Impact of Reinterventions solution

Controling Variables

```
cat(controlling_vars %>% as.yaml())
```

```
- Age
- Gender
- Site
- Prior Spine Surgery
- ASA classification
- 3CO
- Pelvic Fixation
- Number of Posterior Instrumented Levels
- SPOs
- BMI_First Visit
- Osteoporosis / osteopenia
- LGap
- Global Tilt
- ideal LL
- Lordosis (top of L1-S1)
- RLL
- ODI - Score (%)_First Visit
- SRS22 - SRS Total score_First Visit
- SF36 - PCS_First Visit
- SF36 - MCS_First Visit
- Major curve Cobb angle
```

Definition of final_status

```
get_surgery_status <- function(status){
  final_status <- 'Resolved without sequelae'
  if( 'Not resolved' %in% status){
    final_status <- 'Not resolved or with sequelae'
  }else if('Resolved with sequelae' %in% status){
    final_status <- 'Not resolved or with sequelae'
  }
  final_status
}
```

Impact of final status and number of reinterventions associated to a surgery in 5Y HRQL Gain (odi neg / others pos)

```
index_dates <- clinical_data[, .(`Code of the patient`, `st1. Date of Stage 1`)]

complications_0 %>%
  merge(index_dates,  by='Code of the patient') %>%
  .[, diff_years:=difftime(`Date of Reoperation`, `st1. Date of Stage 1`, units = "days")/365] %>%
  .[diff_years < y_] %>%
  .[`Code of the patient` %in% valid_patients] %>%
  .[`Reoperation Due to Complication` == 'Yes'] %>%
  .[!is.na(`Date of Reoperation`)] %>%
  .[, .(
    final_status = get_surgery_status(`Status of the complication`),
    reinterventions = `Date of Reoperation` %>% uniqueN),
    .(`Complication associated to surgery`, `Code of the patient` )] ->
  complicated_surgeries

complicated_surgeries_n <- complicated_surgeries[, `Complication associated to surgery`] %>% uniqueN
```

- Surgeries with complications before 5y with valid patients: 115
- Valid patients: 316

```
                   final_status   N
1:     Resolved without sequelae 102
2: Not resolved or with sequelae  13
```

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

5Y. ODI - Score (%) Gain (odi neg / others pos)

```
                                       Estimate Pr(>|t|)
(Intercept)                            20.30477  0.34880
Age                                    -0.20086  0.08210
GenderMale                             -3.29650  0.31127
SiteBOR Op                              4.20688  0.30573
SiteIST Op                             -6.93379  0.25142
SiteMAD Op                              4.75010  0.24802
SiteZUR Op                              0.44561  0.91736
`Prior Spine Surgery`Yes                0.54910  0.85181
`ASA classification`                    2.05726  0.42736
`3CO`Yes                               -1.94328  0.62017
`Pelvic Fixation`Yes                    1.36756  0.69849
`Number of Posterior Instrumented Levels` -0.34342  0.34323
SPOs                                   -0.57260  0.48299
`BMI_First Visit`                       0.13896  0.65601
`Osteoporosis / osteopenia`Yes          2.18097  0.51400
LGap                                   -0.14897  0.15315
`Global Tilt`                           0.28459  0.05539
`ideal LL`                             -0.05031  0.80324
`ODI - Score (%)_First Visit`          -0.47799  0.00048
```

‘SRS22 - SRS Total score_First Visit‘	-3.57956	0.39714
‘SF36 - PCS_First Visit‘	0.09376	0.68665
‘SF36 - MCS_First Visit‘	-0.04334	0.77303
‘Major curve Cobb angle‘	-0.02852	0.69024
‘Not resolved or with sequelae‘	9.07142	0.06889
‘Resolved without sequelae‘	4.97125	0.00111

Impacte d’una reintervencio que acaba sense secueles te 4.9 d’odi Impacte d’una reintervencio que acaba sense resolucio o amb secueles te 9 d’odi (no significatius)

5Y. SRS22 - SRS Subtotal score Gain (odi neg / others pos)

