


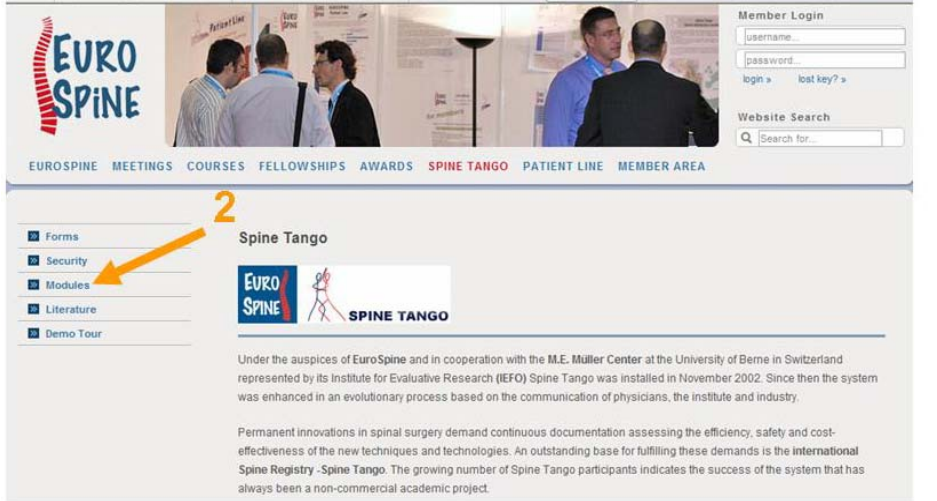
SSE Spine Tango - Pathway for Entering and Querying Data

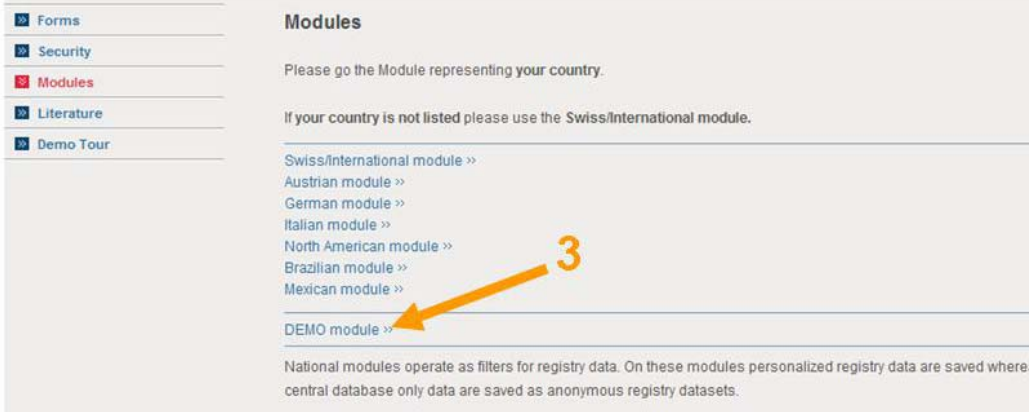
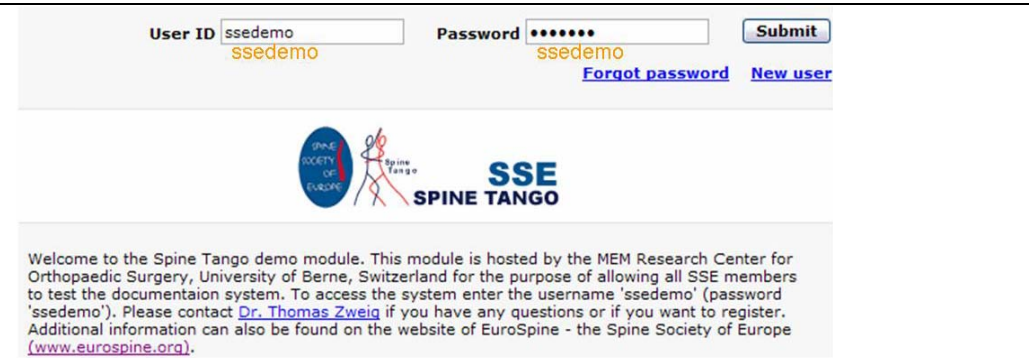
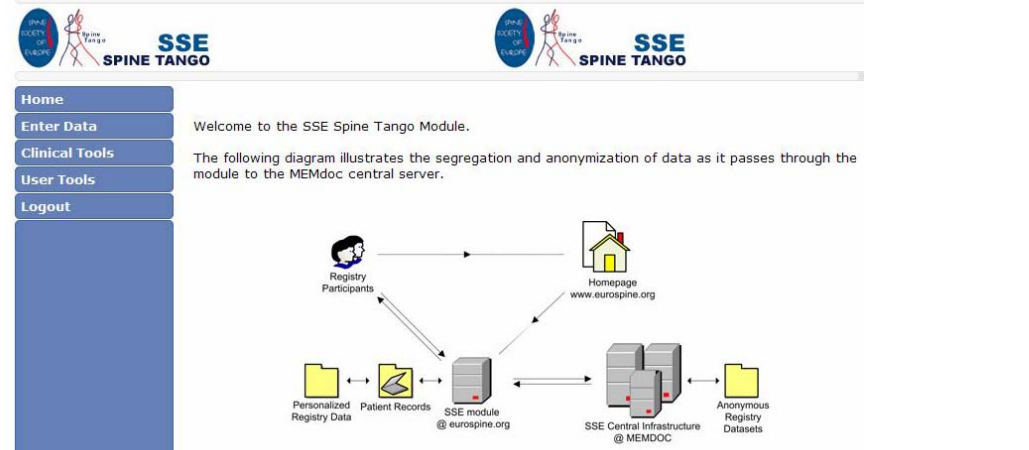
- SSE Spine Tango - Pathway for Entering and Querying Data..... 1
 - Demo-Tour/ Demo-Module: 1
 - Document a patient record:..... 2
 - Create a new Patient 2
 - Search a Patient..... 4
 - Enter Data..... 5
 - New e-Form..... 5
 - Implant tracking/ Components 6
 - Implant tracking with Sedico 7
 - Manual implant data input 8
 - Submission 11
- Online Statistics..... 11
 - Statistical analysis of primary forms 13
 - Statistical analysis of followup forms..... 18
 - Comparative statistical analysis (benchmarking) 25

Enter:
<http://www.eurospine.org/>

If already registered, choose your module, log in with your username/password and proceed to the bottom of page 2.

Demo-Tour/ Demo-Module:

<p>Click on: 1 Spine Tango</p>	
<p>2 Modules</p>	

<p>3 DEMO module</p>	
<p>→ User ID: ssedemo Password : ssedemo</p> <p>→ Submit</p>	
<p>→</p>	

Document a patient record:

- Enter data for a new patient - create a new mask.
- Enter data for an existing patient - search the patient and create a new e-form.

Create a new Patient

- Enter Data
- New Patient

Please fill out at least the mandatory fields marked with a star (*):
 Department;
 MRN - Medical Record Number;
 Date of birth;
 Gender

SSE SPINE TANGO

New patient

*** Mandatory Fields**

Department* Spine Surgery

M.R.N.* 11223344

Last name test

First name

Date of birth* (dd-mm-yyyy) 01.01.2009

Gender* Female Male

Middle initial

S.I.N.

Maiden name

Street

Street number

City

Country Please select

Zip code

Phone

Fax

Birth place

E-mail

Language English

Save Reset

→ Click on **Save** to store the information and proceed to the form list

M.R.N	Last name	First name	Date of birth	Gender
11223344	test		01-01-2009	Female

[Back](#)

[help ?](#)

Form List New e-Form New OMR Form

Study Type	Form Type	Intervention	Pathology	Status	Print list
No data found					

Legend: [View](#) [Edit](#) [Print](#) [upload RX](#) [View RX](#) [Delete](#)

The Form List shows all the existing forms for this patient.

There are 3 status possible for the e-forms:

incomplete: not all the subforms are filled out and saved

to submit: all the subforms are saved and the e-form can be submitted.

submitted: you can only view the data and not edit them. There is no possibility to change the data or add data at a submitted e-form.

