

*February 2016*



Software for  
Business Intelligence

**BizInt Smart Charts**

# *Cookbook of Reports & Visualizations*

CREATED WITH THE BIZINT SMART CHARTS  
PRODUCT FAMILY

[www.bizint.com/Cookbook](http://www.bizint.com/Cookbook)

## Using this Cookbook

### APPLYING THESE RECIPES TO YOUR DATA

We believe the methods in the recipes included here are applicable to other data sets and sources. However, because each recipe was built using a particular example dataset, you should take some caveats into consideration when applying recipe steps to your own data:

**Caveat One:** When you combine charts from different sources, the source selected first (the “Key Chart”), will determine the names for common columns. For example, depending on the source, the column could be called Condition, Disease or Indications. While you may see different column names than those indicated in the recipe, the same steps should still apply.

**Caveat Two:** Some recipes contain steps and guidance based on the content of the example dataset. For example, we provide suggestions for changing Common Trial ID assignment in cases where the automatically generated Common ID combines trials we want to be treat separately. How much this step is necessary depends on the dataset.

**Caveat Three:** We revise these recipes based on user feedback, so check the latest edition of the Cookbook on our website to see if we have revised the recipe you're interested in.

*Note: Some recipes in the Cookbook have been updated for VantagePoint - Smart Charts Edition 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

### STYLE CONVENTIONS USED

**Commands** are shown in **colored sans-serif type** with the pipe(|) symbol used to divide sequential menu selections. For example, **File | Combine** indicates that you should first click on the File menu and then select Combine.

*Italics* indicate a note, generally indicating steps that may be different depending on the dataset.

“Text in quotation marks” indicates something you should type in to a text box or text that appears in the software outside of the menus.

**Note:** as of 1 September 2015, support for clinical trials data is in BizInt Smart Charts for Clinical Trials or the BizInt Smart Charts Drug Development Suite.



# Table of Contents

## PATENTS

Integrating Patent Data with Claims from Other Patent Databases [Patents-PT-10] .....	2
Creating an Aduna Cluster Map —Key Assignees and CA Classifications[Patents PT-11] .....	4
Company Collaboration – Assignee Cleanup [Patents PT-1] .....	6
Summarizing Legal Status in a Family [Patents PT-2] .....	8
Filtering the Patent Family by Authorities [Patents PT-3] .....	10
Charting Companies by Filing Status with a Bubble Chart [Patents PT-7] .....	12
Creating a Co-Occurrence Matrix to Evaluate Patent Assignees [Patents PT-4] .....	14
Creating a Timeline Showing Patent Lifetimes [Patents PT-5] .....	16
Mapping Patents by Authority [Patents PT-6] .....	18
Summarizing Sequence Locations in a Patent Family [Patents PT-8] .....	20
Creating an Aduna Chart with a Multi-Query Sequence Search [Patents PT-9] .....	22

## CLINICAL TRIALS

Creating Clinical Trial Timelines Showing Trial Status [Trials CT-1] .....	24
Creating Clinical Trial Timelines Showing Trial Phase [Trials CT-2] .....	26
Creating Clinical Trial Timelines Showing Enrollment & Study Design [Trials CT-3] .....	28
Summarizing Clinical Trial Data – Enrollment [Trials CT-4] .....	30
Summarizing EudraCT Clinical Trials – Enrollment [Trials CT-10] .....	32
Charting Trial Indications by Phase with a Bubble Chart [Trials CT-9] .....	34
Mapping Trial Locations [Trials CT-7] .....	36
Mapping Clinical Trials by State [Trials CT-8] .....	38

## DRUG PIPELINES


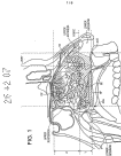
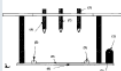
Graphing Company Collaboration – Company Cleanup [Pipeline DP-1] .....	40
Extracting the Highest Phase for an Indication [Pipeline DP-4] .....	42
Highest Phase for an Indication – Database Summary [Pipeline DP-5] .....	44
Bubble Charts for Top Companies in a Drug Pipeline [Pipeline DP-8] .....	46
Creating Simple Pipeline “Piano Charts” [Pipeline DP-9] .....	48
Creating Pipeline “Piano Charts” Displaying Multiple Fields [Pipeline DP-10] .....	50
Creating an Aduna Chart Showing Companies by Drug Category [Pipeline DP-7] .....	52
Bubble Chart Showing Changes in Pipeline Updates (I) [Pipeline DP-11-1] .....	54
Bubble Chart Showing Changes in Pipeline Updates (II) [Pipeline DP-11-2] .....	56
Launch Timeline (I) – Creating a Competitive Launch Timeline [Pipeline DP-12-1] .....	58
Launch Timeline (II) – Calculating Estimated Launch Dates [Pipeline DP-12-2] .....	60

## TECHNIQUES

Technique: Phase and Company Cleanup across Databases [Pipeline DP-2] .....	62
Technique: Working with Thesauri .....	64
Technique: Extracting Keywords .....	66
Technique: Using Pipeline Data to Cleanup Drug Names in Trial Data [Trials CT-5] .....	68
About this Cookbook .....	70

# Integrating Patent Data with Claims from Other Patent Databases [Patents-PT-10]

In this example we combine information from Chemical Abstracts, Derwent World Patents Index and fulltext patent sources on the new STN platform into a report that integrates the information from Chemical Abstracts with claims from DWPI and fulltext sources. The Identify Common Patent Families tool is used to identify related publications across databases, as shown in the chart below. The BizInt Smart Charts Reference Rows utility is then used to create a single row integrating claims and other information for each family, shown on the next page.

	Title	Common Family	Database	Patent Assignee	Priority Date	Claims	Graphic Information
1	Nasal delivery device for treating inflammatory or infectious condition of nasal cavity, has nosepiece unit with nosepiece that is fitted into nostril of person, and nozzle that ejects substance from delivery unit	GB2434989	Derwent World Patents Index	OPTINOSE AS	2006-02-14		
2	Delivery device and method	GB2434989	GB Patents Fulltext	OPTINOSE AS, Norway (NO)	2006-02-14	GB 2434989B 1. A nasal delivery device for delivering substance to the middle meatus in a nasal cavity of a subject in the treatment of a condition, in particular an inflammatory or infectious condition, thereof, the delivery device comprising: a nosepiece unit including a nosepiece for fitting to a nostril of a subject and a nozzle through which substance is in use delivered to the respective nasal cavity; and a delivery unit for delivering substance through the nozzle of the nosepiece; wherein the nosepiece is configured, when inserted into the nasal cavity, to extend into the nasal valve and provide for expansion thereof, and the nozzle provides for delivery of the substance as at least one liquid jet or an aerosol spray having a cone angle of not more than about 50 degrees, whereby at [CONT.]	
3	Sheet or tubular structure consisting of elastic biocompatible material and its use	EP2067494	Chemical Abstracts	Charite - Universitaetsmedizin Berlin, Germany (DE)	2007-12-04		
4	Sheet or tubular structure useful for covering e.g. orthopedic implant and pacemaker and for treating e.g. fractured/lost bone and heart disease, comprises elastic biocompatible material and biologically active substance	EP2067494	Derwent World Patents Index	CHARITE-UNIV MEDIZIN BERLIN UNIV BERLIN CHARITE	2007-12-04	EP2067494A1 A sheet or tubular structure, which consists of biocompatible material, is elastic and comprises at least one biologically active substance in at least one region.	

## Integrating Patent Data with Claims from Other Patent Databases [Patents-PT-10]

### How did we create this?

#### SEARCHES:

- A search for natamycin was conducted in Derwent Chemical Resource and transferred to Derwent World Patents Index and the patent numbers found were searched in Chemical Abstracts and fulltext patent files on new STN.

#### BIZINT SMART CHARTS FOR PATENTS

- Create a combined chart:** Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart, selecting the Chemical Abstracts chart first as the key chart.
- Identify related records:** Use **Tools | Identify Common Patent Families** to identify related records and then sort by the Common Family column to review the results.
- Use **View | Columns** to select the columns you want in your chart. For this example, Claims should be visible.
- Save the chart file and then use **File | Send to Reference Rows** to open the chart in BizInt Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

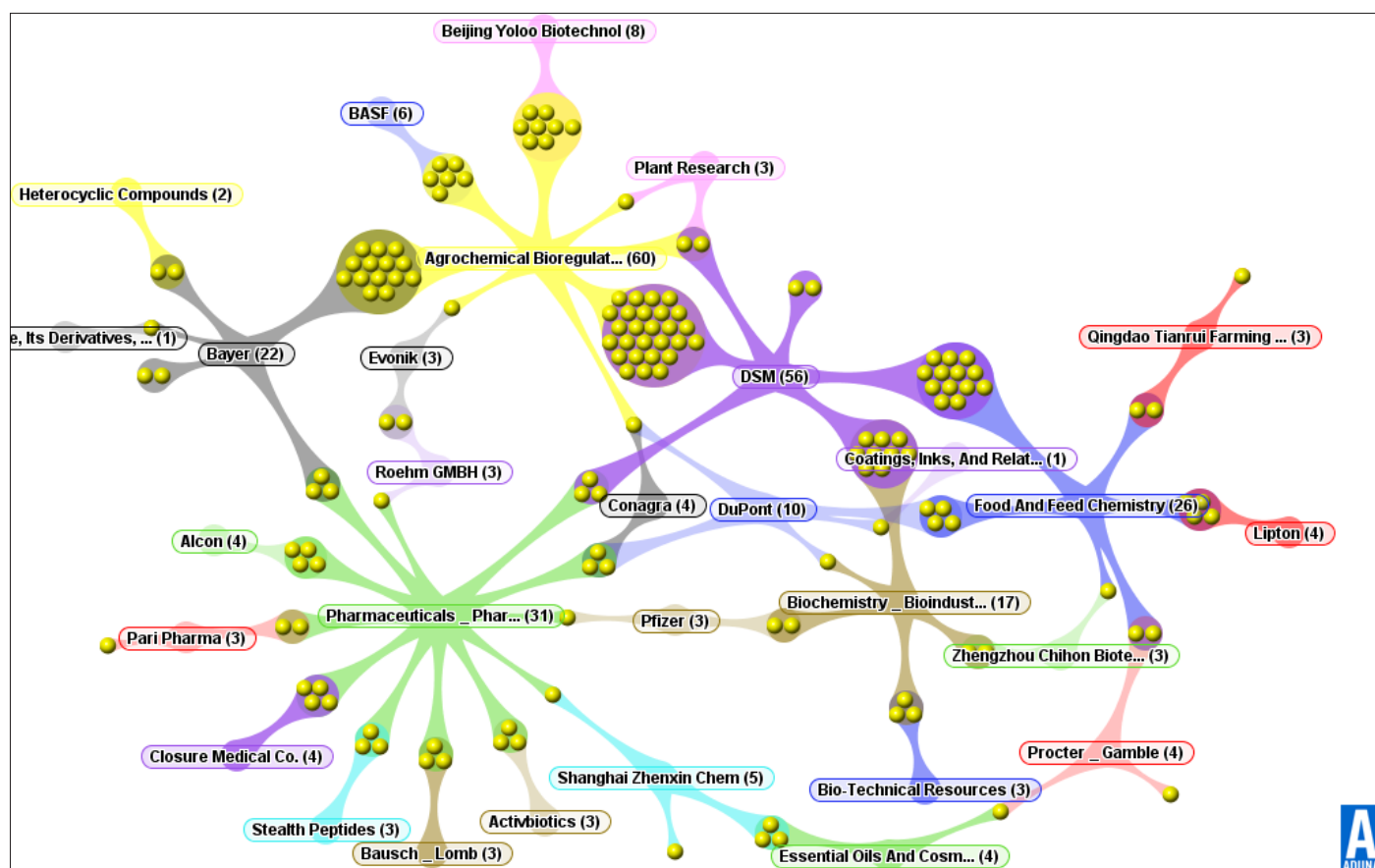
- Integrate information from both databases:** Click Next to continue to the next step in the Create Reference Rows Wizard. *We already identified common patent families so we don't need to Regenerate them.*
- Click Finish in step 2. *Because you chose your Chemical Abstracts chart as the key chart it will automatically be at the top of your database preferences. This means that reference rows will contain information from CA by default. Reference Rows will draw from the next database if the preferred database is missing the information. This means that Claims will come from DWPI and the fulltext sources.*
- When the wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking.
- Create your report:** *To see the reference rows integrating your sources, you'll need to export. Use **File | Export** and choose an export format. For this example we chose HTML, chart and records. Then click OK. Click OK on the next screen to use the default options. You should see a report like the one below with one row per patent family showing claims as well as the additional columns you selected.*

Title	Database	Patent Assignee	Priority Date	Claims	Graphic Information
1. Nasal delivery device for treating inflammatory or infectious condition of nasal cavity, has nosepiece unit with nosepiece that is fitted into nostril of person, and nozzle that ejects substance from delivery unit	1.1 DWPI	OPTINOSE AS	2006-02-14	GB 2434989B 1. A nasal delivery device for delivering substance to the middle meatus in a nasal cavity of a subject in the treatment of a condition, in particular an inflammatory or infectious condition, thereof, the delivery device comprising: a nosepiece unit including a nosepiece for fitting to a nostril of a subject and a nozzle through which substance is in use delivered to the respective nasal cavity; and a delivery unit for delivering substance through the nozzle of the nosepiece; wherein the nosepiece is configured, when inserted into the nasal cavity, to extend into the nasal valve and provide for expansion thereof, and the nozzle provides for delivery of the substance as at least one liquid jet or an aerosol spray having a cone angle of not more than about 50 degrees, whereby at [CONT.]	
	1.2 GBPATF				
2. Sheet or tubular structure consisting of elastic biocompatible material and its use	2.1 CABS	Charite - Universitaetsmedizin Berlin, Germany (DE)	2007-12-04	EP2067494A1 A sheet or tubular structure, which consists of biocompatible material, is elastic and comprises at least one biologically active substance in at least one region.	
	2.2 DWPI				
	2.3 EPFU				
3. Method for treating otitis externa with composition comprising corticosteroid with antifungal agent	3.1 CABS	SLATER P	2005-01-25	US8337481B2 What is claimed is: 1. A method for treating otitis externa, comprising: diagnosing an instance of otitis externa in a patient; and	

# Creating an Aduna Cluster Map — Key Assignees and CA Classifications

## [Patents PT-11]

This recipe shows how to build an Aduna visualization showing key patent assignees for top technology areas using data from Chemical Abstracts and Derwent World Patents Index on the new STN platform. Tools in BizInt Smart Charts for Patents and BizInt Smart Charts Reference Rows are used to integrate data for each family. VantagePoint – Smart Charts Edition (VP-SCE) is used to clean the patent assignee field and combine CA Classifications into broader categories. The Aduna cluster map is created with VP-SCE. The yellow circles represent a patent family for each top assignee in each technology area, as defined by the CA classification.



## Creating an Aduna Cluster Map of Key Assignees and CA Classifications [Patents PT-11]

### How did we create this?

#### SEARCHES:

- A search for natamycin was conducted in Derwent Chemical Resource and transferred to Derwent World Patents Index and the patent numbers found were searched in Chemical Abstracts on new STN.

**RECIPES:** Company Collaboration - Assignee Cleanup

#### BIZINT SMART CHARTS FOR PATENTS

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Identify Common Patent Families tool and sort by the resulting Common Family field.
3. Display the patent assignee and CA Classification fields.
4. Save and Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

5. Click Next to continue to the next step in the Create Reference Rows Wizard. *We already identified common patent families so we don't need to Regenerate them.* Click Finish in step 2.
6. Use database rankings, rules and manual selection if necessary to select the best assignees for each family. The CA Classification will automatically be taken from the CA record.
7. Use **File | Export** to export the visible columns to VantagePoint - XML.

