

Using Graphics to Present the Study Results as a Story

PSI graphics, London 9th Oct 2015



 Shafi Consultancy Ltd.



Overview

- Introduction
- Presenting report as a story
- Developing animated graphics
- Sharing stories
 - Disposition of Patients
 - Systolic/Diastolic BP over weeks
 - System organ class over time
 - Injections Site Reactions over time



Introduction



Too often we sit and listen to the final results of a study that has just been reported and think of how it can be more interesting.



We are told

We need to see

- the numbers
- the tables
- the figures

so that we know the result of
the study



Presenting reports as a story



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Animated charts

- Helps audiences to visualize the numbers
- Makes easier to see changes over time
- Leave a powerful image in the minds
- Makes the presentation more interesting
- Energizes the audience
- Interactive aspect allow the presenter to answer questions
- Demonstrate and show those results as and when required



Developing animated graphics

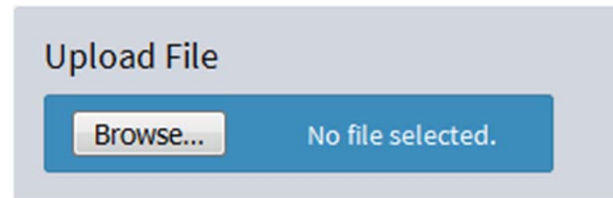
There are five parts used in the application

- Upload data
- Assign role
- Customise settings
- Create chart
- Export feature

Developing animated graphics (cont.)

UPLOAD DATA

- Accept CSV
- Print loaded data using “DataTables” plugins
- Data processed on user’s browser



PTNO	TYPE	DAY	BLVALUE	VALUE
1001	A	0	35	35
1001	A	6	35	63
1001	A	12	35	63
1001	A	18	35	56
1001	A	24	35	37
1001	A	30	35	68
1001	A	36	35	53
1001	A	42	35	39
1001	A	48	35	64
1001	A	54	35	41

Developing animated graphics (cont.)

ASSIGN ROLE

- Change the role of a variable to be used in the desired graph
- Roles can be changed anytime

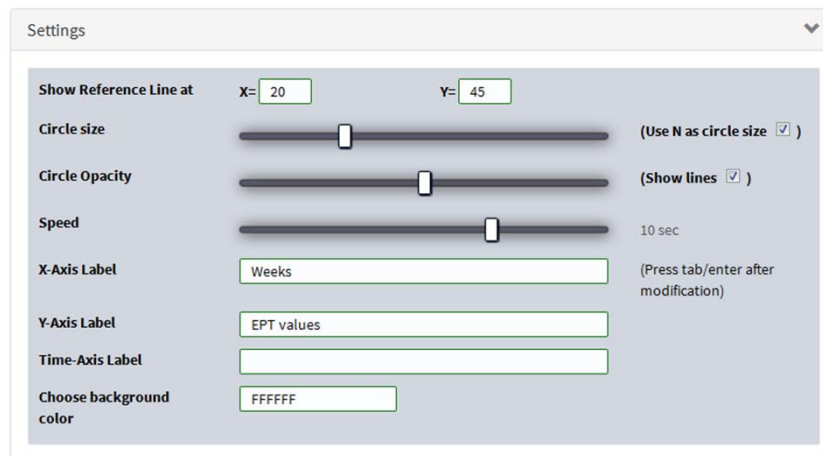
Assign role

Category	TYPE	▼
Time	DAY	▼
X axis	BLVALUE	▼
Y axis	VALUE	▼
Patient ID	PTNO	▼

Developing animated graphics (cont.)

CUSTOMIZE SETTINGS

- Customise various settings
- Can be changed anytime, reflect the change immediately



The screenshot shows a 'Settings' dialog box with the following options:

- Show Reference Line at**: X= 20, Y= 45
- Circle size**: A slider control. (Use N as circle size)
- Circle Opacity**: A slider control. (Show lines)
- Speed**: A slider control. 10 sec
- X-Axis Label**: Text input field containing 'Weeks'. (Press tab/enter after modification)
- Y-Axis Label**: Text input field containing 'EPT values'
- Time-Axis Label**: Text input field (empty)
- Choose background color**: Color input field containing 'FFFFFF'

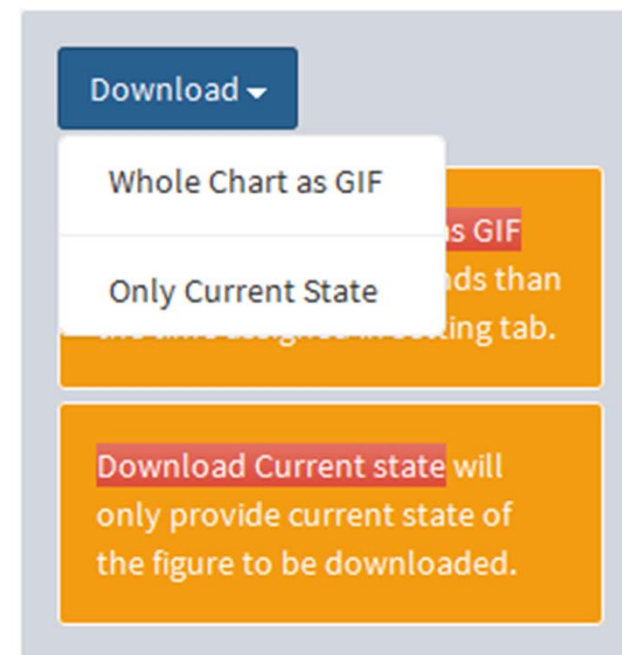
Developing animated graphics (cont.)