M.R.N	Last name	First name	Date of birth	Gender	
11223344	test		01-01-2009	Female	Back

help ?

Form List	New e-Form	New OMR Form
-----------	------------	--------------

Study Type	Form Type	Intervention	Pathology	Status	Print list
SSE SPINE TANGO	lumbo-sacral d. Surgery 2006	07.07.2009	degenerative disease	incomplete	
SSE SPINE TANGO	thoracic d. Surgery 2006	01.01.2009	fracture/trauma	submitted 07.07.2009	
SSE SPINE TANGO	thoracic f. Follow-up 2006	06.06.2009		to submit	

Legend: View Edit Print upload RX View RX Delete

The Legend explains the shown symbols.

Search a Patient

→ Enter data

→ Search patient

The easiest way to search is a “wild” search by simply clicking the search button. You can also limit your search with MRN or date of birth, or you can search with every shown criterion.

Home	Search patient	
Enter Data	M.R.N	11223344
<ul style="list-style-type: none"> New patient Search patient 	Last name	
	First name	
Clinical Tools	Date of birth	01.01.2009
User Tools	Gender	<input type="radio"/> Female <input type="radio"/> Male
Logout	Study type	Please select
	Study	-----
	Form type	-----
	Form state	<input checked="" type="checkbox"/> All <input type="checkbox"/> Incomplete <input type="checkbox"/> To submit <input type="checkbox"/> Submitted
		Search Clear

You can also show all patients of a special study or with a special form state.

The Search result shows all the patients which match your search criteria.

M.R.N	Last name	First name	Date of birth	Gender	
11223344	test		01-01-2009	Female	[Form list] [Demographics] [Delete]
798798798	Test	Test	25-01-1960	Male	[Form list] [Demographics] [Delete]

2 patients found Show 10 patients Page << < 1 > >>

Legend : [Form list] [Demographics] [Delete]

1: to open the form list click



2: if you click [Demographics] you open the demographic data of a patient and can add more information or change them

3: you can only delete [Delete] a patient-mask when there are no e-forms existing

Enter Data

New e-Form

To enter data, create a new e-form:

Study:

→ Register

→ SSE SPINE TANGO

Form Type:

→ select the appropriate form option

Location:

→ select operated/ treated segments/ area

→ **CREATE**

M.R.N	Last name	First name	Date of birth	Gender
11223344	test		01-01-2009	Female

[Back](#)

[help ?](#)

Form List **Form** New e-Form New OMR Form

Register: SSE SPINE TANGO, d. Surgery 2006, thoracic

Admission / Pathology Surgery Surgical measures Discharge Additional

GENERAL

1. Admission date

/ / (dd.mm.yyyy)

2. Main pathology Specify other main pathology

Please select

Enter the data at all the shown subforms and [SAVE](#) each single one !!

Only when all requested questions are answered the data will be saved and the subform tab turns to dark grey

Form List **Form** New e-Form New OMR Form

Register: SSE SPINE TANGO, d. Surgery 2006, thoracic

Admission / Pathology **Surgery** Surgical measures Discharge Additional

When all subforms except Additional are saved and show dark grey, you can/should → [Submit](#) the case/e-form

Implant tracking/ Components

For implant tracking or manual implant description, question 14 (Implant Characteristics) at the bottom of the Subform Surgery needs to be answered with "yes".

IMPLANT CHARACTERISTICS

14. Components [?](#)

yes

no

[SAVE](#) [ABORT](#)

An extra subform **Components** is triggered that way and will open

Form List **Form** New e-Form New OMR Form

Register: SSE SPINE TANGO, d. Surgery 2006, thoracic

Admission / Pathology **Surgery** **Components** Surgical measures Discharge Additional

To identify the implants you can scan the implant-codes with SEDICO/ GHX, search the electronic supplier catalogues or enter the implant information manually.

Form List **Form** New e-Form New OMR Form

Register: SSE SPINE TANGO, d. Surgery 2006, thoracic

Admission / Pathology **Surgery** **Components** Surgical measures Discharge Additional

Selected Implants [Update SEDICO](#)

Supplier	Article No.	Lot Number	Article Description
no implants			

[Edit Implant Notebook](#) [help ?](#)

Search component catalog

Supplier **Please select** ▼

Article No.

Article description

[SEARCH](#)

Enter other component data

Supplier

Article No.

Article description

Lot Nr.

[ADD](#)

Implant tracking with Sedico

SEDICO/ GHX: The implant barcodes can be scanned directly after surgery.

To match with the right patient, four criteria have to be consistent:

- Medical Record Number (MRN)
- Surgical date has to be the scan date
- Location chosen during scanning and location indicated for the e-form (e.g. "lumbo-sacral)
- Clinic: your scanner is linked to your Spine Tango clinic account with a code during installation. This code does not have to be entered again for implant tracking.

If these four criteria match, AND the scanner is operated in ordering/tracking or solely tracking mode, the implants will be inserted into the "Components" subform automatically.

Manual implant data input

You can use your personal **Implant Notebook** and choose the right implants

For example:

PERSONAL IMPLANT NOTEBOOK

Supplier	Article No.	Article Description	
DePuy-Spine	185911006	Cervikale Bandscheibenprothese DISCOVER Klein x 6mm	→ edit → delete
DePuy-Spine	185911009	Cervikale Bandscheibenprothese DISCOVER Klein x 9mm	→ edit → delete
Synthes		USS I	→ edit → delete
Synthes		USS II	→ edit → delete
Zimmer		Dynardi	→ edit → delete

To create **your own Implant Notebook**


Click on Edit Implant Notebook:

Register: SSE SPINE TANGO, d. Surgery 2006, lumbo-sacral

Admission / Pathology | Surgery | **Components** | Surgical measures | Discharge | Additional

Selected Implants Update SEDICO

Supplier	Article No.	Lot Number	Article Description
no implants			


Edit Implant Notebook [help ?](#)

Search component catalog

Supplier: Please select ▼

Article No.:

Article description:

SEARCH

Enter other component data

Supplier:

Article No.:

Article description:

Lot Nr.:

ADD

You can attach your own Components by entering Data and ADD them

Close Implant Notebook

Search component catalog

Supplier: Please select ▼

Article No.:

Article description:


SEARCH

Enter other component data

Supplier:

Article No.:

Article description:

 ADD

The next time you open your Implant Notebook all the attached Components are shown.

PERSONAL IMPLANT NOTEBOOK

Supplier	Article No.	Article Description	
Phantasy	4532	XYZ	→ edit → delete
TEST	123456	Test-Component	→ edit → delete
universal		pedicle screw	→ edit → delete

Then you can easily link them to your patient by searching the Implant Notebook and selecting the respective Implants.

Please select

IMPLANT NOTEBOOK

- Aesculap
- Amplitude
- Biomet
- Centerpulse
- Ceraver
- DePuy
- DePuy-France
- DePuy-Spine
- Dedienne Sante
- Ethicon
- FH Orthopedics
- Groupe Lepine
- Johnson & Johnson
- Link Implants
- Mathys
- Mathys-RM Club
- Medacta
- Plus Orthopedics
- Plus Orthopedics-France
- Protheos
- Serf
- Stryker Howmedica
- Stryker-France
- TranSysteme
- Zimmer
- Zimmer-France
- Smith & Nephew

IMPLANT NOTEBOOK

Supplier: no implants

Search component

Supplier: **IMPLANT NOTEBOOK**

Article No. *

Article description

SEARCH

Enter other component data

Supplier

Article No.

Article description

Lot Nr.

ADD

Choose one of your Implants: if desired, the Lot-number can be manually added for each component.

ADD

Searched ' Implant Notebook, * xx '

Search results: Displayed: 1 to 4 from 4 1 show all

Supplier	Article No.	Article Description	Lot number	
Phantasy	4532	XYZ		→ add
Retest	123456	Component		→ add
TEST	123456	Test-Component	12345	→ add
universal		pedicle screw		→ add

Search results: Displayed: 1 to 4 from 4 1 show all

Search component catalog

Supplier: **IMPLANT NOTEBOOK**

Article No. *

Article description

Enter other component data

Supplier

Article No.

