

SD03: Dashboarding a Clinical Trial Study

Pritesh Desai-Principal Strategic Advisor , Life Sciences

Samiul Haque Sr. Systems Engineer, Life Sciences

SAS Institute Inc.



Coronavirus Report

Novel Coronavirus Outbreak Reported Daily

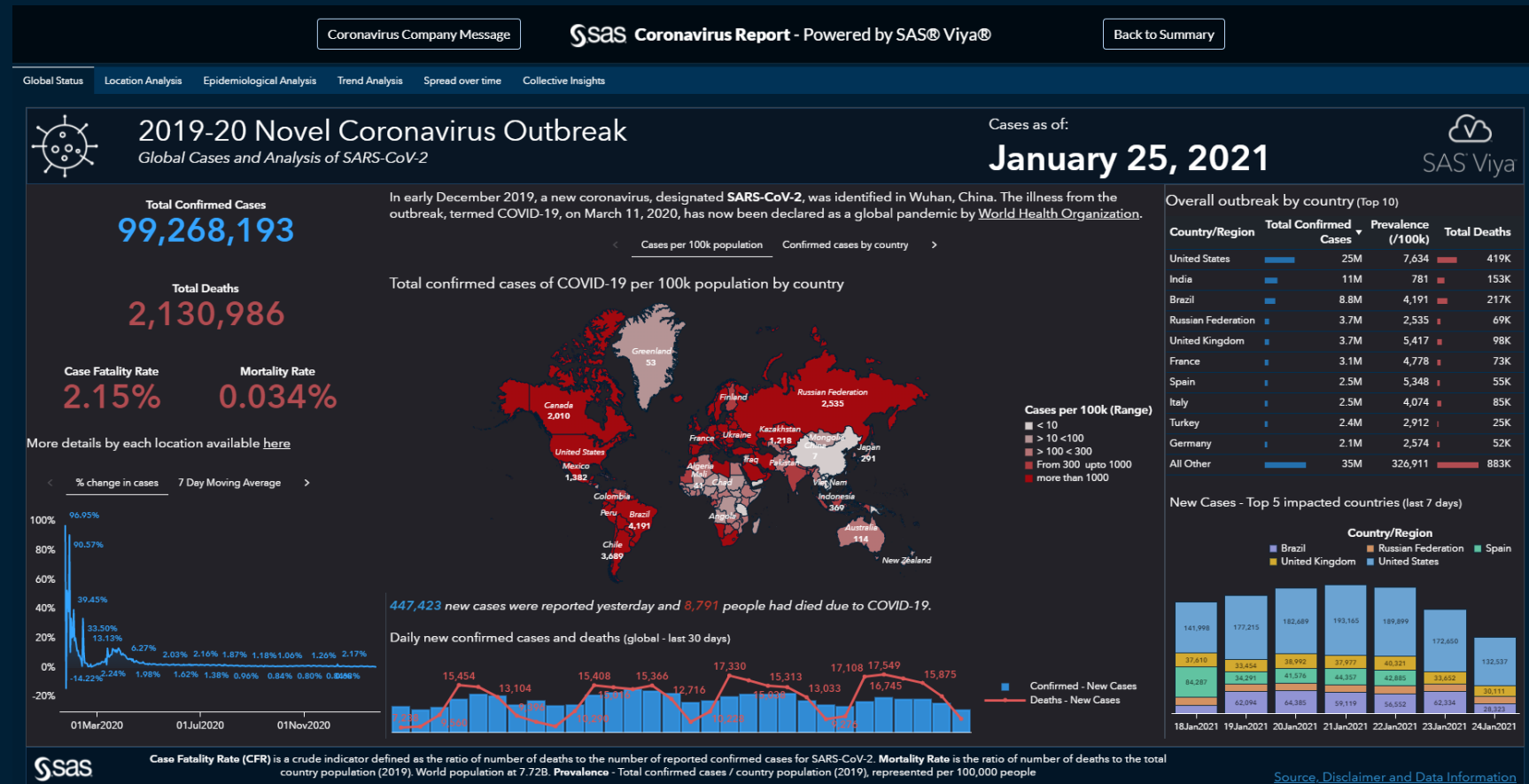
- Visualization

- Browser based, self-service, centralized, rule-based, alert triggers.

