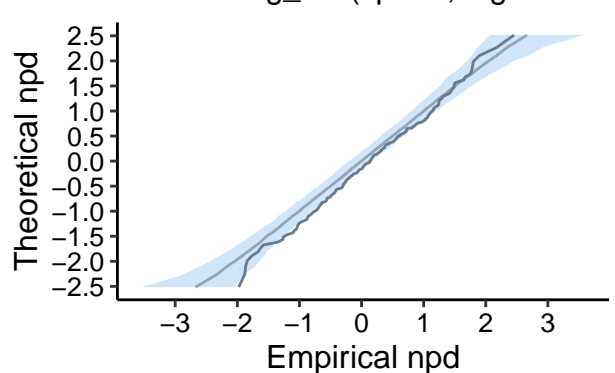
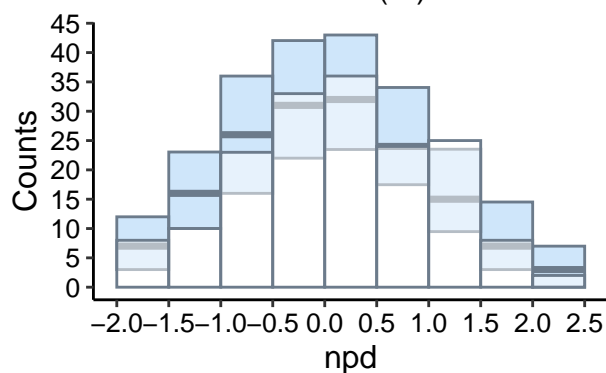
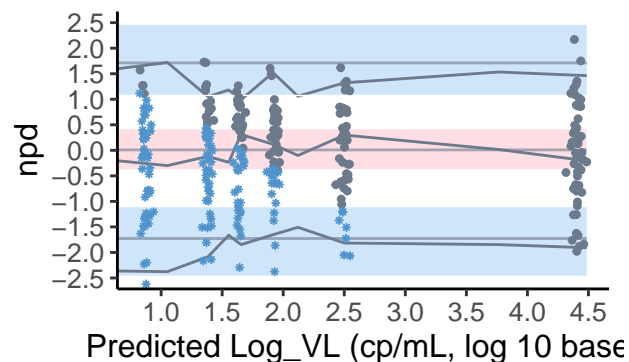
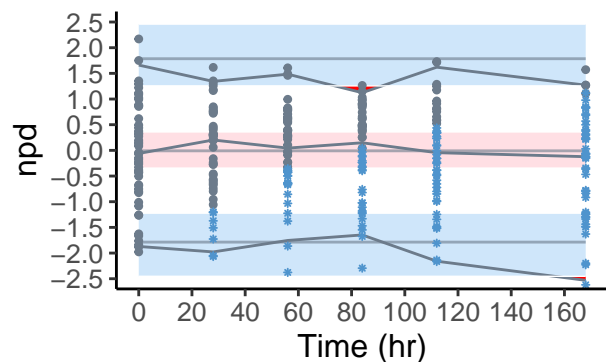
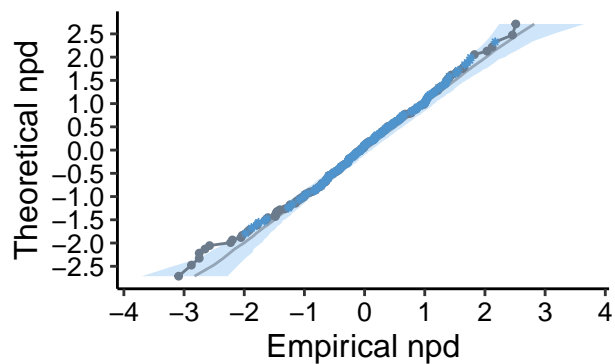
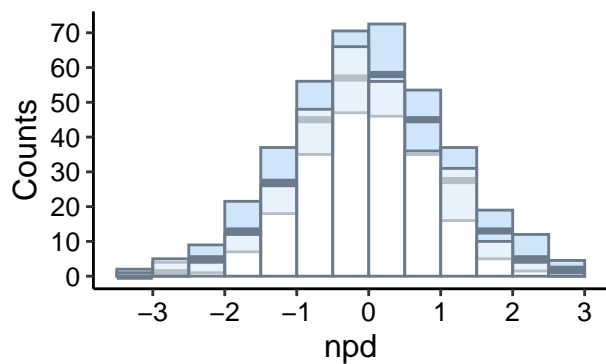


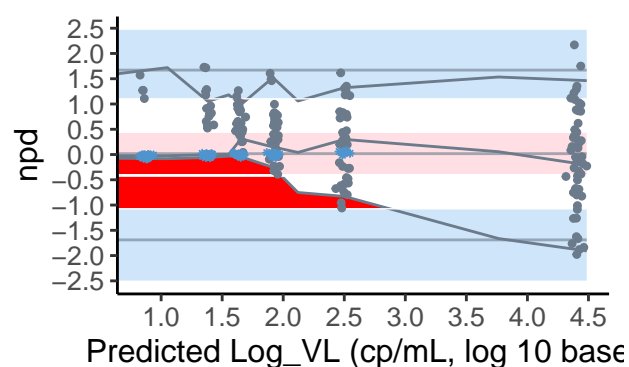
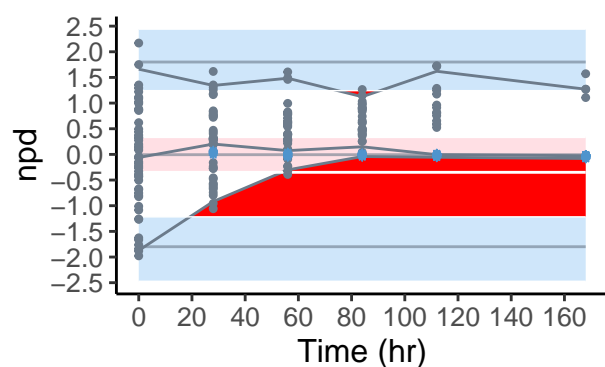
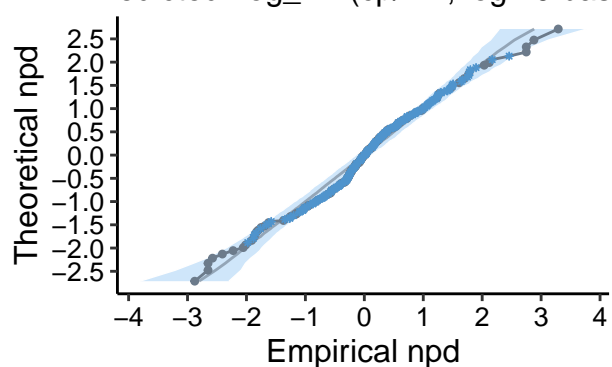
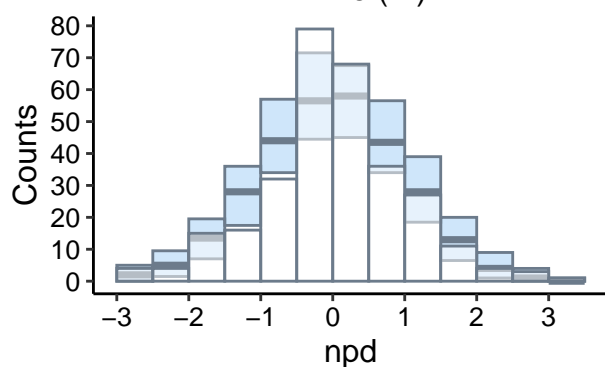
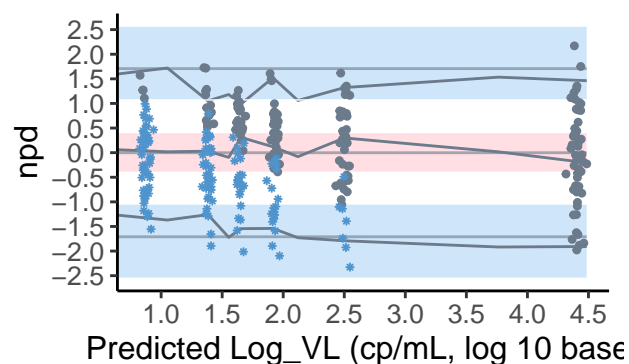
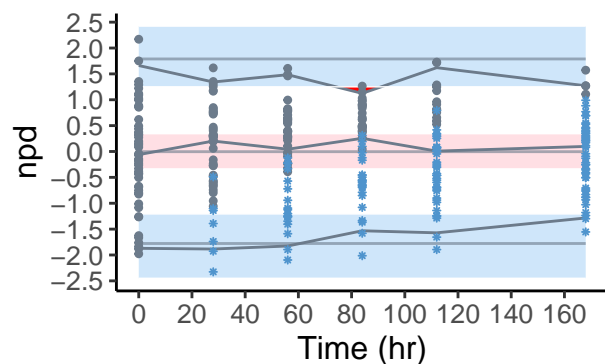
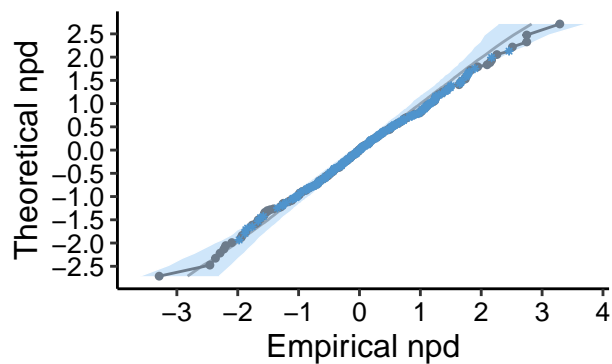
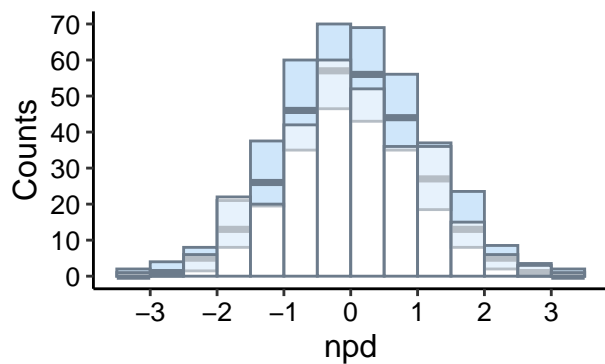
Viral load example

