5y complications analysis

Filters

We need those with and without 2 FU for the 'Do complications before 2y affect 2y followup?' analysis.

```r
discarded_patients <- readLines('code/five_years/discarded_patients')

data_set %<>%
  .[, followup_2y :=
      !is.na('2 YEAR VISIT - Date of visit') |
      !is.na('3 YEAR VISIT - Date of visit')] %>%
  .[, followup_5y :=
      !is.na('5 YEAR VISIT - Date of visit') |
      !is.na('6 YEAR VISIT - Date of visit')]

data_set %<>%
  .[Site != 'ANK Op'] %>%
  .[Study=='Op'] %>%
  .['Vital status' == 'Alive'] %>%
  .[!('Code of the patient' %in% discarded_patients)] %>%
  .['st1. Date of Stage 1' %>% as.Date() < as.Date('2015-3-15')]
```

Only Major Complications

```
## PhantomJS not found. You can install it with webshot::install_phantomjs(). If it is installed, please
```

Stats

```
   complication_before_2y has_followup_2y
1:                     No           0.860
2:                    Yes           0.922

   complication_before_2y has_followup_5y
1:                     No           0.701
2:                    Yes           0.756
```

Complications stats

- Complications before 2 years: 209

- Proportion of patients with complications before 2 years: 0.2493075

- Complications between 2y and 5y: 70

- Proportion of patients with complications between 2y and 5y: 0.1052632

- p-value testing equality between proportions of complications: 6.7015449×10^{-7}

Major Complications before 2y

```
Category of the complication
   Central neurologic complications          Infectious complications
                              1                                    29
          Mechanical complications               Other complications
                            109                                    54
Peripheral neurologic complications
                             16


Category of the complication
   Central neurologic complications          Infectious complications
                    0.004784689                           0.138755981
          Mechanical complications               Other complications
                    0.521531100                           0.258373206
Peripheral neurologic complications
                    0.076555024
```

Major Complications between 2y and 5y

```
Category of the complication
          Infectious complications          Mechanical complications
                              4                                    55
              Other complications Peripheral neurologic complications
                              9                                     2


Category of the complication
          Infectious complications          Mechanical complications
                     0.05714286                            0.78571429
              Other complications Peripheral neurologic complications
                     0.12857143                            0.02857143
```

Minor Complications before 2y

```
Category of the complication
          Infectious complications          Mechanical complications
                              8                                    95
              Other complications Peripheral neurologic complications
                            101                                    48


Category of the complication
          Infectious complications          Mechanical complications
                     0.03174603                            0.37698413
              Other complications Peripheral neurologic complications
                     0.40079365                            0.19047619
```

Minor Complications between 2y and 5y

```
Category of the complication
Mechanical complications       Other complications
                      38                         1
```

```
Category of the complication
Mechanical complications     Other complications
         0.97435897                  0.02564103
```

Reinterventions before 2 years

- Reinterventions before 2 years: 95

- Proportion of patients with reintervention before 2 years: 0.1883657

- Reinterventions between 2y and 5y: 56

- Proportion of patients with reintervention between 2y and 5y: 0.1218837

- p-value testing equality between proportions of reinterventions: 0.0180589

Do complications before 2y affect 2y followup?

```
                                        Estimate Pr(>|t|)
(Intercept)                                1.118    0.000
Age                                        0.001    0.354
GenderMale                                -0.024    0.616
'Prior Spine Surgery'Yes                  -0.018    0.676
'ASA classification'                       0.044    0.224
'BMI_First Visit'                          0.004    0.445
SiteBOR Op                                -0.130    0.024
SiteIST Op                                 0.109    0.177
SiteMAD Op                                -0.089    0.148
SiteZUR Op                                 0.021    0.758
LGap                                       0.001    0.535
'Global Tilt'                             -0.002    0.291
'Major curve Cobb angle'                   0.000    0.936
'ODI - Score (%)_First Visit'             -0.006    0.001
'SRS22 - SRS Subtotal score_First Visit'  -0.102    0.068
'SF36 - PCS_First Visit'                   0.000    0.923
'SF36 - MCS_First Visit'                   0.003    0.127
complication_before_2yYes                  0.072    0.109
```

Do complications before 2y affect 5y followup?

```
                                        Estimate Pr(>|t|)
(Intercept)                                0.543    0.164
Age                                        0.004    0.066
GenderMale                                -0.080    0.221
'Prior Spine Surgery'Yes                  -0.001    0.993
'ASA classification'                      -0.015    0.768
'BMI_First Visit'                          0.010    0.110
SiteBOR Op                                 0.086    0.280
SiteIST Op                                 0.078    0.485
SiteMAD Op                                -0.023    0.789
SiteZUR Op                                 0.189    0.043
LGap                                      -0.003    0.133
'Global Tilt'                             -0.001    0.533
```

```
'Major curve Cobb angle'                      0.000    0.889
'ODI - Score (%)_First Visit'                -0.006    0.038
'SRS22 - SRS Subtotal score_First Visit'     -0.117    0.131
'SF36 - PCS_First Visit'                     -0.003    0.541
'SF36 - MCS_First Visit'                      0.010    0.002
complication_before_2yYes                     0.051    0.407
```