- [Link to customer example](#)
- [Link to Covid-19 Dashboard](#)

- Automation

- Scheduling, Batch jobs, Event Triggers
- [Link to Automation with SAS](#)



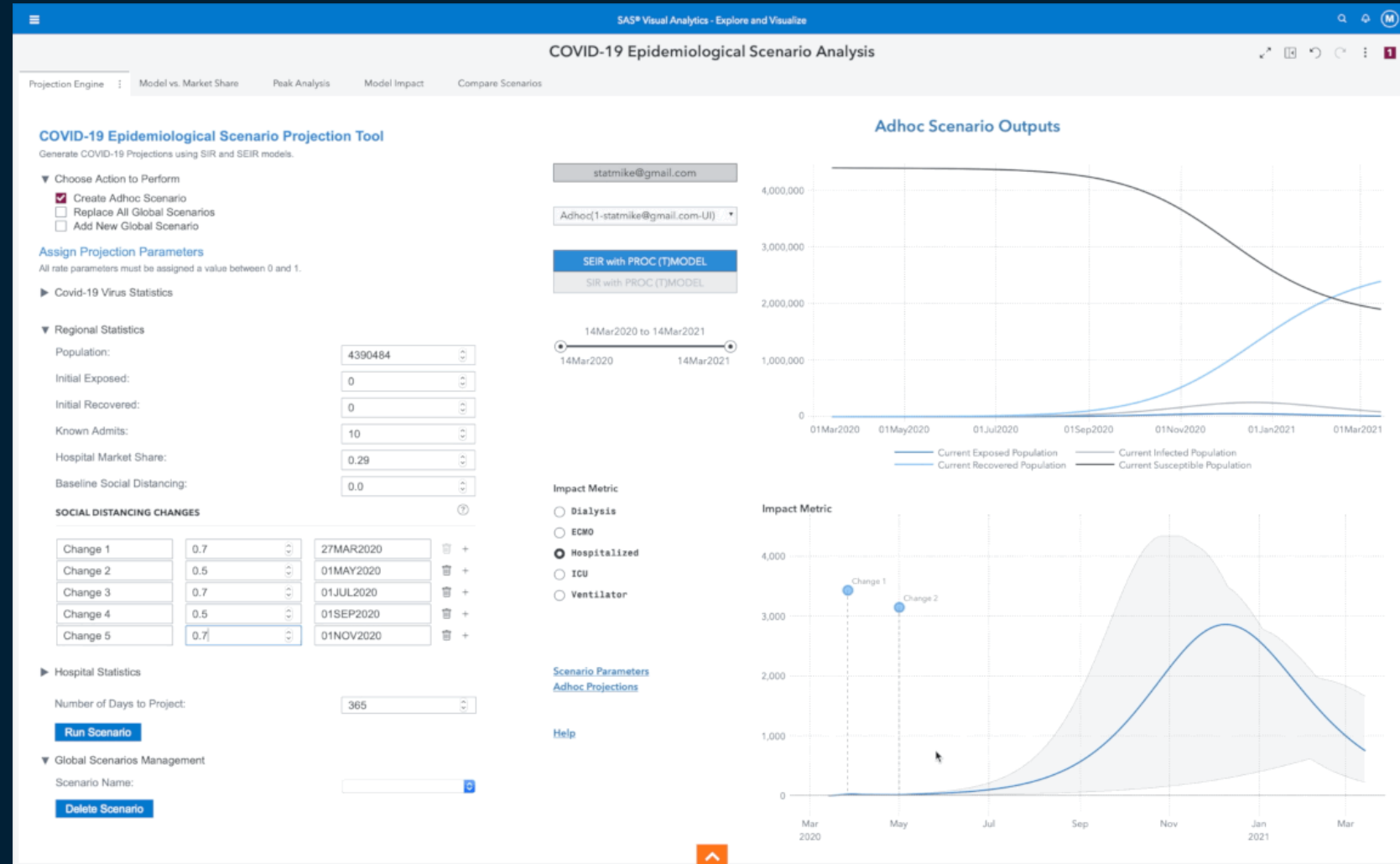
COVID-19 Epidemiological Scenario Analysis