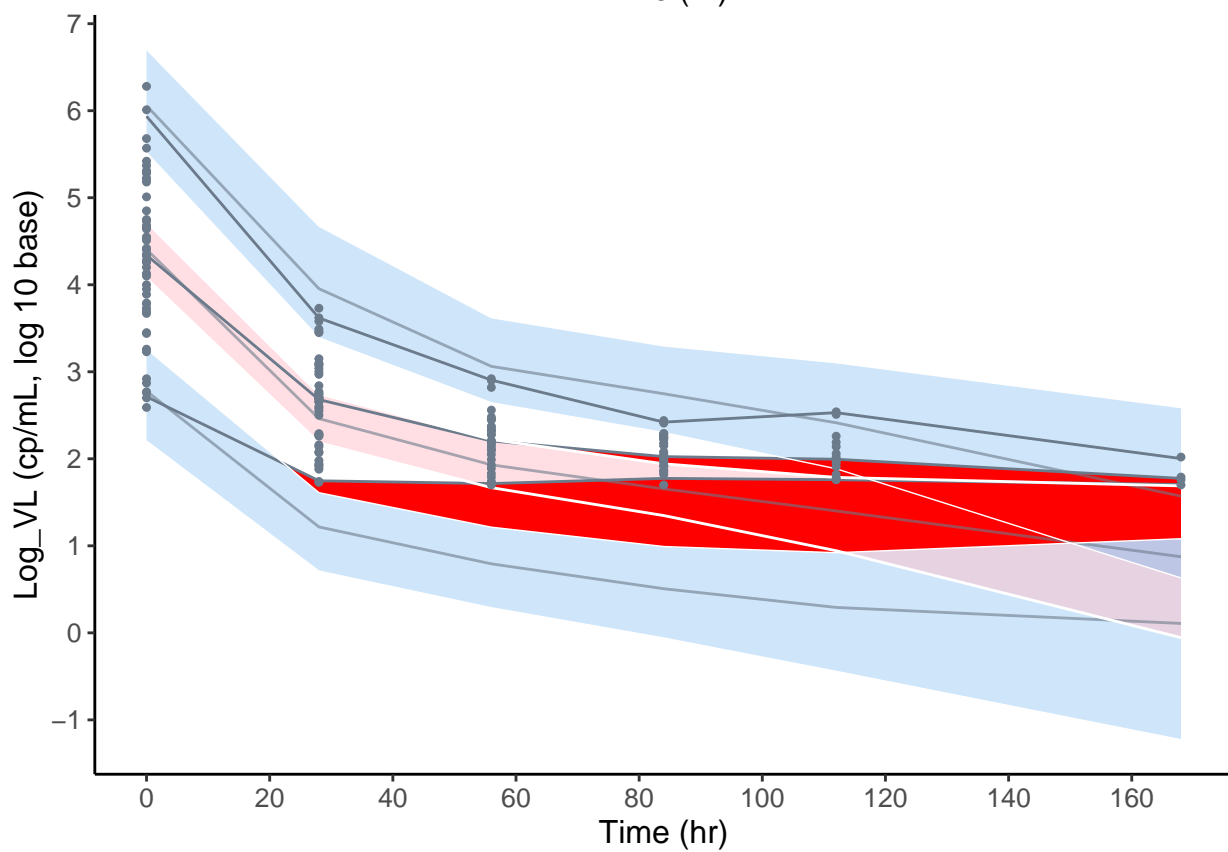
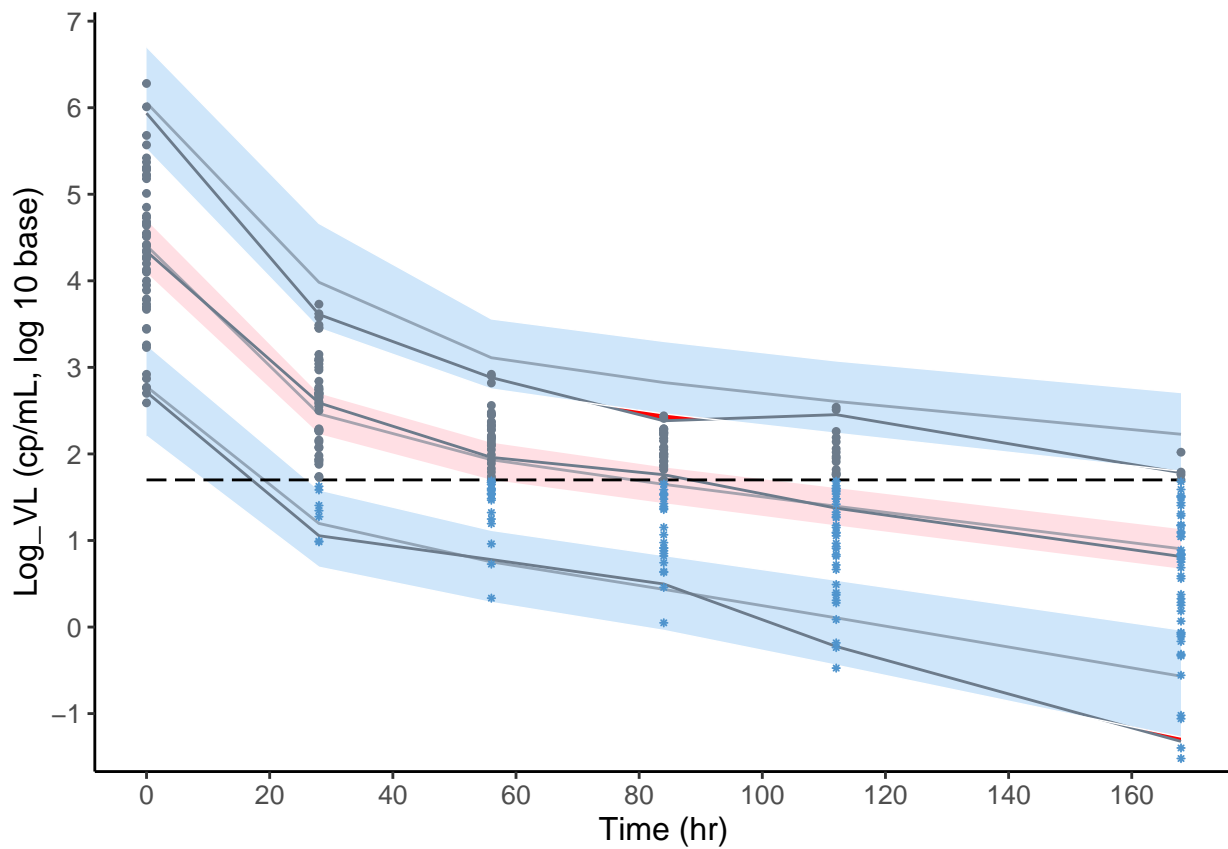
- data
 - mêmes problèmes que plus haut
 - LOQ data should be plotted **Romain**
 - besoin de faire un waffle plot avec les 4 objets data, **Romain TODO** possible ? (sinon sauver 4 graphes)
 - complete data according to the censoring method when an npdeObject is given (plot just the LOQ data when the plot is called directly on a npdeData object) **Romain**

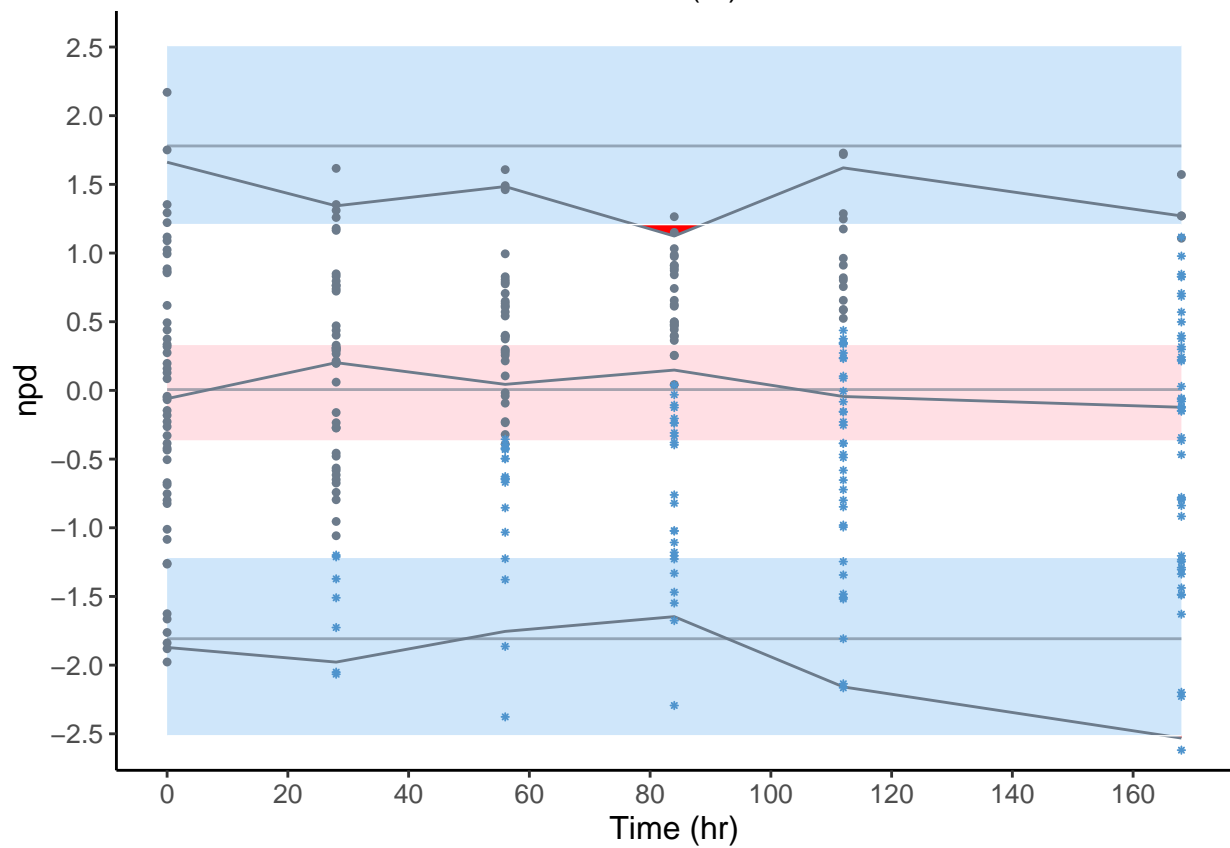
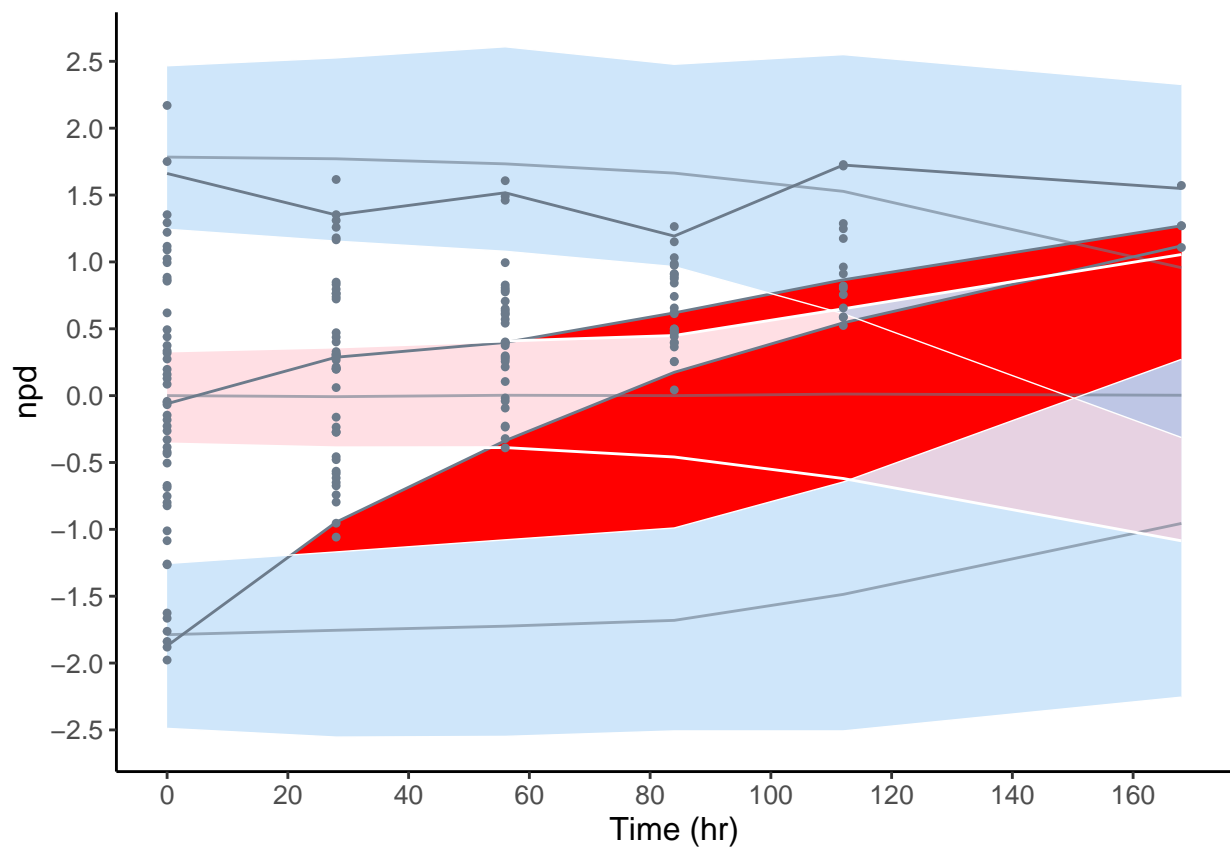