	Estimate	Pr(>|t|)
(Intercept)	3.24245	0.00063
Age	0.00555	0.26667
GenderMale	0.08685	0.53802
SiteBOR Op	0.07483	0.67143
SiteIST Op	0.53501	0.04084
SiteMAD Op	-0.20027	0.25558
SiteZUR Op	-0.14129	0.44808
‘Prior Spine Surgery‘Yes	0.10275	0.41412
‘ASA classification‘	-0.09138	0.41245
‘3CO‘Yes	-0.22140	0.19057
‘Pelvic Fixation‘Yes	0.04710	0.75819
‘Number of Posterior Instrumented Levels‘	0.00483	0.75657
SPOs	0.03010	0.39338
‘BMI_First Visit‘	-0.01370	0.30711
‘Osteoporosis / osteopenia‘Yes	-0.05784	0.68876
LGap	0.00048	0.91492
‘Global Tilt‘	-0.00767	0.23125
‘ideal LL‘	-0.00346	0.69235
‘ODI - Score (%)_First Visit‘	-0.01005	0.08410
‘SRS22 - SRS Total score_First Visit‘	-0.65430	0.00039
‘SF36 - PCS_First Visit‘	-0.00254	0.79712
‘SF36 - MCS_First Visit‘	0.00677	0.29632
‘Major curve Cobb angle‘	-0.00001	0.99776
‘Not resolved or with sequelae‘	-0.50672	0.00652
‘Resolved without sequelae‘	-0.16022	0.01431

5Y. SF36 - MCS Gain (odi neg / others pos)

	Estimate	Pr(>|t|)
(Intercept)	19.73804	0.14201
Age	-0.00123	0.98597
GenderMale	-3.19402	0.10591
SiteBOR Op	1.23067	0.62335
SiteIST Op	6.27483	0.09681
SiteMAD Op	-0.99905	0.69091
SiteZUR Op	-2.87076	0.27666
‘Prior Spine Surgery‘Yes	-0.07221	0.96722
‘ASA classification‘	1.23008	0.43874
‘3CO‘Yes	-2.54536	0.28183
‘Pelvic Fixation‘Yes	-1.37098	0.52465
‘Number of Posterior Instrumented Levels‘	0.21030	0.33479

SPOs	0.33142	0.50180
‘BMI_First Visit‘	0.16067	0.39819
‘Osteoporosis / osteopenia‘Yes	-1.64059	0.42078
LGap	0.05767	0.35343
‘Global Tilt‘	-0.07735	0.38325
‘ideal LL‘	0.06132	0.61990
‘ODI - Score (%)_First Visit‘	-0.03027	0.70655
‘SRS22 - SRS Total score_First Visit‘	5.67810	0.02629
‘SF36 - PCS_First Visit‘	-0.16850	0.22817
‘SF36 - MCS_First Visit‘	-0.69873	0.00000
‘Major curve Cobb angle‘	-0.06156	0.15812
‘Not resolved or with sequelae‘	-3.73028	0.14466
‘Resolved without sequelae‘	-2.42989	0.00791

5Y. SF36 - PCS Gain (odi neg / others pos)

	Estimate	Pr(>|t|)
(Intercept)	42.38200	0.00077
Age	0.03711	0.56850
GenderMale	0.26966	0.88224
SiteBOR Op	0.84578	0.71555
SiteIST Op	3.90551	0.26243
SiteMAD Op	-1.78272	0.44294
SiteZUR Op	1.55398	0.52441
‘Prior Spine Surgery‘Yes	0.66100	0.68428
‘ASA classification‘	-2.34015	0.11415
‘3CO‘Yes	0.78413	0.71924
‘Pelvic Fixation‘Yes	-0.16880	0.93244
‘Number of Posterior Instrumented Levels‘	-0.03402	0.86625
SPOs	0.14926	0.74378
‘BMI_First Visit‘	-0.13899	0.42884
‘Osteoporosis / osteopenia‘Yes	1.26367	0.50633
LGap	0.00817	0.88663
‘Global Tilt‘	-0.06786	0.40739
‘ideal LL‘	-0.00204	0.98578
‘ODI - Score (%)_First Visit‘	-0.14569	0.05193
‘SRS22 - SRS Total score_First Visit‘	0.24292	0.91771
‘SF36 - PCS_First Visit‘	-0.71146	0.00000
‘SF36 - MCS_First Visit‘	0.04289	0.60843
‘Major curve Cobb angle‘	-0.02844	0.48022
‘Not resolved or with sequelae‘	-4.10159	0.08286
‘Resolved without sequelae‘	-1.59733	0.05728