

## 5y followup analysis

### Filters

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

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')]
```

### FU Stats

```
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')]

followup_2y <- data_set %>%
  .[followup_2y==TRUE] %>%
  .[, 'Code of the patient' %>% uniqueN]

followup_5y <- data_set %>%
  .[followup_5y==TRUE] %>%
  .[, 'Code of the patient' %>% uniqueN]

total <- data_set[, .N]
total_with_followup_2y <- data_set[followup_2y==TRUE, .N]
perc_followup_2y <- round(followup_2y/total, 3)
perc_followup_5y <- round(followup_5y/total, 3)
perc_followup_5y_with_2y <- round(followup_5y/total_with_followup_2y, 3)
```

- Patients with at least 5 year from intervention (total variable): 361
- Patients with 2y number (followup\_2y variable): 316
- Patients with 2y % (perc\_followup\_2y variable): 87.5
- Patients with 5y number (followup\_5y variable): 258
- Patients with 5y % (perc\_followup\_5y variable): 71.5
- Patients (among 2y FU) with 5y % (perc\_followup\_5y\_with\_2y variable): 81.6

## 2Y FU follow per Site

	Site eligible	fu_2y
1: BCN Op	100	0.9100000
2: BOR Op	115	0.7913043
3: IST Op	33	0.9696970
4: MAD Op	59	0.8305085
5: ZUR Op	54	0.9814815

## 5Y FU follow per Site

	Site eligible	fu_5y
1: BCN Op	100	0.6900000
2: BOR Op	115	0.7217391
3: IST Op	33	0.6363636
4: MAD Op	59	0.6440678
5: ZUR Op	54	0.8703704

We finally stick to those with 2y FU

```
data_set %<>%  
  .[followup_2y==TRUE]
```

## Complications during 2y depending on followup 5y

	followup_5y	complication_before_2y	low_ci	up_ci
1: has_followup		0.2750000	0.2223886	0.3347007
2: no_followup		0.2236842	0.1446118	0.3293457

## HRQOL during 2y depending on followup 5y

2Y. ODI - Score (%)

	followup_5y	mean_outcome	sd_outcome
1: has_followup		26.95781	1.374503
2: no_followup		28.83099	2.481282

t-test p-value: 0.521930748502738

2Y. SRS22 - SRS Subtotal score

	followup_5y	mean_outcome	sd_outcome
1: has_followup		3.493957	0.05360123
2: no_followup		3.368750	0.10567636

t-test p-value: 0.304401390893291

2Y. SF36 - PCS

	followup_5y	mean_outcome	sd_outcome
1: has_followup		42.25594	0.6593884
2: no_followup		41.23529	1.2487688

t-test p-value: 0.49181444824917

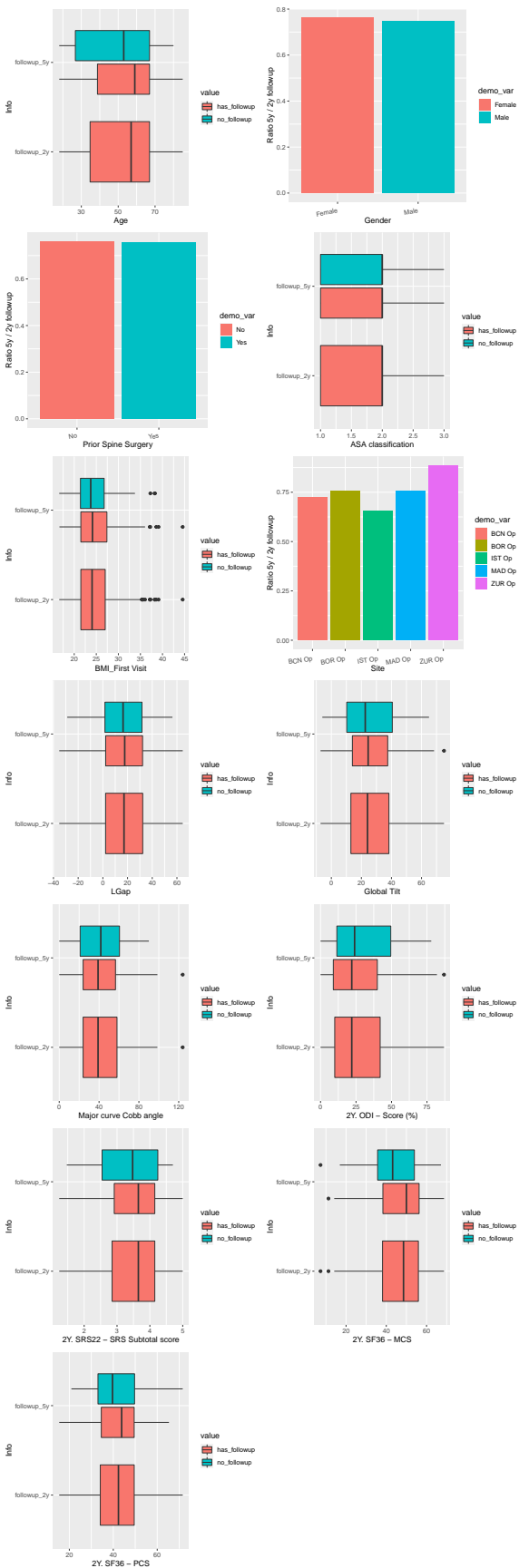
2Y. SF36 - MCS

	followup_5y	mean_outcome	sd_outcome
1: has_followup		47.23197	0.781389
2: no_followup		43.72397	1.473267

t-test p-value: 0.0473276471016629