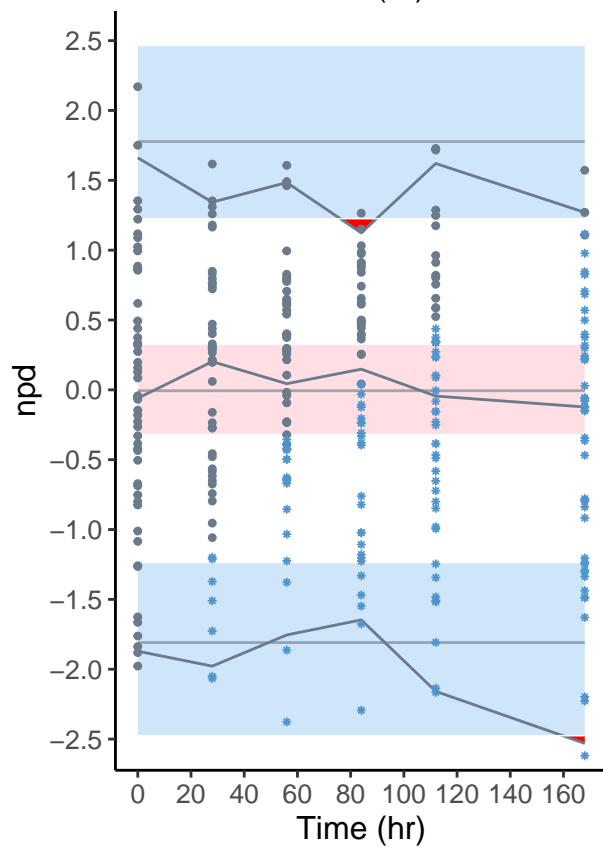
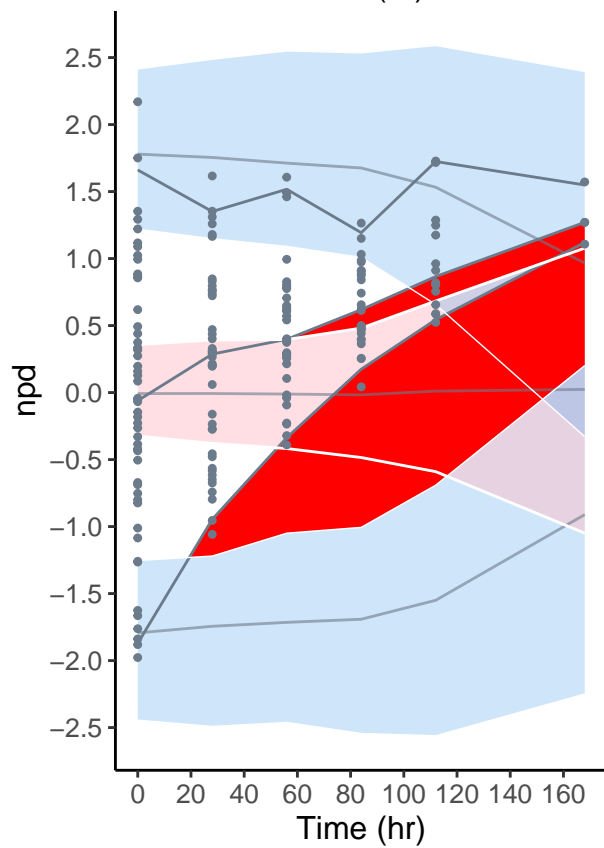
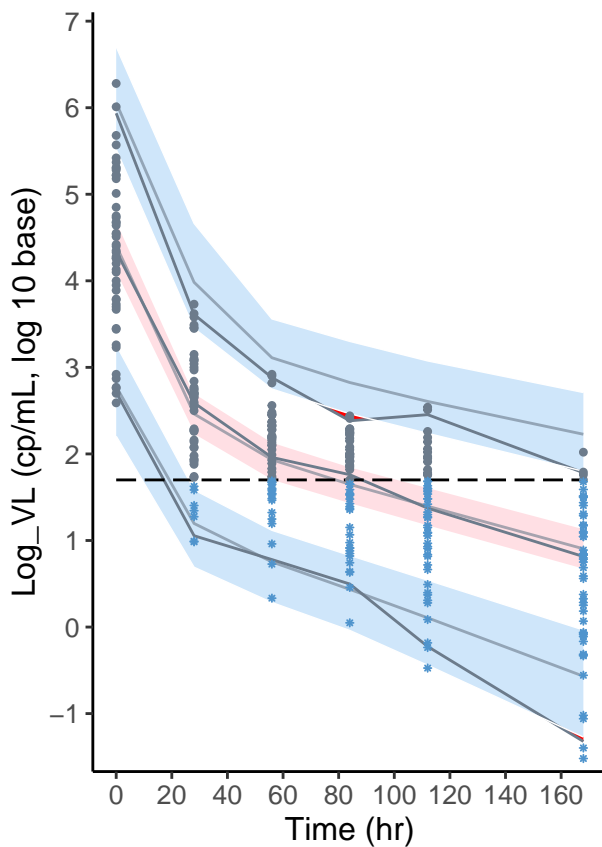
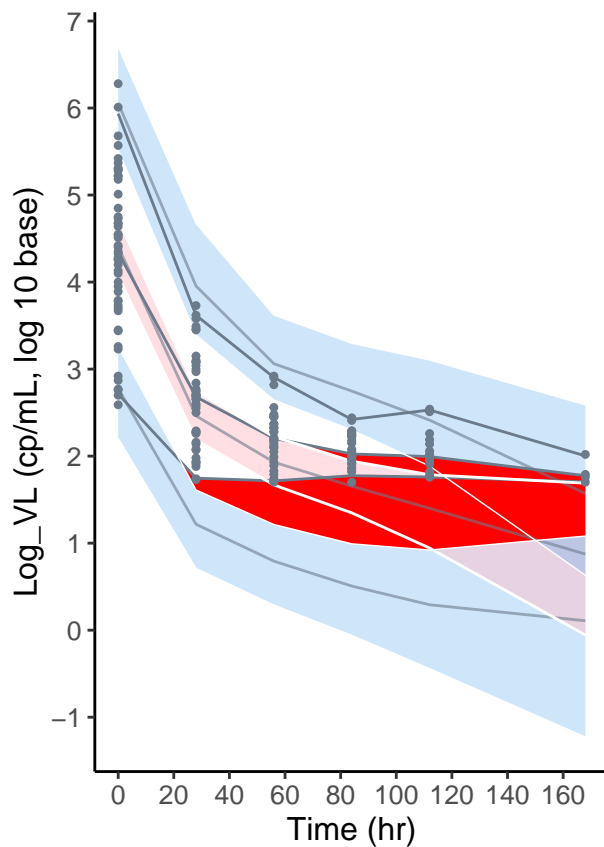
- scatterplots and VPC
 - pb with VPC of x50 **Eco fait**
- possibilité d'utiliser un grid.arrange pour les 2 derniers graphes ? **Romain**
- VPC missing tite on y-axis



