5y complications analysis

```
xls_path <- '../../data/ESSG Extraction_DEC_OP_ NON DePuy v8.xlsx'
# xls_path <- '../../data/Dataset 4th report 5Y - ONLY DPS.xlsx'
```

Filters

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

```
# discarded_patients <- readLines('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 %<>%
#   .[followup_2y==TRUE] %>%
#   .[`st1. Date of Stage` %>% as.Date() < as.Date('2016-6-1')]
```

Total Patients for the analysis: 708

Stats

```
   complication_before_2y has_followup_2y
1:                     No           0.639
2:                    Yes           0.744
```

```
   complication_before_2y has_followup_5y
1:                     No           0.327
2:                    Yes           0.231
```

Major Complications Stats

- Total patients: 708
- Total patients with 2YFU: 465
- Total patients with 2Y and 5YFU: 199
- Patients with complications before 2y: 91

- Patients without complications before 2y: 374
- Patients with complications between 2y-5y: 13
- Patients without complications between 2y-5y: 186
- Patients with 2y complications and 2y-5y complications: 5
- Patients with 2y complications and without 2y-5y complications: 22
- Patients without 2y complications and 2y-5y complications: 8
- Patients without 2y complications and without 2y-5y complications: 164
- Complications before 2 years: 219
- Proportion of patients with complications before 2 years: 0.1285311
- Complications between 2y and 5y: 35
- Proportion of patients with complications between 2y and 5y: 0.0183616
- p-value testing equality between proportions of complications: $4.3634302 \times 10^{-15}$

Minor Complications Stats

- Complications before 2 years: 221
- Proportion of patients with complications before 2 years: 0.1935028
- Complications between 2y and 5y: 31
- Proportion of patients with complications between 2y and 5y: 0.0338983
- p-value testing equality between proportions of complications: $6.8561674 \times 10^{-21}$

Major Complications before 2y

```
Category of the complication
   Central neurologic complications           Infectious complications
                                  2                                 29
           Mechanical complications                Other complications
                                111                                 48
Peripheral neurologic complications
                                 29
```

```
Category of the complication
   Central neurologic complications           Infectious complications
                         0.00913242                        0.13242009
           Mechanical complications                Other complications
                         0.50684932                        0.21917808
Peripheral neurologic complications
                         0.13242009
```

Major Complications between 2y and 5y

```
Category of the complication
          Mechanical complications                Other complications
                                32                                 2
Peripheral neurologic complications
                                 1
```

```
Category of the complication
          Mechanical complications                Other complications
                        0.91428571                         0.05714286
Peripheral neurologic complications
                        0.02857143
```

Minor Complications before 2y

```
Category of the complication
   Central neurologic complications           Infectious complications
                                 1                                 8
          Mechanical complications                Other complications
                                96                                74
Peripheral neurologic complications
                                42
```

```
Category of the complication
   Central neurologic complications           Infectious complications
                        0.004524887                        0.036199095
          Mechanical complications                Other complications
                        0.434389140                        0.334841629
Peripheral neurologic complications
                        0.190045249
```

Minor Complications between 2y and 5y

```
Category of the complication
Mechanical complications
                      31
```

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

Reinterventions before 2 years

```
## Warning in prop.test(c(patients_2y_n, patients_2y_5y_n), c(patients_n,
## patients_n)): Chi-squared approximation may be incorrect
```

- Total patients: 708.
- Reinterventions before 2 years: 0
- Patients with reintervention before 2 years: 0

- Proportion of patients with reintervention before 2 years: 0
- Reinterventions between 2y and 5y: 0
- Patients with reintervention before 5 years: 0
- Proportion of patients with reintervention between 2y and 5y: 0
- p-value testing equality between proportions of reinterventions: NaN

Do complications before 2y affect 2y followup?

	Estimate	Pr(>|t|)
(Intercept)	1.047	0.000
Age	0.003	0.118
GenderMale	-0.002	0.975
‘Prior Spine Surgery‘Yes	-0.073	0.131
‘ASA classification‘	-0.017	0.644
‘BMI_First Visit‘	0.003	0.568
SiteBOR Op	0.167	0.008
SiteIST Op	0.166	0.032
SiteMAD Op	0.090	0.199
SiteZUR Op	0.513	0.016
‘Global Tilt‘	0.000	0.783
‘Static Major curve Cobb angle‘	0.000	0.883
‘ODI - Score (%)_First Visit‘	-0.006	0.001
‘SRS22 - SRS Subtotal score_First Visit‘	-0.021	0.707
‘SF36 - PCS_First Visit‘	-0.007	0.051
‘SF36 - MCS_First Visit‘	-0.002	0.307
complication_before_2yYes	0.103	0.048

Do complications before 2y affect 5y followup?

	Estimate	Pr(>|t|)
(Intercept)	0.649	0.023
Age	0.005	0.004
GenderMale	-0.079	0.114
‘Prior Spine Surgery‘Yes	-0.065	0.200
‘ASA classification‘	-0.031	0.400
‘BMI_First Visit‘	-0.002	0.625
SiteBOR Op	-0.033	0.613
SiteIST Op	-0.065	0.419
SiteMAD Op	0.092	0.203
SiteZUR Op	-0.128	0.563
‘Global Tilt‘	-0.002	0.255
‘Static Major curve Cobb angle‘	0.001	0.226
‘ODI - Score (%)_First Visit‘	-0.003	0.095
‘SRS22 - SRS Subtotal score_First Visit‘	-0.025	0.666
‘SF36 - PCS_First Visit‘	-0.002	0.665
‘SF36 - MCS_First Visit‘	-0.003	0.170
complication_before_2yYes	-0.119	0.027