Article description

About | Privacy | Help | Contact us | Contact an administrat

→

Form List **Form** New e-Form New OMR Form help ?

Register: SSE SPINE TANGO, d. Surgery 2006, lumbo-sacral

Admission / Pathology Surgery **Components** Surgical measures Discharge Additional

Selected Implants Update SEDICO

Supplier	Article No.	Lot Number	Article Description	
TEST	123456	12345	Test-Component	→ delete

Edit Implant Notebook help ?

You can also search the **Supplier Catalogues for other Components** or enter Supplier; Article No. Article description and Lot Nr manually.

Supplier Catalogues manual data entry

Enter other component data

Supplier	Depuy Spine
Article No.	123456
Article description	test
Lot Nr.	0000000

ADD

→

Selected Implants **Update SEDICO**

Supplier	Article No.	Lot Number	Article Description	
Depuy Spine	123456	0000000	test	→ delete

Submission

When all subforms except Additional are saved and all the tabs show in dark grey the e-form can be submitted:

Register: SSE SPINE TANGO, d. Surgery 2006, thoracic

Admission / Pathology | Surgery | Components | Surgical measures | Discharge | **Additional**

→ **SUBMIT**

→

After submission you cannot change or delete your data anymore without personally contacting the data center.

Study Type	Form Type	Intervention	Pathology	Status	Print list
SSE SPINE TANGO	thoracic d. Surgery 2006	01.01.2009	fracture/trauma	submitted 07.07.2009	[Print] [Up] [Down] [X]

Legend: [View] [Edit] [Print] [upload RX] [View RX] [Delete]

Online Statistics

The Spine Tango gives you the possibility to create some descriptive online statistics with your data and also to compare your data against the anonymized data pool (benchmarking)

You activate this Tool via

→ Clinical Tools

→ Online statistics

SPINE SOCIETY OF EUROPE

Spine Tango

SPINE TANGO

Home

Enter Data

Clinical Tools

- Online statistics
- FU CALENDAR (temporary)

User Tools

Logout

MEM Center Epidemiology

The online epidemiological service is a feature offered to MEMdoc exclusively by the Institute for Evaluative Research in Orthopaedic Surgery, University of Bern. Note that **only** patients with submitted form(s) and those submitted data are taken into account in producing statistical results.

Please select a study with a form type:

Study type	Register
Form type	SSE SPINE TANGO

Please select

- a. Surgery (07.11.2002)
- b. Staged (07.11.2002)
- c. Follow up (07.11.2002)
- a. Surgery (03.07.2003)
- c. Follow up (03.07.2003)
- b. Staged (04.07.2003)
- a. Surgery 2005 (13.04.2005)
- c. Follow-up 2005 (07.07.2005)
- b. Staged 2005 (30.08.2005)
- d. Surgery 2006 (18.10.2006)
- e. Staged 2006 (18.10.2006)
- f. Follow-up 2006 (20.10.2006)
- h. conservative therapy: follow-up 2009 (24.03.2009)
- g. Conservative therapy 2009 (09.04.2009)

By choosing Study type and Form type you choose the forms you want to query. Spine Tango users with a long track record may have to choose an older version of Spine Tango.

You have different possibilities to view and compare patient samples:

→ Select a sample:

MEM Center Epidemiology

The online epidemiological service is a feature offered to MEMdoc exclusively by Research in Orthopaedic Surgery, University of Bern. Note that **only** patients whose submitted data are taken into account in producing statistical results.

Register: SSE SPINE TANGO - d. Surgery 2006 (18.10.2006)

Select sample:

- My data only
- My department's data
- All data in the pool
- My data compared with the pool
- My department's data compared with the pool

Gender: both male female

Min age: 0 Max age: 130
Min date: 01/01/1900 Max date: 14/7/2009

→ Select filter criteria:

You can create subsamples of patients by applying certain filter criteria like age, gender, operation date, specific pathologies, aso. You can also ignore the filtering by clicking on "Hide Filter"

Register: SSE SPINE TANGO - d. Surgery 2006 (18.10.2006)

Select sample: All data in the pool

Select filter criteria (optional): Hide Filter

Use this section to select only the data that falls within your selected criteria.
Note: Questions will be compared to each other using the AND logical operator.
Answers within the same question will be compare using the OR operator.

Gender: both male female

Min age: 0 Max age: 130
Min date: 01/01/1900 Max date: 14/7/2009

Main pathology

- degenerative disease
- fracture/trauma
- spondylolisthesis
- infection
- failed surgery
- deformity
- pathological fracture
- inflammation
- tumor
- other

Type of degeneration

- black disc
- disc herniation
- spondylarthrosis
- adjacent segment degeneration
- disc degeneration
- spondylosis
- spinal stenosis
- other

Type of deformity

And chose whether you want to look on the primary forms or the follow up forms

Select outcomes of interest (choose at least one question):

from Primary from Follow-up

Admission / Pathology

Main pathology Type of degeneration

Type of deformity Type of scoliosis

Predominant etiology Type of (pathological) fracture/trauma

Dens fracture type C3-4/S1 AO fracture type

Statistical analysis of primary forms

First you have to select a sample and thereafter you may want to apply filter criteria for this sample.

For example:

- Viewing all data in the pool

- no filtering with respect to gender, age, or surgery date, but applying Main Pathology : degenerative disease as filter criterion

Register: SSE SPINE TANGO - d. Surgery 2006 (18.10.2006)

Select sample:

All data in the pool

Select filter criteria (optional): Hide Filter

Use this section to select only the data that falls within your selected criteria.
 Note: Questions will be compared to each other using the AND logical operator.
 Answers within the same question will be compare using the OR operator.

Gender both male female

Min age 0 Max age 130

Min date 01/01/1900 Max date 21/7/2009

Main pathology

degenerative disease deformity

fracture/trauma pathological fracture

spondylolisthesis inflammation

infection tumor

failed surgery other

Type of degeneration

Scroll down and select no more than 3-5 outcomes of interest at once to reduce calculation times.

Choose from e.g the primary form:

Select outcomes of interest (choose at least one question):

from Primary from Follow-up

Admission / Pathology

Main pathology Type of degeneration

Type of deformity Type of scoliosis

Predominant etiology Type of (pathological) fracture/trauma

Select at least one question!

For example:
 We want to look at the distribution of **type of degeneration, decompression and fusion** in our group of patients with degenerative disease in the complete data pool
 We also want to know about the **surgical complications**

→

Generate Stats

Surgical measures

- Decompression
- Fusion
- Fusion material
- Specify stabilization rigid
- Specify stabilization motion preservin
- Specify percutaneous measures

Discharge

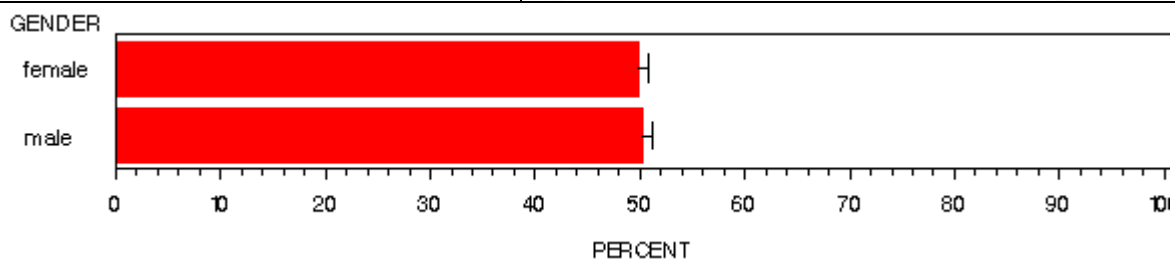
- Surgical complications
- Measures taken
- Surgical

Depending on the size of the patient sample chosen and the number of parameters selected it might take up to half a minute until a SAS output window will open, which shows your statistics as tables and graphs. The graphs are pictures and can be used in e.g. Power Point presentations with a right mouse click. The tables must be marked with the left mouse button, copied, and then inserted into the slides.