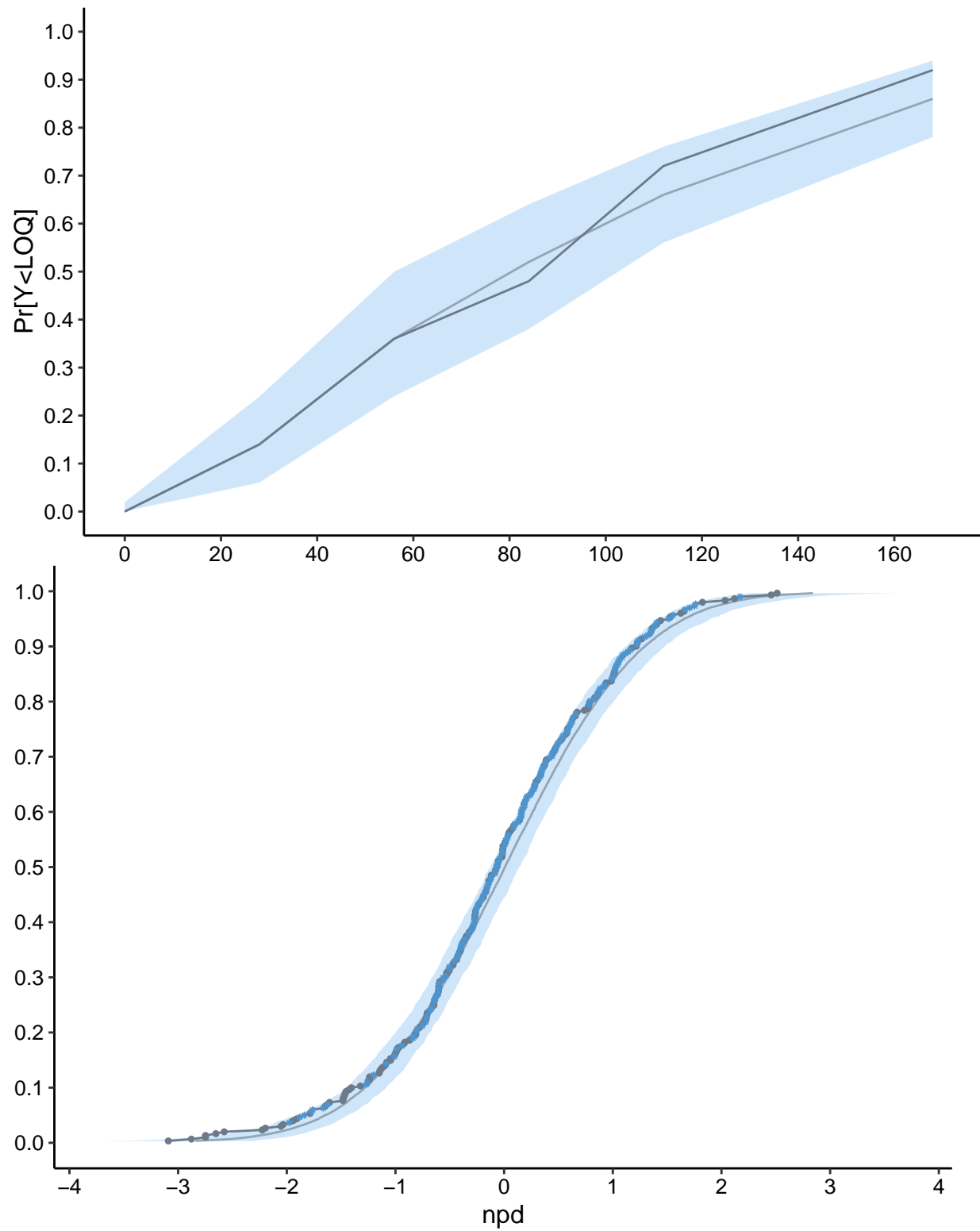








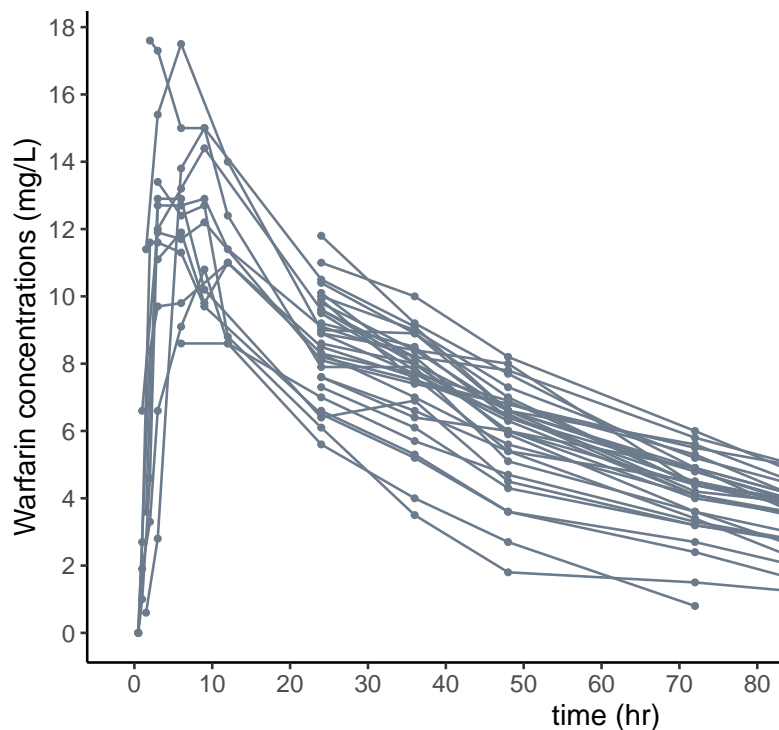
- $P(Y < LOQ)$: changed defaults



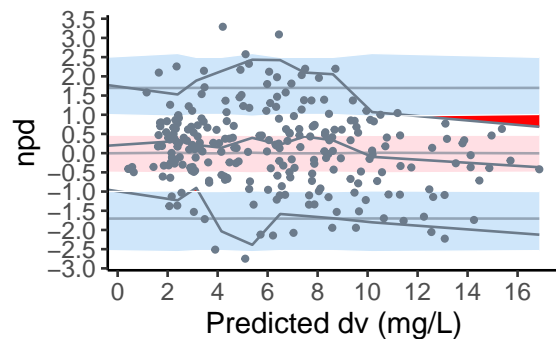
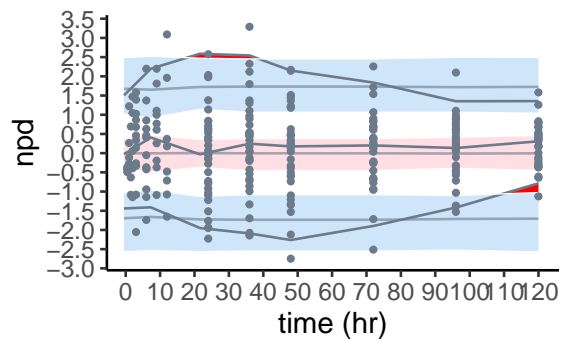
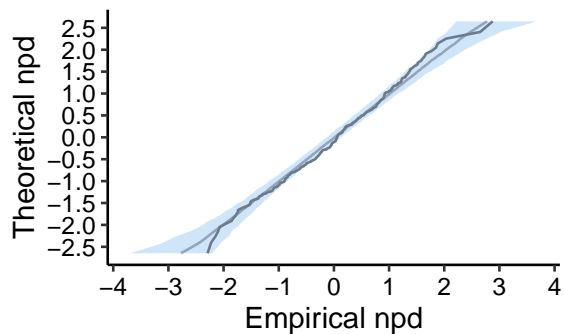
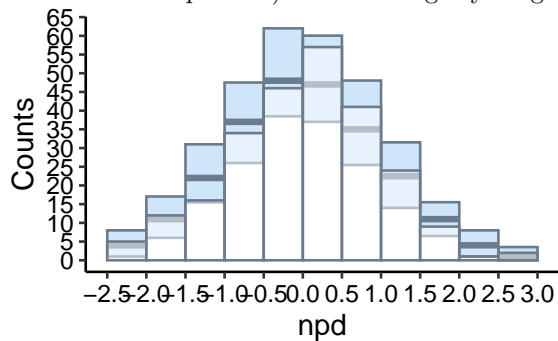
Warfarin

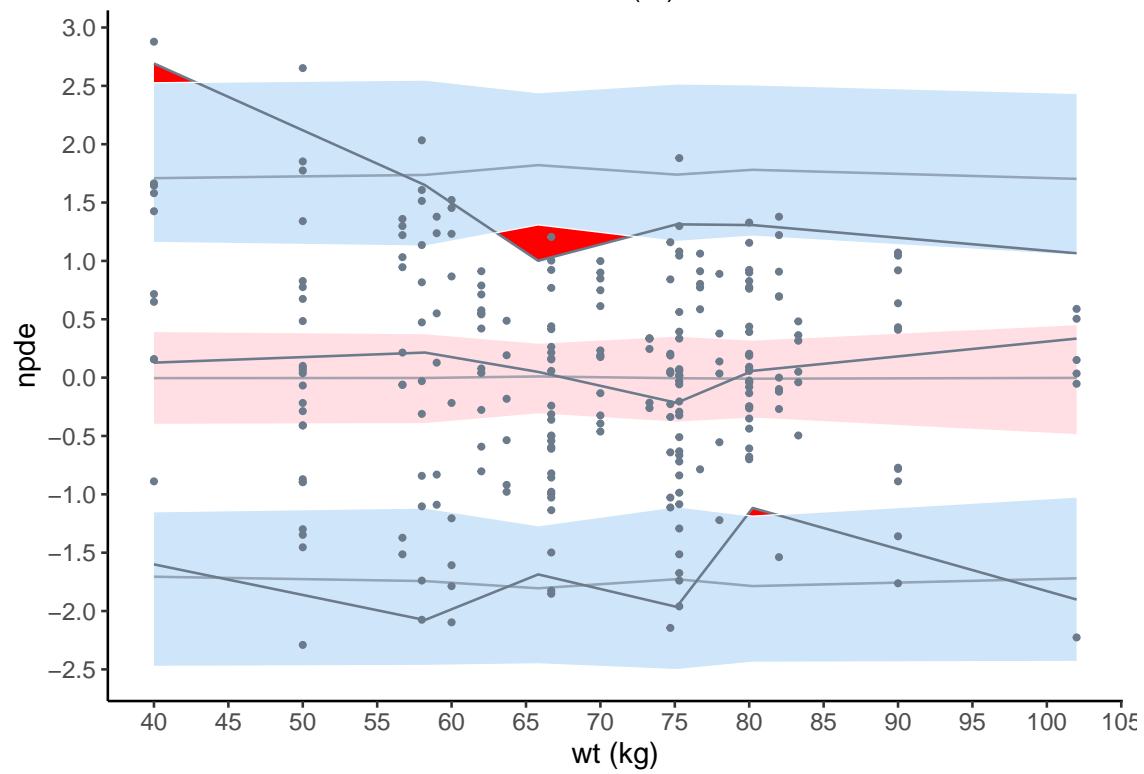
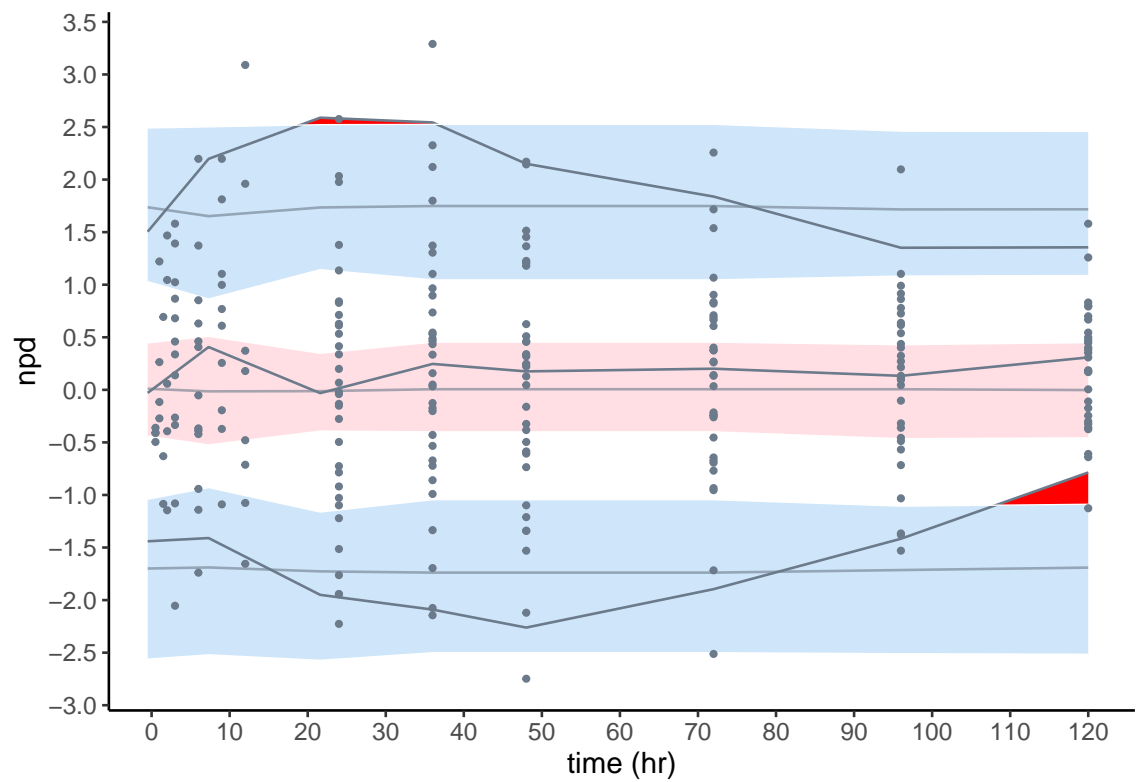
- **TODO:**