- Developing purpose-built App modules

- Decision support in real time
- [Link to App factory](#)
- [Link to App Creation](#)
- [Link to news of SAS acquisition of Boemsa](#)

- Permission models

- with CDR, folder lock, file lock, scrambling
- [Link to customer e.g. of how to handle blinding](#)
- [Link to customer e.g. The Unblind Leading the Blind](#)



US Food and Drug Administration (FDA)

Key Capability:

AI and ML powered by SAS® Viya®

Long-time customer, The US Food and Drug Administration (FDA), has a large and experienced SAS user community and many mission-critical SAS applications. The FDA will expand its capabilities in NLP, AI and ML to support their mission as an essential public health agency.

The new five-year, \$49.9 million Blanket Purchase Agreement supports bold digital transformation efforts underway in the FDA. The initial projects will be with the FDA's Center for Drug Evaluation and Research (CDER), which helps ensure that human drugs are safe and effective for their intended use.



Advance CDER's initiative
to modernize drug
regulatory programs



Provide analytically driven
drug manufacturing
facility surveillance



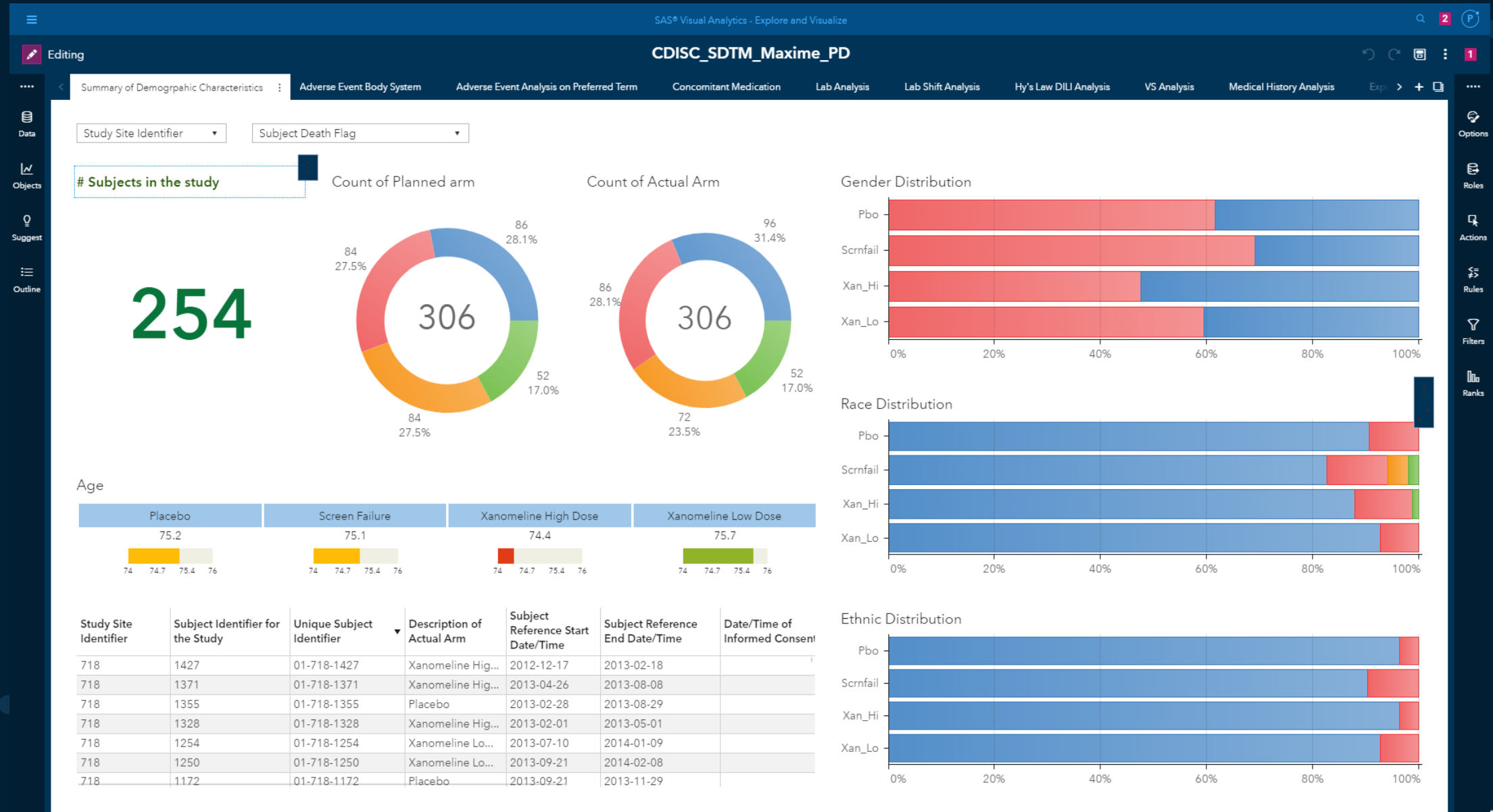
Better fulfill the center's
mission through other key
initiatives