The statistics **always** show the Gender and Age distribution of your group:

Gender Distribution

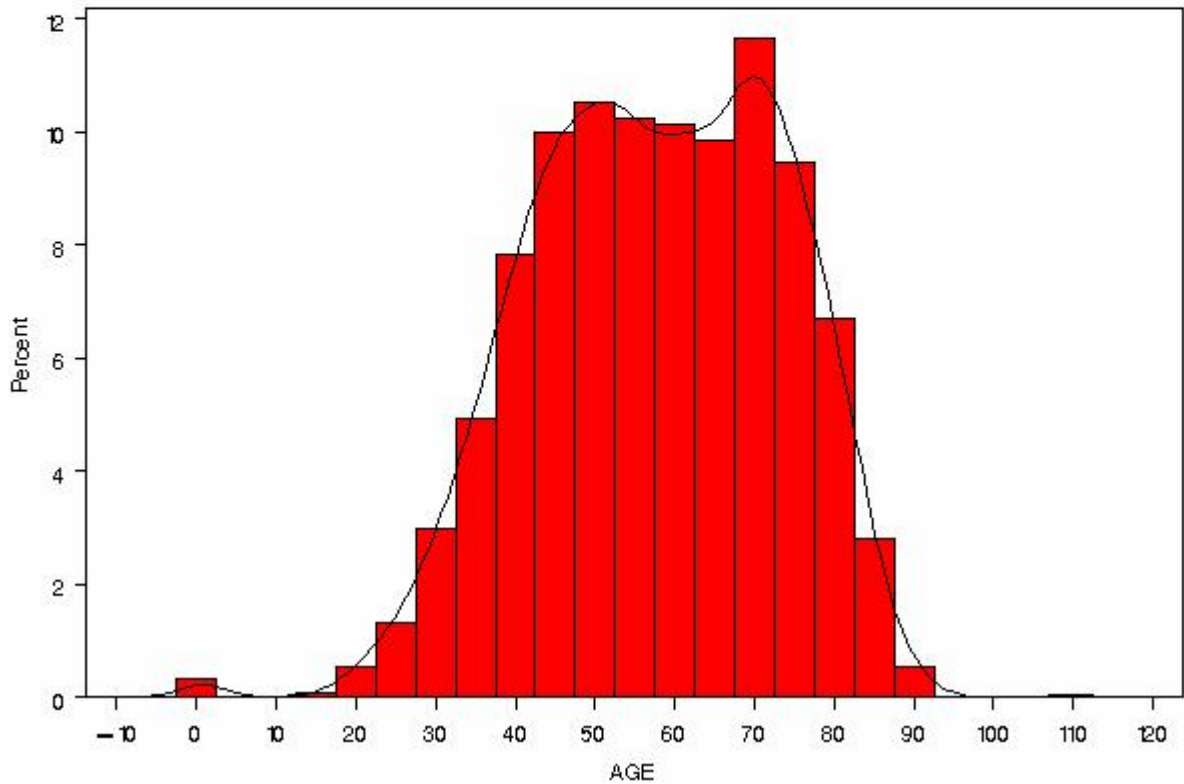
<i>GENDER</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
female	5612	49.84
male	5649	50.16
	11261	100.0



Age Distribution

Analysis Variable : AGE

<i>N</i>	<i>Minimum</i>	<i>Median</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std Dev</i>
11261	0.00	58.00	109.00	57.64	15.52

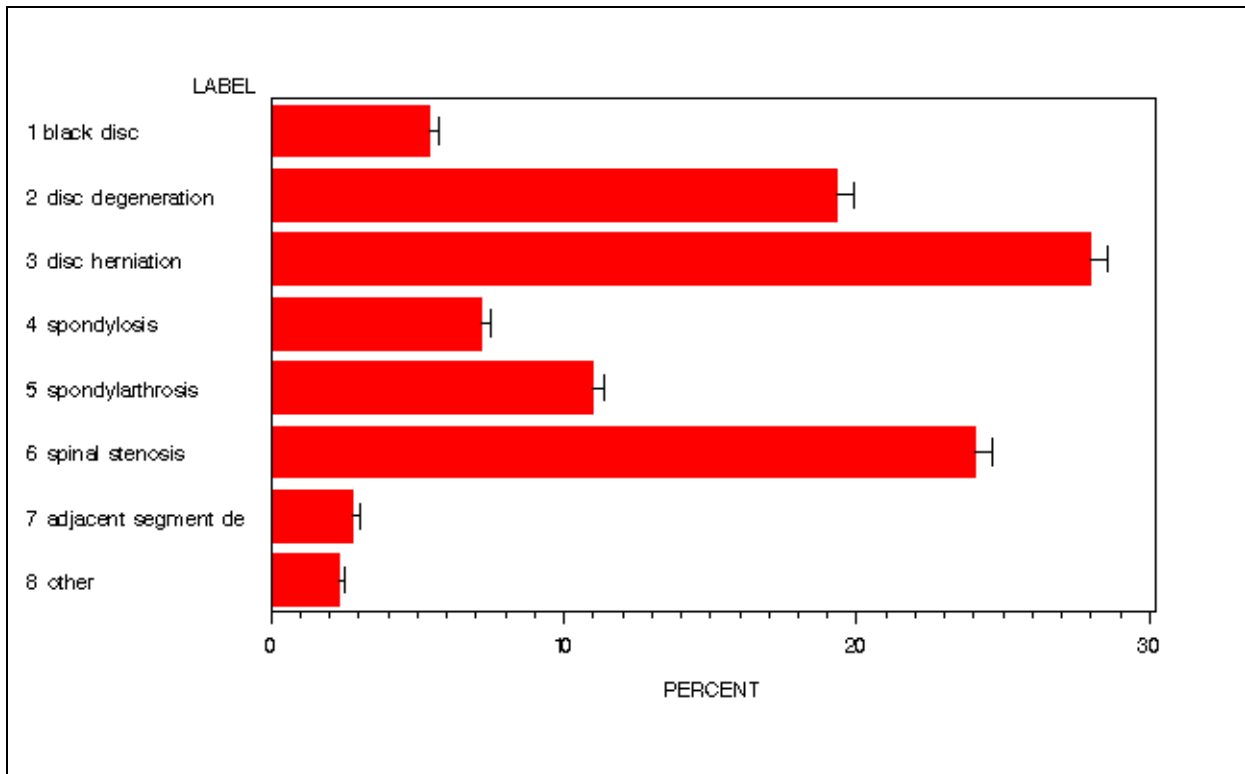


According to your selection of outcomes, in this example:

→ **distribution of type of degeneration**

Distribution of Type of degeneration

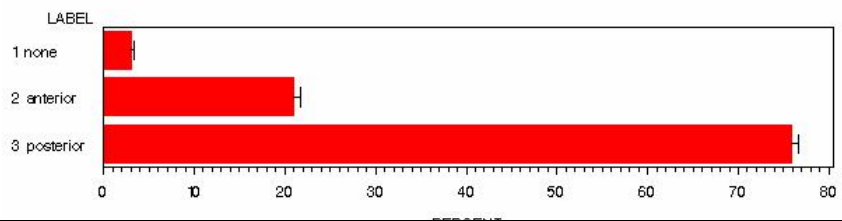
<i>LABEL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
1 black disc	1125	5.43
2 disc degeneration	4009	19.33
3 disc herniation	5800	27.97
4 spondylosis	1484	7.16
5 spondylarthrosis	2275	10.97
6 spinal stenosis	4983	24.03
7 adjacent segment degeneration	581	2.80
8 other	478	2.31
	20735	100.0



→ **distribution of decompression**

Distribution of Decompression

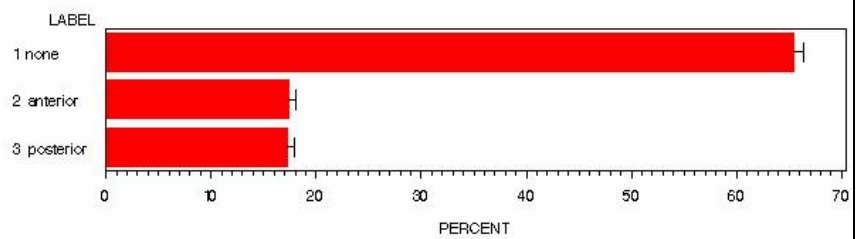
LABEL	Frequency Count	Percent of Total Frequency
1 none	359	3.10
2 anterior	2433	20.98
3 posterior	8804	75.92
	11596	100.0