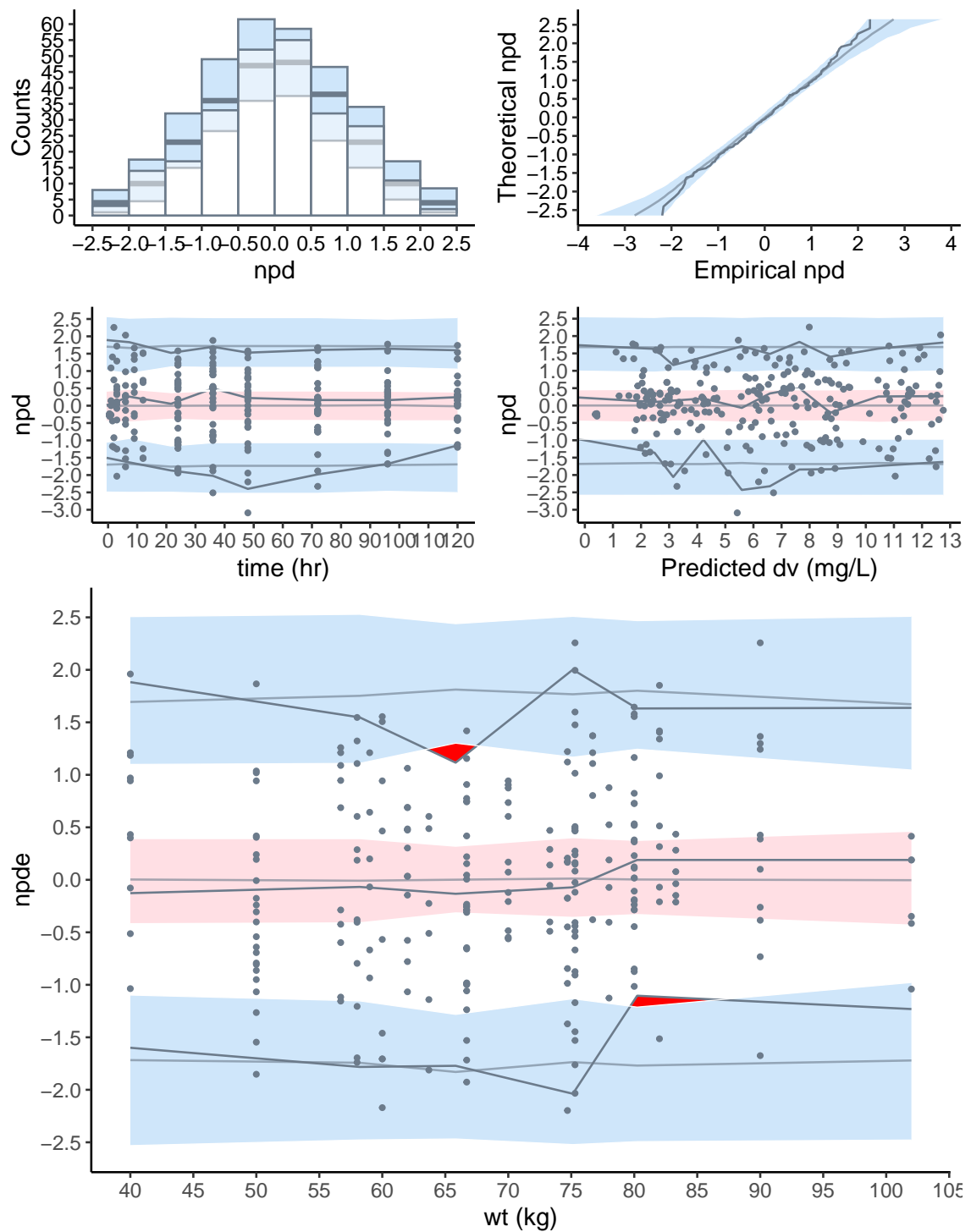
- add to documentation
- cov.scatter changed to covariates (default plot with covariates as in Brendel et al. 2010)
- alternative: covsplit applied to the other types of graphs will produce graphs stratified by covariate categories/ranges
- check `npde.plot.scatterplot(wbase, which.x="cov", which.y="npde", which.cov="wt",`



bin.method="optimal") not rendering anything

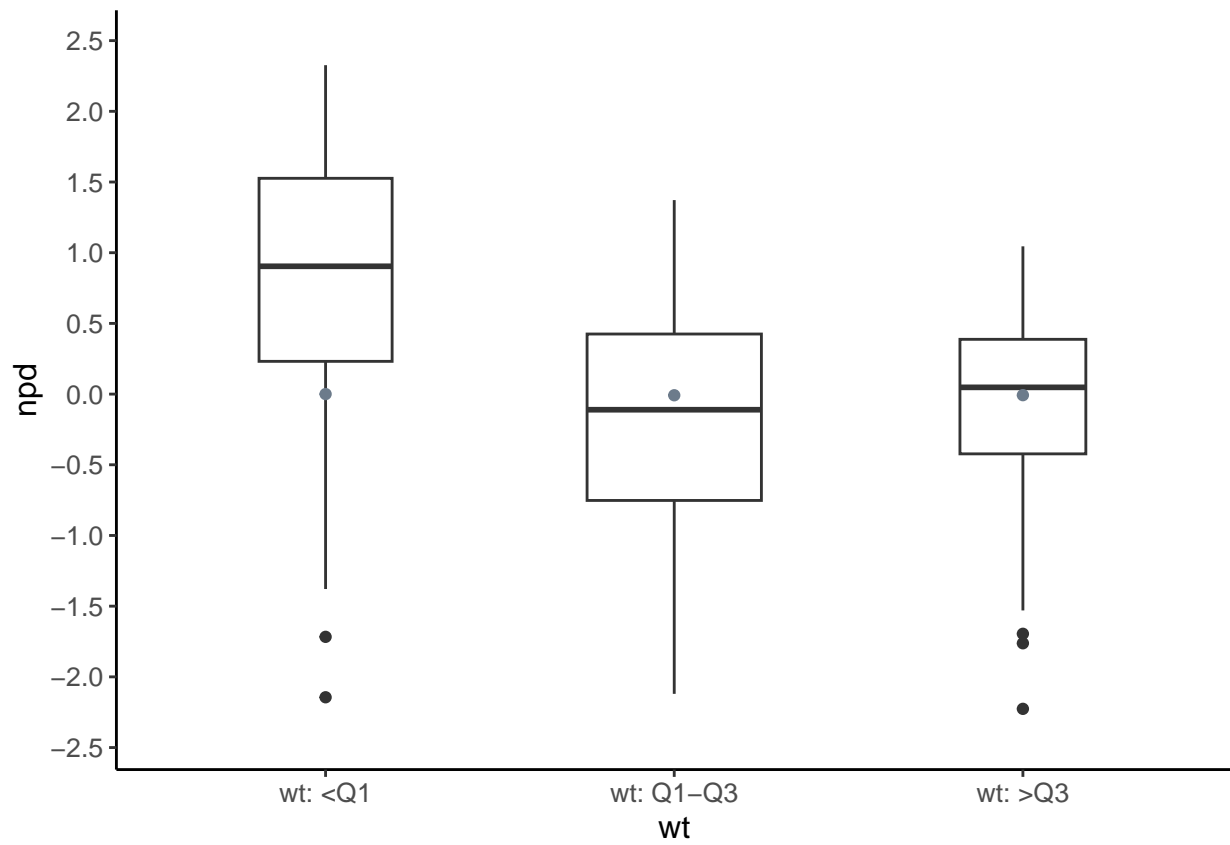






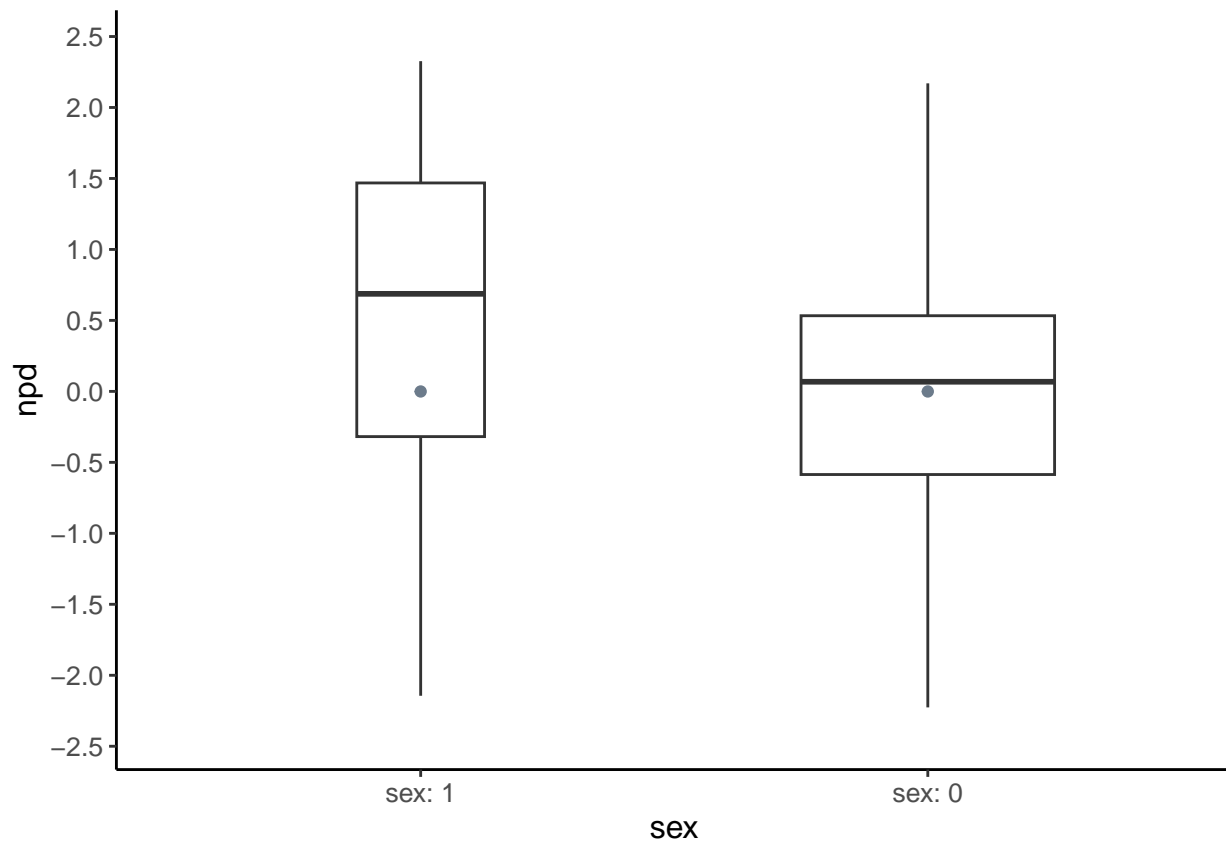
```
## [[1]]
```

```
## Warning: Removed 5 rows containing non-finite values (`stat_boxplot()`).
```