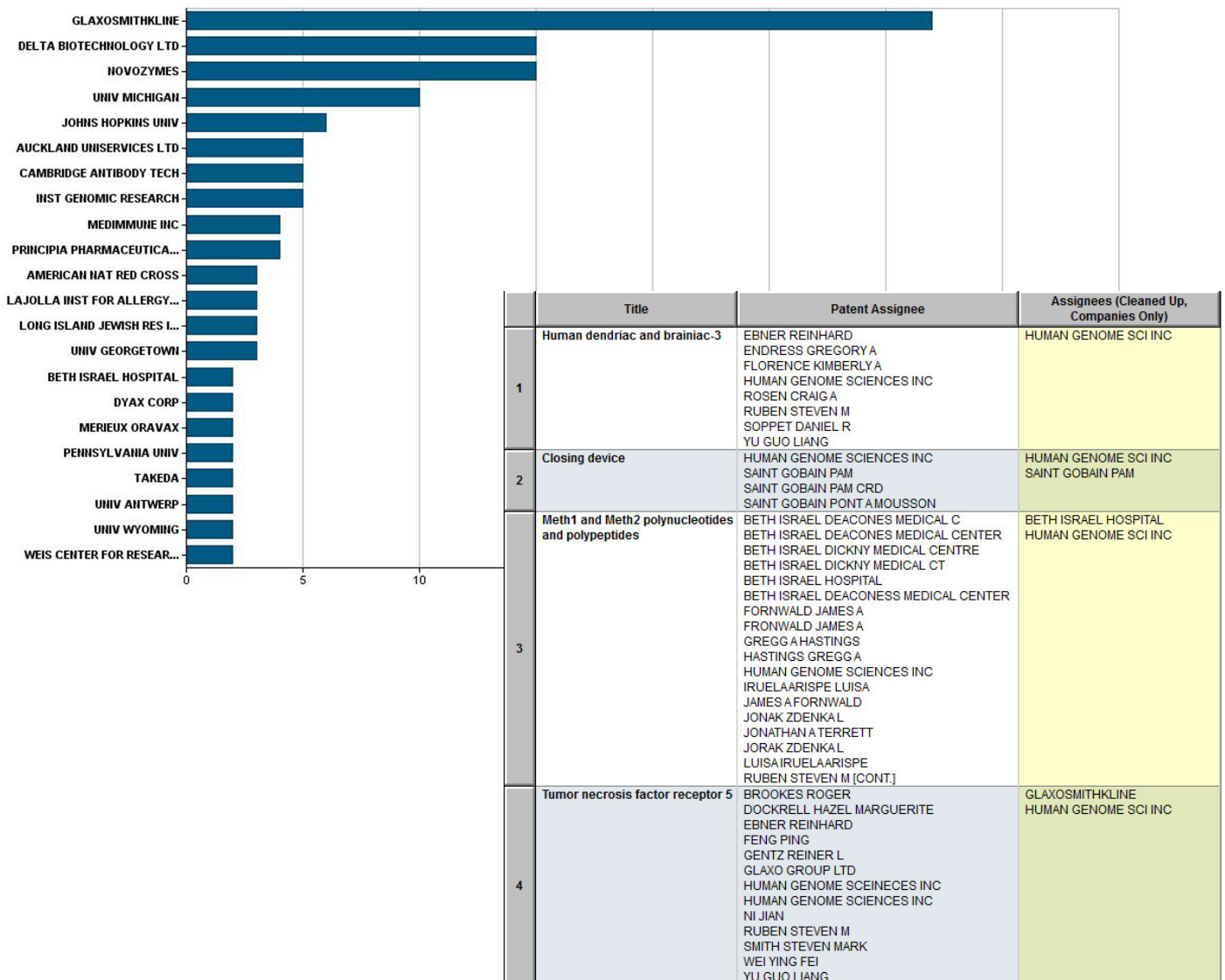
#### VANTAGEPOINT - SMART CHARTS EDITION

8. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
9. **Clean patent assignees:** Follow steps 1-12 in the recipe, Company Collaboration - Assignee Cleanup, to clean the assignee field.
10. Use Ctrl+click to select the top assignees and right-click to select "Add Selection to Group...". In the "New Group" panel, type the word "top" and click OK.
11. **Create a sub-dataset:** Go to **File | Create Sub-dataset** and click OK to accept the default options.
12. Right-click on the CA Classification field and choose **Further Processing | Read Until - First | Paren** to remove numbers in parentheses.
13. **Create classification categories:** Go to **Fields | List Cleanup**. Then choose General as the fuzzy match file (you don't need to set any other options).
14. Change the radio button to All Items to see the entire list. Drag and drop a classification onto another to combine. Then right-click on the group and select Rename Term to rename the group. Repeat as needed to create categories. *For example, we dragged Pharmacology onto Pharmaceuticals to combine and then from the right-click menu selected Rename Term to create the "Pharmaceuticals & Pharmacology" group.*
15. Consider saving as a thesaurus to use with a later cleanup. Then click Accept.
16. **Merge Fields:** Use **Fields | Merge Fields**. Click the plus symbol to the left of the cleaned assignee field and click top to select the top group. Then click the Add button. Select and Add the cleaned CA Classification field. Change the New Field Name to "CA Classification categories + Top Assignees", then click OK to merge the two fields.
17. **Create the Aduna cluster map:** Select **Scripts | Aduna Cluster Map**. Select CA Classification categories + Top Assignees as the field to map. *You can save the map as an image by clicking on the Export Map button.*

# Company Collaboration – Assignee Cleanup [Patents PT-1]

This bar chart shows the top 20 companies listed as Assignees in patents filed by Human Genome Sciences, based on a searches in Minesoft Patbase. Company names were cleaned up using VantagePoint - Smart Charts Edition and inventor names were removed from the Assignee list (as shown in the chart below) so that a company analysis could be done.

Human Genome Sciences Co-Assignees



## Company Collaboration – Assignee Cleanup [Patents PT-1]

### How did we create this?

#### SEARCHES:

Minesoft PatBase: Assignee = Human Genome Sciences (and obvious synonyms) - 1507

#### BIZINT SMART CHARTS FOR PATENTS

1. Import your results into BizInt Smart Charts to create a .chp file.
2. Display the Patent Assignee and Inventor(s) columns.
3. Use [File | Export](#) to export the chart to Vantage Point – XML, chart only.

#### VANTAGEPOINT - SMART CHARTS EDITION

4. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using [File | Import](#).
5. **Remove Inventors from the Assignee List:** On the Summary page, double-click on Patent Assignee.
6. From the Groups menu, choose List Comparison.
7. In the middle list, expand the list, and then expand Inventor(s) and choose Full list. In the Comparison Type choose Unique. At the bottom right of the panel give the new group a name (such as “Nolnv”). *You can improve the comparison accuracy by selecting Fuzzy Comparison and then pressing the ... button to select the Person Names - Very Aggressive comparison.*
8. Press OK. This will place a check mark next to every Assignee which doesn’t exactly match an Inventor.
9. Choose [Fields | Create Field From Group Items...](#), select the Patent Assignee field, and the Nolnv group. Enter a new field name “Assignee Companies”. At this point, the list contains many variations on the Assignee company names, but may still contain many individual names that weren’t an exact match to the inventors.
10. **Normalize the Assignee Names:** Choose [Fields | List Cleanup](#) and choose Organization Names (Pharma).fuz as the fuzzy match criteria (you don’t need to set any other options). Use the Cleanup Confirm panel to further cleanup company names. Type part of a name into the Find box and click Add. The Custom Set of Items will show everything that matches what you typed – this is a great way to find all universities (finding “univ”). Then click Accept.
11. **Manually remove remaining Inventors from the Assignees:** Note that you may still have individual names in the list. Review the list, clicking the Nolnv box until the mark is blank when the name is an individual.
12. Once again, use [Fields | Create Field from Group Names](#) to create a new group from the Assignee Companies (Cleaned) : Nolnv group. Call this field “Assignees”.
13. **Visualize the results:** Click the # Records header to sort by records/drugs. Select the first 15 companies, except for Human Genome Sciences itself (after all, we’re looking for their top collaborators) and save your .vpt file.
14. Click the Bar chart icon in the toolbar.
15. You can click on a bar to see the associated records for each company in the panel at left. The bar chart can be saved as an image file by holding down the right mouse button and selecting Save Image as....
16. Export the cleaned up Assignees back to BizInt Smart Charts as a new column using [File | Export Fielded Records....](#) In the Export Wizard, select All Records and click the Next button.
17. In the next panel, select BizInt Smart Charts for Patents in the Output Type dropdown list, click the Launch Application radio button, and then click Finish.

#### BIZINT SMART CHARTS FOR PATENTS

18. When BizInt Smart Charts for Patents comes to the foreground, select the original chart. It will redisplay with a new Assignee Companies column. You can use [Text | Highlight Cells](#) to highlight the column in yellow.

# Summarizing Legal Status in a Family

## [Patents PT-2]

This recipe shows how to use the “Create Subtable from Columns” tool and the “Summarize All Values” rule to create a table summarizing the latest legal status events for a family. Several variations of this recipe are possible, such as only showing the status for a specific authority, or using VP-SCE to filter for a subset of legal status codes in the Legal Status field, rather than using the Latest Legal Status field.

### SUBTABLE SUMMARIZING LEGAL STATUS IN FAMILY



Title	Patent Family				Patent Assignee	International Patent Class	Family Legal Status			
	Patent	Kind	Date				Patent Number	Latest Legal Status		
6. Colon and colon cancer associated polynucleotides and polypeptides	AU 200077215	A5	2001-04-30	6.1	HUMAN GENOME SCIENCES INC	A61P35/00 C07K14/47 C12Q1/68	AU 200077215 A5	20020606: - (MK6) APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	6.1	
	US 2003109690	A	2003-06-12	6.2						
	EP 1265582	A2	2002-12-18	6.3						
	CA 2384713	AA	2001-04-05	6.4			US 2003109690 A	20020715: (AS) ASSIGNMENT ( OWNER NAME : HUMAN GENOME SCIENCES, INC., MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: RUBEN, STEVEN M.; BARASH, STEVEN C.; BIRSE, CHARLES E.; AND OTHERS; REEL/FRAME: 013088/0134; SIGNING DATES FROM 20020610 TO 20020611 )	6.2	
	WO 0122920	C1	2002-04-11	6.5						
							EP 1265582 A2	20030129: - (18W) WITHDRAWN ( EFFECTIVE DATE : 20021126 )	6.3	
							CA 2384713 AA	20030224: - (AZWI) WITHDRAWN APPLICATION	6.4	
							WO 0122920 C1	20040701: (NENP) NON-ENTRY INTO THE NATIONAL PHASE IN: ( REF COUNTRY CODE : JP )	6.5	
	6.1 Patbase							6.1 Patbase	6.1 Patbase	
	7. Identification and use of molecules implicated in pain	GB 200202910	A0	2002-03-27			7.1	WARNER LAMBERT CO	A61K38/00 A61P23/00 A61P25/02 A61P25/04 C07K14/47 C07K14/705 C12N9/00 C12N9/12 C12N9/16 C12N9/64 C12N15/12 C12Q1/68	GB 200202910 A0
GB 200202892		A0	2002-03-27	7.2						
GB 200202880		A0	2002-03-27	7.3						
GB 200202883		A0	2002-03-27	7.4	GB 200202892 A0	20030430: - (AT) APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	7.2			
GB 2377940		A1	2003-01-29	7.5						
EP 1281775		A2	2003-02-05	7.6						
CA 2391216		AA	2003-01-27	7.7	GB 200202880 A0	20030430: - (AT) APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	7.3			
CA 2391112		AA	2003-01-27	7.8						
CA 2391642		AA	2003-01-27	7.9	GB 200202883 A0	20030430: - (AT) APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	7.4			
EP 1284298		A2	2003-02-19	7.10						
EP 1284297		A2	2003-02-19	7.11						
EP 1279744		A2	2003-01-29	7.12						
CA 2391219		AA	2003-01-27	7.13	GB 2377940 A1	20031008: - (WAP) APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	7.5			
				EP 1281775 A2	20060823: - (18D) DEEMED TO BE WITHDRAWN ( EFFECTIVE DATE : 20060221 )	7.6				
				CA 2391216 AA	20060921: - (FZDE) DEAD	7.7				
				CA 2391112 AA	20060922: - (FZDE) DEAD	7.8				

## Summarizing Legal Status in a Family [Patents PT-2]

### How did we create this?

#### SEARCH:

- PatBase - number search for publications found in a sequence (H5N1 NS1); rather than exporting the matching families, we export individual publication data including Legal Status

#### BIZINT SMART CHARTS FOR PATENTS

1. Import the search results into BizInt Smart Charts for Patents to create a .chp file.
2. **Group Rows by Patent Family:** Even though our search result is from a single database, we need to group records. Use the **Identify Common Patent Families** tool to match the publications into their family groups.  
*If you didn't export the family members as part of the publication data, you can copy the PatBase Family Number column and paste it into the Common Family column. This will ensure that the families in your report match the PatBase families.*
3. Display the Patent Number and Latest Legal Status columns (**View | Columns**).
4. **Hide Rows Which Don't Have Legal Status Data:** Generally you don't need to show family members for which you don't have any Legal Status data to report.
5. Click in the Latest Legal Status column and then select **View | Sort**. Add Latest Legal Status to the Sort Order list and sort.
6. Rows which are missing Latest Legal Status will be at the top of the chart. Click in the first row, scroll down to the last row with blank Latest Legal Status, press Shift and click again. Then **Edit | Hide Rows** to hide these rows in the chart. (You can bring them back with **View | Rows** at a later time).
7. Save the .chp file.
8. Send the chart to Reference Rows using the toolbar icon (or **File | Send to Reference Rows**).

#### BIZINT SMART CHARTS REFERENCE ROWS

9. During the Create Reference Rows wizard, do not Regenerate the Common Family if you copied the PatBase Family Number column.
10. Finish the wizard - you don't need to set any rules at this time.
11. **Create the Summary Subtable Column and Set Rules:** Run **Tools | Create Subtable from Columns**.
12. Select the Patent Number and Latest Legal Status columns in that order and press Apply. A new column will be created.
13. Double click on the column header to rename the new column from Untitled Subtable to "Family Legal Status".
14. Hide the original Patent Number and Latest Legal Status columns.
15. Use **Reference Rows | Column Rules...** to set the rule for the new column to Summarize All Values.
16. Use **File | Export** to export the report to HTML and see the subtable column summarizing the latest legal status even for each family member.

# Filtering the Patent Family by Authorities

## [Patents PT-3]

In this example, we've used VantagePoint - Smart Charts Edition to filter the Patent Family subtable to include only US, EP, WO patents. We've also filtered the patent numbers in the Patent Family to create a new column with only Chinese patents.

PATENT FAMILY  
FILTERED BY AUTHORITIES  
(US/EP/WO)

PATENT NUMBERS  
FILTERED BY  
AUTHORITIES (CN)

	Database	Patent Family			Patent Family:US/EP/WO			Chinese Patents
		Patent	Kind	Date	Patent	Kind	Date	
20	FAMPAT	WO 2006127537	A2	20061130	EP 1888785	A2	20080220	CN 101501214
		CA2609214	A1	20061130	EP 1888785	A4	20100203	
		US 20070037186	A1	20070215	US 20070037186	A1	20070215	
		EP 1888785	A2	20080220	WO 2006127537	A2	20061130	
		MX 2007014618	A	20080422	WO 2006127537	A3	20090416	
		JP 2008545400	A	20081218				
		WO 2006127537	A3	20090416				
		CN 101501214	A	20090805				
21	GQPAT Nucleotides	EP 1888785	A4	20100203				CN101501214
		BR 200610012	A2	20100518				
		US20070037186		20070215	EP1888785			
		BRPI0610012			US20070037186		20070215	
		CA2609214			WO2006127537			
		CN101501214						
		EP1888785						
		JP2008545400						
22	GQPAT Nucleotides	MX2007014618						CN101501214
		US20070037186						
		WO2006127537						
		JP2008545400		20081218	EP1888785			
		BRPI0610012			US20070037186			
		CA2609214			WO2006127537			
		CN101501214						
		EP1888785						
23	GQPAT Nucleotides	MX2007014618						CN101501214
		US20070037186						
		WO2006127537						
		EP1888785		20080220	EP1888785		20080220	
		BRPI0610012			US20070037186			
		CA2609214			WO2006127537			
		CN101501214						
		JP2008545400						

## Filtering the Patent Family by Authorities [Patents PT-3]

### How did we create this?

#### SEARCHES:

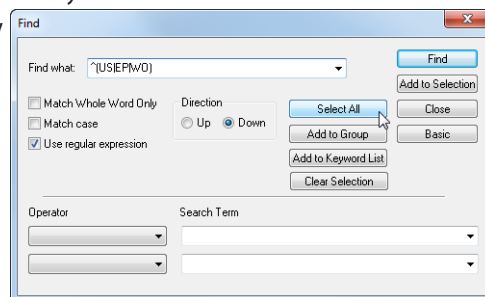
- Sequence and patent data from GenomeQuest (GeneSeq and GQPAT) and FAMPAT on Orbit.com

#### BIZINT SMART CHARTS FOR PATENTS (VERSION 3.5.6 OR HIGHER)

1. Import your results into BizInt Smart Charts to create a .chp file.
2. Use the **File | Combine** feature to create a single combined chart. Run the Identify Common Patent Families tool and sort by the Common Patent Family field. Display the Patent Family column.
3. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

4. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
5. **Filter the Patent Family by Authorities:** On the Summary panel, double-click on Patent Family.
6. Select **Edit | Find** to bring up the Find panel. Click the Clear Selection button to clear any existing selections.
7. In the Find panel, check the Use regular expression box. Type the regular expression "**^(US|EP|WO)**" into the Find what: box and click the Select All button. All of the US, EP, and WO patent numbers should be selected in the Patent Family window.
8. Click the Add to Group button and type "BizInt" in the group field. A new column with check marks next to the selected subrows will be created. Click Close to close the Find panel.
9. Select **Fields | Create Field from Group Items**. Select the BizInt item under Patent Family, and click OK.
10. **Filter Patent Numbers by Authorities:** If you want a column in your report with patent numbers from selected authorities, return to the Summary view and right-click on the Patent sub-field under the Patent Family field. Choose **Copy Field...** and enter a new field name (such as "All Patent Numbers"). Press OK, and select this new field from the Summary.
11. Select **Edit | Find** to bring up the Find panel. Click the Clear Selection button to clear any existing selections.
12. In the Find panel, check the Use regular expression box. Type the regular expression "**^CN**" into the Find what: box and click the Select All button. All of the CN patent numbers should be selected in the All Patent Numbers window.
13. Click the Add to Group button and type "Chinese" in the group field. A new column with check marks next to the selected subrows will be created. Click Close to close the Find panel.
14. Select **Fields | Create Field from Group Items**. Select the Chinese item under All Patent Numbers, and click OK.
15. **Export new fields to BizInt Smart Charts:** Export back to BizInt Smart Charts using **File | Export Fielded Records....** In the Export Wizard, select All Records and click the Next button. Include the new filtered fields and the recordID.
16. In the next panel, select BizInt Smart Charts for Patents in the Output Type dropdown list, select the Launch Application radio button, and then click Finish.