→ distribution of fusion

Distribution of Fusion

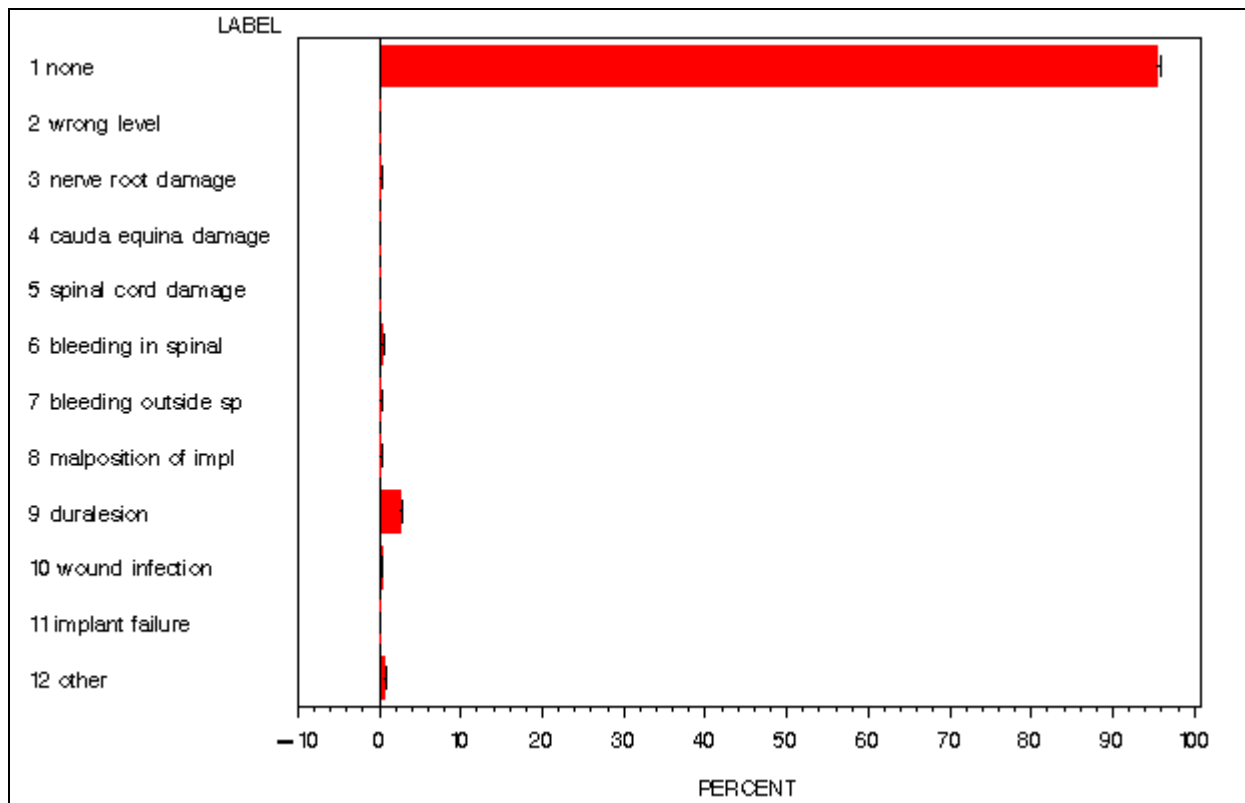
<i>LABEL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
1 none	7669	65.46
2 anterior	2032	17.35
3 posterior	2014	17.19
	<i>11715</i>	<i>100.0</i>



→ and distribution of surgical complications is displayed as output.

Distribution of Surgical complications

<i>LABEL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
1 none	10625	95.45
2 wrong level	10	0.09
3 nerve root damage	19	0.17
4 cauda equina damage	4	0.04
5 spinal cord damage	2	0.02
6 bleeding in spinal canal	43	0.39
7 bleeding outside spinal canal	23	0.21
8 malposition of implant	21	0.19
9 dural lesion	287	2.58
10 wound infection	27	0.24
11 implant failure	5	0.04
12 other	66	0.59
	<i>11132</i>	<i>100.0</i>



Statistical analysis of follow-up forms

Here you can create statistics of the surgeon based outcomes (ST followup forms). There are fewer criteria to choose, and the analysis will automatically be stratified by the follow-up intervals. You can still generate a subsample of patients based on the filter for the PRIMARY forms. The follow-up query will then display the selected outcomes of the predefined subsample of patients.

For example:

- analysis of all data in the pool

- without selection or limitation by gender, age, or surgery date but with limitation to cases with main pathology degenerative disease only

Register: SSE SPINE TANGO - d. Surgery 2006 (18.10.2006)

Select sample:

Select filter criteria (optional): Hide Filter
 Use this section to select only the data that falls within your selected criteria.
 Note: Questions will be compared to each other using the AND logical operator.
 Answers within the same question will be compare using the OR operator.

Gender both male female

Min age Max age
 Min date Max date

Main pathology

<input checked="" type="checkbox"/> degenerative disease	<input type="checkbox"/> deformity
<input type="checkbox"/> fracture/trauma	<input type="checkbox"/> pathological fracture
<input type="checkbox"/> spondylolisthesis	<input type="checkbox"/> inflammation
<input type="checkbox"/> infection	<input type="checkbox"/> tumor
<input type="checkbox"/> failed surgery	<input type="checkbox"/> other

Type of degeneration

<input type="checkbox"/> black disc	<input type="checkbox"/> disc degeneration
<input type="checkbox"/> disc herniation	<input type="checkbox"/> spondylosis
<input type="checkbox"/> spondylarthrosis	<input type="checkbox"/> spinal stenosis
<input type="checkbox"/> adjacent segment degeneration	<input type="checkbox"/> other

Type of deformity

Scroll down and select the outcomes of interest from the follow-up mask:

Choose from **Follow-up**: then select **at least one** outcome question!
 For example:
 We look at the distribution of **the surgical goals/measures achieved** in our group of patients with degenerative disease
 We also want to know about the presence of **complications** and their **type**.

→

Generate Stats

Select outcomes of interest (choose at least one question):

from Primary from Follow-up

Follow-up

- Level of procedure
- Examiner
- Surgical goals/measures achieved
- Surgical goals/measures not achieved
- Rehabilitation
- Decision
- Follow-up interval
- Work status
- Surgical goals/mea
- Medication
- Overall outcome (e

Complications

- Complications
- Type
- Individual consequences
- Time
- Therapeutic consec

Generate Stats

Dependent how big your case load is it might take a few seconds until a SAS output window will open with your statistics.

The statistics **always** shows the Age and Gender distribution of your group.