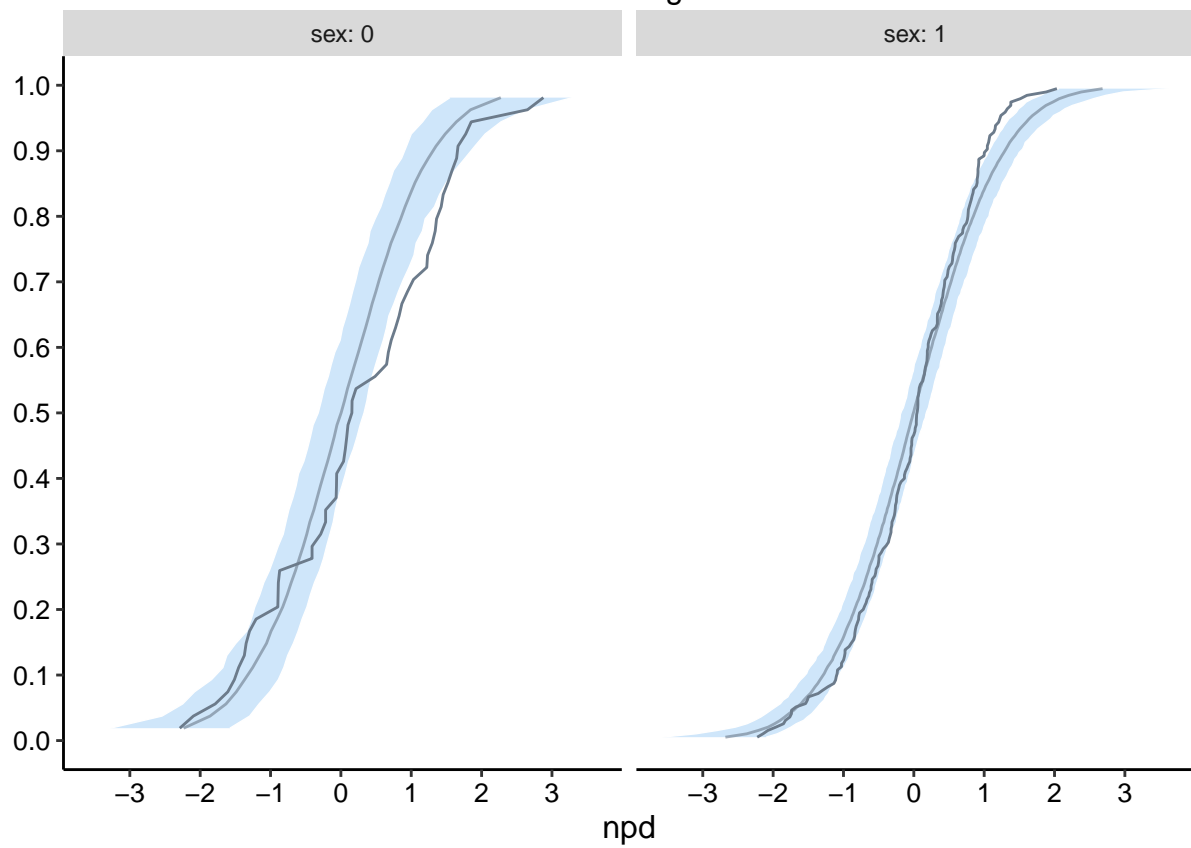
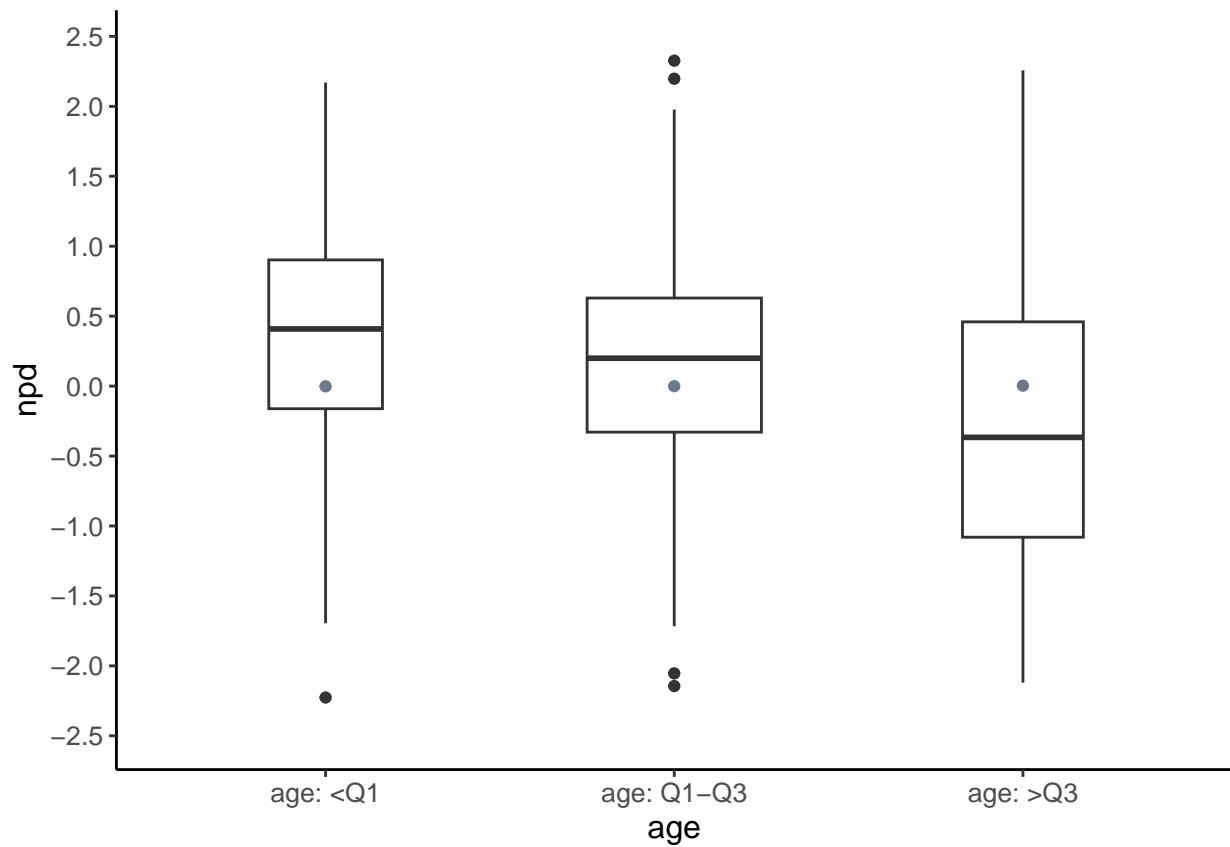
```
## [[1]]
```

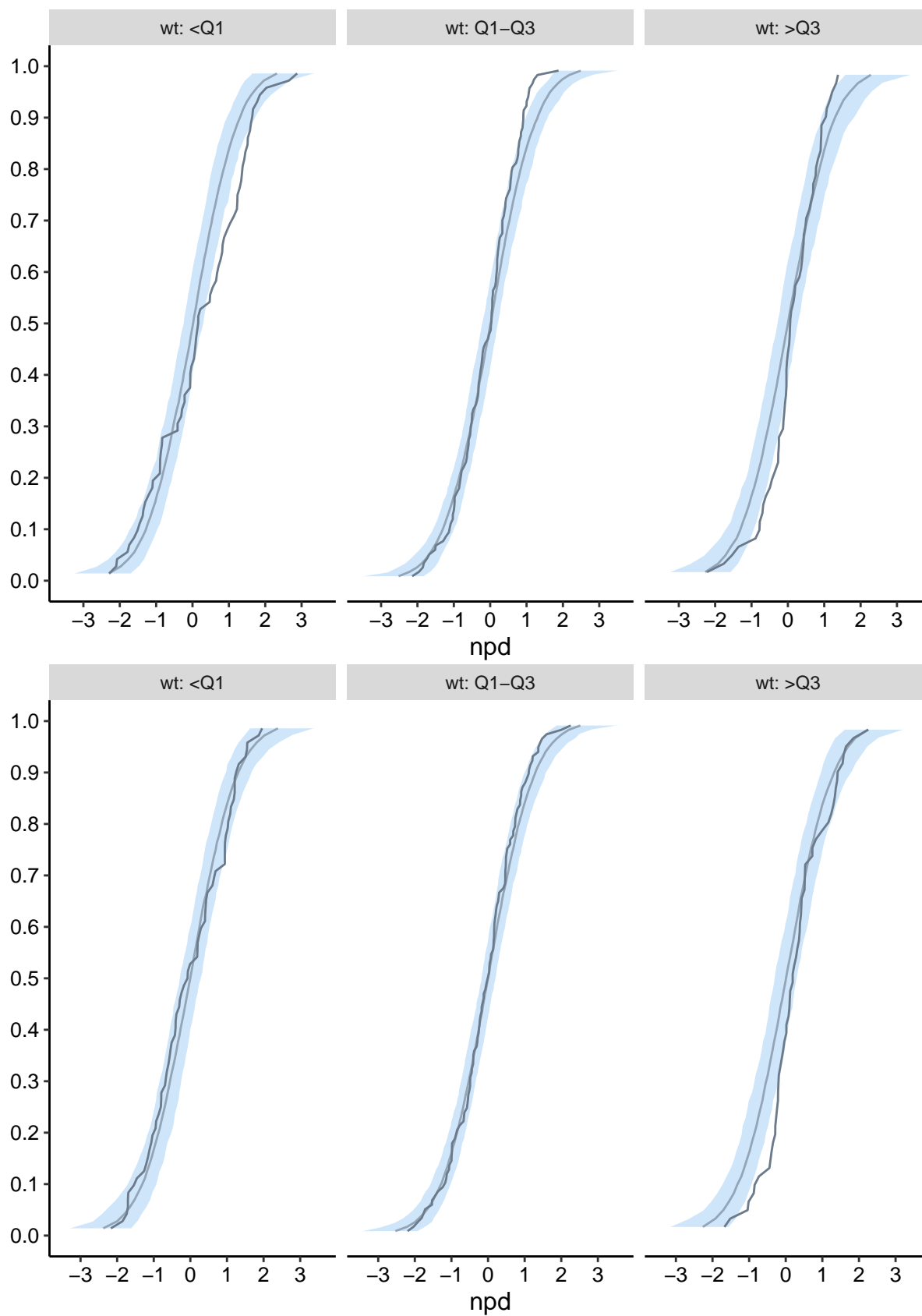
```
## Warning: Removed 5 rows containing non-finite values (`stat_boxplot()`).
```