CREATE FIGURE

- Draw the chart using defined roles and settings

EXPORT FEATURE

- Export animated or static chart

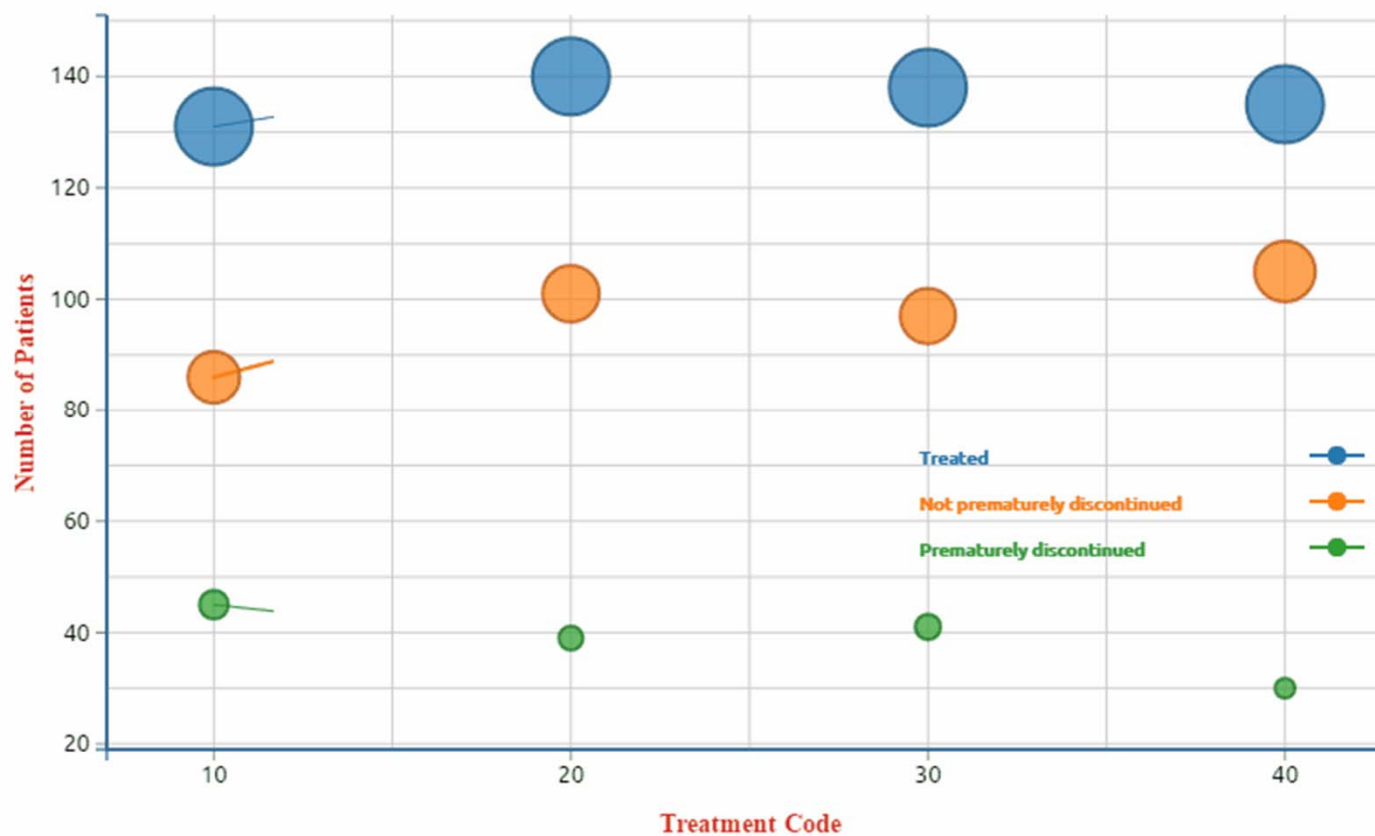


Sharing a story

Disposition of patients

	TRT_10 N (%)	TRT_20 N (%)	TRT_30 N (%)	TRT_40 N (%)
Treated *	131 (100.0)	140 (100.0)	138 (100.0)	135 (100.0)
Not prematurely discontinued	86 (65.6)	101 (72.1)	97 (70.3)	105 (77.8)
Prematurely discontinued	45 (34.4)	39 (27.9)	41 (29.7)	30 (22.2)