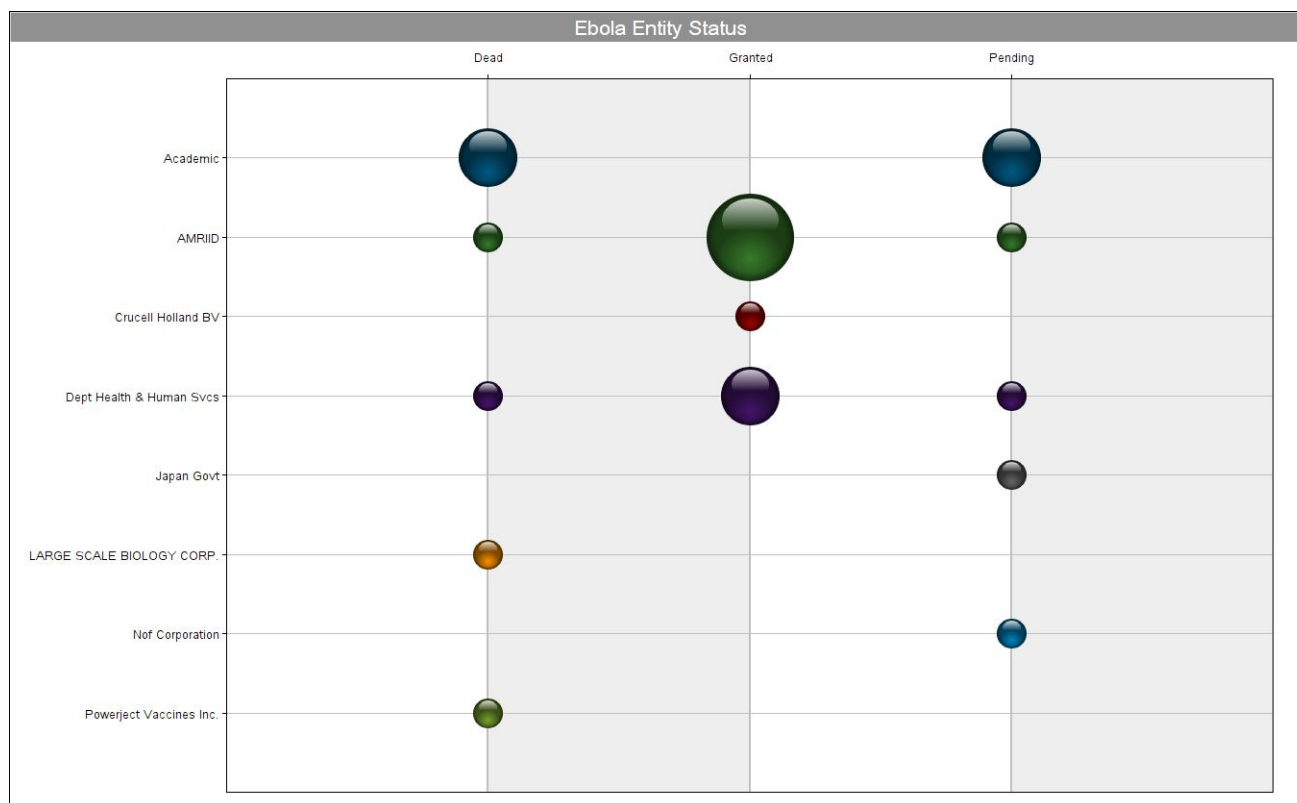


#### BIZINT SMART CHARTS FOR PATENTS

17. When BizInt Smart Charts for Patents comes to the foreground, select the original chart. It will redisplay with your new filtered patent family and patents numbers as new columns.

# Charting Companies by Filing Status with a Bubble Chart [Patents PT-7]

This is one example of a bubble chart created with VantagePoint – Smart Charts Edition (VP-SCE) using data exported from BizInt Smart Charts for Patents (see other recipes in this Cookbook for examples with pipeline and clinical trial data.) Here the bubble chart shows companies by filing status based on records from Cortellis and Fampat. A single record for each patent family was created with BizInt Smart Charts Reference Rows and then exported to VP-SCE where we created filing status categories from Fampat data and extracted patent assignees from the Company information from Cortellis. Then we used VP-SCE to generate the chart.



## Charting Companies by Filing Status with a Bubble Chart [Patents PT-7]

### How did we create this?

#### SEARCHES:

- Cortellis Patents: search for patents for indication Ebola, import into BizInt Smart Charts for Patents, run Identify Common Patent Families and run statistics on the Common Family column and save as .csv file.
- Orbit.com: Upload the .csv file of patent numbers from Cortellis to Orbit number search.

#### BIZINT SMART CHARTS FOR PATENTS

1. Import each set of search results into BizInt Smart Charts and use the [File | Combine](#) feature to create a combined chart.
2. Run the [Identify Common Patent Families](#) tool and sort by the Common Family field.
3. Display the Companies, State, and Status columns.
4. Save the chart. Select [File | Send to Reference Rows](#) to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

5. Use [File | Export](#) to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - SMART CHARTS EDITION

6. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using [File | Import](#). Save your .vpt file.
7. **Combine the State and Status fields:** Using [Scripts | Concatenate Fields](#), choose State as the first field and Status as the second field. Type "-" as the field separator.
8. Right-click on the State-Status field on the Summary sheet and choose [List Cleanup....](#) Select the General.fuz file, and click Use.
9. **Create filing status categories:** On the Cleanup Confirm panel, change the Display radio button to All Items. Drag and drop to place all the DEAD items in a single group.
10. **Rename the categories for the chart:** Click on the DEAD group and use Ctrl+R to rename it "Dead". Repeat to rename "ALIVE-GRANTED" to "Granted" and "ALIVE-PENDING" to "Pending".
11. Click Accept. If you're working in this area often, consider saving the cleanup as a Thesaurus.
12. Select the three categories you created then right click to select Add Selection to Group.... In the New Group panel, type the word "chart" and click OK.
13. **Extract Assignees from Companies field:** Use [Sheets | Add List](#) and choose the Companies field.
14. Use Ctrl+F to open the Find panel. Type "Assignee" as the text to find and click Select All. Click Add to Group and name the group "Assignees". Click Close.
15. Go to [Fields | Create Field from Group Items](#), select the Assignees group, and click OK.
16. Use [Sheets | Add List](#) and choose the Companies:Assignees::Company field.
17. **Cleanup Assignees:** Go to [Fields | List Cleanup...](#) and select the Organization Names (Pharma).fuz file, and click Use.
18. Use the Cleanup Confirm panel to further cleanup company names and then click Accept.
19. Select the top assignees, then right click to select Add Selection to Group.... In the New Group panel, type the word "top" and click OK. *To focus on industry, you can uncheck individuals and academic institutions.*
20. **Create the Bubble Chart:** Save the file. From the Scripts menu, select Bubble Chart and a Browser window will open with options for the script.
21. For step 1, select the cleaned assignees field-"Companies:Assignees::Company (Cleaned)" and change the radio button to Select a group.
22. For step 2, change the radio button to Select Any, and select State-Status (Cleaned) from the drop-down and change the radio button to Select a group.
23. For step 3, you can check the box to show record count in the bubbles and then scroll to the bottom of the window and click OK. A bubble chart showing assignees by filing status will be created.

# Creating a Co-Occurrence Matrix to Evaluate Patent Assignees [Patents PT-4]

We can use patent data to find organizations who haven't yet started clinical trials in a particular market. We searched for our target in the claims text, and limited the results to those publications with a Chinese document in the family. We then use VantagePoint – Smart Charts Edition (VP-SCE) to create a co-occurrence matrix from the patent data (in this case, mapping assignee organizations and priority application years) to try to identify possible partners (or competitors) in the field. We use this selection to choose a subset of rows in our original data set in BizInt Smart Charts for Patents, and export that subset with links to WIPO Patentscope, a good source for finding complete addresses.

Reset		Patent Assignee (Cleaned)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		# Records	5	20	27	31	27	39	54	93	96	12	10	10	12	16	14	26	12
Date	# Recor		1994	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	167	BAYER AG			2	1				2	2	4	7	19	37	37	54	2	
2	77	ABBOTT LAB			5	4						3	9	5	9	21	18	3	
3	44	ABBVIE INC			1							1	4	1	4	12	18	3	
4	28	NOVARTIS AG					2			10	5	6	3	1		1			
5	24	GENENTECH INC									5	9	2	1	3	2	2		
6	23	BASF AG		1	5	5	1		3			2		2	1	3			
7	21	KUDOS PHARM LTD					2			6	3	1	6	3					
8	19	JANSSEN PHARM NV								9	8				2				
9	18	MERCK SHARP&DOHME										4	6	1	1	3	3		
10	17	BIPAR										3	5	7	1	1			
11	17	SANOFI-AVENTIS	1		1		1			1	6				4	1	2		
12	16	PFIZER INC				1		1	2	2	2		2	4	1		1		
13	14	SCHERING AG							1		3		6	3		1			
14	12	AGOURON PHARMA				3	2	2		2	2				1				
15	11	CEPHALON INC		1			4				2		3			1			
16	11	CHIRON CORP								7	3	1							
17	10	INOTEK PHARM CORP						2		4	2	1		1					
18	9	NEREUS PHARM INC							2	1	5	1							
19	8	ASTRAZENECA AB											2	3	2		1		
20	8	CYCLACEL LTD							1	1		1	1	2	2				
21	8	IST RICERCHE BIOL MOLECOLARE ANGEL											4	4					
22	8	XOMA TECHNOLOGY LTD								6		1		1					
23	7	ACUCELA INC												5	2				
24	7	AEGERA THERAPEUTICS INC							2	1		1	3						
25	7	PFIZER PROD INC				1		1					1	4					
26	7	XENCOR INC									4			2			1		
27	6	AGENCY'S INC									4	2							
28	6	ALLERGAN INC														6			
29	6	BIOMARIN PHARM INC													3		3		
30	6	HOFFMANN LA ROCHE INC								1			1	1		1	2		
31	6	IDERA PHARM INC								1		3		1		1			
32	6	JIANGSU HENGRUI MEDICINE CO LTD															6		
33	6	JIANGSU SIMCERE PHARM CO LTD																6	
34	6	SHANGHAI HENGRUI PHARM CO LTD															6		
35	6	SIRTRIS PHARM INC									6								
36	6	SUGEN					2	4											
37	5	BERG PHARMA LLC														5			
38	5	CELL SIGNALING TECHNOLOGY INC										1	2	2					

## Creating a Co-Occurrence Matrix to Evaluate Patent Assignees [Patents PT-4]

### How did we create this?

#### SEARCHES:

- Thomson Innovation: Claims contains "PARP" and Country = "CN" - 1203 records

#### BIZINT SMART CHARTS FOR PATENTS

1. Import the search results into BizInt Smart Charts. Since Thomson Innovation generates a ZIP file of the results, you can drag the file and drop it into BizInt Smart Charts for Patents.
2. Run [Tools | Identify Common Patent Families](#).
3. Display the Patent Assignee and Priority Date columns.
4. Use [File | Export](#) to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - SMART CHARTS EDITION

5. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using [File | Import](#). Save your .vpt file.
6. **Cleanup Patent Assignees:** Follow the instructions in the Company Collaboration - Assignee Cleanup recipe to clean up your list of Assignees.
7. You may not be interested in all Assignees - for example, universities located in the US aren't of interest in this exercise. View the cleaned up Patent Assignee list, and use [Edit | Find](#) to find "Univ", then Select All and Add to Group. Name the group (e.g. "no interest").
8. You can double-click on the header for the group to bring the selected items to the top, where you can review them. You may want to turn off the group check-box for Univ Shanghai, for example.
9. Create a list containing only those Assignees you are interested in. [Fields | Create Field From Group](#), select the no interest group, and select the Use unchecked items radio button. Give the new field a name (e.g. "Selected Assignees") and then hit OK.
10. **Extract the year for the priority date:** Use [Sheets | Summary](#) to return to the Summary. Right-click on the Priority Date field and apply [Further Processing | Dates | Extract Years](#).
11. **Create the Matrix:** Select [Sheets | Add Matrix...](#)
12. Under the Rows heading, choose Selected Assignees.
13. Under the Columns heading, choose Priority Date: Dates/Extract Years.
14. Ensure that the Matrix type is Co-occurrence and Based On is # of Records, then press OK.
15. Double-click on the Priority Date: Dates/Extract Years label (near the top left) to sort the columns by year.
16. **Select interesting cells on the matrix:** As you review the matrix you may find cells that are of interest. For example, we found recent patenting activity from Jiangsu Hengrui Medicine and a few other organizations. Click and drag to draw a box around those cells, or use control-click to select multiple cells.
17. Right-click on a selected cell and choose Add Row Selections to Group. Create a group name such as "selected" and press OK. You may repeat these two steps to add several selections to the group.
18. Send this new field back to BizInt Smart Charts using [File | Export Fielded Records](#). In the Export Wizard, select All Records and click the Next button. Keep only the Selected Assignees field to export (along with the recordID). Select the other fields and click <Remove to remove them. On the next panel choose BizInt Smart Charts for Patents and Launch Application. Press OK.

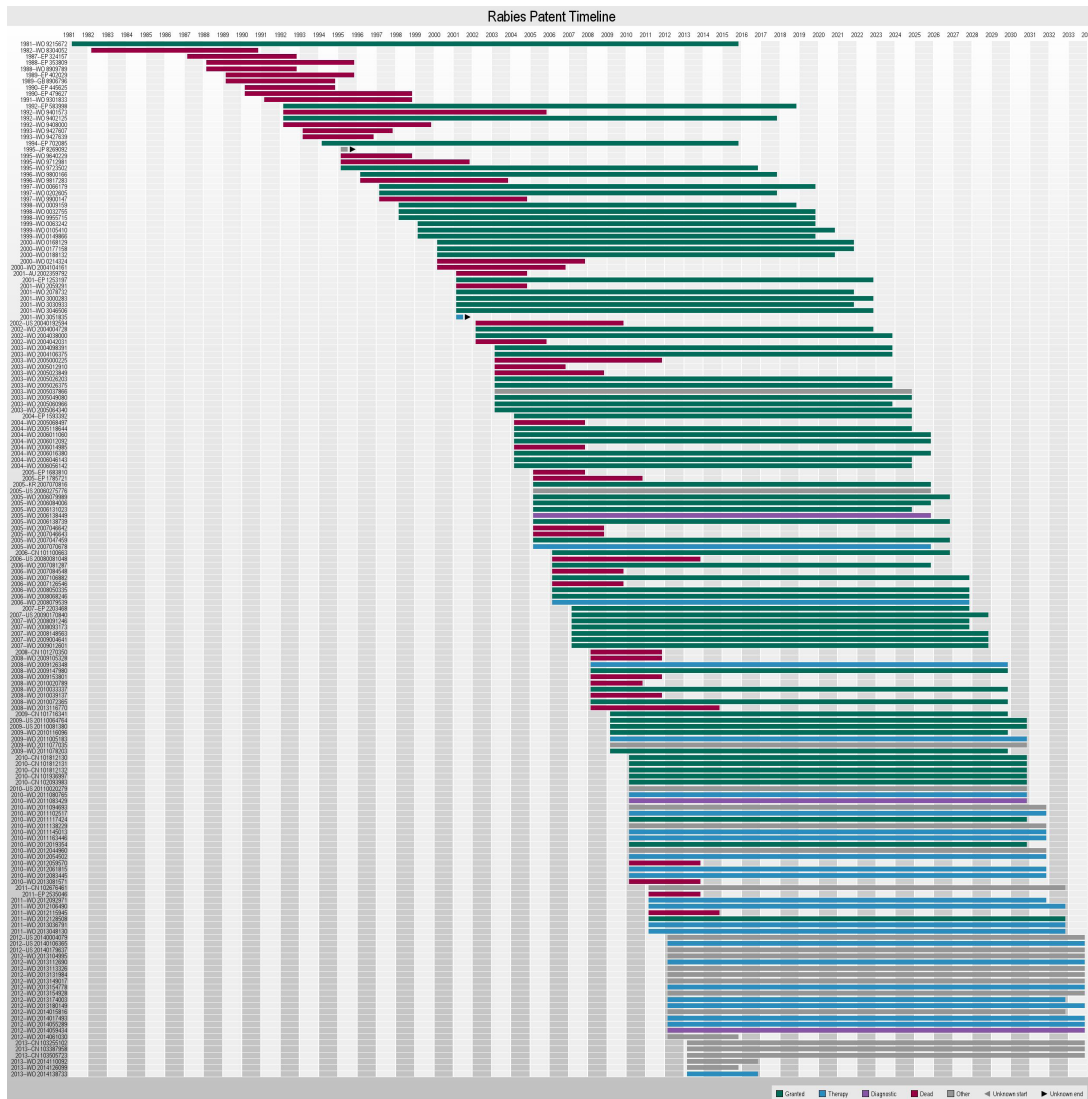
#### BIZINT SMART CHARTS FOR PATENTS

19. Choose your original chart and the new Selected Assignees field will be created as a separate column.
20. [View | Sort](#) on the Selected Assignees, using a descending sort. This will put blank cells at the bottom. You can hide the blank rows by selecting the range and using [Edit | Hide Rows](#).
21. If not already visible, use [View | Columns](#) to add Patent Family to the chart. Double click on the column header and ensure that the Link Patent Numbers option is set. Under [Options | Full-text patent links](#) select Patentscope for WO documents.
22. Export the chart to HTML, and click on WO publication numbers to find addresses for the assignees.

# Creating a Timeline Showing Patent Lifetimes [Patents PT-5]

Based on a recipe first presented at the 2014 PIUG Annual Meeting

This recipe helps you show patents over time, classified by a mix of status and patent type. The color of each bar can represent status, taken from Orbit (green bars are GRANTED and in effect, the red bars are DEAD). Pending applications are further classified by patent type from Thomson Reuters Cortellis: therapeutic (blue); diagnostic (purple); or all other types (grey).