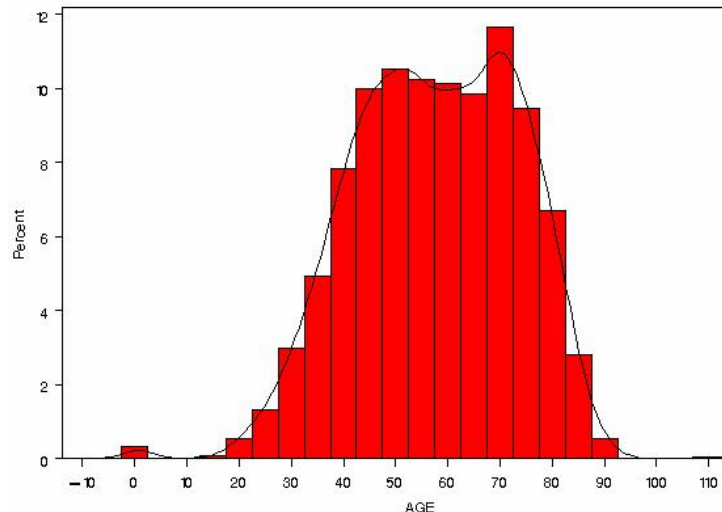
PATIENT CHARACTERISTICS AT SURGERY
Gender Distribution

GENDER	Frequency Count	Percent of Total Frequency
female	5612	49.84
male	5649	50.16
	11261	100.0

Age Distribution

Analysis Variable : AGE

N	Minimum	Median	Maximum	Mean	Std Dev
11261	0.00	58.00	109.00	57.64	15.52



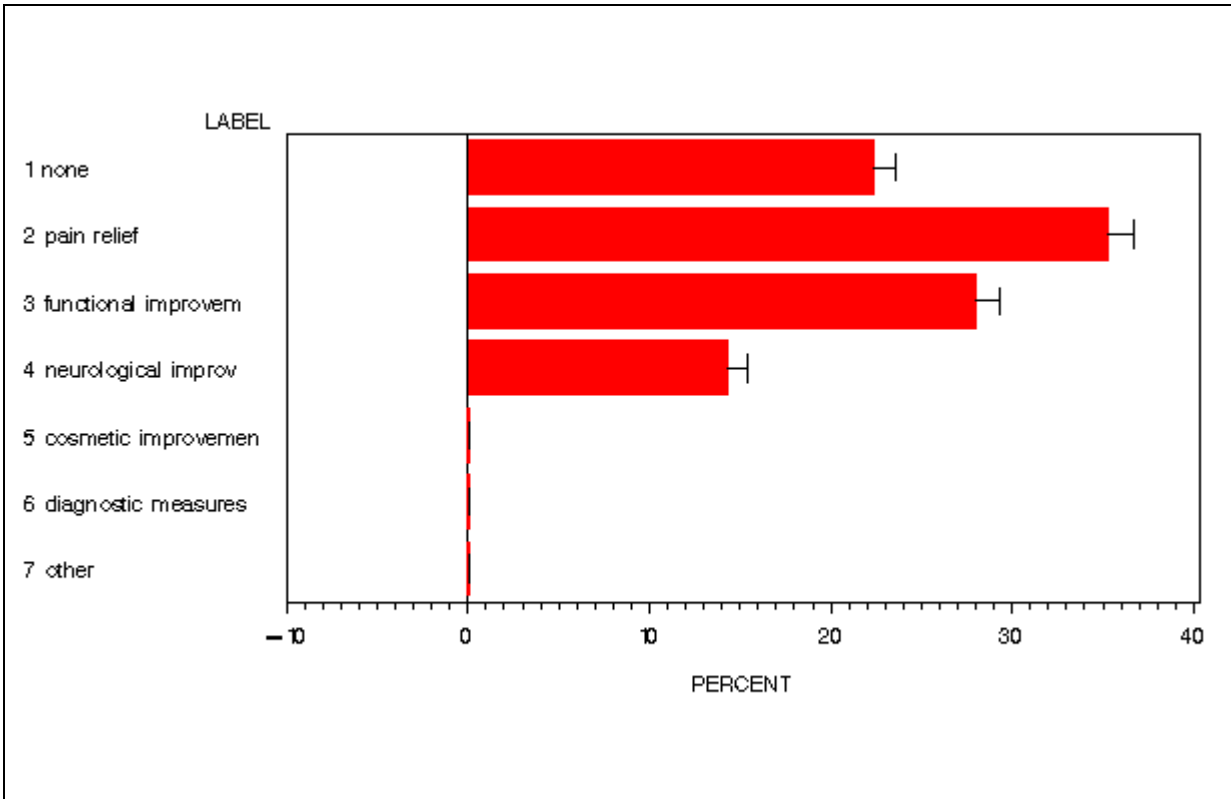
It also shows your **distribution of follow-ups** and the selected covariates stratified by follow-up interval.

<i>FOLLOW-UPS</i>		
<i>INTERVAL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
6 weeks	2805	44.27
3 months	1826	28.82
6 months	813	12.83
1 year	525	8.29
2 years	60	0.95
other	307	4.85
	6336	100.0

Surgical goals achieved stratified by follow-up times

Distribution of Surgical goals/measures achieved 6 weeks

<i>LABEL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
1 none	1004	22.33
2 pain relief	1586	35.28
3 functional improvement	1257	27.96
4 neurological improvement	645	14.35
5 cosmetic improvement	1	0.02
6 diagnostic measures	1	0.02
7 other	2	0.04
	4496	100.0



1 year			3 months			other	
LABEL	Frequency Count	Percent of Total	LABEL	Frequency Count	Percent of Total Frequency	Frequency Count	Percent of Total Frequency
1 none	212		1 none	590	20.42	165	40.15
2 pain relief	260		2 pain relief	1073	37.14	103	25.06
3 functional improvement	215		3 functional improvement	804	27.83	93	22.63
4 neurological improvement	119		4 neurological improvement	417	14.43	50	12.17
5 cosmetic improvement	1		5 cosmetic improvement	4	0.14		
			7 other	1	0.03	411	100.0
				2889	100.0		

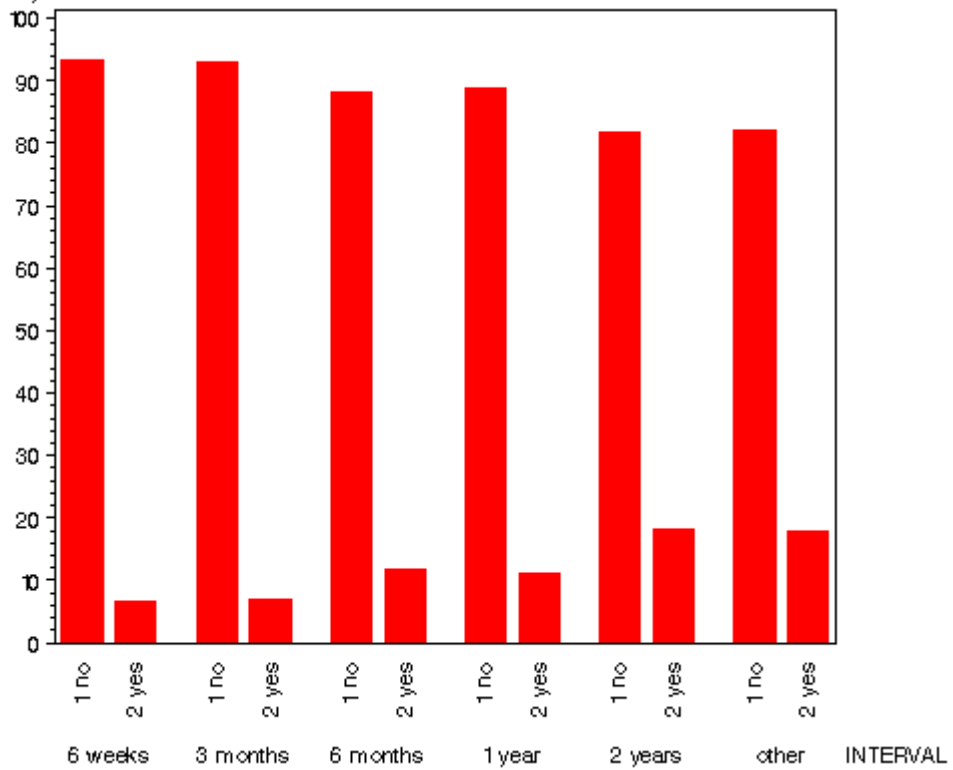
6 months			2 years		
LABEL	Frequency Count	Percent of Total Frequency	LABEL	Frequency Count	Percent of Total Frequency
1 none	304	23.99	1 none	28	34.57
2 pain relief	409	32.28	2 pain relief	24	29.63
3 functional improvement	346	27.31	3 functional improvement	15	18.52
4 neurological improvement	205	16.18	4 neurological improvement	14	17.28
7 other	3	0.24			
	1267	100.0		81	100.0