Disposition of patients



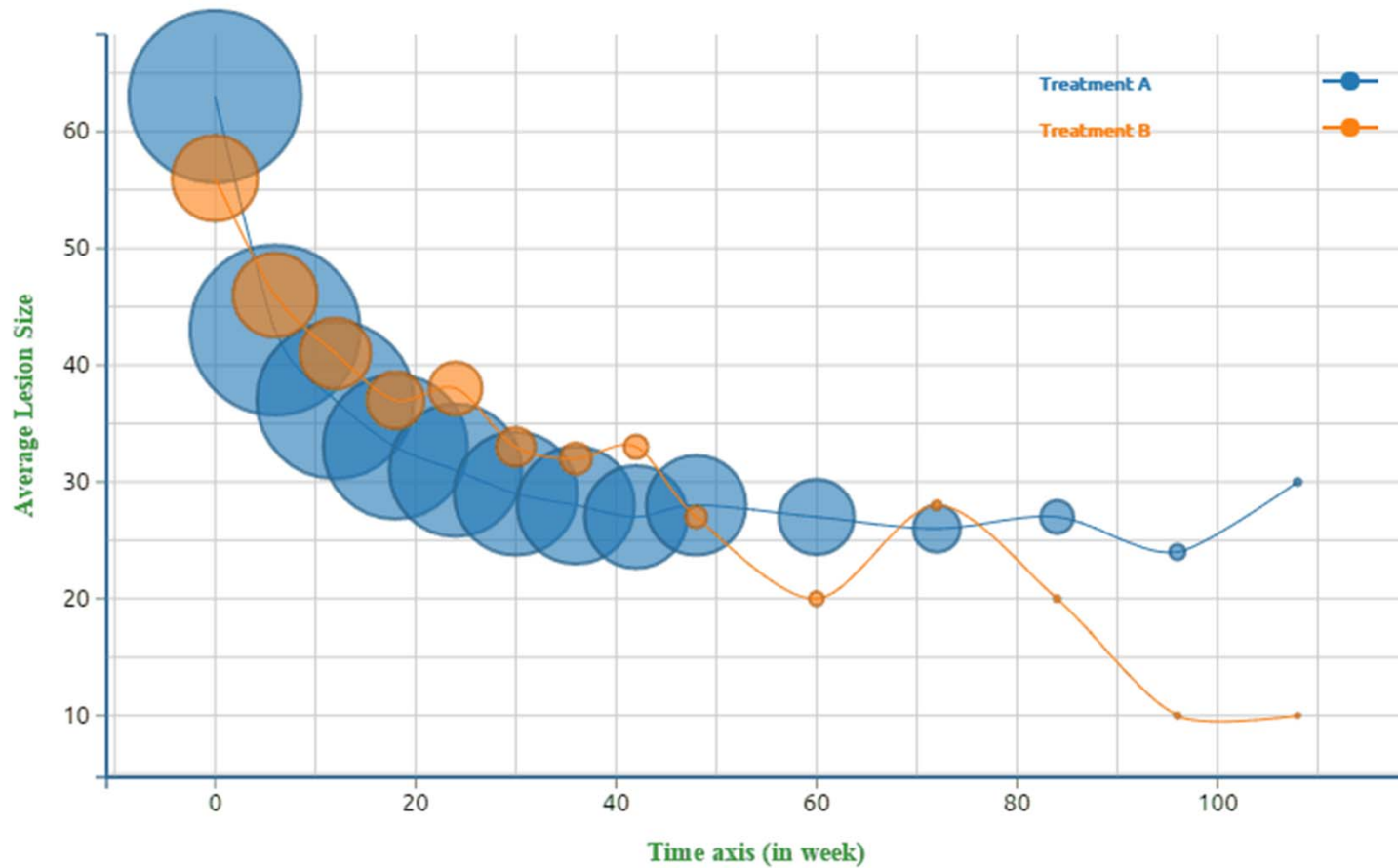
Change in lesion size over time

ATRSORT	ATRSLBL	INTERV	INTERVDC	WEEK	EPTNM	EPTNMDC	N	AVERAGE_SIZE
1	Treatment A	0	Baseline	0	SLD	Sum of target lesion diameters [mm]	454	63
1	Treatment A	1	Day 2 - 64	6	SLD	Sum of target lesion diameters [mm]	448	43
1	Treatment A	2	Day 65 - 106	12	SLD	Sum of target lesion diameters [mm]	413	37
1	Treatment A	3	Day 107 - 148	18	SLD	Sum of target lesion diameters [mm]	379	33
1	Treatment A	4	Day 149 - 190	24	SLD	Sum of target lesion diameters [mm]	347	31
1	Treatment A	5	Day 191 - 232	30	SLD	Sum of target lesion diameters [mm]	322	29
1	Treatment A	6	Day 233 - 274	36	SLD	Sum of target lesion diameters [mm]	306	28
1	Treatment A	7	Day 275 - 316	42	SLD	Sum of target lesion diameters [mm]	267	27
1	Treatment A	8	Day 317 - 379	48	SLD	Sum of target lesion diameters [mm]	259	28
1	Treatment A	9	Day 380 - 463	60	SLD	Sum of target lesion diameters [mm]	193	27