## Creating a Timeline Showing Patent Lifetimes [Patents PT-5]

### How did we create this?

#### SEARCHES:

- Cortellis Patents: search for patents for indication Rabies Infection: 170 records
- Orbit.com: transfer all basic publication numbers from the Cortellis result: 168 records

#### BIZINT SMART CHARTS FOR PATENTS - *create your combined chart*

1. Import each set of search results into BizInt Smart Charts and use the [File | Combine](#) feature to create a combined chart.
2. Make the columns Calculated Expiry Date, Priority Date, State, Status, and Patent Type visible using [View | Columns](#).
3. Save the chart and select [File | Send to Reference Rows](#) to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *select dates and stitch together unique fields for each family*

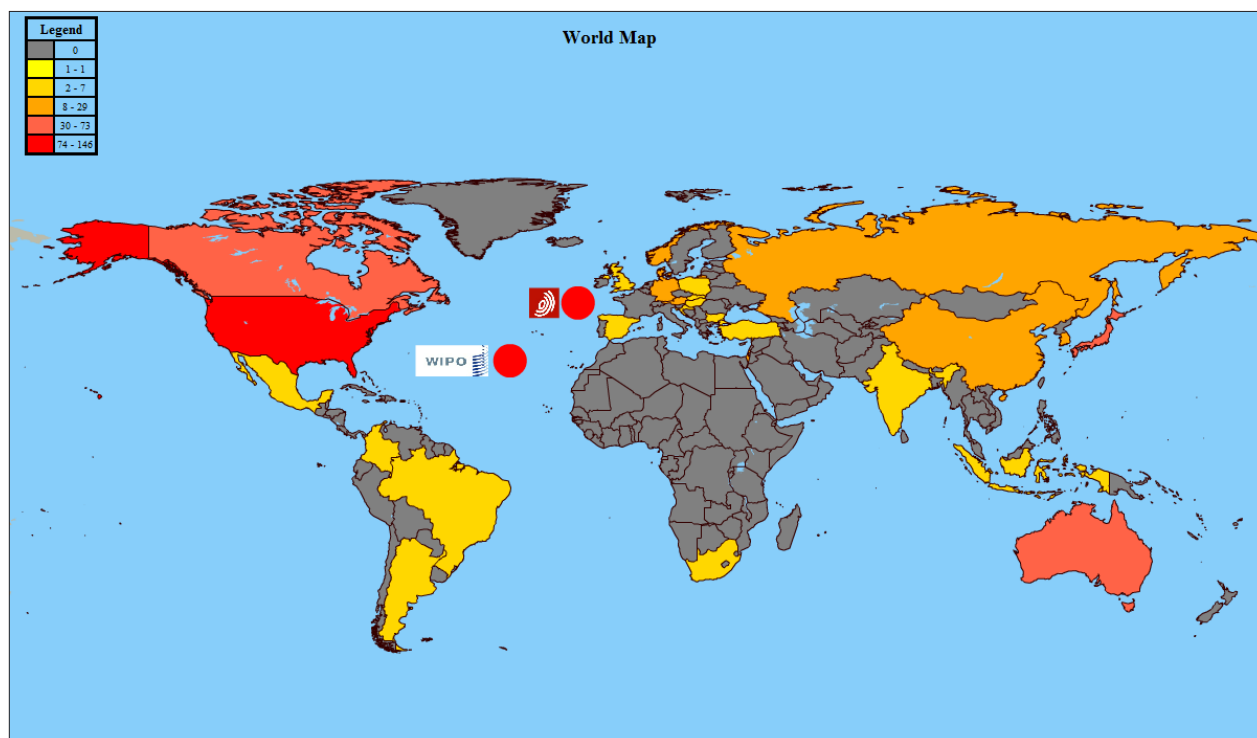
4. In the wizard, you can simply press [Generate](#) to identify the patents in the same family (as opposed to running this tool in BizInt Smart Charts for Patents) and then Finish on the next panel. We're going to set the rules up next.
5. Right click in the Priority Date and choose [Edit Column Rule](#). Change the rule for Priority Date to Earliest Date and repeat to change the rule for Calculated Expiry Date to Earliest Date as well.
6. You don't need to set a rule for State, Status, or Patent Type, as the standard behavior of Reference Rows is to "fill in the blanks". This will automatically link the State and Status from Orbit with the Patent Type from Cortellis in each family.
7. Make sure that the Common Family column is visible, as this will be used to label the timeline.
8. Use [File | Export](#) to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION - *create a key for color coding the families in the timeline*

9. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using [File | Import](#).
10. **Extract the year for the priority date and expiry date:** right-click on Priority Date, and choose [Further Processing | Dates | Extract Years](#). Use [Sheets | Summary](#) to return to the summary and repeat this step for the Calculated Expiry Date field.
11. **Combine the State, Status, and Patent Type fields:** We want to color code our timeline by a combination of the Status and the Patent Type, so we want to start by creating a field that combines the three values. Using [Scripts | Concatenate Fields](#), choose State as the first field and Status as the second field. Type "-" as the field separator. Then concatenate the new field with Patent Type in the same way. We refer to the resulting field as the "category" field below.
12. **Combine Priority Year and Common Family:** *Optional* To sort the publications in year order, concatenate Priority Date: Dates/Extract Years with Common Family. Call the field "Year+Family". This will be the label on each row in the table.
13. **Assign States and Patent Types to groups:** The timeline script uses groups to color the bars. Open the category field you created above. You can group the rows any way you want (up to five groups), but only assign one group to each item.
14. For the example on the left, the first group we created was for all families with State DEAD. In the category field, use [Edit | Find](#) to find "dead", Select All, and Add To Group using the group name Dead. Do the same for Granted (but press Clear Selection between groups).
15. Next we want to find create a group with therapeutic and product types. Once again select [Edit | Find](#), make sure the Use Regular Expression box is checked, and enter "therap|product" in the search area (the vertical bar means OR). At the same time, we don't want to match the Granted or Dead items. Click Advanced to expose additional search terms. Type "granted|dead" in the first search term, and choose And Not as the operator. Select All and Add to Group with the name "Therapy". Repeat this process for our Diagnostic types, using the search "diagnost|screen".
16. Finally we want to group the items that weren't assigned to any of the other groups. Right click in the category list and choose [Sort Ungrouped](#). This will move the items without any group to the top of the list. Select all of the ungrouped items, right click, and [Add Selection to Group...](#) using the name "Other".
17. **Rearrange group items:** If you would like the colors to be assigned differently to the groups you created, you can use [Groups | Edit Groups...](#) to rearrange the order of the groups.
18. **Create the trial timeline:** Select [Scripts | Timeline Gantt](#). Select Year+Family as the field to chart (this will be the label on the left side). Select the fields for the priority year and calculated expiry year, and select the category field as the Category field. Enter a title for the timeline graphic, such as "Patent Timeline", and press OK.
19. You can save the timeline as a .jpg file by holding down right mouse button and selecting Save image as....

## Mapping Patents by Authority [Patents PT-6]

This map shows relative density of patent records by country for a search of the sequence of poly ADP ribose polymerase (PARP) and a matching family search on Orbit.com. The records were combined with BizInt Smart Charts for Patents and BizInt Smart Charts Reference Rows was used to create a combined patent family table including unique family members from both sources. Then a single record for each patent family was sent to VantagePoint – Smart Charts Edition (VP-SCE). VP-SCE was used to extract patent authority codes and generate the map.



## Mapping Patents by Authority [Patents PT-6]

### How did we create this?

#### SEARCHES:

- GenomeQuest – sequence search for poly ADP ribose polymerase (PARP) from GQPAT and/or GENESEQ.
- Orbit.com – families corresponding to the sequences.

*Note: This recipe is for VP-SCE 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

#### BIZINT SMART CHARTS FOR PATENTS

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Identify Common Patent Families tool and sort by the Common Family field. Review and make changes if needed.
3. Display the Patent Family column.
4. Save the chart and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS (VERSION 1.2 OR HIGHER)

5. **Include unique family members from both sources:** On the third panel of the wizard, select the Patent Family column and click the Edit button to choose the Summarize Unique Values rule to include all unique family members from each source. *When the wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking and rules.*
6. Use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

7. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**. Save your .vpt file.
8. **Extract authority codes:** Right-click on the Patent child field under Patent Family and select **Further Processing | Patent Numbers | Read Country Code**.
9. **Tag Extracted field as a Country field:** Use **Sheets | Summary** to return to the summary. Right-click on the Patent: Patent Numbers/Read Country Code field and choose Set Meta Tags. Select Country on the right-hand column and click the left arrow button and then click OK.
10. **Create the Map:** From the Scripts menu, select World Map. A world map will automatically be generated. *You can click on the title to edit or click on a country to zoom and double-click to zoom out.*

# Summarizing Sequence Locations in a Patent Family [Patents PT-8]

In this example, we've used two new features in BizInt Smart Charts Reference Rows -- the "Create Subtable from Columns" tool and "Summarize All Values" rule -- to create a subtable summarizing key columns for sequences grouped by the Common Patent Family tool.

SUBTABLE SUMMARIZING  
RELATED SEQUENCES.



Title	Database	Patent Family			Patent Sequence Location	
		Patent	Kind	Date	Sequence ID	Location
9. TRANSLOCATION AND MUTANT ROS KINASE IN HUMAN NON-SMALL CELL LUNG CARCINOMA	9.1 FAMPAT	WO 200784631	A2	20070726	WO20070084631-0006	Claim 1; SEQ ID NO 6; 127pp; English. 9.3
	9.2 FAMPAT	EP 1973946	A2	20081001		
	9.3 GENESEQ <a href="#">link</a>	WO 200784631	A3	20081231	WO20070084631-0005	Claim 10; SEQ ID NO 5; 127pp; English. 9.4
	9.4 GENESEQ <a href="#">link</a>	JP 2009523446	A	20090625	US20100143918-0005	claim: 1; 8 9.5
	9.5 GPATPRT <a href="#">link</a>	CN 101528921	A	20090909	US20100298404-0005	claim: 1; 10 9.6
	9.6 GPATPRT <a href="#">link</a>	US 20100143918	A1	20100610	EP1973946-0005	TBD (information not in GQ-Pat) 9.7
	9.7 GPATPRT <a href="#">link</a>	EP 1973946	A4	20100811	JP2009523446-0017	TBD (information not in GQ-Pat) 9.8
	9.8 GPATPRT <a href="#">link</a>	US 20100298404	A1	20101125	US20120208824-0003	probable disclosure (not found by automated parsing) 9.9
	9.9 GPATPRT <a href="#">link</a>				US20120208824-0004	probable disclosure (not found by automated parsing) 9.10
	9.10 GPATNUC <a href="#">link</a>				JP2009523446-0003	TBD (information not in GQ-Pat) 9.11
	9.11 GPATNUC <a href="#">link</a>				EP1973946-0006	TBD (information not in GQ-Pat) 9.12
	9.12 GPATNUC <a href="#">link</a>				US20100298404-0006	claim: 1 9.13
	9.13 GPATNUC <a href="#">link</a>				US20100143918-0006	claim: 1 9.14
	9.14 GPATNUC <a href="#">link</a>					
9.1 FAMPAT		9.1 FAMPAT				
10. METHOD FOR PREDICTION OF POSTOPERATIVE PROGNOSIS FOR PATIENT WITH PULMONARY ADENOCARCINOMA, AND COMPOSITION FOR USE IN THE PREDICTION	10.1 FAMPAT	WO 200743418	A1	20070419	WO20070043418-0014	Claim 12; SEQ ID NO 14; 95pp; Japanese. 10.2
	10.2 GENESEQ <a href="#">link</a>	JP 2007097486	A	20070419	JP2007097486-0014	TBD (information not in GQ-Pat) 10.3
	10.3 GPATNUC <a href="#">link</a>				WO2007043418-0014	TBD (information not in GQ-Pat) 10.4
	10.4 GPATNUC <a href="#">link</a>					
10.1 FAMPAT		10.1 FAMPAT				

## Summarizing Sequence Locations in a Patent Family [Patents PT-8]

### How did we create this?

#### SEARCHES:

- GenomeQuest – sequence search from GQPAT and/or GENESEQ.
- Orbit.com – families corresponding to the sequences.

#### BIZINT SMART CHARTS FOR PATENTS (VERSION 3.5.6 OR HIGHER)

1. Import each set of results into BizInt Smart Charts for Patents to create .chp files.
2. Use the [File | Combine](#) feature to create a single combined chart. Run the Identify Common Patent Families tool.
3. Display the Seq. ID Number and Patent Sequence Location columns ([View | Columns](#)).
4. Change the title on the Patent Sequence Location column to “Location” (by double-clicking on the column header). Repeat to rename the Seq. ID Number column to “Sequence ID”.
5. Save the .chp file.
6. Send the chart to Reference Rows using the toolbar icon (or [File | Send to Reference Rows](#)).

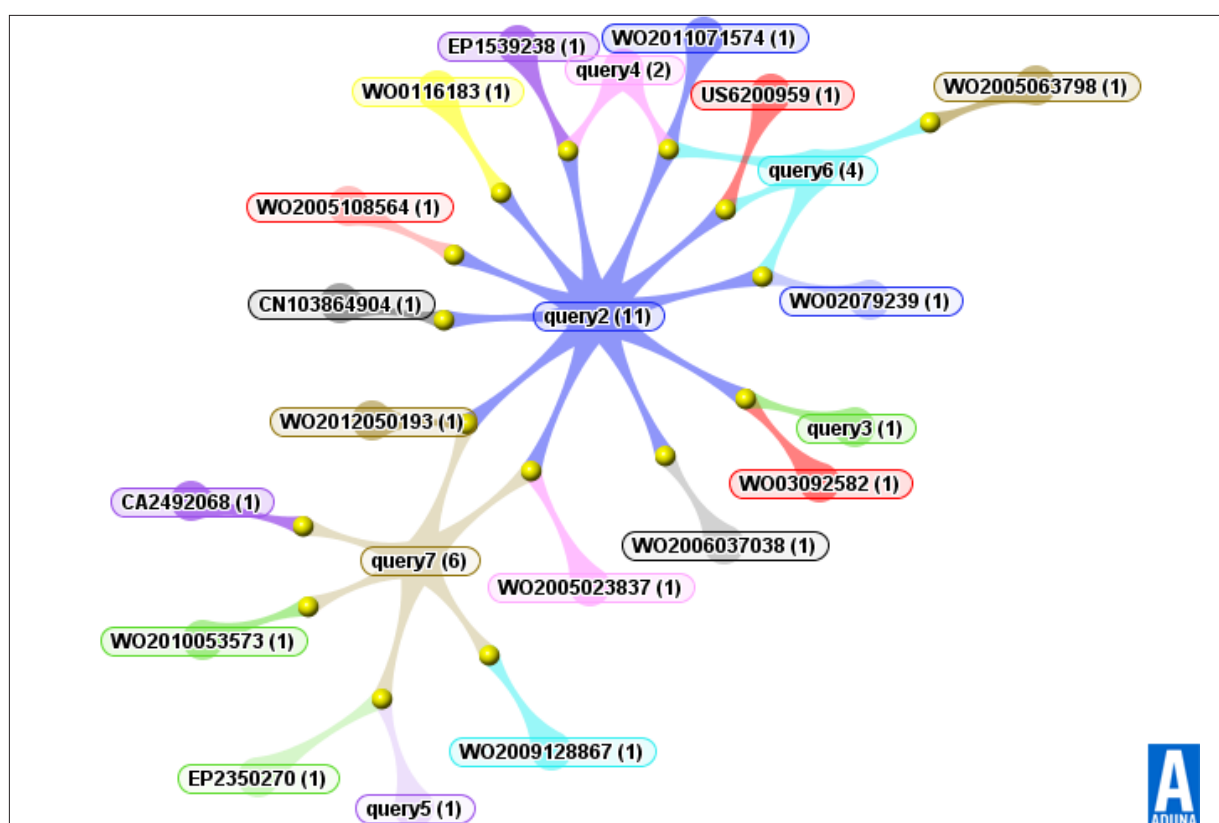
#### BIZINT SMART CHARTS REFERENCE ROWS (VERSION 1.0.6 OR HIGHER)

7. During the Create Reference Rows wizard, make sure that FAMPAT is listed as the first database.
8. When the wizard finishes, run [Tools | Create Subtable from Columns](#).
9. Select the Sequence ID and Location columns in that order and press Apply. A new column will be created.
10. Double click on the column header to rename the new column from Untitled Subtable to “Patent Sequence Location”.
11. Hide the original Sequence ID and Location columns.
12. Use [Reference Rows | Column Rules...](#) to set the rule for the new column to Summarize All Values.
13. Use [File | Export](#) to export the report to HTML and see the subtable column summarizing the Sequence ID and Location data.

# Creating an Aduna Chart with a Multi-Query Sequence Search [Patents PT-9]

This recipe shows how to build an Aduna chart showing sequence search results from a multi-query search with VantagePoint – Smart Charts Edition (VP-SCE) using data exported from BizInt Smart Charts for Patents. While the Aduna Cluster Map script only works with one field, you can merge fields to get the chart you want. Here the chart shows Common Family vs Query ID from a set of sequence searches run in GenomeQuest. Common Family was generated in BizInt Smart Charts for Patents and then sent to BizInt Smart Charts Reference Rows to create single record for each patent. Then we exported to VP-SCE to generate the chart.

You could also build this visualization showing individual publications, in order to see which publications are retrieved by each query. Or you could build this visualization based on the same SEQ ID NO in a family.



## Creating an Aduna Chart with a Multi-Query Sequence Search [Patents PT-9]

### How did we create this?

#### SEARCHES:

- We conducted multiple related sequence searches in GenomeQuest, combined them, and exported as a single set.