"We are in a new era of drug regulation. By unleashing the power of SAS' most advanced technology, we are working together to help the FDA find the perfect combination of speed, efficacy and safety when it comes to getting lifesaving drugs to Americans."

Jim Goodnight, CEO, SAS



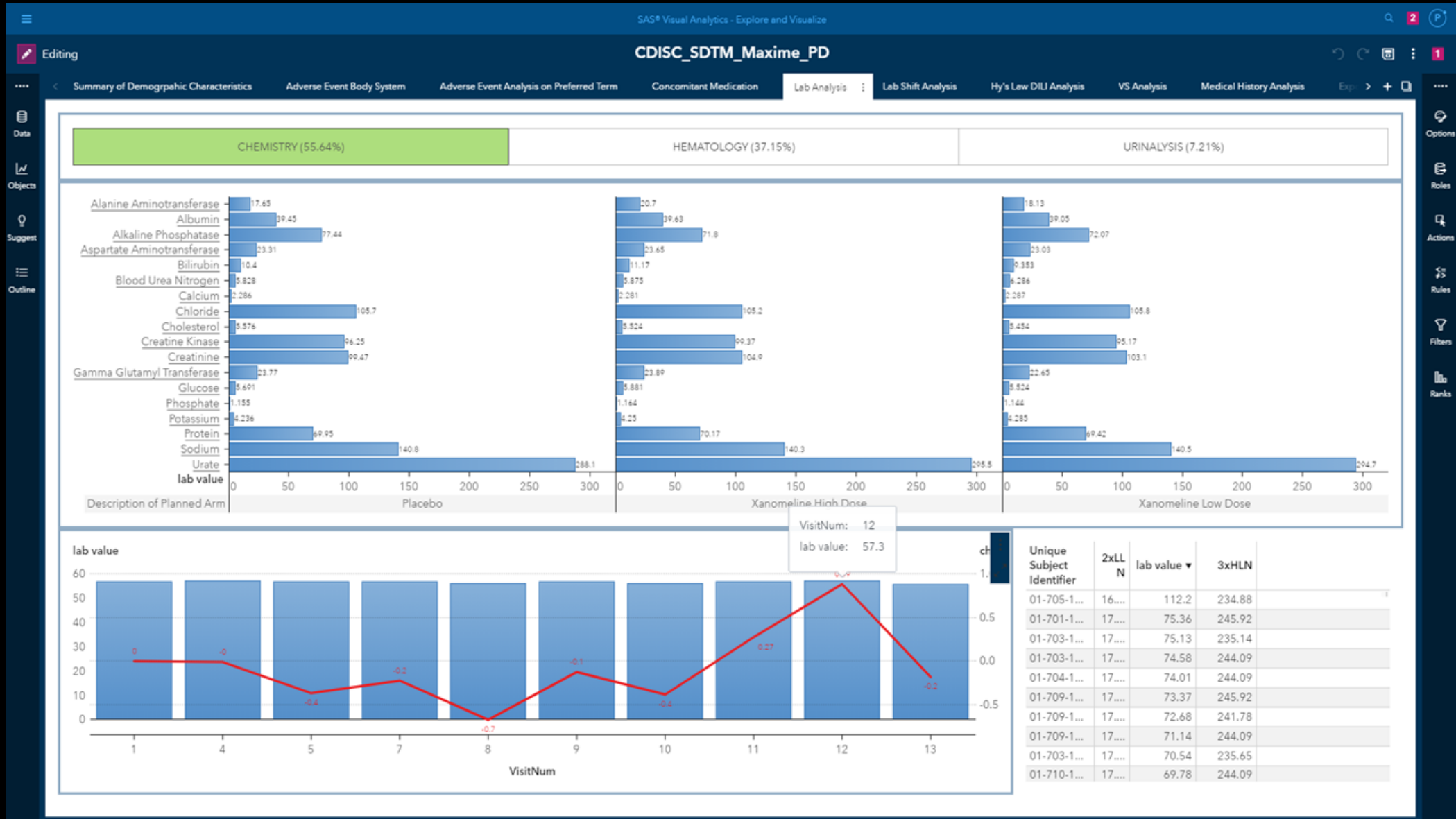
Summary of Demographic Characteristics in Visual Analytics



