change_c

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#dataset

```
lasso_c_simdata <- read_csv("varying_c_lasso.csv") %>%
  select(-1) %>%
  mutate(c.val = factor(c.val)) %>%
  pivot_longer(cols = c(pct_strong_vec,
                        pct_wai_vec,
                        pct_wbc_vec,
                        type1_error_vec,
                        power_vec),
                           names_to = "metric") %>%
  #group_by(cor_val, metric) %>%
  #summarize(mean_pct = mean(value))
  mutate(method = "lasso")
```

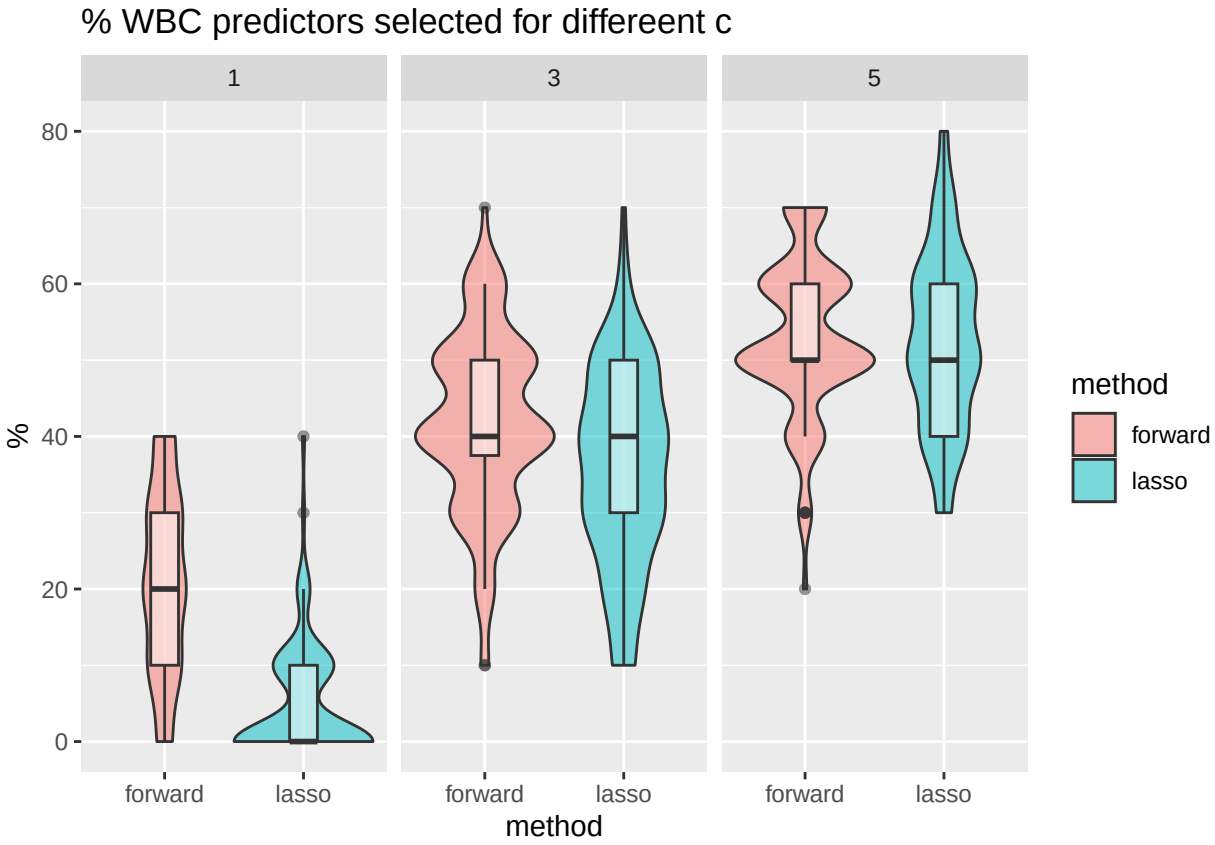
```
## New names:
## Rows: 300 Columns: 7
## -- Column specification
## -------------------------------------------------------- Delimiter: "," dbl
## (7): ...1, c.val, pct_strong_vec, pct_wai_vec, pct_wbc_vec, type1_error_...
## i Use `spec()` to retrieve the full column specification for this data. i
## Specify the column types or set `show_col_types = FALSE` to quiet this message.
## * `` -> `...1`
```

```
forward_c_simdata <- read.csv("varying_c_forward.csv")%>%
  select(-1) %>%
  mutate(c.val = factor(c.val)) %>%
  pivot_longer(cols = c(pct_strong_vec,
                        pct_wai_vec,
                        pct_wbc_vec,
                        type1_error_vec,
                        power_vec),
                           names_to = "metric") %>%
  mutate(method = "forward")

combined_c_simdata <- rbind(forward_c_simdata, lasso_c_simdata)
```