#### BIZINT SMART CHARTS FOR PATENTS

1. Import the search results into BizInt Smart Charts.
2. Run the Identify Common Patent Families tool and sort by the Common Family field.
3. Display the Query ID field.
4. Save your file and Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

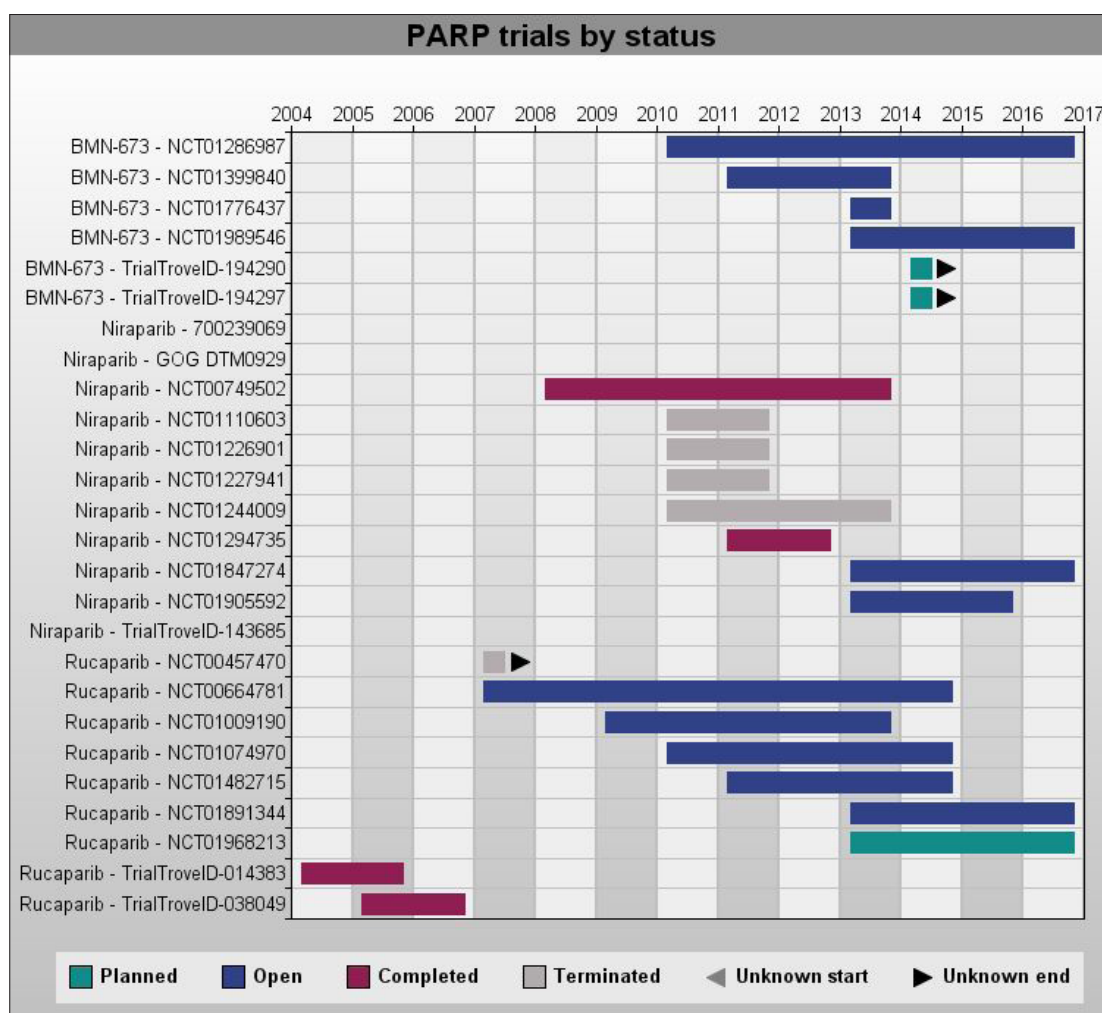
5. When the wizard finishes, right-click on the Query ID column and choose Edit Column Rule. Change the rule to Summarize Unique Values.
6. Use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - SMART CHARTS EDITION

7. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
8. **Merge Fields:** Use **Fields | Merge Fields** to combine Common Family and Query ID into a single field. Name the new field "Common Family+Query ID".
9. **Create the Aduna Chart:** Select **Scripts | Aduna Cluster Map**. Select Common Family+Query ID from the Select the field to map: dropdown. Scroll down and click OK.
10. VantagePoint will analyze the data and the Aduna map will appear. You can export the map as a .png file.

# Creating Clinical Trial Timelines Showing Trial Status [Trials CT-1]

This recipe shows how you can build trial timelines using fields beyond phase. In this example we will map trials by status for trials with drugs targeting poly ADP ribose polymerase (PARP), a target in trials for cancer. A search for selected PARP drugs was conducted in ClinicalTrials.gov, Citeline TrialTrove, and Adis Clinical Trials Insight. BizInt Smart Charts Reference Rows was used to build a more complete single record for each trial using information from all three sources. We then exported to VantagePoint – Smart Charts Edition (VP-SCE) to normalize and extract the data and generate the timeline. A thesaurus is used to group each trial into a normalized status which determines the color coding for the timeline. The same technique is applicable to trials aspects beyond phase and trial status, feel free to contact us about extending this or any recipe.



## Creating Clinical Trial Timelines Showing Trial Status [Trials CT-1]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe. *Trial field names in this recipe are from ClinicalTrials.gov.*

**RECIPES:** Cleaning up Drug Names in Trial Data using Pipeline sourced Synonyms

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS - *create your combined chart*

1. Import each set of search results into BizInt Smart Charts and use the **File | Combine** feature to create a combined chart.
2. Use **Tools | Generate Common Trial IDs** and then sort by the Common Trial ID column.
3. Scroll through the chart to review the matched trials (row shading indicates each set of trials) and revise if necessary by manually editing the Common Trial ID. Re-sort by Common Trial ID.
4. Make the columns Primary Completion Date, Start Date, and any columns you wish to use to color code your timeline visible using **View | Columns**. For this recipe we will use Overall Status. *Fields may be combined with Common Trial ID in VP-SCE to create a more informative timeline.* If you wish to use any additional columns in your timeline, such as Drugs or Company field, make them visible as well. We will use the Drugs field.
5. Save and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *select earliest start date and latest completion date for each trial*

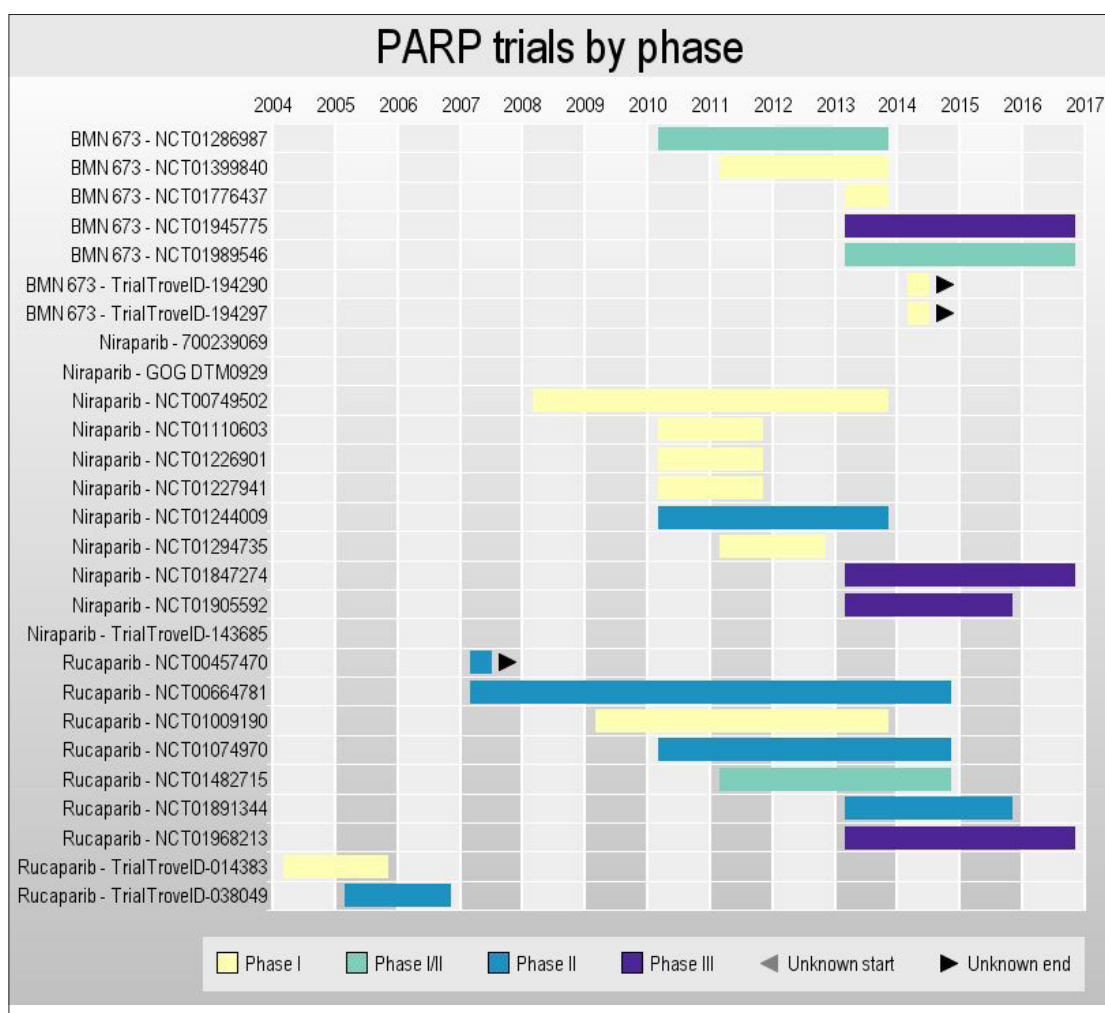
6. In the wizard, click Next and then click Finish. *DO NOT Regenerate the Common Trial IDs if you edited any Common Trial IDs in Step 3.*
7. Right click in the Start Date column and choose Edit Column Rule. Change the rule for Start Date to Earliest Date and repeat to change the rule for Primary Completion Date to Latest Date.
8. Make sure that the Common Trial ID, Start Date, Primary Completion Date, Overall Status, Drugs, and any other fields you plan to use are visible.
9. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION - *clean up the data and create the trial timeline*

10. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using **File | Import**.
11. **Extract the year for the start date and completion date:** From the Summary sheet, right-click on Start Date, and select **Fields | Further Processing | Dates | Extract Years**. Repeat this step for the Primary Completion Date field.
12. **Create groups for the timeline:** Go to **Sheets | Add List** and select the Overall Status list, and choose **Groups | Group using Thesaurus....** In the first step of the wizard, select the "Full list". Next, select the TrialStatus thesaurus to group the trials by status.
13. To have the timeline reflect the correct status order you may need to reorder the groups. Go to **Groups | Edit Groups** and click on group names and use the arrow buttons to reorder as needed. *Any field may be used here, as long as you create groups, either by thesaurus, as above, or manually by selecting rows and selecting Add Selection to Group... from the right-click menu.*
14. **Create trial labels for your timeline:** You can combine Common Trial ID with another field to create a trial label. In this recipe we use drug names, cleaned using the recipe, Cleaning up Drug Names in Trial Data using Synonyms from Pipeline Sources. *Whatever field you choose does not need to be unique, but there should be only one value per trial.*
15. Using **Scripts | Concatenate Fields**, choose the cleaned Drugs field created with the companion recipe as the first field and Common Trial ID as the second field. Type " - " (hyphen with a space on either side) as the field separator. Name the new field "Drug + Trial ID" and click OK.
16. **Create the trial timeline:** Select **Scripts | Timeline Gantt**. Select Drug + Trial ID as the field to chart. Select the fields for the start and completion years, and from the Select Category Field drop-down select the field where you have created groups, in this case Overall Status. Enter a title for the timeline graphic, such as "PARP trials by status", and click OK.
17. You can save the timeline as a .jpg file by right-clicking on the timeline and selecting Save image as....

# Creating Clinical Trial Timelines Showing Trial Phase [Trials CT-2]

This recipe shows how you can build trial timelines color coded by phase. See other recipes in this Cookbook for other options for categorizing trials. In this example we will map trials with three drugs targeting poly ADP ribose polymerase (PARP), a target in trials for cancer. A search for the selected PARP drugs was conducted in ClinicalTrials.gov, Citeline TrialTrove, and Adis Clinical Trials Insight. BizInt Smart Charts Reference Rows was used to build a more complete single record for each trial using information from all three sources. We then exported to VantagePoint – Smart Charts Edition (VP-SCE) to normalize and extract the data and generate the timeline. A thesaurus is used to group each trial into a normalized status which determines the color coding for the timeline.



## Creating Clinical Trial Timelines Showing Trial Phase [Trials CT-2]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe. *Trial field names in this recipe are from ClinicalTrials.gov.*

**RECIPES:** Cleaning up Drug Names in Trial Data using Pipeline sourced Synonyms

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS (VERSION 4.1 OR HIGHER) - *create your combined chart*

1. Import each set of search results into BizInt Smart Charts and use the **File | Combine** feature to create a combined chart.
2. Use **Tools | Generate Common Trial IDs** and then sort by the Common Trial ID column.
3. Scroll through the chart to review the matched trials (row shading indicates each set of trials) and revise if necessary by manually editing the Common Trial ID. Re-sort by Common Trial ID.
4. Make the columns Primary Completion Date, Start Date, and Phase visible using **View | Columns**. *Fields may be combined with Common Trial ID in VP-SCE to create a more informative timeline.* If you wish to use any additional columns in your timeline, such as Drugs or Company field, make them visible as well. We will use the Drugs field.
5. Save and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *select earliest start date and latest completion date for each trial*

6. In the wizard, click Next and then click Finish. *DO NOT Regenerate the Common Trial IDs if you edited any Common Trial IDs in Step 3.*
7. Right click in the Start Date column and choose Edit Column Rule. Change the rule for Start Date to Earliest Date and repeat to change the rule for Primary Completion Date to Latest Date.
8. Set the rule for Phase to Highest Development Phase.
9. Make sure that the Common Trial ID, Start Date, Primary Completion Date, Phase, Drugs, and any other fields you plan to use are visible.
10. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION - *clean up the data and create the trial timeline*

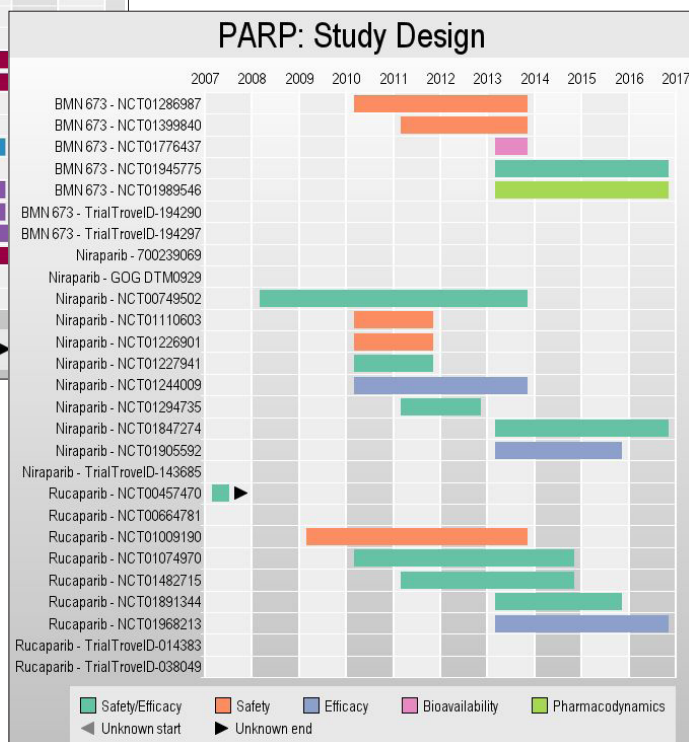
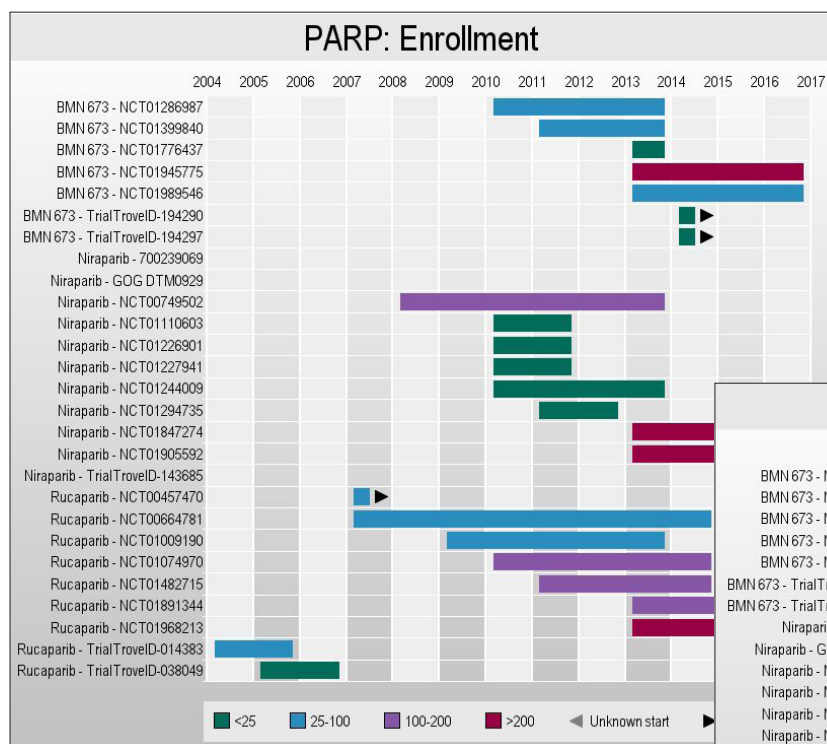
11. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using **File | Import**.
12. **Extract the year for the start date and completion date:** From the Summary sheet, right-click on Start Date, and select **Fields | Further Processing | Dates | Extract Years**. Repeat this step for the Primary Completion Date field.
13. **Create groups for the timeline:** Use **Sheets | Summary** and then double-click Phase to open the list. Then choose **Groups | Group using Thesaurus...** In the first step of the wizard, select the Full list. Next, select the DrugDevelopmentPhases thesaurus to group the trials by phase.
14. To have the timeline reflect the correct status order you may need to reorder the groups. Go to **Groups | Edit Groups** and click on group names and use the arrow buttons to reorder as needed. *Any field may be used here, as long as you create groups, either by thesaurus, as above, or manually by selecting rows and selecting Add Selection to Group... from the right-click menu.*
15. **Create trial labels for your timeline:** You can combine Common Trial ID with another field to create a trial label. In this recipe we use drug names, cleaned using the recipe, Cleaning up Drug Names in Trial Data using Synonyms from Pipeline Sources. *Whatever field you choose does not need to be unique, but there should be only one value per trial.*
16. Using **Scripts | Concatenate Fields**, choose the cleaned Drugs field created with the companion recipe as the first field and Common Trial ID as the second field. Type " - " (hyphen with a space on either side) as the field separator. Name the new field "Drug + Trial ID" and click OK.
17. **Create the trial timeline:** Select **Scripts | Timeline Gantt**. Select Drug + Trial ID as the field to chart. Select the fields for the start and completion years, and from the Select Category Field drop-down select Phase. Enter a title for the timeline graphic, such as "PARP trials by phase", and click OK.
18. You can save the timeline as a .jpg file by right-clicking on the timeline and selecting Save image as....