Adverse Events with Cross tab and Listings in Visual Analytics



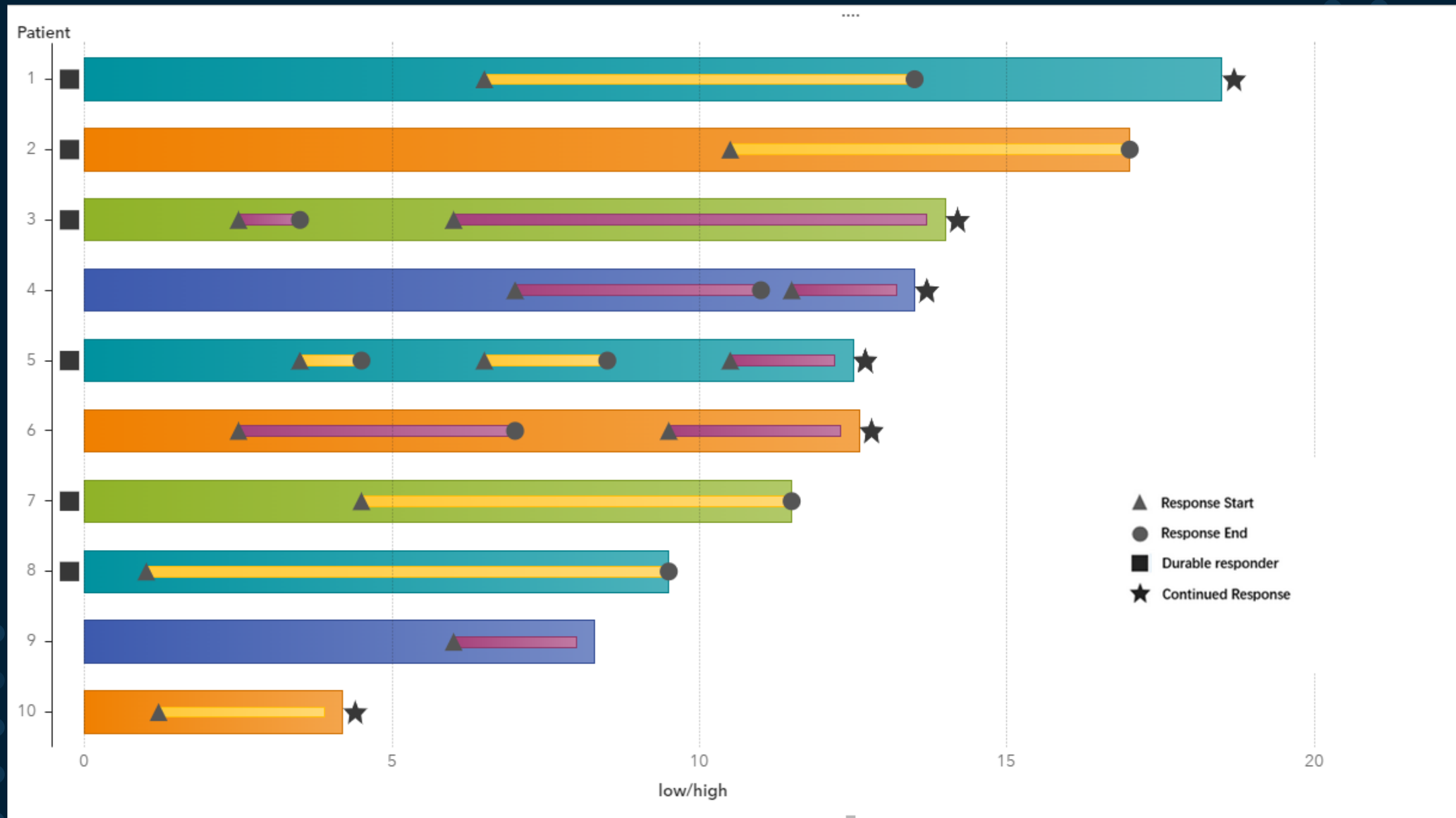
Lab Analysis with Hierarchy and Rules in Visual Analytics