Complications
Stratified by follow-up times

Distribution of Complications

INTERVAL	LABEL	Frequency Count	Percent of Total Frequency
6 weeks	1 no	2618	93.33
6 weeks	2 yes	187	6.67
3 months	1 no	1700	93.10
3 months	2 yes	126	6.90
6 months	1 no	718	88.31
6 months	2 yes	95	11.69
1 year	1 no	467	88.95
1 year	2 yes	58	11.05
2 years	1 no	49	81.67
2 years	2 yes	11	18.33
other	1 no	252	82.08
other	2 yes	55	17.92
		6336	600.0

Percent of Total Frequency



Type of complications
Stratified by follow-up
times

*Distribution of Type
6 weeks*

<i>LABEL</i>	<i>Frequency Count</i>	<i>Percent of Total Frequency</i>
1 sensory disturbance	32	14.22
2 motor disturbance	26	11.56
3 sphincter disturbance	1	0.44
5 implant failure	11	4.89
6 instability	4	1.78
7 liquor fistula	8	3.56
8 superficial wound infection	23	10.22
9 deep subfascial wound infection	8	3.56
10 spondylitis	2	0.89
11 discitis	3	1.33
12 wrong segment	2	0.89
13 malposition of implant	8	3.56
14 recurrence of symptoms	34	15.11
15 graft complication	1	0.44
17 internal medicine	11	4.89
18 other	51	22.67
	225	100.0

Comparative statistical analysis (benchmarking)

In this online statistical function you can also perform a comparative statistical analysis e.g to compare your data with the data of the pool.

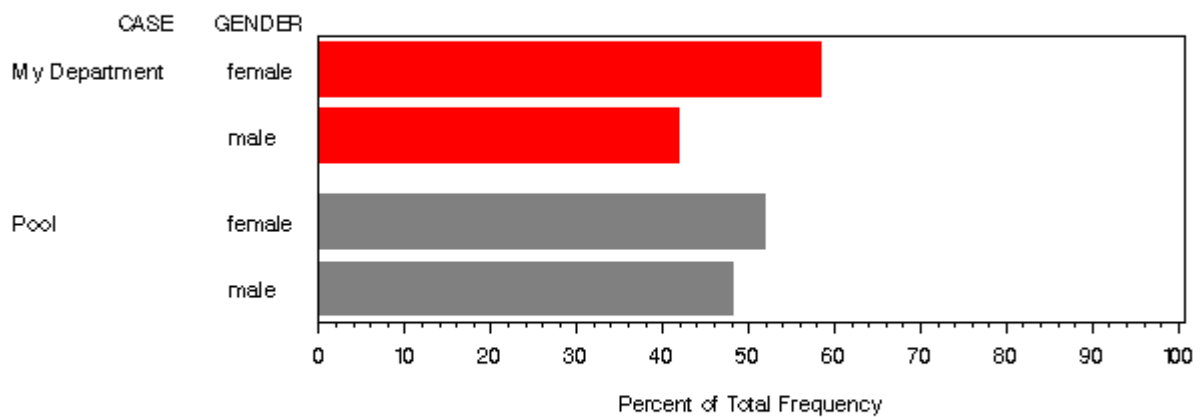
Apply the same procedure as for the statistic analysis before.													
<p>At <u>select sample</u> click on My department's data compared with the pool (or My data compared with the pool)</p> <p>Then again you can select the required filter criteria.</p> <p>In this example we chose: <i>from Primary, Main pathology</i> and <i>Morbidity state</i></p>	<div style="border: 1px solid black; padding: 5px;"> <p>MEM Center Epidemiology</p> <p>The online epidemiological service is a feature offered to MEMdoc exclusively by the Institute for Evaluative Research in Orthopaedic Surgery, University of Bern. Note that only patients with submitted form(s) and those submitted data are taken into account in producing statistical results.</p> <p>Register: SSE SPINE TANGO - d. Surgery 2006 (18.10.2006)</p> <p>Select sample:</p> <p>My department's data compared with the pool ▼</p> <p>Select filter criteria (optional): Hide Filter <input checked="" type="checkbox"/></p> <p>Use this section to select only the data that falls within your selected criteria. Note: Questions will be compared to each other using the AND logical operator. Answers within the same question will be compare using the OR operator.</p> <p>Select outcomes of interest (choose at least one question):</p> <p><input checked="" type="radio"/> from Primary <input type="radio"/> from Follow-up</p> <p>Admission / Pathology</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Main pathology</td> <td><input type="checkbox"/> Type of degeneration</td> </tr> <tr> <td><input type="checkbox"/> Type of deformity</td> <td><input type="checkbox"/> Type of scoliosis</td> </tr> <tr> <td><input type="checkbox"/> Predominant etiology</td> <td><input type="checkbox"/> Type of (pathological) fracture/trauma</td> </tr> <tr> <td><input type="checkbox"/> Dens fracture type</td> <td><input type="checkbox"/> C3-L5/S1 AO fracture type</td> </tr> <tr> <td><input type="checkbox"/> Pathological fracture due to</td> <td><input type="checkbox"/> Fracture age</td> </tr> <tr> <td><input type="checkbox"/> Type of spondylolisthesis</td> <td><input type="checkbox"/> Grade of spondylolisthesis</td> </tr> </table> </div>	<input checked="" type="checkbox"/> Main pathology	<input type="checkbox"/> Type of degeneration	<input type="checkbox"/> Type of deformity	<input type="checkbox"/> Type of scoliosis	<input type="checkbox"/> Predominant etiology	<input type="checkbox"/> Type of (pathological) fracture/trauma	<input type="checkbox"/> Dens fracture type	<input type="checkbox"/> C3-L5/S1 AO fracture type	<input type="checkbox"/> Pathological fracture due to	<input type="checkbox"/> Fracture age	<input type="checkbox"/> Type of spondylolisthesis	<input type="checkbox"/> Grade of spondylolisthesis
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<input type="checkbox"/> Type of spondylolisthesis	<input type="checkbox"/> Grade of spondylolisthesis												
	<div style="border: 1px solid black; padding: 5px;"> <p>Surgery</p> <table border="0"> <tr> <td><input type="checkbox"/> Level of procedure</td> <td><input type="checkbox"/> Surgeon</td> </tr> <tr> <td><input type="checkbox"/> Assistant</td> <td><input type="checkbox"/> Surgeon credentials</td> </tr> <tr> <td><input type="checkbox"/> Goal of surgery</td> <td><input checked="" type="checkbox"/> Morbidity state</td> </tr> <tr> <td><input type="checkbox"/> Anterior access</td> <td><input type="checkbox"/> Posterior access</td> </tr> <tr> <td><input type="checkbox"/> Technology</td> <td><input type="checkbox"/> Blood loss</td> </tr> <tr> <td><input type="checkbox"/> Operation time</td> <td></td> </tr> </table> <p>Surgical measures</p> </div>	<input type="checkbox"/> Level of procedure	<input type="checkbox"/> Surgeon	<input type="checkbox"/> Assistant	<input type="checkbox"/> Surgeon credentials	<input type="checkbox"/> Goal of surgery	<input checked="" type="checkbox"/> Morbidity state	<input type="checkbox"/> Anterior access	<input type="checkbox"/> Posterior access	<input type="checkbox"/> Technology	<input type="checkbox"/> Blood loss	<input type="checkbox"/> Operation time	
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<input type="checkbox"/> Technology	<input type="checkbox"/> Blood loss												
<input type="checkbox"/> Operation time													
<p>→</p> <p>Generate Stats</p>													

In this comparison your data are shown in red, the department's data in grey:

→ **distribution of gender**

Gender Distribution

CASE	GENDER	Frequency Count	Percent of Total Frequency
My Department	female	356	58.27
My Department	male	255	41.73
Pool	female	7400	51.93
Pool	male	6849	48.07