# Creating Clinical Trial Timelines Showing Enrollment & Study Design

## [Trials CT-3]

This recipe shows how you can build trial timelines using any field. In this example we will map trials by study type classification and enrollment for trials with drugs targeting poly ADP ribose polymerase (PARP), a target in trials for cancer. The same technique is applicable to other trials aspects as well, feel free to contact us about extending this or any recipe.

A search for selected PARP drugs was conducted in ClinicalTrials.gov, Citeline TrialTrove, and Adis Clinical Trials Insight. BizInt Smart Charts Reference Rows was used to build a more complete single record for each trial using information from all three sources. We then exported to VantagePoint – Smart Charts Edition (VP-SCE) to normalize and extract the data and generate the timeline.



## Creating Clinical Trial Timelines Showing Enrollment & Study Design [Trials CT-3]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe. *Trial field names in this recipe are from ClinicalTrials.gov.*

**RECIPES:** Cleaning up Drug Names in Trial Data using Pipeline sourced Synonyms

**FILE:** study\_classification\_kw.txt (Contact support@bizcharts for the file and installation directions)

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS - *create your combined chart*

1. Import each set of search results into BizInt Smart Charts and use the **File | Combine** feature to create a combined chart.
2. Use **Tools | Generate Common Trial IDs** and then sort by the Common Trial ID column.
3. Scroll through the chart to review the matched trials (row shading indicates each set of trials) and revise if necessary by manually editing the Common Trial ID. Re-sort by Common Trial ID.
4. Make the Primary Completion Date, Start Date, Drugs and both Study Design columns visible using **View | Columns**.
5. Save and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *select earliest start date and latest completion date for each trial*

6. In the wizard, DO NOT Regenerate the Common Trial IDs if you edited any Common Trial IDs in Step 3.
7. Right click in the Start Date column and choose Edit Column Rule. Change the rule for Start Date to Earliest Date and repeat to change the rule for Primary Completion Date to Latest Date and Enrollment to Most Recently Updated.
8. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION - *clean up the data and create the trial timeline*

9. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using **File | Import**.
10. **Extract the year for the start date and completion date:** From the Summary sheet, right-click on Start Date, and select **Fields | Further Processing | Dates | Extract Years**. Repeat this step for the Primary Completion Date field.
11. **Import the keywords list:** Use **View | My Keywords** to display it if not already checked. Click on the key icon in the top right of the My Keywords panel and select **Import Keyword Lists**. Choose study\_classification\_kw.txt. If you don't have the file, contact support@bizcharts.com.
12. **Extract study design terms:** Use **Key Icon | Extract My Keywords From** and choose Study Design. This will create a new field Study Design : study\_classification\_kw.
13. **Create study design groups** Right-click on each item in the new field and select Add Selection to Group and use the name of the term as it should appear in the color key for the timeline.
14. To have the timeline reflect the correct status order you may need to reorder the groups. Go to **Groups | Edit Groups** and click on group names and use the arrow buttons to reorder as needed.
15. **Create enrollment groups:** Use **Sheets | Add List** and select Enrollment to view enrollment numbers.
16. Decide on ranges of enrollment numbers to use. Select all the rows in a range, then right-click and add selection to group. Name the group as it should appear in the key, such as "<25" or "25-100". Repeat until all rows are in a group.
17. **Create trial labels for your timeline:** You can combine Common Trial ID with another field to create a trial label. In this recipe we use drug names, cleaned using the recipe, Cleaning up Drug Names in Trial Data using Synonyms from Pipeline Sources. *Whatever field you choose does not need to be unique, but there should be only one value per trial.*
18. Using **Scripts | Concatenate Fields**, choose the cleaned Drugs field created with the companion recipe as the first field and Common Trial ID as the second field. Type " - " (hyphen with a space on either side) as the field separator. Name the new field "Drug + Trial ID" and click OK.
19. **Create the trial timelines:** Select **Scripts | Timeline Gantt**. Select Drug + Trial ID as the field to chart. Select the fields for the start and completion years, and from the Select Category Field drop-down select Study Design : study\_classification\_kw. Enter a title for the timeline graphic, such as "PARP: Study Design", and click OK.
20. Repeat the previous step, this time selecting Enrollment as the Category Field.
21. You can save a timeline as a .jpg file by right-clicking on the timeline and selecting "Save image as..."

# Summarizing Clinical Trial Data – Enrollment [Trials CT-4]

Other recipes in this Cookbook show how you can create trial timelines grouped by any aspect of the data, including enrollment. But which enrollment number do you use? This recipe shows how you can use Reference Rows to build a single row for each trial that includes a summary table showing enrollment number and update date from each database. The chart used here is the same set of trials for drugs targeting PARP used in the trial timeline recipes in this Cookbook.

The same technique can be applied to other columns as well. Try it with Start and End dates and you can see why it is informative to incorporate multiple sources.

Trial Title	Common Trial ID	Database	Countries	Enrollment (Most Recent Trial)	Enrollment - Database Summary			
					Database	Enrollment	Last Changed Date	
21. Rucaparib(CO-338;Formally Called AG-014699 or PF-0136738) in Treating Patients With Locally Advanced or Metastatic Breast Cancer or Advanced Ovarian Cancer	NCT00664781	21.1 NCT   <a href="#">link</a>	United Kingdom England Multinational Scotland	114	ClinicalTrials.Gov	84 (Anticipated)	2013-10-07	21.1
		21.2 ACT3   <a href="#">link</a>			Adis Clinical Trials Database	114	2013-11-11	21.2
		21.3 TROVE   <a href="#">link</a>			Citeline TrialTrove	84-114	2013-10-12	21.3
		21.1 NCT			21.2 ACT3			
22. PARP Inhibition for Triple Negative Breast Cancer (ER-/PR-/HER2-)With BRCA1/2 Mutations	NCT01074970	22.1 NCT   <a href="#">link</a>	United States USA	135	ClinicalTrials.Gov	135 (Anticipated)	2013-09-12	22.1
		22.2 ACT3   <a href="#">link</a>			Adis Clinical Trials Database	135	2013-09-19	22.2
		22.3 TROVE   <a href="#">link</a>			Citeline TrialTrove	135-250 patients	2013-07-06	22.3
		22.1 NCT			22.2 ACT3			
23. A Phase 2 Study Exploring The Safety And Efficacy Of Novel Drug Treatment In Subjects With Diabetic Macular Edema (DME)	NCT00457470	23.1 NCT   <a href="#">link</a>	Unknown United States	80	ClinicalTrials.Gov	80	2007-06-25	23.1
		23.2 ACT3   <a href="#">link</a>			Adis Clinical Trials Database	80	2013-12-31	23.2
		23.3 TROVE   <a href="#">link</a>			Citeline TrialTrove	80	2012-08-01	23.3
		23.1 NCT			23.2 ACT3			
24. A Study Of Poly (ADP-Ribose) Polymerase Inhibitor PF-01367338 In Combination With Several Chemotherapeutic Regimens	NCT01009190	24.1 NCT   <a href="#">link</a>	France Italy United Kingdom England Ireland Multinational Northern Ireland Scotland United States	60	ClinicalTrials.Gov	60 (Anticipated)	2013-11-06	24.1
		24.2 ACT3   <a href="#">link</a>			Adis Clinical Trials Database	60	2013-11-22	24.2
		24.3 TROVE   <a href="#">link</a>			Citeline TrialTrove	65 (30 patients in France)	2013-11-12	24.3
		24.1 NCT			24.2 ACT3			

## Summarizing Clinical Trial Data – Enrollment [Trials CT-4]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe.

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

1. Import each set of search results into BizInt Smart Charts and use [File | Combine](#) to create a combined chart.
2. Run the [Generate Common Trial IDs](#) tool and sort by Common Trial ID. Review and make changes if needed.
3. Display the Enrollment and Last Changed Date columns.
4. Save the chart and send to Reference Rows using the toolbar icon (or [File | Send to Reference Rows](#)).

#### BIZINT SMART CHARTS REFERENCE ROWS (VERSION 1.0.6 OR HIGHER)

5. During the Create Reference Rows wizard, make sure that Clinicaltrials.gov is listed as the first database.
6. When the wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking and rules.
7. **Create the Subtable:** In the Selection View, run [Tools | Create Subtable from Columns](#).
8. Select the Database, Enrollment and Last Changed Date columns in that order and press Apply. A new column will be created containing a subtable with these three columns.
9. Double click on the column header to rename the new column from Untitled Subtable to "Database - Enrollment - Update Date".
10. **Set the Export to Show Enrollment from all Sources:** Use [Reference Rows | Column Rules...](#) to set the rule for the new column to Summarize All Values. Blue hash marks will appear in the cells.
11. Hide any columns you do not want displayed in your final report.
12. Use [File | Export](#) to export the report to HTML and see the selected enrollment from a single database and the summary subtable.

# Summarizing EudraCT Clinical Trials – Enrollment [Trials CT-10]

The EudraCT (EU Clinical Trials) database provides trial records for a trial in each member county. BizInt Smart Charts tools help you identify related trials and summarize the data for all EU trials in a single row. In this example, we create a summary table showing the enrollment in each member state for each trial. Other columns show the total enrollment and other data selected from one of the records.

Pertussis Trials - Enrollment in EU (EudraCT - Oct2015)

Trial Identifier	Database	EU Trial Summary			Enrollment (Total)	Phase	Population	Study Design		
		Member State	Enrollment in State							
1.	EudraCT 2004-001175-19 102247	1.1	EUDRACT   <a href="#">link</a>	Spain - AEMPS	345	1.1	3990	Phase III	Infants and toddlers Healthy volunteers	Prophylaxis Safety Efficacy Controlled Randomised Double blind Parallel group
		1.2	EUDRACT   <a href="#">link</a>	Italy - Italian Medicines Agency		1.2				
		1.3	EUDRACT   <a href="#">link</a>	Finland - Fimea	2490	1.3				
		1.4	EUDRACT   <a href="#">link</a>	Czech Republic - SUKL	300	1.4				
	1.1	EUDRACT				1.1	EUDRACT	1.1	EUDRACT	1.1
2.	EudraCT 2005-001288-73 104703, 104704	2.1	EUDRACT   <a href="#">link</a>	Austria - BASG	100	2.1	500	Phase II	Infants and toddlers Children Healthy volunteers Subjects incapable of giving consent personally	Prophylaxis Safety Dose response Controlled Randomised open, partially double-blind
		2.2	EUDRACT   <a href="#">link</a>	Germany - PEI	400	2.2				
	2.1	EUDRACT				2.1	EUDRACT	2.1	EUDRACT	2.1
3.	EudraCT 2005-003508-12 010	3.1	EUDRACT   <a href="#">link</a>	Belgium - FPS Health-DGM	100	3.1	522	Phase IV	Infants and toddlers Healthy volunteers	Safety Controlled Randomised Double blind
		3.2	EUDRACT   <a href="#">link</a>	Austria - BASG	60	3.2				
		3.3	EUDRACT   <a href="#">link</a>	Germany - PEI	372	3.3				
	3.1	EUDRACT				3.1	EUDRACT	3.1	EUDRACT	3.1
4.	EudraCT 2010-019730-27 113994	4.1	EUDRACT   <a href="#">link</a>	Germany - PEI	100	4.1	600	Phase II	Infants and toddlers Healthy volunteers Subjects incapable of giving consent personally	Prophylaxis Safety Efficacy Controlled Randomised Parallel group observer blind
		4.2	EUDRACT   <a href="#">link</a>	Czech Republic - SUKL	250	4.2				
		4.3	EUDRACT   <a href="#">link</a>	Poland - Office for Medicinal Products	400	4.3				
		4.4	EUDRACT   <a href="#">link</a>	Sweden - MPA	100	4.4				
4.1	EUDRACT				4.1	EUDRACT	4.1	EUDRACT	4.1	EUDRACT
5.	EudraCT 2012-001042-18 A3L40 U1111-1122-2362	5.1	EUDRACT   <a href="#">link</a>	Germany - PEI	265	5.1	795	Phase III	Infants and toddlers Healthy volunteers Subjects incapable of giving consent personally	Prophylaxis Safety Efficacy Controlled Randomised blind-observer (group 1 and group 2) and open-label (group 3)
		5.2	EUDRACT   <a href="#">link</a>	Czech Republic - SUKL	265	5.2				
		5.3	EUDRACT   <a href="#">link</a>	Spain - AEMPS	265	5.3				
	5.1	EUDRACT				5.1	EUDRACT	5.1	EUDRACT	5.1

## Summarizing EudraCT Clinical Trial Data- Enrollment [Trials CT-10]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched EudraCT (EU Clinical Trials) for pertussis trials and downloaded each page of trials.

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS (VERSION 4.1 OR HIGHER)

1. Import each set of search results into BizInt Smart Charts and use [File | Combine](#) to create a combined chart.
2. Run the [Generate Common Trial IDs](#) tool and sort by Common Trial ID. Review and make changes if needed.
3. Display the Member State and Enrollment in State columns.
4. Save the chart and send to Reference Rows using the toolbar icon (or [File | Send to Reference Rows](#)).

#### BIZINT SMART CHARTS REFERENCE ROWS (VERSION 1.0.6 OR HIGHER)

5. When the Create Reference Rows wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking and rules.
6. **Create the Subtable:** In the Selection View, run [Tools | Create Subtable from Columns](#).
7. Select the Member State and Enrollment in State columns in that order and press Apply. A new column will be created containing a subtable with these two columns.
8. Double click on the column header to rename the new column from Untitled Subtable to "EU Trial Summary".
9. **Change the column rule to summarize enrollment for each trial:** Use [Reference Rows | Column Rules...](#) to set the rule for the new column to Summarize All Values. Blue hash marks will appear in the cells.
10. Hide any columns you do not want displayed in your final report.
11. Use [File | Export](#) to export the report to HTML and see the summary subtable.

# Charting Trial Indications by Phase with a Bubble Chart [Trials CT-9]

This is one example of a bubble chart created with VantagePoint – Smart Charts Edition (VP-SCE) using data exported from BizInt Smart Charts for Drug Pipelines. For another example with pipeline data, see Charting Indications by Phase with a Bubble Chart. Here the chart shows clinical trial indications by phase based on records from ClinicalTrials.gov, Citeline TrialTrove, and Adis Clinical Trials Insight. The subject of the search was trials with selected poly ADP ribose polymerase (PARP) inhibitors. A single record for each trial was created with BizInt Smart Charts Reference Rows and then exported to VP-SCE where we normalized trial phases and used the list cleanup tool to clean indications by creating a custom thesaurus. Then we used VP-SCE to generate the chart.