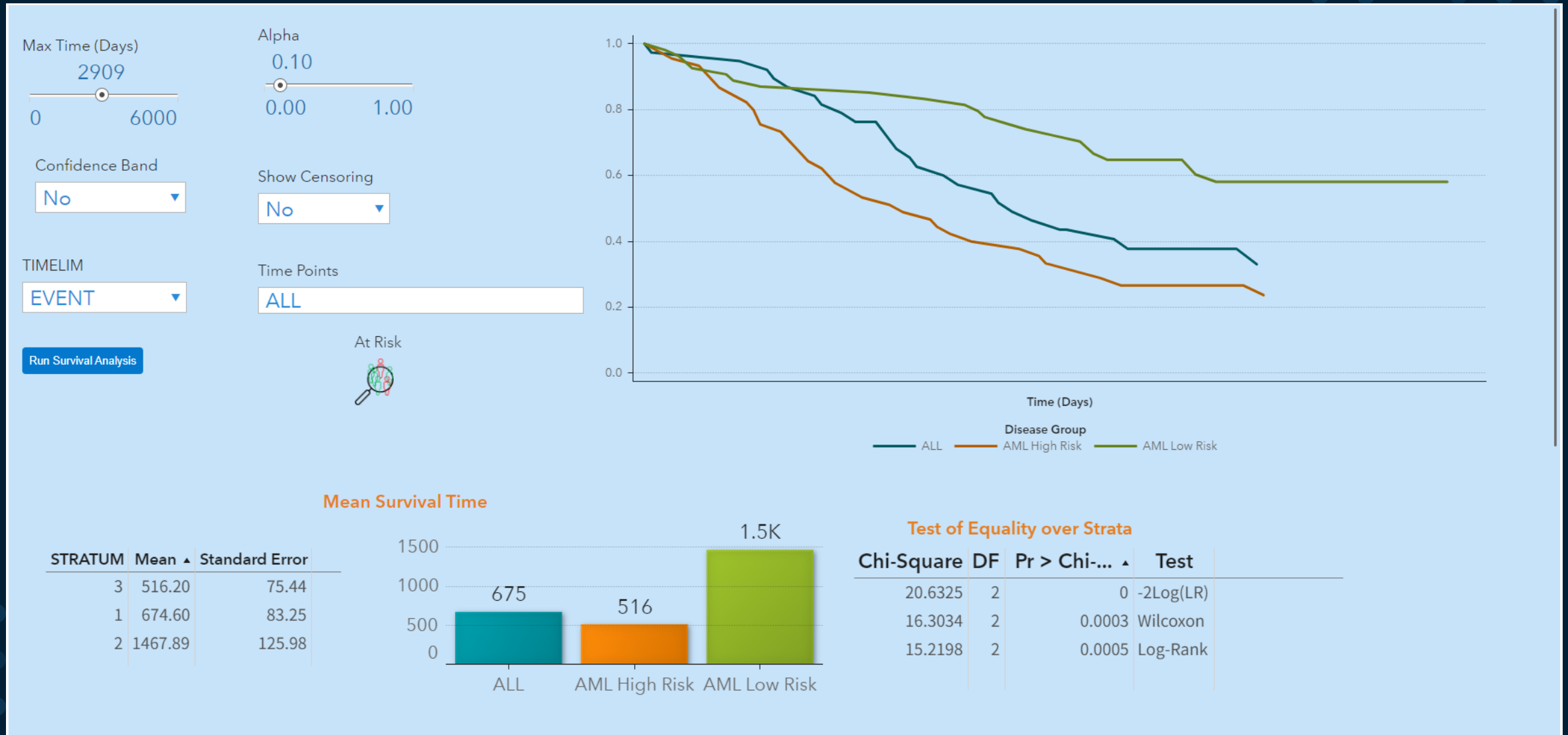
Building a KPI as Rules and Alerts in Visual Analytics