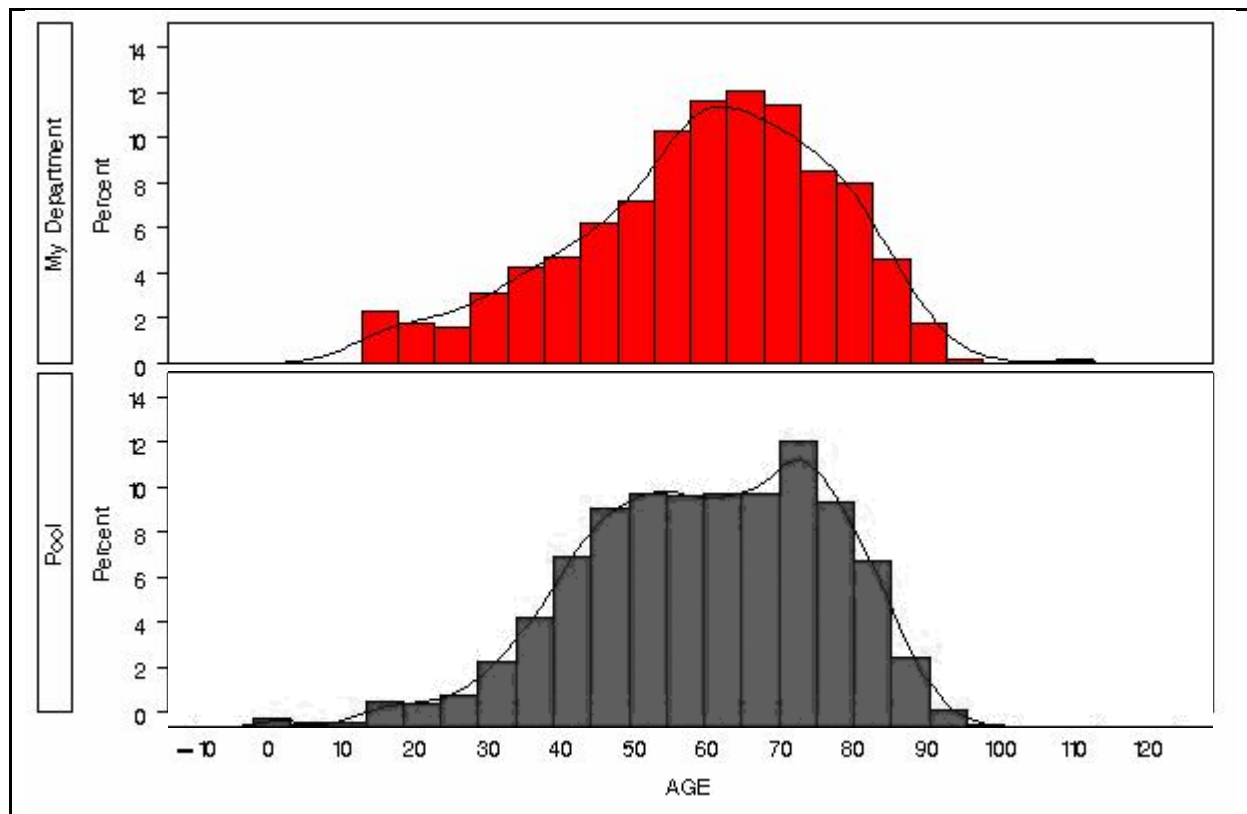


CASE ■ My Department ■ Pool

→ **distribution of age**

Age Distribution

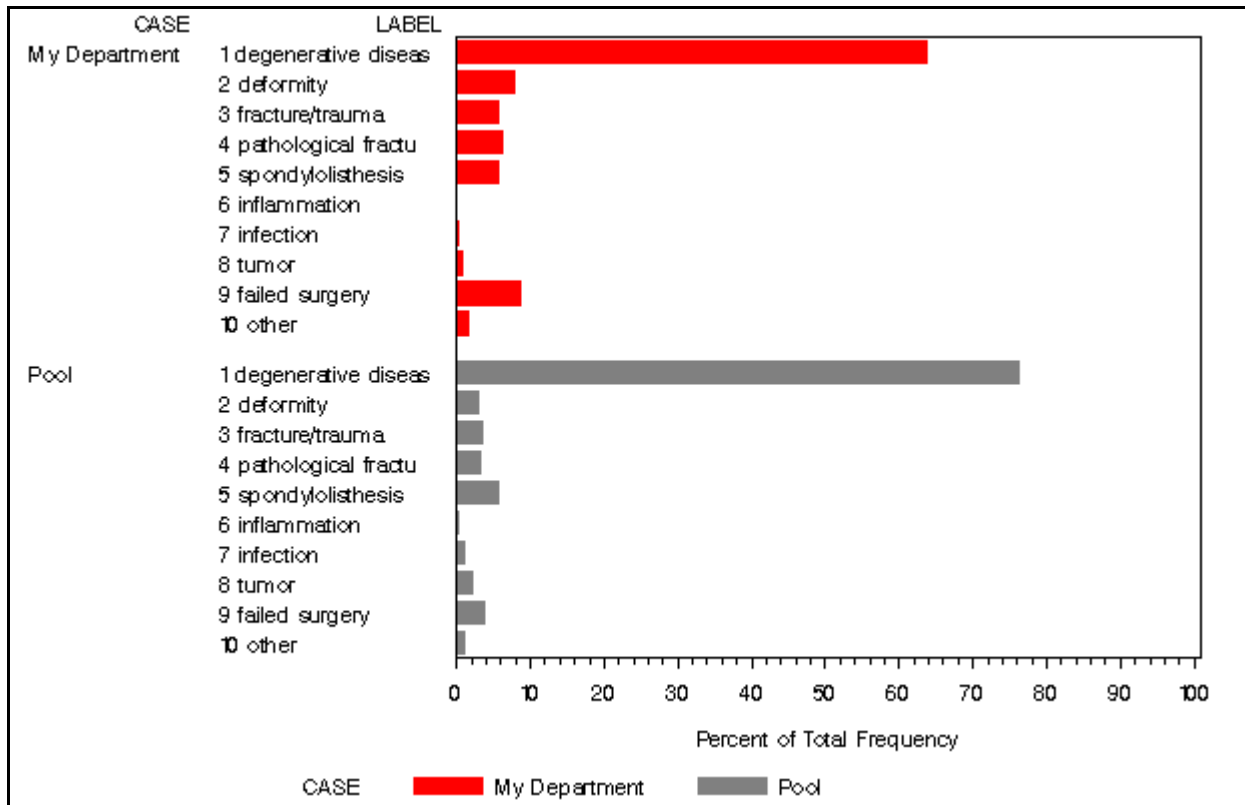
Analysis Variable : AGE							
CASE	N Obs	N	Minimum	Median	Maximum	Mean	Std Dev
My Department	611	611	13.00	61.00	108.00	58.99	17.53
Pool	14249	14249	0.00	59.00	109.00	57.51	16.57



→ distribution of Main Pathology

Distribution of Main pathology

CASE	LABEL	Frequency Count	Percent of Total Frequency
My Department	1 degenerative disease	390	63.83
My Department	2 deformity	47	7.69
My Department	3 fracture/trauma	35	5.73
My Department	4 pathological fracture	37	6.06
My Department	5 spondylolisthesis	34	5.56
My Department	7 infection	2	0.33
My Department	8 tumor	4	0.65
My Department	9 failed surgery	52	8.51
My Department	10 other	10	1.64
Pool	1 degenerative disease	10871	76.29
Pool	2 deformity	408	2.86
Pool	3 fracture/trauma	513	3.60
Pool	4 pathological fracture	473	3.32
Pool	5 spondylolisthesis	798	5.60
Pool	6 inflammation	43	0.30
Pool	7 infection	146	1.02
Pool	8 tumor	311	2.18
Pool	9 failed surgery	543	3.81
Pool	10 other	143	1.00



→ **distribution of Morbidity State**

Distribution of Morbidity state

CASE	LABEL	Frequency Count	Percent of Total Frequency
My Department	1 unknown	179	29.30
My Department	2 ASA 1	150	24.55
My Department	3 ASA 2	169	27.66
My Department	4 ASA 3	102	16.69
My Department	5 ASA 4	9	1.47
My Department	6 ASA 5	2	0.33
Pool	1 unknown	1465	10.39
Pool	2 ASA 1	3810	27.03
Pool	3 ASA 2	6118	43.40
Pool	4 ASA 3	2544	18.05
Pool	5 ASA 4	155	1.10
Pool	6 ASA 5	5	0.04