```
2Y. SRS22 - Satisfaction with management
      followup_5y mean_outcome sd_outcome
1: has_followup      4.117521 0.06733191
2: no_followup       4.119718 0.11692520
t-test p-value: 0.987404359777908
```

# Follow up



## Followup

### Demographics

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.000	0.104	9.603	0.000
Age	0.000	0.001	0.000	1.000
GenderMale	0.000	0.042	0.000	1.000
Prior_Spine_SurgeryYes	0.000	0.039	0.000	1.000
ASA_classification	0.000	0.034	0.000	1.000
BMI_First_Visit	0.000	0.004	0.000	1.000
SiteBOR Op	0.000	0.050	0.000	1.000
SiteIST Op	0.000	0.064	0.000	1.000
SiteMAD Op	0.000	0.056	0.000	1.000
SiteZUR Op	0.000	0.056	0.000	1.000
'5y_vs_2y_effect'	-0.345	0.147	-2.341	0.020
Age:'5y_vs_2y_effect'	0.002	0.002	1.310	0.191
GenderMale:'5y_vs_2y_effect'	-0.035	0.059	-0.591	0.555
Prior_Spine_SurgeryYes:'5y_vs_2y_effect'	-0.007	0.055	-0.136	0.892
ASA_classification:'5y_vs_2y_effect'	-0.083	0.048	-1.740	0.082
BMI_First_Visit:'5y_vs_2y_effect'	0.005	0.006	0.884	0.377
SiteBOR Op:'5y_vs_2y_effect'	-0.012	0.070	-0.174	0.862
SiteIST Op:'5y_vs_2y_effect'	-0.078	0.091	-0.852	0.395
SiteMAD Op:'5y_vs_2y_effect'	0.038	0.079	0.476	0.634
SiteZUR Op:'5y_vs_2y_effect'	0.164	0.079	2.066	0.039

### Radiology

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.935	0.099	9.449	0.000
Age	0.001	0.001	0.967	0.334
GenderMale	-0.032	0.032	-0.996	0.319
Prior_Spine_SurgeryYes	-0.003	0.030	-0.113	0.910
ASA_classification	-0.033	0.025	-1.320	0.187
BMI_First_Visit	0.003	0.003	0.871	0.384
SiteBOR Op	0.011	0.038	0.300	0.765
SiteIST Op	-0.015	0.049	-0.313	0.754
SiteMAD Op	0.013	0.041	0.326	0.744
SiteZUR Op	0.097	0.043	2.281	0.023
LGap	0.000	0.001	-0.294	0.769
Global_Tilt	0.000	0.002	-0.113	0.910
Major_curve_Cobb_angle	0.000	0.001	0.180	0.857
'5y_vs_2y_effect'	-0.283	0.071	-3.973	0.000
LGap:'5y_vs_2y_effect'	0.000	0.002	-0.233	0.816
Global_Tilt:'5y_vs_2y_effect'	0.001	0.002	0.374	0.709
Major_curve_Cobb_angle:'5y_vs_2y_effect'	0.001	0.001	0.729	0.466

## 5y selection bias

### Demographics

Estimate Std. Error t value Pr(>|t|)

(Intercept)	0.655	0.147	4.449	0.000
Age	0.002	0.002	1.310	0.191
GenderMale	-0.035	0.059	-0.591	0.555
'Prior Spine Surgery'Yes	-0.007	0.055	-0.136	0.892