Showing 1 to 10 of 28 entries

Previous **1** 2 3 Next

Change in lesion size over time



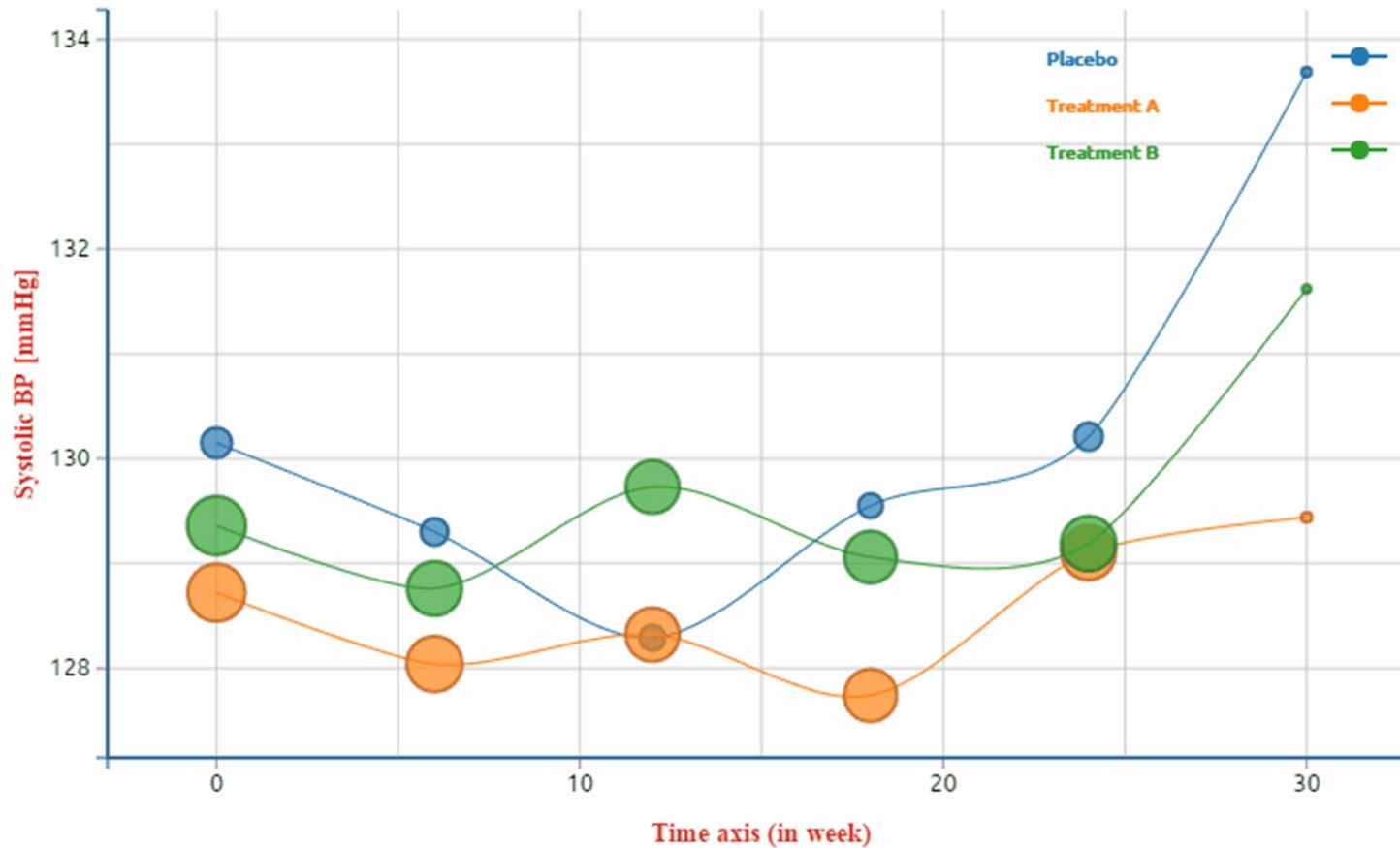
Systolic BP over time

TYPE	TIMEPERIOD	TREATMENT	WEEKS	N	MEAN	SD	MIN	MEDIAN	MAX
Systolic BP [mmHg]	Baseline	Placebo	0	72	130.15	15.88	90	130	179
Systolic BP [mmHg]	Week 6	Placebo	6	64	129.3	13.31	98	130	160
Systolic BP [mmHg]	Week 12	Placebo	12	59	128.29	13.3	100	130	159
Systolic BP [mmHg]	Week 18	Placebo	18	56	129.55	14.88	100	130	166
Systolic BP [mmHg]	Week 24	Placebo	24	66	130.21	13.95	100	130	169
Systolic BP [mmHg]	Follow-up	Placebo	30	16	133.69	16	110	130	179
Systolic BP [mmHg]	Baseline	Treatment A	0	144	128.72	14.42	99	128	182
Systolic BP [mmHg]	Week 6	Treatment A	6	139	128.04	14.82	86	130	179
Systolic BP [mmHg]	Week 12	Treatment A	12	134	128.32	14.59	88	128	175
Systolic BP [mmHg]	Week 18	Treatment A	18	131	127.74	13.88	99	127	180