KPI											
# Major Findings from Quality Audit											
KPI_LIST	STUDYID	TA_C	PHASE	CRO	PROG_START	STUDY_START	N_TARGET_ENROLL	PLAN_TOTALMAXVIS	ACTUAL	TARGET	
# Major Findings from ...	1-1-1-1	CARDIOVASCUL	Phase III	1	23Sep2011	11Dec2012	812	38	3	2	
# Major Findings from ...	1-1-1-2	CARDIOVASCUL	Phase II	1	23Sep2011	14Jan2013	266	10	2	2	
# Major Findings from ...	1-1-1-3	CARDIOVASCUL	Phase III	1	23Sep2011	29Oct2012	9856	4	1	2	
# Major Findings from ...	1-1-1-4	CARDIOVASCUL	Phase II	1	23Sep2011	14Nov2011	397	6	1	2	
# Major Findings from ...	1-1-2-1	CARDIOVASCUL	Phase II	1	03Jul2011	08Mar2012	259	10	0	2	
# Major Findings from ...	1-1-2-2	CARDIOVASCUL	Phase III	1	03Jul2011	27Aug2012	1007	16	3	2	
# Major Findings from ...	1-1-2-3	CARDIOVASCUL	Phase III	1	03Jul2011	26Feb2012	13401	10	0	2	
# Major Findings from ...	1-1-2-4	CARDIOVASCUL	Phase II	1	03Jul2011	21Dec2011	210	10	0	2	
# Major Findings from ...	1-2-1-1	ONCOLOGY	Phase III	1	08Jan2011	12Jun2012	407	20	3	2	
# Major Findings from ...	1-2-1-2	ONCOLOGY	Phase III	1	08Jan2011	23Mar2012	958	14	2	2	
# Major Findings from ...	1-2-1-3	ONCOLOGY	Phase III	1	08Jan2011	12Jun2012	880	14	3	2	
# Major Findings from ...	1-2-1-4	ONCOLOGY	Phase III	1	08Jan2011	21Dec2011	835	38	0	2	
# Major Findings from ...	1-2-2-1	ONCOLOGY	Phase III	1	19Dec2011	30May2013	816	38	1	2	
# Major Findings from ...	1-2-2-2	ONCOLOGY	Phase II	1	19Dec2011	08Feb2013	168	18	0	2	
# Major Findings from ...	1-2-2-3	ONCOLOGY	Phase II	1	19Dec2011	01Mar2012	161	14	3	2	
# Major Findings from ...	1-2-2-4	ONCOLOGY	Phase II	1	19Dec2011	21Jul2012	381	16	2	2	
# Major Findings from ...	2-1-1-1	RESPIRATORY	Phase II	2	15Jul2010	12Aug2010	219	14	3	2	
# Major Findings from ...	2-1-1-2	RESPIRATORY	Phase II	2	15Jul2010	16Jul2011	393	18	0	2	
# Major Findings from ...	2-1-1-3	RESPIRATORY	Phase III	2	15Jul2010	11Sep2010	1096	16	2	2	
# Major Findings from ...	