'ASA classification'	-0.083	0.048	-1.740	0.083
'BMI_First Visit'	0.005	0.006	0.884	0.377
SiteBOR Op	-0.012	0.070	-0.174	0.862
SiteIST Op	-0.078	0.091	-0.852	0.395
SiteMAD Op	0.038	0.079	0.476	0.635
SiteZUR Op	0.164	0.079	2.066	0.040

## Radiology

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.587	0.184	3.184	0.002
Age	0.002	0.002	0.968	0.334
GenderMale	-0.064	0.064	-0.998	0.319
'Prior Spine Surgery'Yes	-0.007	0.059	-0.113	0.910
'ASA classification'	-0.066	0.050	-1.322	0.187
'BMI_First Visit'	0.005	0.006	0.872	0.384
SiteBOR Op	0.023	0.076	0.300	0.764
SiteIST Op	-0.030	0.097	-0.314	0.754
SiteMAD Op	0.027	0.082	0.327	0.744
SiteZUR Op	0.195	0.085	2.284	0.023
LGap	-0.001	0.002	-0.638	0.524
'Global Tilt'	0.000	0.002	0.178	0.859
'Major curve Cobb angle'	0.001	0.001	0.899	0.369

## Increment of quality of life

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.535	0.207	2.589	0.010
Age	0.002	0.002	0.889	0.375
GenderMale	-0.066	0.070	-0.948	0.344
'Prior Spine Surgery'Yes	-0.002	0.063	-0.038	0.969
'ASA classification'	-0.060	0.054	-1.112	0.267
'BMI_First Visit'	0.005	0.007	0.825	0.410
SiteBOR Op	0.045	0.082	0.552	0.581
SiteIST Op	0.137	0.123	1.117	0.265
SiteMAD Op	0.063	0.088	0.713	0.477
SiteZUR Op	0.208	0.092	2.253	0.025
LGap	-0.001	0.002	-0.423	0.673
'Global Tilt'	0.000	0.003	0.088	0.930
'Major curve Cobb angle'	0.001	0.001	0.696	0.487
'2Y. ODI - Score (%)_inc'	0.003	0.002	1.294	0.197
'2Y. SRS22 - SRS Subtotal score_inc'	0.018	0.068	0.259	0.796
'2Y. SF36 - MCS_inc'	-0.001	0.003	-0.393	0.694
'2Y. SF36 - PCS_inc'	0.007	0.004	1.618	0.107

## MCIDS

```
$'5Y. ODI - Score (%)'
```

```
[1] 12.8
```

```
$'5Y. SRS22 - SRS Subtotal score'
```

```
[1] 0.43
```

```
$'5Y. SF36 - PCS'
```

```
[1] 4.9
```

	variable	inc_2y_percent	inc_5y_percent	p_val_two_previous
1	ODI - Score (%)	39.9	37.0	0.558
2	SRS22 - SRS Subtotal score	61.9	57.5	0.357
3	SF36 - PCS	48.9	49.8	0.927

	inc_5y_2y_percent
1	11.6
2	19.7
3	22.9

## PASS

```
$'5Y. ODI - Score (%)'
```

```
[1] 18
```

```
$'5Y. SRS22 - SRS Subtotal score'
```

```
[1] 3.5
```

	variable	prop_2y	prop_5y	p_val
1	ODI - Score (%)	41.2	37.9	0.492
2	SRS22 - SRS Subtotal score	45.3	47.9	0.606