Showing 1 to 10 of 18 entries

Previous **1** 2 Next

Systolic BP over time



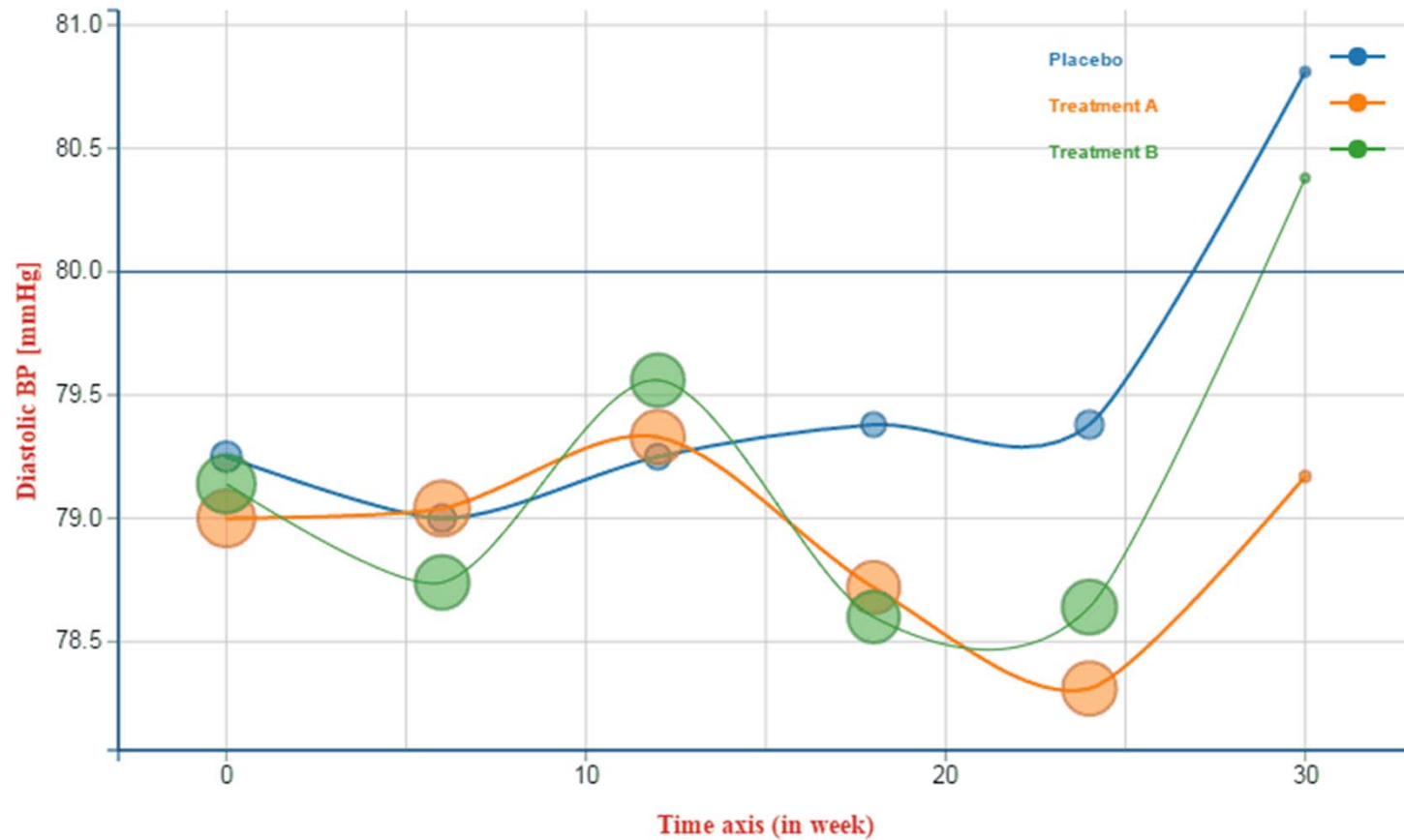
Diastolic BP over time

TYPE	TIMEPERIOD	TREATMENT	WEEKS	N	MEAN	SD	MIN	MEDIAN	MAX
Diastolic BP [mmHg]	Baseline	Placebo	0	72	79.25	8.75	60	80	100
Diastolic BP [mmHg]	Week 6	Placebo	6	64	79	8.03	60	80	97
Diastolic BP [mmHg]	Week 12	Placebo	12	59	79.25	9.17	50	80	97
Diastolic BP [mmHg]	Week 18	Placebo	18	56	79.38	8.48	59	80	100
Diastolic BP [mmHg]	Week 24	Placebo	24	66	79.38	7.75	61	80	95
Diastolic BP [mmHg]	Follow-up	Placebo	30	16	80.81	8.73	57	80	97
Diastolic BP [mmHg]	Baseline	Treatment A	0	144	79	8.49	60	80	115
Diastolic BP [mmHg]	Week 6	Treatment A	6	139	79.04	8.09	60	80	108
Diastolic BP [mmHg]	Week 12	Treatment A	12	134	79.33	8.31	59	80	108
Diastolic BP [mmHg]	Week 18	Treatment A	18	131	78.72	8.14	60	80	103