2-1-1-4	RESPIRATORY	Phase II	2	15Jul2010	09Apr2011	166	8	2	2	
# Major Findings from ...	2-1-2-1	RESPIRATORY	Phase III	2	11Jul2011	13Feb2012	368	16	3	2	
# Major Findings from ...	2-1-2-2	RESPIRATORY	Phase II	2	11Jul2011	28Dec2012	216	18	1	2	
# Major Findings from ...	2-1-2-3	RESPIRATORY	Phase II	2	11Jul2011	24Oct2012	396	14	1	2	
# Major Findings from ...	2-1-2-4	RESPIRATORY	Phase III	2	11Jul2011	04May2012	259	16	3	2	
# Major Findings from ...	2-2-1-1	ONCOLOGY	Phase II	2	10Jun2013	26Oct2014	180	18	3	2	
# Major Findings from ...	2-2-1-2	ONCOLOGY	Phase III	2	10Jun2013	02Jul2013	929	26	1	2	
# Major Findings from ...	2-2-1-3	ONCOLOGY	Phase II	2	10Jun2013	20Feb2014	329	18	2	2	
# Major Findings from ...	2-2-1-4	ONCOLOGY	Phase III	2	10Jun2013	04Nov2013	711	20	1	2	

Swimmer Plot in Visual Analytics using Custom Graphics



How to call a SAS Program and Dynamically visualize results in Visual Analytics



Getting better, safer therapies to patients faster in a regulated landscape



- Leverage all features of Platform
- User Access
- GxP, Data Governance, Open-Source Integration, APIs



- Speed to insight
- Build production quality web app in hours, with minimal coding for front end
- Report is directly connected to data source



- No limit on number of viewers
- Easily scalable
- No additional IT overhead to manage separate server

References

- <https://github.com/sassoftware/sas-visualanalytics-thirdpartyvisualizations>
- <https://communities.sas.com/t5/SAS-Global-Forum-Proceedings/Modernizing-Scenario-Analysis-With-SAS-Viya-and-SAS-Visual/ta-p/726348>
- <https://blogs.sas.com/content/sgf/2022/09/30/how-to-draw-a-swimmer-plot-in-sas-visual-analytics/#:~:text=Create%20the%20swimmer%20plot%20in%20VA&text=In%20SAS%20Visual%20Analytics%2C%20go,graph%20template%20we%20just%20created.>