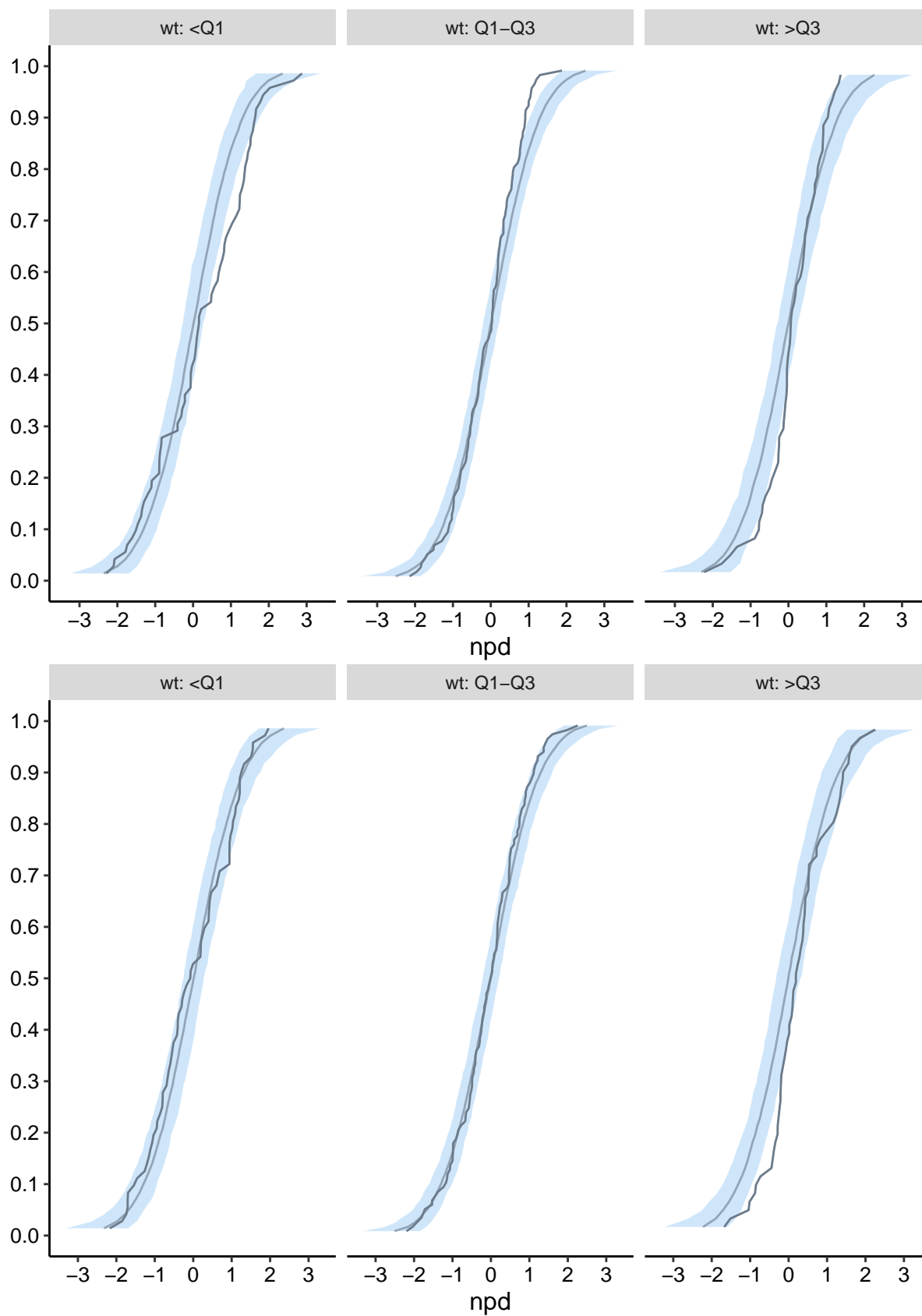


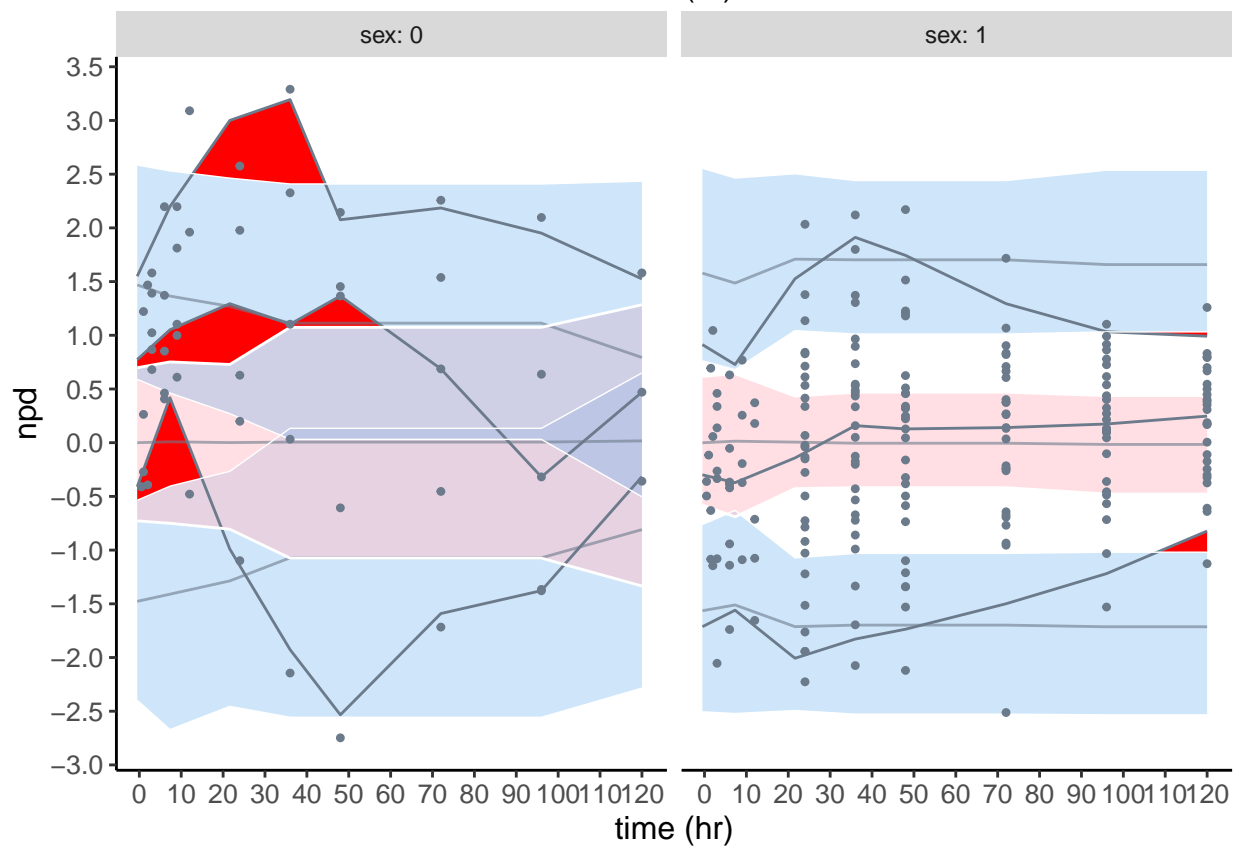
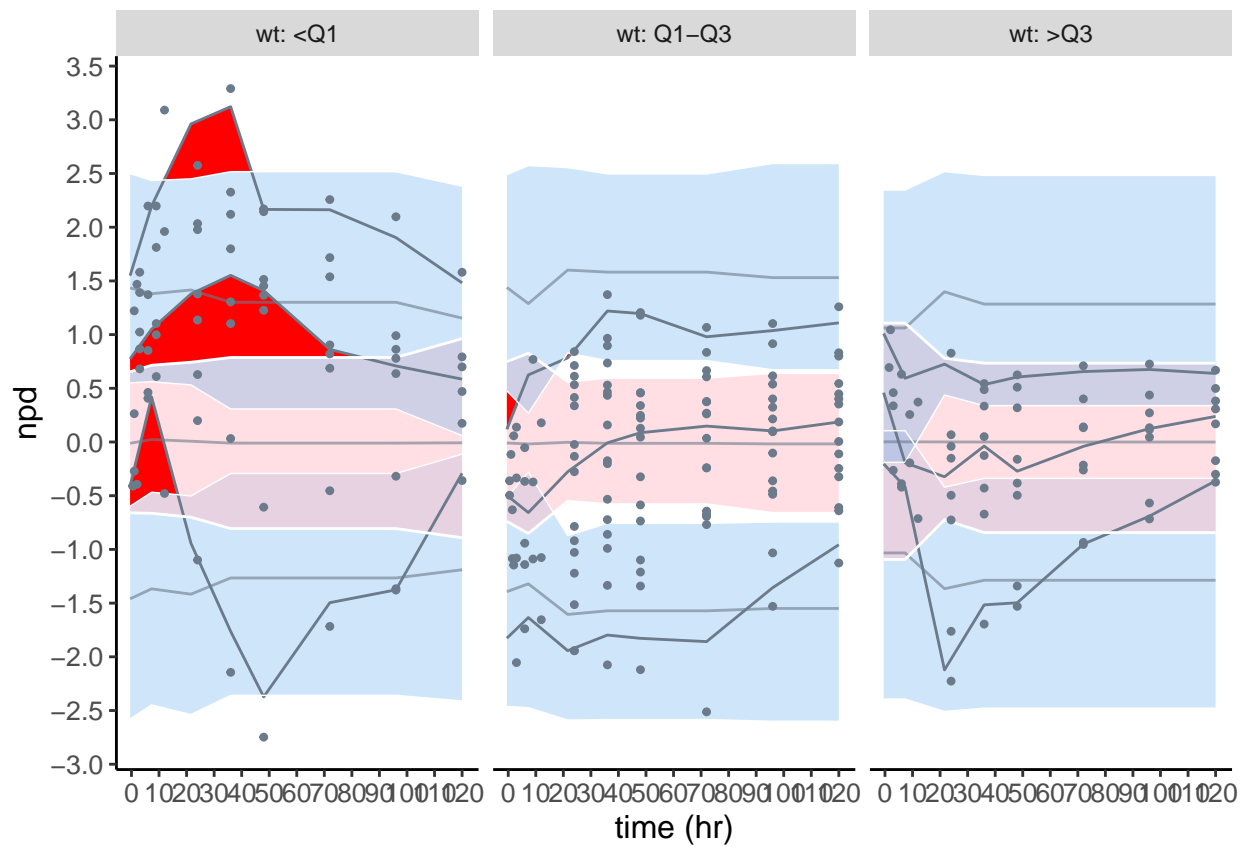
```
## [[1]]
```