Showing 1 to 10 of 18 entries

Previous **1** 2 Next

Diastolic BP over time



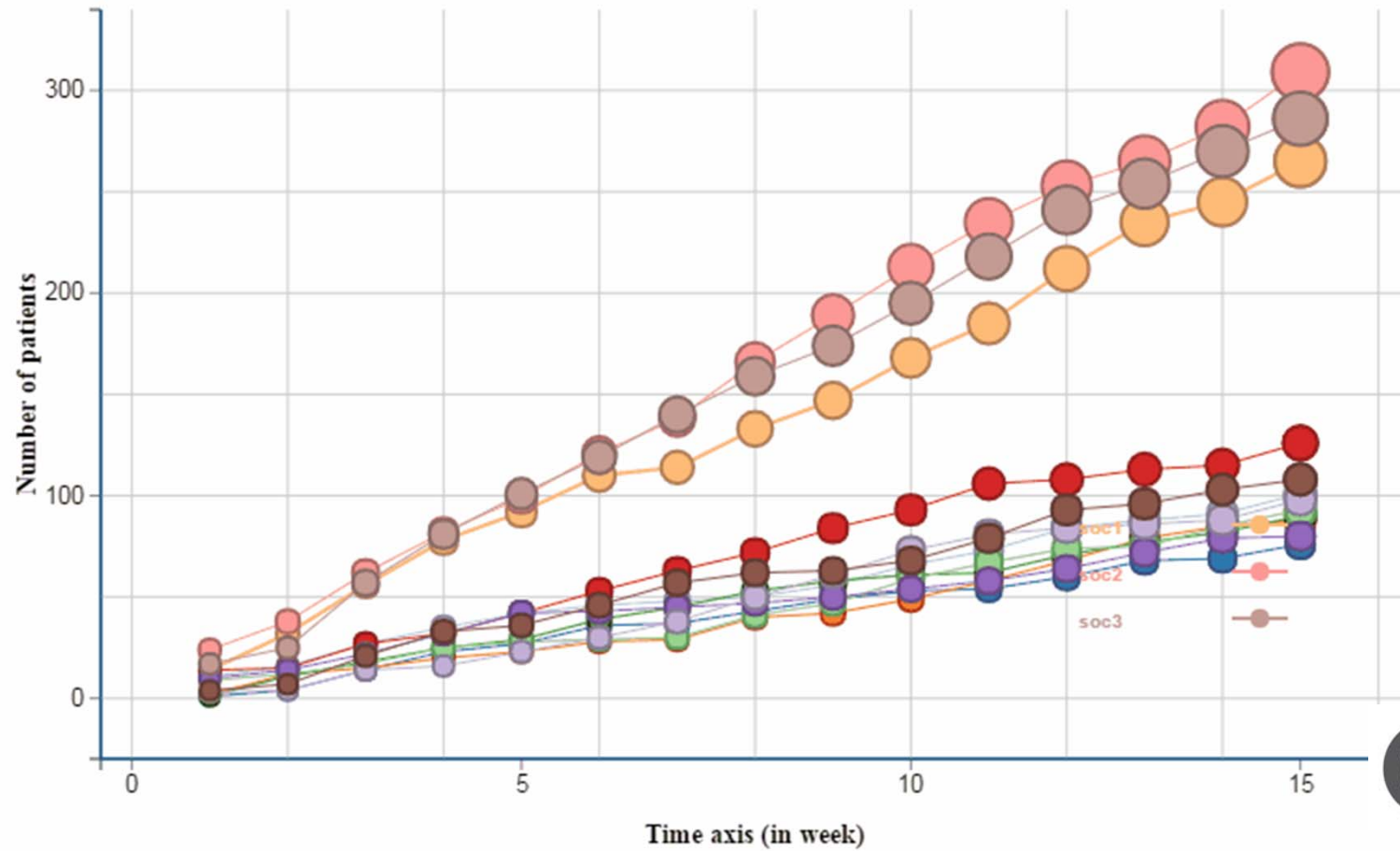
System Organ Class over time

WEEK	SOCNAME	SEVERITY	PTNAME	COUNT
1	soc1	2	p1	1
1	soc1	1	p2	11
1	soc1	1	p3	2
1	soc1	2	Total	14
1	soc2	2	p4	1
1	soc2	3	p5	9
1	soc2	2	p6	14
1	soc2	2	Total	24
1	soc3	2	p7	10
1	soc3	2	p8	3