## Charting Trial Indications by Phase with a Bubble Chart [Trials CT-9]

### How did we create this?

#### SEARCHES:

- We searched Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe.  
*Trial field names in this recipe are from ClinicalTrials.gov.*

*Note: This recipe is for VP-SCE 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

1. Import each set of search results into BizInt Smart Charts and use the **File | Combine** feature to create a combined chart.
2. Run the Generate Common Trial IDs tool and sort by the Common Trial ID field.
3. Display the Conditions and Phase columns.
4. Save the file and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

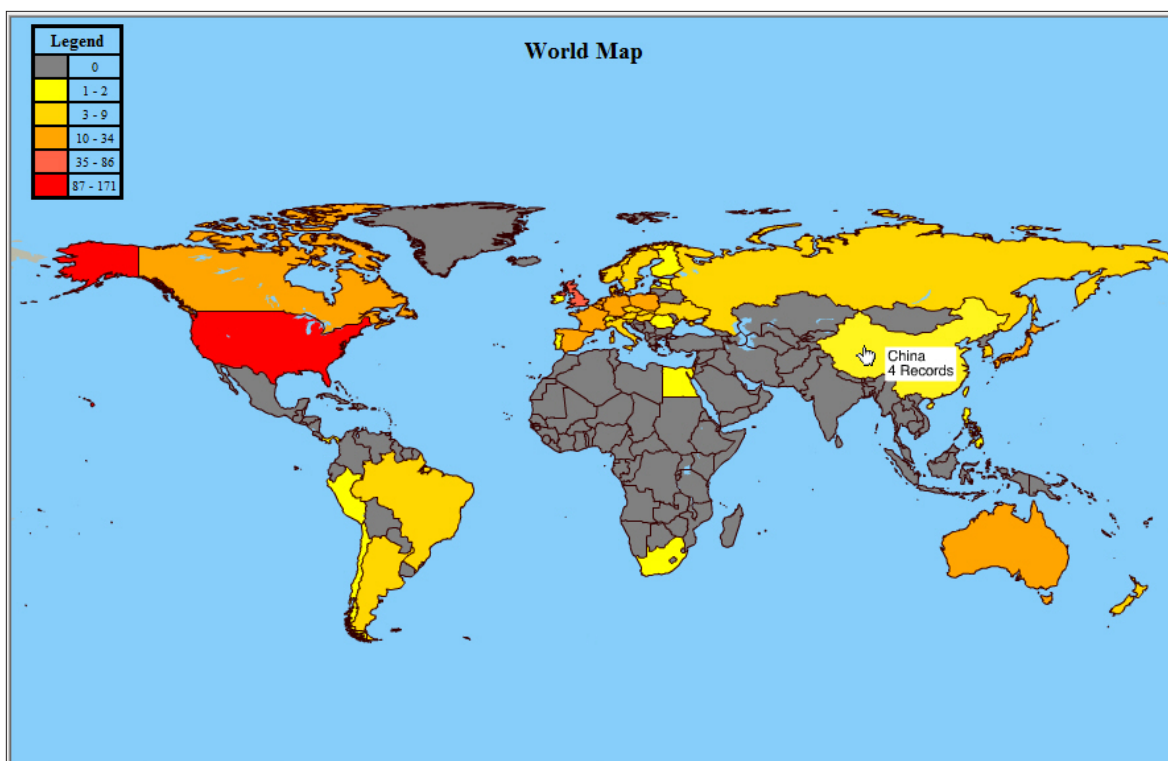
5. Change the rule for Conditions to Summarize All Values.
6. Use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - SMART CHARTS EDITION

7. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using **File | Import**. Save your .vpt file.
8. **Ensure phase order sort:** Right-click on the Phase field and choose **Set Data Type | Phase**.
9. Right-click on Phase and select **Thesaurus...** and choose the DrugDevelopmentPhases.the file.
10. **Cleanup Indications (Conditions):** If there are conditions containing data in parentheses, apply **Fields | Further Processing | Read Until - First | Paren** to remove qualifiers in parenthesis.
11. Go to **Fields | List Cleanup...** and select Condition: Read Until - First/Paren from the field list. Select the General.fuz file, and click Use.
12. Use the Cleanup Confirm panel to clean up indications.
13. Cleanup Confirm provides different tools, you can:
  - Enter keywords or partial keywords in the Find box, click the Add button, and switch the display to Custom Set of Items. To search additional keywords you can Add to the list or use Remove All to clear the Custom Set.
  - Drag and drop terms onto other terms to group them.
  - Cut a term and Paste it onto another term to do the same thing.
  - Right-click on a term and select Rename Term.
14. If you're working in this area often, consider saving the cleanup as a Thesaurus.
15. Select the top conditions, then right click to select Add Selection to Group.... In the New Group panel, type the word "top" and click OK. *You may also want to uncheck generic indications like "Cancer" or "Unspecified solid tumor."*
16. Save your .vpt file.
17. **Create the Bubble Chart:** From the Scripts menu, select Bubble Chart and a Browser window will open with options for the script.
18. For step 1, select the cleaned conditions field: Condition: Read Until - First/Paren (Cleaned) and change the radio button to Select a group. The field name will be different depending on the processing steps you used earlier.
19. For step 2, change the radio button to Select Any, and select Phase (1) from the drop-down.
20. For step 3, you can check the box to show record count in the bubbles and then scroll to the bottom of the window and click OK. A bubble chart showing conditions by phase will be created.

## Mapping Trial Locations [Trials CT-7]

This map shows relative density of clinical trials by country for trials of poly ADP ribose polymerase (PARP) inhibitors. It was built using a search of ClinicalTrials.gov, Citeline TrialTrove, and Adis Clinical Trials Insight. The records were combined with BizInt Smart Charts for Drug Pipelines and BizInt Smart Charts Reference Rows was used to send a single record per trial to VantagePoint – Smart Charts Edition (VP-SCE). VP-SCE was used to normalize country terminology and generate the map.



## Mapping Trial Locations [Trials CT-7]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe. *Trial field names in this recipe are from ClinicalTrials.gov.*

*Note: This recipe is for VP-SCE 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Generate Common Trial IDs tool, and then sort by the Common Trial ID column.
3. Scroll through the chart to review the matched trials (every time the row shading changes, you're in a new group). *Most of the groups should be sensible - one to three records on a trial. If you see groups containing larger numbers of records, you may want to make the Trial ID column visible, so you can review Common Trial ID assignment and in some cases manually edit the Common Trial ID column as appropriate.*
4. Re-sort by Common Trial ID.
5. Make the Countries column visible.
6. Save your chart and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

7. In Step 1 of the wizard, DO NOT Regenerate the Common Trial IDs if you edited the Common Trial IDs in Step 3.
8. Change the rule for Countries to Most content (lines).
9. Use **File | Export** to export the visible columns to VantagePoint - XML.

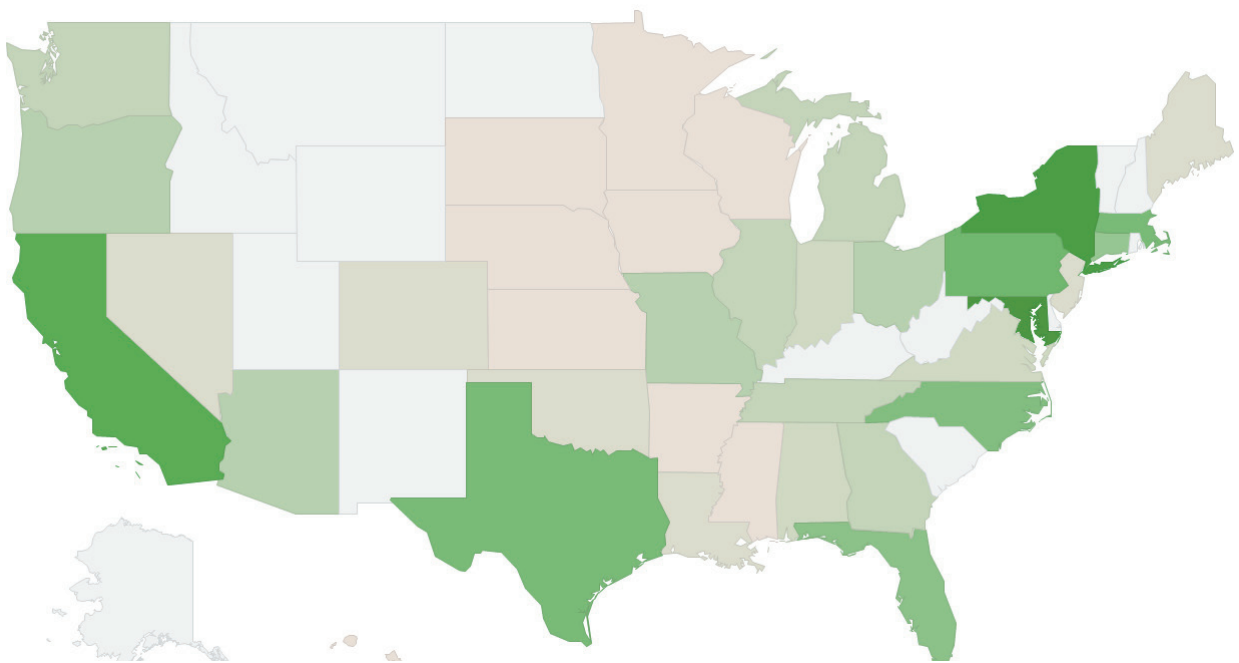
#### VANTAGEPOINT - SMART CHARTS EDITION

10. If the file does not launch automatically in VP-SCE, then import the .vpxi file into VP-SCE using **File | Import**. Save your .vpt file.
11. **Tag Countries as a Country field:** Right-click on Countries and choose Set Meta Tags. Select Country on the right-hand column and click the left arrow button and then click OK.
12. Double-click on Countries to view the list. *VP-SCE uses a thesaurus to normalize countries which can handle common variations, so you may skip to the final step and use the Countries field directly if you wish, but you won't have the same level of control.*
13. Bring up the **Fields | List Cleanup...** panel. Select Countries from the field list on left. Select the General.fuz fuzzy match file, and click Use.
14. Change the radio button to Display All Items and click on Item Name to sort. Manually match up country synonyms (like UK and United Kingdom) by drag and drop. When you are done, click Accept (do not save as thesaurus).
15. Choose **Scripts | World Map**. A world map will automatically be generated. *You can click on the title to edit or click on a country to zoom and double-click to zoom out.*

## Mapping Clinical Trials by State [Trials CT-8]

In this example we mapped clinical trials at the US state level. VP-SCE was used to extract locations from two different clinical trial information sources and two different types of data: fielded data in ClinicalTrials.gov and free text from Citeline TrialTrove. For the free text field, state names and abbreviations were extracted and a thesaurus used to convert abbreviations to full state names. Google Charts JavaScript was used to build the map and display it in a VP-SCE browser window.

This method can also be applied to other countries, though the level of detail supported by Google Charts varies. For Japan, for example, prefectures are supported.



## Mapping Clinical Trials by State [Trials CT-8]

### How did we create this?

#### SEARCHES:

- **Clinical Trials:** We searched ClinicalTrials.gov and Citeline TrialTrove for trial records for Sjögren's Syndrome.

**FILES:** US States and USPS Abbreviations.txt, Google Chart.vpm (Contact support@bizcharts for the files and installation directions)

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

1. Import each set of search results into BizInt Smart Charts and use File | Combine features to create a combined chart.
2. Save and select File | Send to Reference Rows to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *display trial location fields*

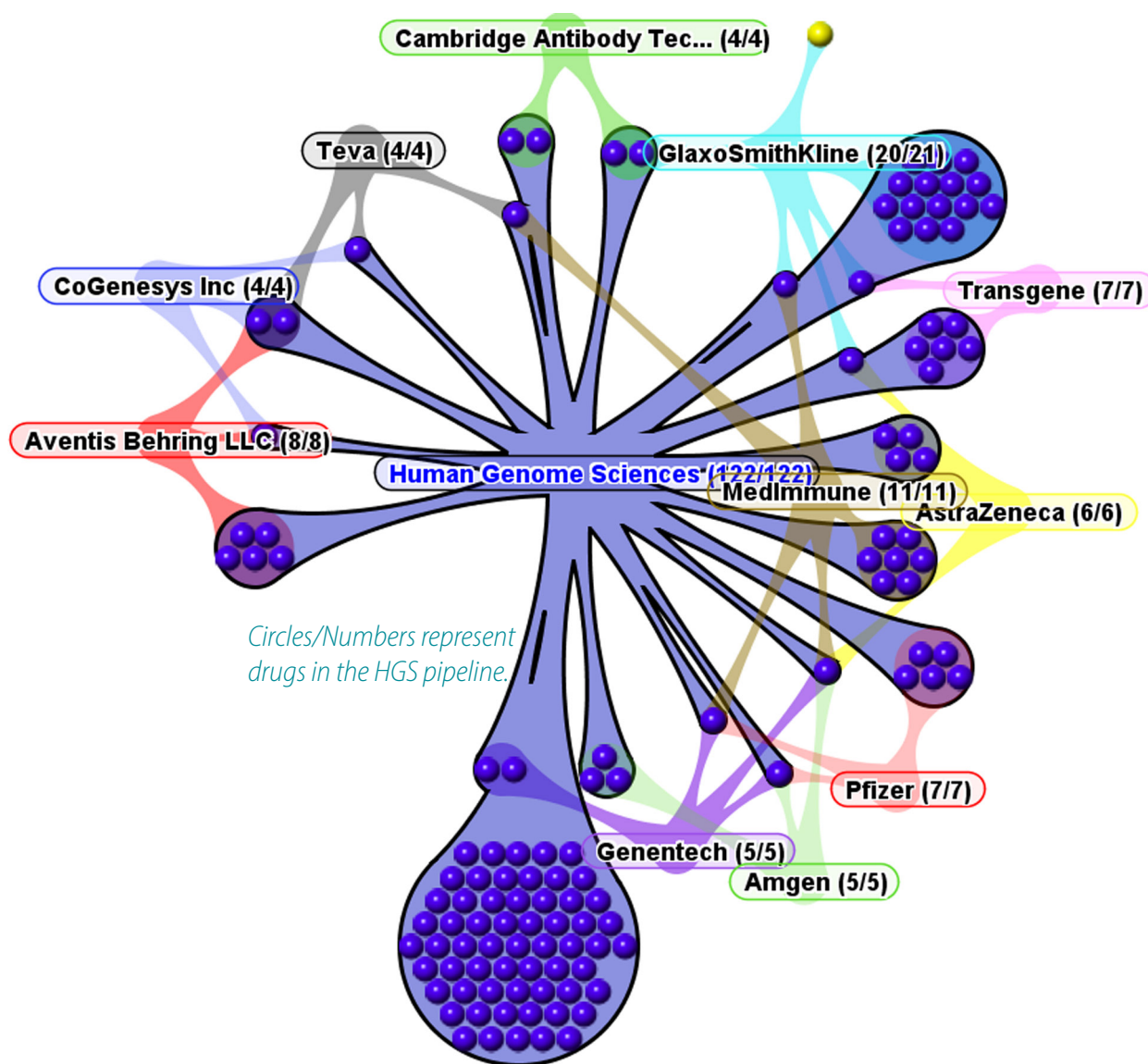
3. Go to View | Columns and add Trial Locations, Investigators / Contacts, and Location Details if not already visible.
4. Use File | Export to export as Vantage Point – XML, chart only. VantagePoint - BizInt Smart Charts Edition (VP-SCE) should open and import the file.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION - *extract state locations and map*

5. **Isolate records with US trials:** Double-click on Trial Locations to display the field and then click on the row for United States to select it.
6. Go to the detail window on the left hand side and shift-click to select all the US records. Right-click and select Create Sub-Dataset from selection.
7. **Extract states:** From Summary sheet right-click on the City field and select Further Processing | Read After First | Comma.
8. **Flag records with state information:** Select All rows in the new field and right-click to Add Selection Group. Name the group "CT".
9. Go to Scripts | Move Groups and select Yes to move the new group to Investigators/Contacts.
10. From the Investigators/Contacts field select Field | Create Field from Group Items, select CT under Investigators/Contacts and change the radio button to Use unchecked items, naming the group "TT". This creates a new group with rows where we need to try to extract states from the Investigators/Contacts field. *If there aren't many unpaired TrialTrove records you may wish to do this manually by exporting back to BizInt Smart Charts.*
11. Make sure the My Keywords panel is visible. Look on the View menu and make sure My Keywords is checked. *If you haven't used this feature before, you should see the Sample Keywords list and a blue key icon.*
12. Click on the drop-down to the left of the key icon. Select US States and USPS Abbreviations. If it's not listed, import it: Click the blue key on the My Keywords panel and select Import Keyword List(s), then browse and open the US States and USPS Abbreviations.txt file.
13. **Extract states from free text:** Go to My Keywords, select the US states and USPS abbreviations list and from the drop-down select Extract My Keywords From | Investigators/Contacts:TT. *At this point you can also export back to BizInt Smart Charts to review or continue with the mapping.*
14. Use Fields | Thesaurus and select US States.the to convert abbreviations to full state names.
15. **Combine the state fields from both sources:** Use Fields | Merge Fields and select the two fields with extracted states and edit the new field name to something shorter like "States CT+TT".
16. Go to Scripts | Google Chart to run the mapping script. Enter "US" for country code and a number to select to map by trial count or site count.

# Graphing Company Collaboration – Company Cleanup [Pipeline DP-1]

This Aduna chart shows the top 12 companies listed as Originators or Licensees in the Human Genome Sciences pipeline, based on searches in Thomson Pharma (Drugs), R&D Insight, R&D Focus (Ovid), and Citeline Pipeline. Company names were cleaned up using VantagePoint - Smart Charts Edition and BizInt Smart Charts Reference Rows was used to select a single set of company names for each drug retrieved from multiple databases.



## Graphing Company Collaboration – Company Cleanup [Pipeline DP-1]

### How did we create this?

#### SEARCHES:

- Thomson Pharma (Drugs): Company = Human Genome Sciences Inc. - 42 (296 NDR deleted)
- R&D Insight (Adis Insight): Organisation Name = Human Genome Sciences - 55
- R&D Focus (Ovid): Company Name = Human Genome Sciences - 69
- Citeline Pipeline: Company = Human Genome Sciences Inc. - 54

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of search results into BizInt Smart Charts to create .cht files.
2. Use the **File | Combine** feature to create a single combined chart. Use **Tools | Generate Common Drug Names** and sort by the resulting Common Drug Name field.
3. Display the Companies column (includes both Originators and Licensees).
4. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

5. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
6. When import completes, double-click on the Companies field in the Summary to view the contents of the field.
7. Apply **Fields | Further Processing | Read until first paren** to remove qualifiers in parenthesis after company names.
8. Bring up the **Fields | List Cleanup...** panel. Select Companies: Read Until - First/Paren from the field list on left. Select the Organization Names (Pharma).fuz file and click Use.
9. Use the Cleanup Confirm panel to further cleanup company names and then click Accept. *Saving the thesaurus is optional but can save time for future company cleanup tasks.* You will now have a new field: Companies: Read Until - First/Paren (Cleaned).
10. Export the new cleaned up company names back to BizInt Smart Charts as a new column using **File | Export Fielded Records...** In the Export Wizard, select All Records and click the Next button. Click on Companies: Read Until - First/Paren and use the Remove button to remove it from the Fields to Export panel.
11. In the next panel, select BizInt Smart Charts for Drug Pipelines in the Output Type dropdown list, click the Launch Application radio button, and then click Finish.

#### BIZINT SMART CHARTS REFERENCE ROWS

12. When BizInt Smart Charts for Drug Pipelines comes to the foreground, select the original chart. It will redisplay with a new column: Companies: Read Until - First/Paren (Cleaned). Use **View | Column Properties** to rename this column "Companies (Cleaned)". Save the chart.
13. Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.
14. When the wizard finishes, right-click on the Companies (Cleaned) column and choose Edit Column Rule. Select the Summarize Unique Values rule to include all companies listed for each unique drug.
15. Use **File | Export** to export the reference rows to Vantage Point - XML as a .vpxi file.