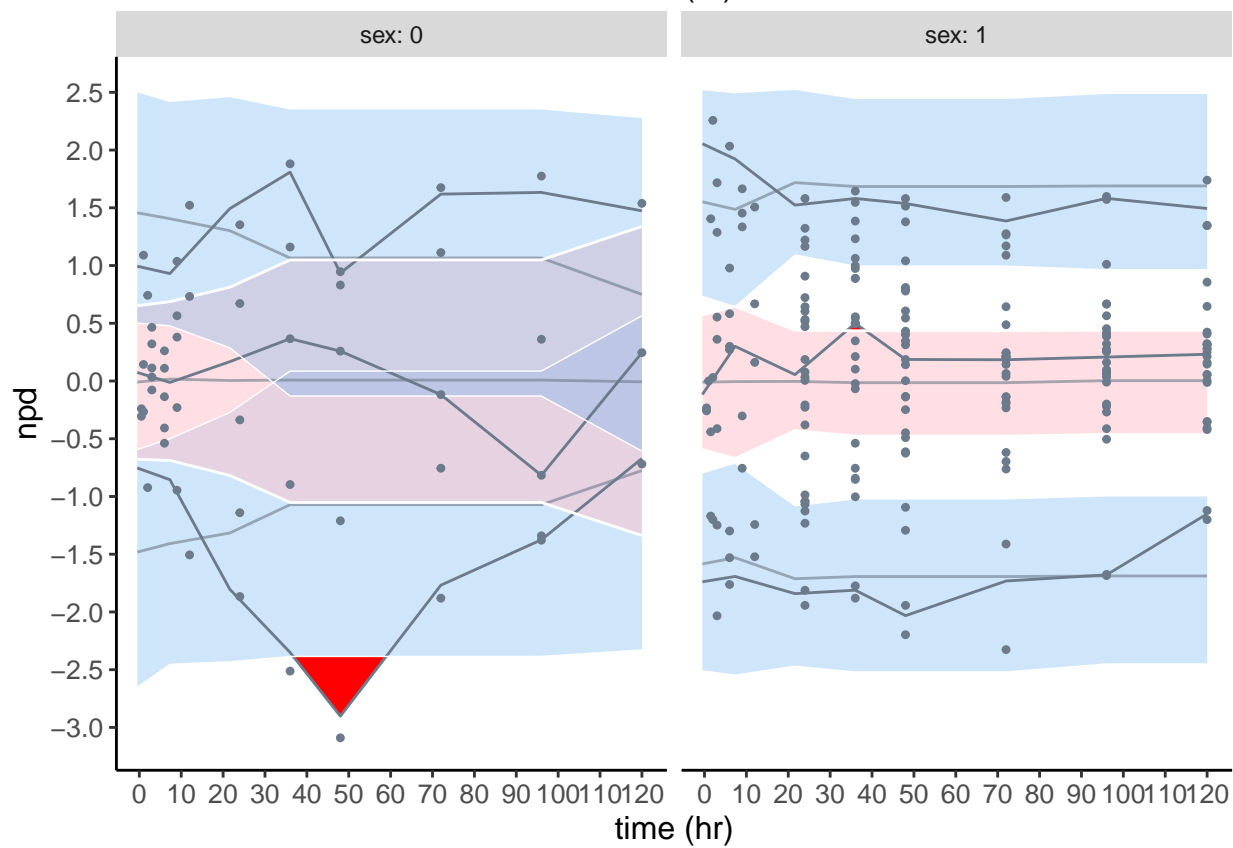
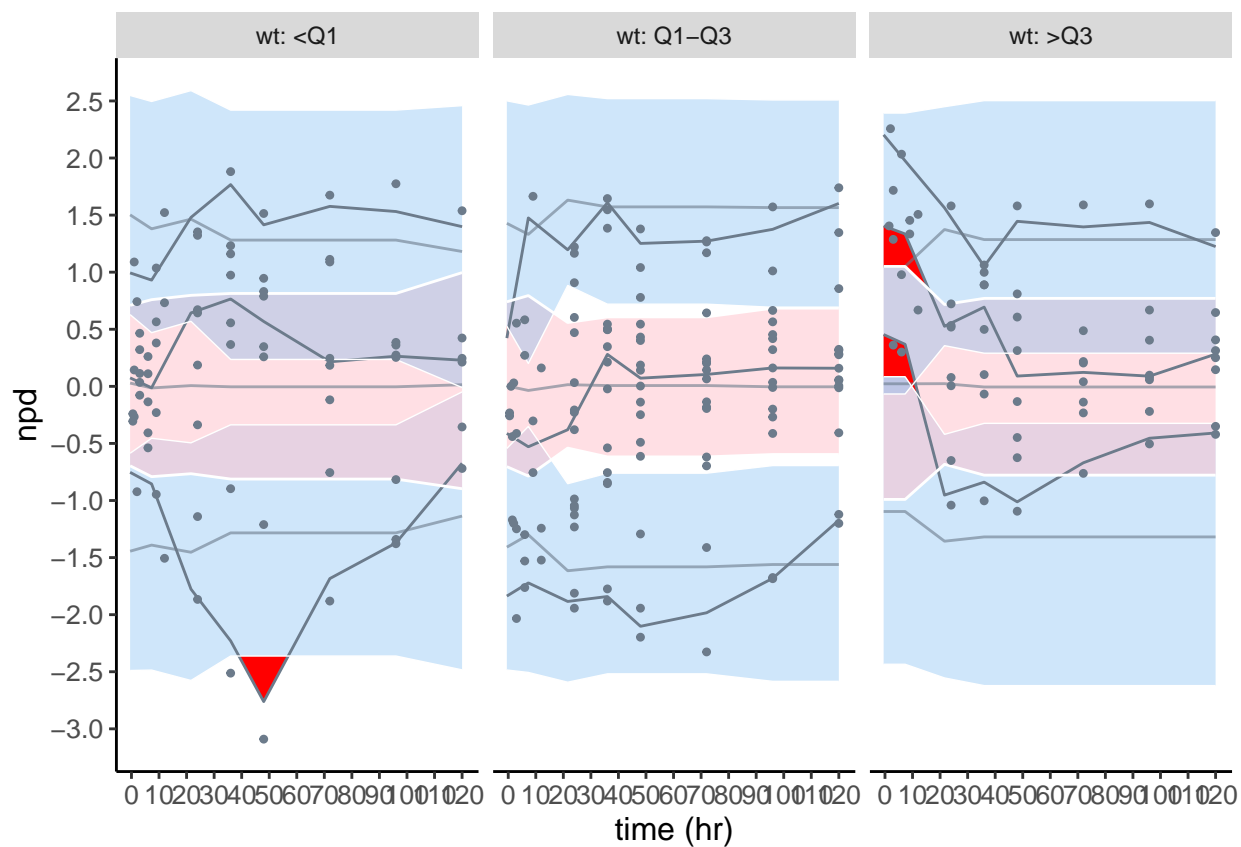
```
## Warning: Removed 5 rows containing non-finite values (`stat_boxplot()`).
```





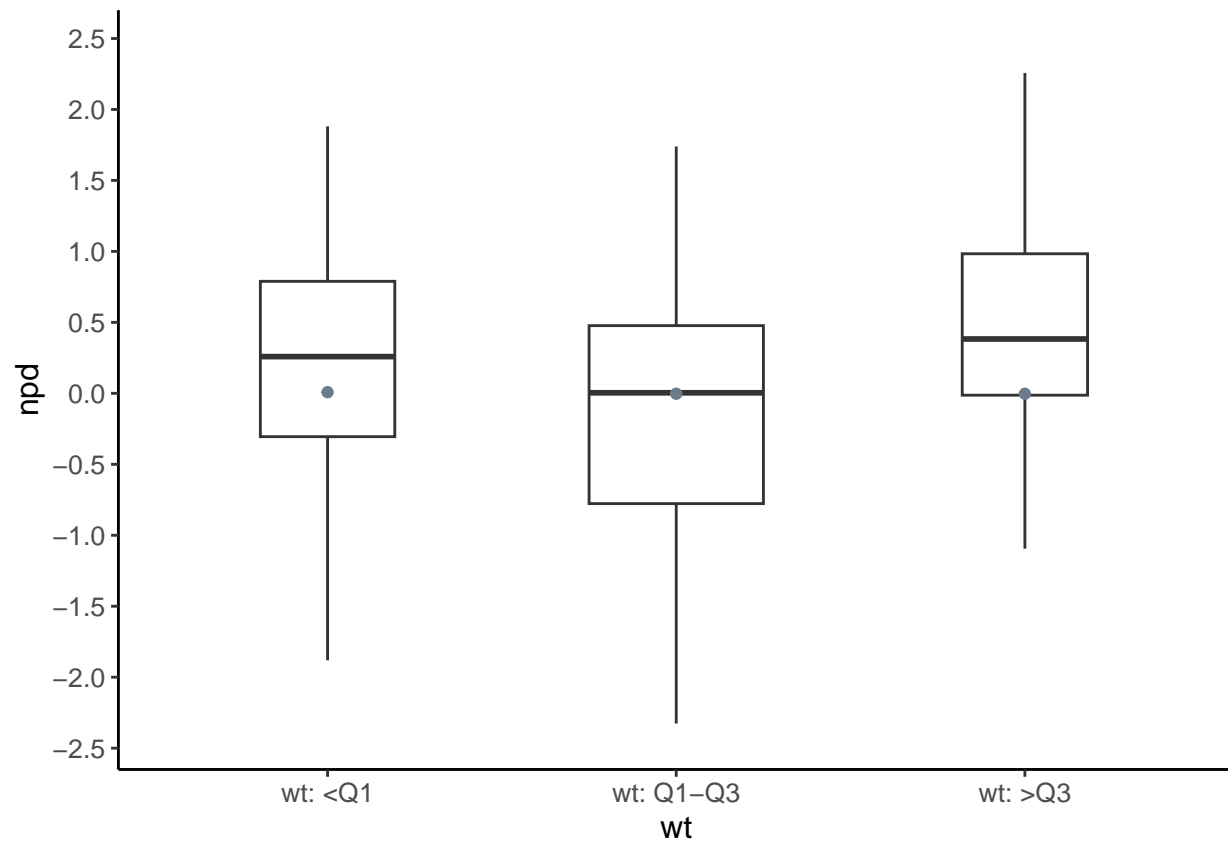


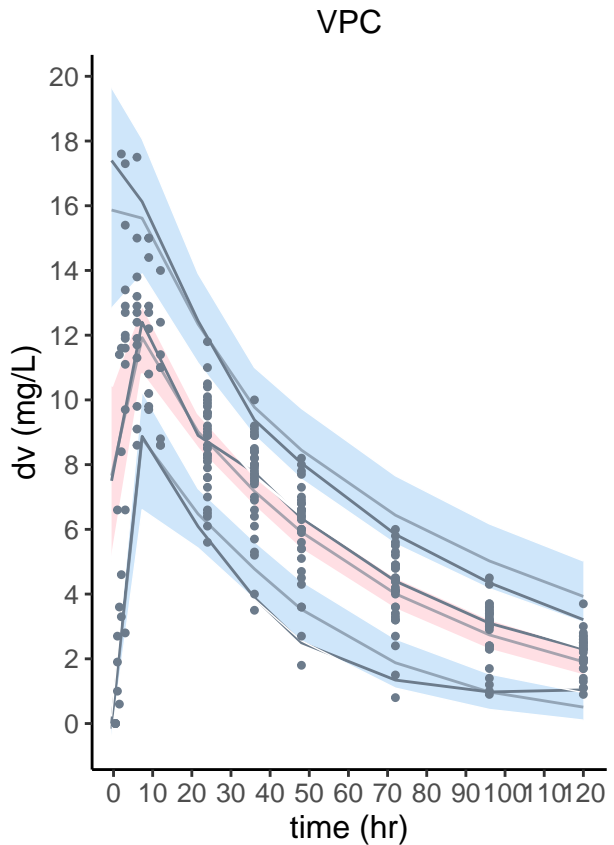
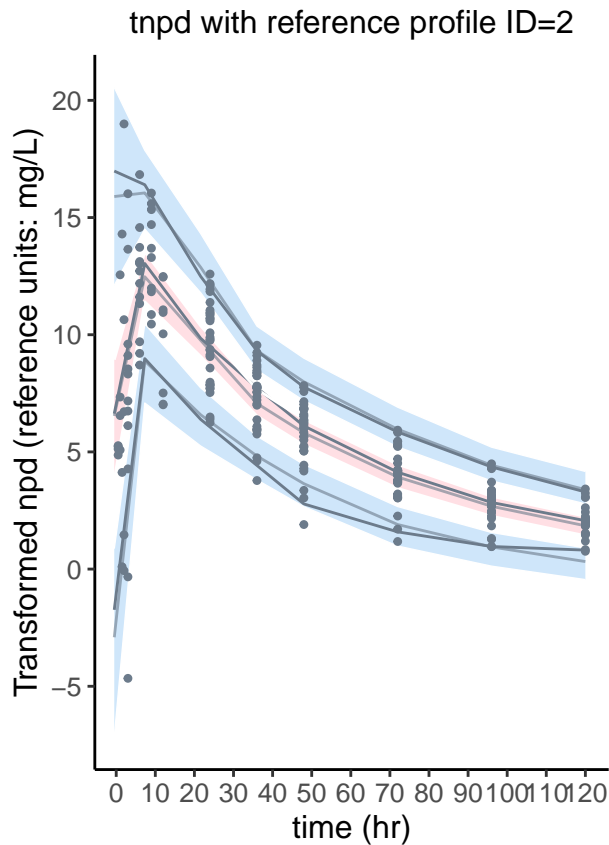




```
## [[1]]
```

```
## Warning: Removed 2 rows containing non-finite values (`stat_boxplot()`).
```





Remifentanil (data will be on website)

Remove from documentation ?

Saving

(not sure where this goes in dev_mode...)

TODO test different output formats using ggsave + an example with cairo_ps() loading library Cairo

```
namfile<-"output.eps" cairo_ps(file = namfile, onefile = TRUE, fallback_resolution = 600, height=8.27,
width=11.69) plot(x) dev.off()
```

End of file, deactivating development mode

```
## v Dev mode: OFF
```