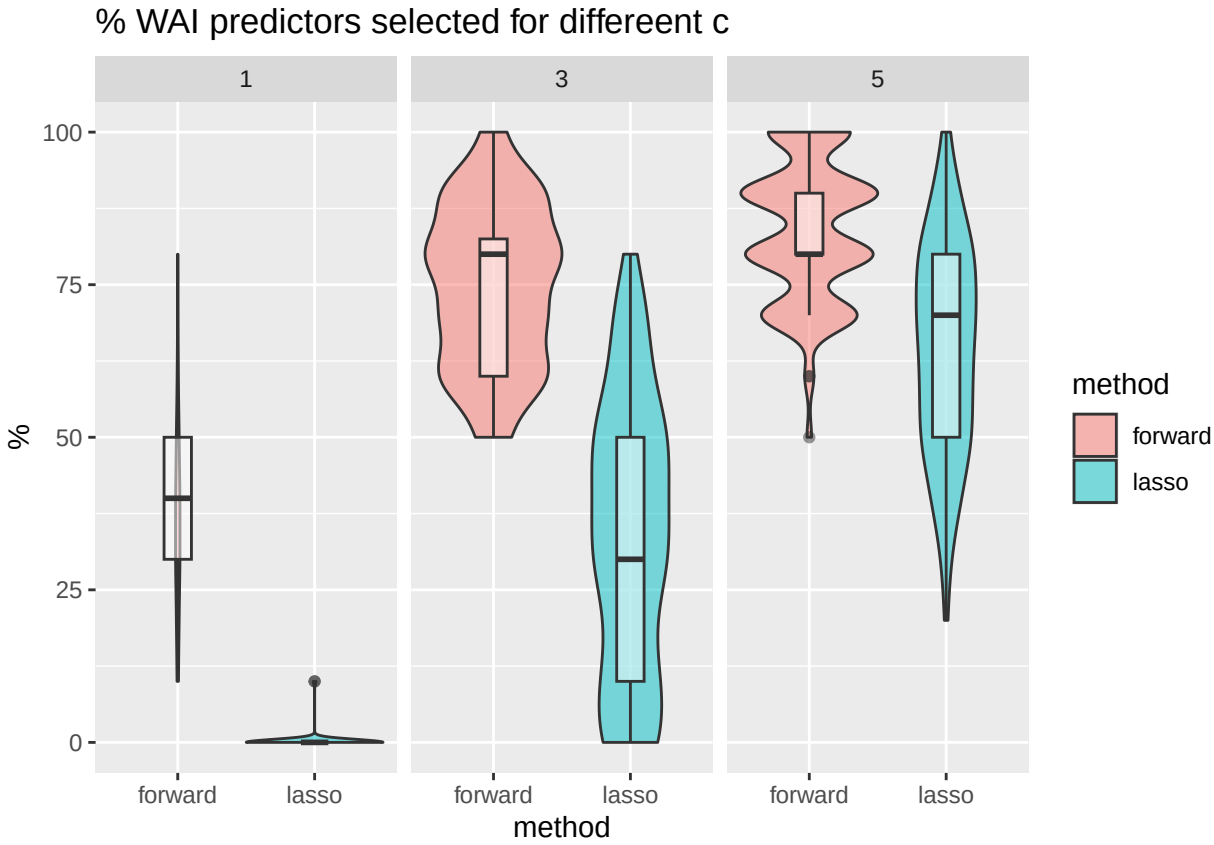
#graph for WBC

```
# WBC
combined_c_simdata %>%
  filter(metric == "pct_wbc_vec") %>%
  ggplot(aes(x = method, y = value)) +
  geom_violin(alpha = 0.5, width = 1, aes(fill = method)) +
  geom_boxplot(alpha = 0.5, width = 0.2) +
  #geom_jitter(alpha = 0.8, width = 0.2, aes(color = method)) +
  facet_wrap(~c.val, nrow = 1) +
  labs(title = "% WBC predictors selected for differeent c",
       y = "%")
```



#graph for WAI

```
# WAI
combined_c_simdata %>%
  filter(metric == "pct_wai_vec") %>%
  ggplot(aes(x = method, y = value)) +
  geom_violin(alpha = 0.5, width = 1, aes(fill = method)) +
  geom_boxplot(alpha = 0.5, width = 0.2) +
  #geom_jitter(alpha = 0.8, width = 0.2, aes(color = method)) +
  facet_wrap(~c.val, nrow = 1) +
  labs(title = "% WAI predictors selected for differeent c",
       y = "%")
```


% WAI predictors selected for differeent c
1
3
5
100
75
50
25
0
%
forward
lasso
forward
lasso
forward
lasso
method
method
forward
lasso