Showing 1 to 10 of 180 entries

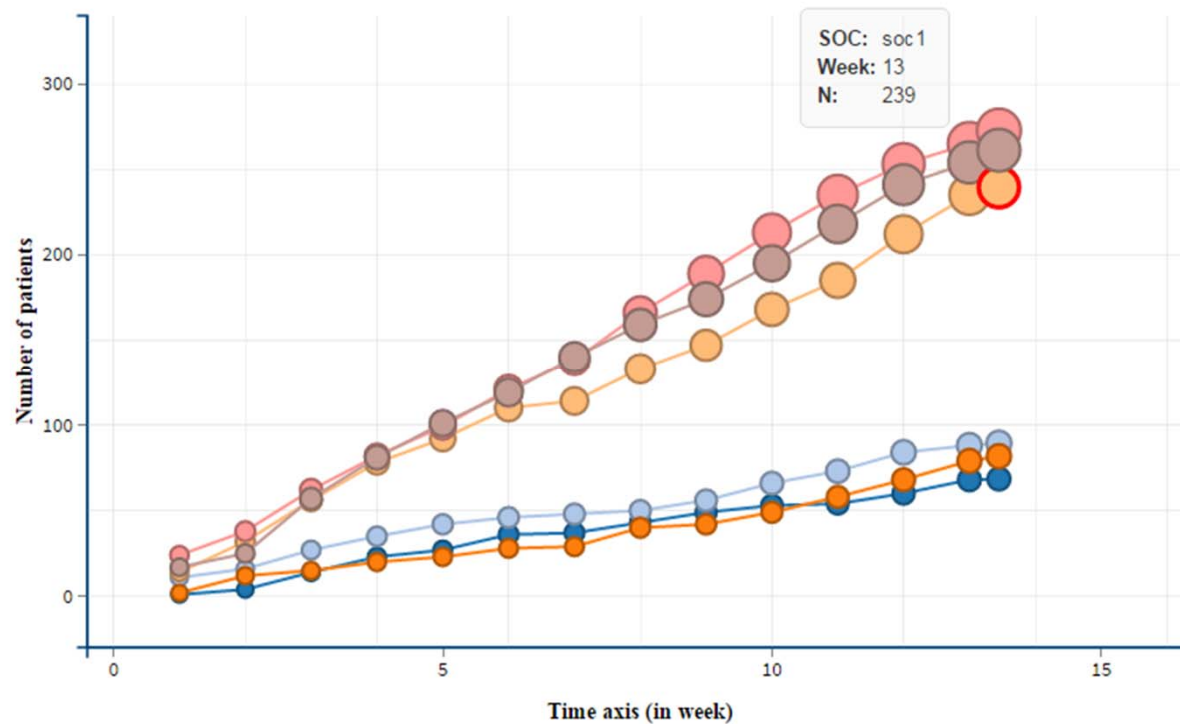
Previous **1** 2 3 4 5 ... 18 Next

System Organ Class over time



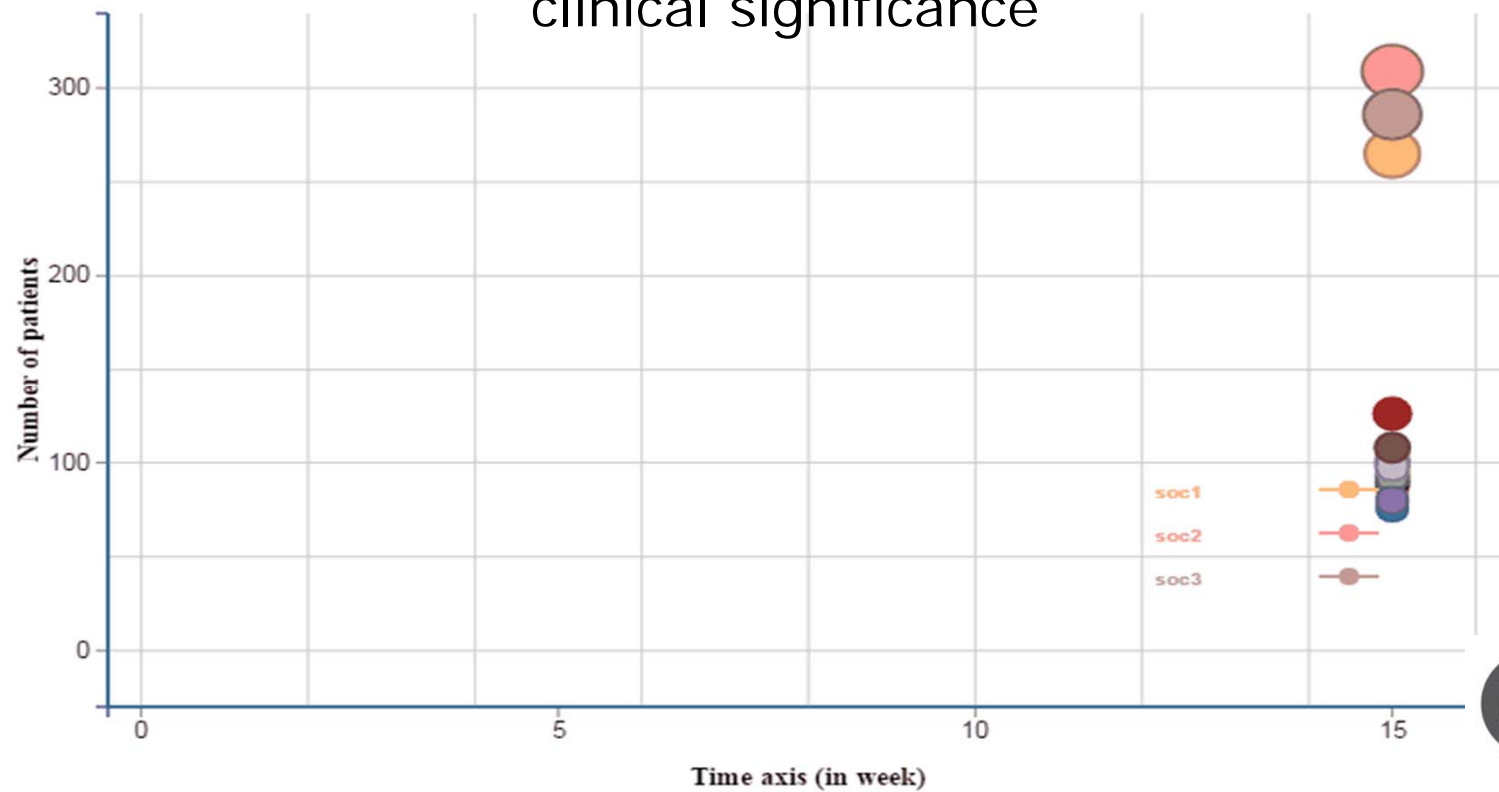
System Organ Class over time

SOC items can be expanded into corresponding PTs at any point



System Organ Class over time

It is also possible to turn the trace off and show how the values move from the start to where they should go to show clinical significance



Injection site reactions over time

PTNO	WEEK	RACE	TRT	BASE	POSTBASE	ISR_N	INTENSITY
1003	2	Asian	Treatment A	2.17	5.63	1	1
1003	4	Asian	Treatment A	2.17	7.28	1	0
1003	8	Asian	Treatment A	2.17	11.94	2	2
1003	12	Asian	Treatment A	2.17	8.4	2	0
1003	16	Asian	Treatment A	2.17	11.71	3	3
1003	20	Asian	Treatment A	2.17	7.12	4	4
1005	0	Caucasian	Treatment B	7.85	7.85	0	0
1005	1	Caucasian	Treatment B	7.85	11.13	1	1
1005	2	Caucasian	Treatment B	7.85	10.11	1	0
1005	4	Caucasian	Treatment B	7.85	3.12	2	2

Showing 11 to 20 of 816 entries

Previous 1 2 3 4 5 ... 82 Next

Injection site reactions over time

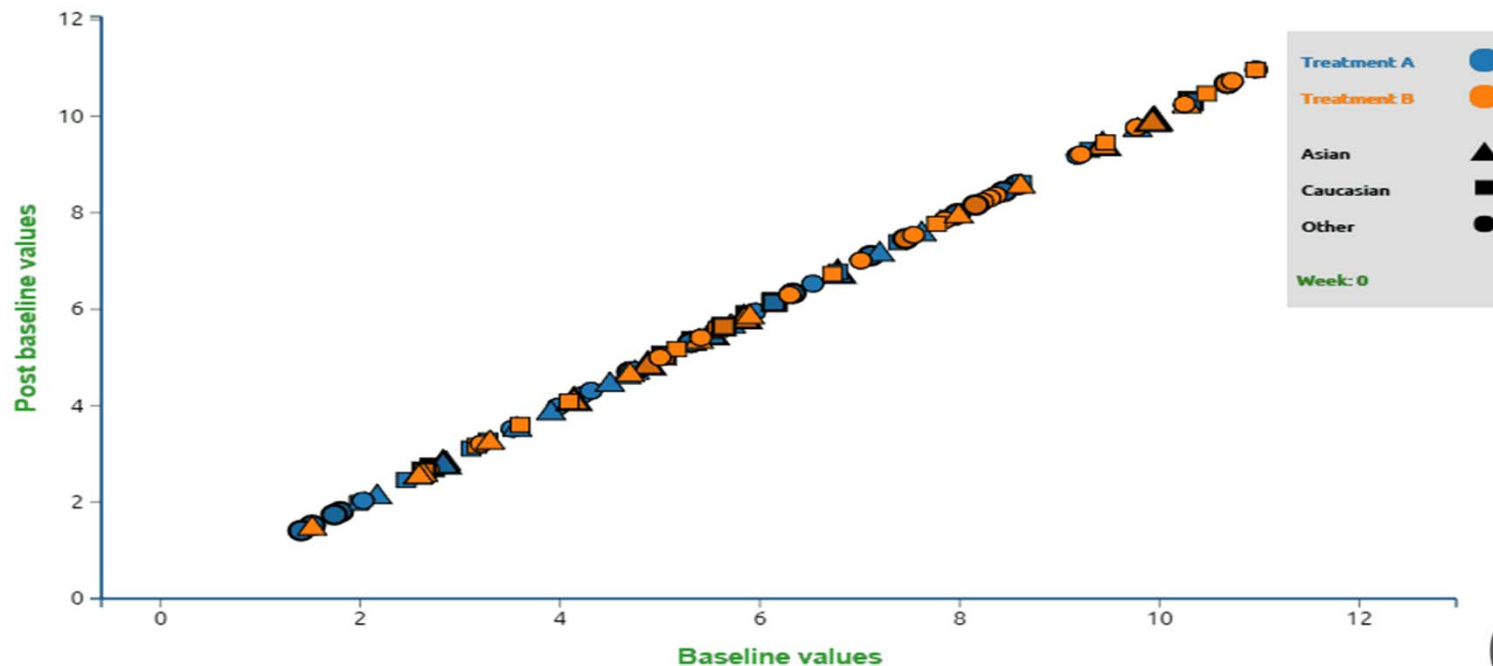
Graph specs:

- x-axis: Baseline, y-axis: Post-baseline
- Animated over time
- 3 shape categories for Race (Asian, Caucasian, Other)
- 2 colors for 2 treatment



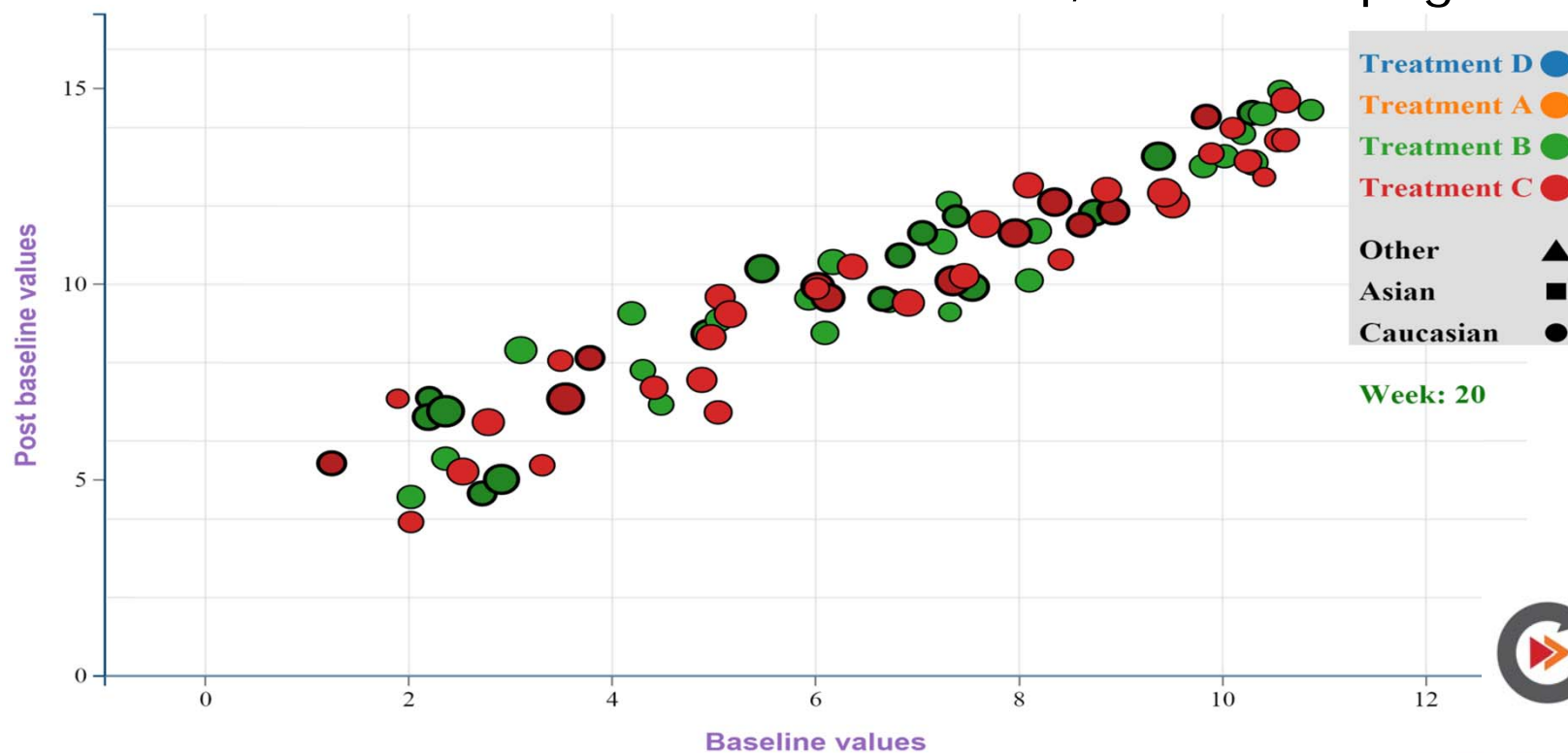
Injection site reactions over time

Here the colour changes and there is a bold edge when a patient experiences an AE, so it is easy to see when an event occurs while looking at efficacy data



Injection site reactions over time

It is there possible to see the size of N, as well as the treatment group, the efficacy result and whether they had an SAE of interest or not over time, all in one page



What would I like to see?

- Many different methods and applications where drilling down is possible, including SAS
- Look at portability, do you need the system on the laptop to do the presentation? Do you need internet?
- Where can animation be used? and what can be presented?
- Feel free to have a go and see if you are inspired:
 - <http://animation.shaficonsultancy.com>
 - <http://animation.shaficonsultancy.com/isr.html>
 - <http://animation.shaficonsultancy.com/bubble1.html>
 - <http://animation.shaficonsultancy.com/presentation>



Questions or Comments



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