#### VANTAGEPOINT - SMART CHARTS EDITION

16. Double-click on the Companies (Cleaned) field to view the list. Click # Records to sort by records/drugs. Select the first 12 companies and right click to select **Add Selection to Group...** In the New Group panel, type the word "map" and click OK. Save your .vpt file.
17. Select **Scripts | Aduna Cluster Map**. Select Companies (Cleaned) from the Select the field to map: dropdown and click the Select a Group radio button with map listed as the group.
18. VantagePoint will analyze the data and the Aduna map will appear. You can export the map as a .png file.

# Extracting the Highest Phase for an Indication [Pipeline DP-4]

In this example, we've used VantagePoint - Smart Charts Edition to normalize indications and phase terminology, and to create a copy of the Drug Development Phase subtable filtered for a specific indication (hepatitis C). In BizInt Smart Charts for Drug Pipelines, we then run the new "Extract High Phase in Column" tool to extract the highest phase from the filtered subtable into a new column.

SUBTABLE FILTERED FOR HEPATITIS C

CLEANED HIGHEST PHASE

Drug	Drug Development Phase			Drug Development Phase:Hep C			Highest Phase (All Indications)	Extracted Highest Phase (Hepatitis C)
	Indication	Phase	Country	Indication: Hep C	Phase (Arabic)	Country		
interleukin-2, Medusa, Flamel	Cancer, renal	Phase II		hepatitis C	No Development Reported		Phase 2	No Development Reported
	Cancer, melanoma	Phase II						
	Infection, HIV/AIDS	No Development Reported						
	Infection, hepatitis-C virus	No Development Reported						
Aldesleukin	Malignant melanoma	Marketed	Canada, USA	hepatitis C	Discontinued	Spain	Launched	Discontinued
	Renal cancer	Marketed	Asia, Canada, European Union, Israel, South America, South Korea, USA					
	Renal cancer	Registered	Australia					
	Cancer	Phase II	USA					
	Non-Hodgkin's lymphoma	Discontinued(III)	USA					
	Hepatitis C	Discontinued(II)	Spain					
	Ovarian cancer	Discontinued(II)	USA					
Alequel	HIV-1 infections	No development reported(III)	Australia, USA	hepatitis C	No Development Reported		Phase 2	No Development Reported
	HIV-1 infections	No development reported(Clinical)	France					
	Crohn's disease	Phase II						
	Cancer, liver	No Development Reported						
	Infection, hepatitis-C virus	No Development Reported						
Alfaferone	Infection, hepatitis-B virus	No Development Reported		hepatitis C	Launched	Italy	Launched	Launched
	Transplant rejection, bone marrow	No Development Reported						
	Hairy cell leukemia	Pre-registration	Argentina					
	Hairy cell leukemia	Registered	Brazil					
	Hairy cell leukemia	Launched	Italy					
	Hairy cell leukemia	Pre-registration	Mexico					
	Hairy cell leukemia	Pre-registration	Poland					
	Hairy cell leukemia	Pre-registration	Spain					
	Hepatitis C virus infection	Pre-registration	Argentina					
	Hepatitis B virus infection	Registered	Brazil	hepatitis C	Registration	Brazil	Launched	Launched
	Hepatitis B virus infection	Launched	Italy					

HIGHEST PHASE COLUMN EXTRACTED FROM THE FILTERED SUBTABLE

## Extracting the Highest Phase for an Indication [Pipeline DP-4]

### How did we create this?

#### SEARCHES:

- Indication = hepatitis C. Adis R&D Insight (web): 407 records; Citeline Pipeline (web): 554 records; IMS R&D Focus (Ovid): 393 records; Thomson Pharma (web): 565 records.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES (VERSION 3.5.6 OR HIGHER)

1. Open your combined pipeline chart, with the Drug Development Phase and Highest Phase columns visible.
2. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

3. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
4. **Normalize Phases:** On the Summary Sheet, Right-click on Highest Phase field, select **Thesaurus...** and choose the DrugDevelopmentPhases\_Arabic.the file. This will normalize the phases using Arabic numbers.
5. Repeat this for the Phase sub-field in the Drug Development Phase field. Use **Sheets | Summary** to return to the Summary.
6. Right-click on the Highest Phase (1) field and select **Rename Field** to rename the field "Highest Phase (All Indications)".
7. Repeat to rename the sub-fields in the Drug Development Phase field. Rename Phase (1) to "Phase - Arabic",
8. **Clean up your selected indication:** On the Summary panel, double-click on Indication under Drug Development Phase.
9. If there are Indications containing data in parentheses, apply **Fields | Further Processing | Read until - First | Paren** to remove qualifiers in parenthesis after indications.
10. Bring up the **Fields | List Cleanup...** panel. Select Drug Development Phase:Indication:: Read Until - First/Paren from the field list on left. Select the General.fuz file, and click Use.
11. Select the Custom Set of Items radio button on the right side of the panel, type "hep" into the Find box, click the Regular Expression check box, and select Add. Drag and drop all the Hepatitis C items into a single item and then click Accept. *Saving the thesaurus is optional but can save time for future cleanup tasks.* You will now have a new sub-field: Indication:: Read Until - First/Paren (Cleaned). *To create the filtered subtable, you do not need to cleanup any other indications beyond Hepatitis C*
12. Rename Indication:: Read Until - First/Paren (Cleaned) to "Indication - Hep C". *Note: Rename the subfields in VP-SCE before you export!*
13. **Filter the subtable by your Indication:** In the Summary panel, double-click on the Drug Development Phase field. Double-click on Indication-Hep C to sort the subfield alphabetically. Shift-click to select all the Hepatitis C items, and from the right-mouse menu, select Add Selection to Group. Type in "Hep C" under New group and click OK. A new column with check marks for all the Hepatitis C items will be created.
14. Select **Fields | Create Field from Group Items**. Select the Hep C item under Drug Development Phase; click OK.
15. **Export filtered subtable and normalized phases back to BizInt Smart Charts:** Select **File | Export Fielded Records...** In the Export Wizard, select All Records and click the Next button. Include only the Drug Development Phase: Hep C, Highest Phase (All Indications), and recordID fields. Remove other fields by selecting them and clicking the <Remove button.
16. In the next panel, select BizInt Smart Charts for Drug Pipelines in the Output Type dropdown list, click the Launch Application radio button, and then click Finish.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

17. When BizInt Smart Charts for Drug Pipelines comes to the foreground, select the original chart. It will redisplay with two new columns -- the new Drug Development Phase - Hep C subtable and a new Highest Phase (All Indications) column.
18. **Extract the highest phase for your Indication into a new column:** Select the Drug Development Phase - Hep C subtable and then select **Tools | Extract High Phase in Column**. A new column will be created showing the Extracted Highest Phase from the Hep C subtable. You can compare this to the Highest Phase (All Indications) column to see where the highest phase for Hepatitis C differs from the highest phase for all indications.

# Highest Phase for an Indication – Database Summary [Pipeline DP-5]

In this example, we've taken the chart from the previous recipe (Extracting the Highest Phase for an Indication) and used BizInt Smart Charts Reference Rows to select a single value for each unique drug. And, we've used tools in BizInt Smart Charts Reference Rows to create a summary of the Hepatitis C Phase and Update Date for each related drug record.

Hepatitis C Pipeline -- HTML exported from Reference Rows							
Drug	Database	Highest Phase (All Indications)	Highest Phase (Hepatitis C)	Database - Hep C Phase - Update Date			
				Database	Highest Phase (Hepatitis C)	Last Update	
1. P-1101	1.1 TPharm   <a href="#">link</a>	Phase 2	No Development Reported	Thomson Pharma	Phase 2	2012-03-26	1.1
	1.2 Adis   <a href="#">link</a>			Adis R&D Insight	Phase 1	2011-02-07	1.2
	1.3 Pipeln   <a href="#">link</a>			Citeline Pipeline	No Development Reported	2012-04-23	1.3
	1.4 IMS   <a href="#">link</a>			IMS R&D Focus	Phase 1	2011-12-15	1.4
	1.1 TPharm			1.3 Pipeln			
2. nivolumab	2.1 TPharm   <a href="#">link</a>	Phase 2	Phase 1	Thomson Pharma	Phase 1	2012-03-22	2.1
	2.2 Adis   <a href="#">link</a>			Adis R&D Insight	Phase 1	2012-03-04	2.2
	2.3 Pipeln   <a href="#">link</a>			Citeline Pipeline	Phase 1	2012-02-22	2.3
	2.4 IMS   <a href="#">link</a>			IMS R&D Focus	Phase 1	2012-05-02	2.4
	2.1 TPharm			2.4 IMS			
3. REP-9AC	3.1 TPharm   <a href="#">link</a>	Phase 2	Preclinical	Thomson Pharma	Phase 2	2012-02-02	3.1
	3.2 Adis   <a href="#">link</a>			Adis R&D Insight	Preclinical	2007-09-25	3.2
	3.3 Pipeln   <a href="#">link</a>			Citeline Pipeline	Preclinical	2012-02-22	3.3
	3.4 IMS   <a href="#">link</a>			IMS R&D Focus		2006-11-13	3.4
	3.5 IMS   <a href="#">link</a>			IMS R&D Focus	Preclinical	2006-11-13	3.5
4. XTL-2125	4.1 TPharm   <a href="#">link</a>	Phase 1	Phase 1	Thomson Pharma	Phase 1	2012-03-20	4.1
	4.2 Adis   <a href="#">link</a>			Adis R&D Insight	Discontinued	2008-03-07	4.2
	4.3 Adis   <a href="#">link</a>			Adis R&D Insight	Discontinued	2010-05-24	4.3
	4.4 Pipeln   <a href="#">link</a>			Citeline Pipeline	Discontinued	2007-06-11	4.4
	4.5 IMS   <a href="#">link</a>			IMS R&D Focus	Phase 1	2007-05-14	4.5
	4.1 TPharm			4.1 TPharm			



SUMMARY OF HEP C PHASE AND UPDATE DATE

## Highest Phase for an Indication – Database Summary [Pipeline DP-5]

### How did we create this?

#### SEARCHES:

- Indication = hepatitis C. Adis R&D Insight (web): 407 records; Citeline Pipeline (web): 554 records; IMS R&D Focus (Ovid): 393 records; Thomson Pharma (web): 565 records.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES (VERSION 3.5.6 OR HIGHER)

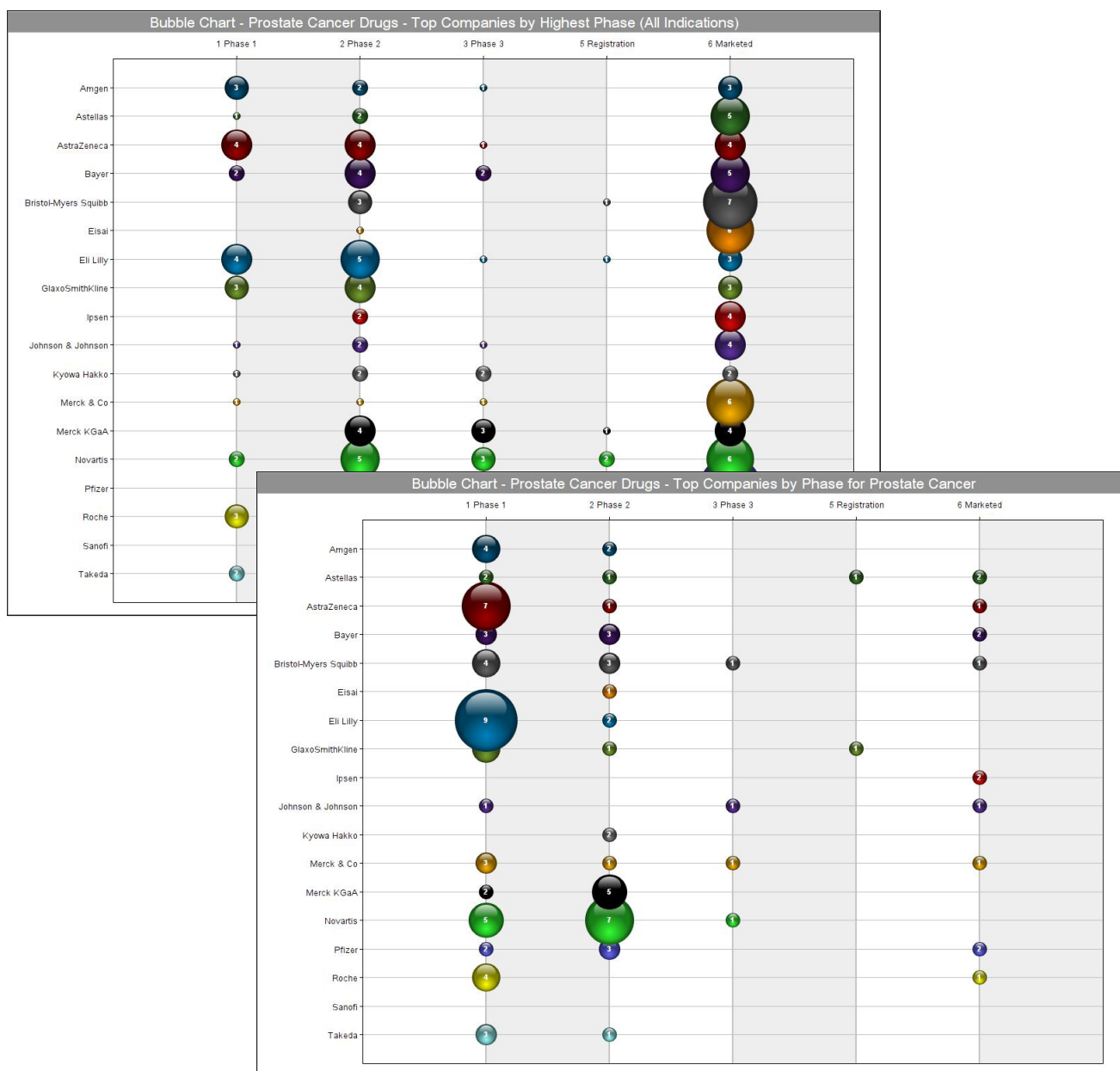
1. Open your combined pipeline chart from the previous recipe, with the extracted highest phase for Hepatitis C column visible.
2. Right-click on the Extracted Highest Phase column and choose **Column Properties**. Rename the column “Highest Phase (Hepatitis C)” and click OK.
3. Save the .cht file.
4. Send the chart to Reference Rows using the toolbar icon (or **File | Send to Reference Rows**).

#### BIZINT SMART CHARTS REFERENCE ROWS (VERSION 1.0.6 OR HIGHER)

5. During the Create Reference Rows wizard, on the second panel, make sure that Thomson Pharma is listed as the first database. Click Next.
6. On the third panel, select the Highest Phase (All Indications) column, click the Edit button and choose the Most Recently Updated rule to select the phase from the most recently updated record. Do the same for the Highest Phase (Hepatitis C) column.
7. When the wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking and rules.
8. In the Selection View, run **Tools | Create Subtable from Columns**.
9. Select the Database, Highest Phase (Hepatitis C) and Last Update columns in that order and press Apply. A new column will be created containing a subtable with these three columns.
10. Double click on the column header to rename the new column from Untitled Subtable to “Database - Hep C Phase - Update Date”.
11. Use **Reference Rows | Column Rules...** to set the rule for the new column to Summarize All Values. Blue hash marks will appear in the cells.
12. Hide any columns you do not want displayed in your final report.
13. Use **File | Export** to export the report to HTML and see the selected highest phases and the subtable column summarizing the Database/Hep C Phase/Update data.

# Bubble Charts for Top Companies in a Drug Pipeline [Pipeline DP-8]

Techniques from different recipes can be combined to create a more powerful visualization. Here we use the recipe Extracting the Highest Phase for an Indication [Pipeline DP-4] as the basis for building a bubble chart. In this example we'll use pipeline data for prostate cancer drugs. Pictured here are a bubble chart showing companies and highest phase overall and the same chart using highest phase for our target indication, prostate cancer. The picture is quite different, suggesting which companies are supporting an existing prostate cancer franchise and which are looking to expand into a new indication.



## Bubble Charts for Top Companies in a Drug Pipeline [Pipeline DP-8]

### How did we create this?

#### SEARCHES:

- Thomson Reuters Cortellis, Adis R&D Insight, Citeline Pharmaprojects: Indication = Prostate Cancer  
*Field names in this recipe are from Adis R&D Insight.*

*Note: This recipe is for VP-SCE 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

#### RECIPES: Extracting the Highest Phase for an Indication

##### BIZINT SMART CHARTS FOR DRUG PIPELINES

- Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
- Use **Tools | Generate Common Drug Names** and sort by the resulting Common Drug Name field.
- Display the Companies, Drug Development Phase, and Highest Phase columns.
- Use the steps in the Extracting the Highest Phase for an Indication recipe to create a "Highest Phase (Prostate cancer)" field.
- Select **File | Send to Reference Rows**.

##### BIZINT SMART CHARTS REFERENCE ROWS

- On the third panel of the Create wizard select Highest Phase and click on Edit to change the rule to Most Recently Updated. Do the same for the Highest Phase (Prostate cancer) field. Click Finish to create the reference rows. *When the wizard finishes, you will see the Selection View. Green check marks indicate the items selected by the database ranking and rules.*
- Review the selections and make any changes especially to the Companies and Highest Phase (Prostate cancer) fields. To change which cell is selected for the reference row, right-click on a cell and choose Select this cell.
- Use **File | Export** to export the visible columns to VantagePoint - XML.

##### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

- If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
- Normalize company names:** Double-click on the Companies field to view the contents. Use **Fields | Further Processing | Read Until - First/Paren** to remove information in parentheses.
- Go to **Fields | List Cleanup**, select the General.fuz file, and click Use.
- Use the Cleanup Confirm panel to clean up Companies.
- Cleanup Confirm provides different tools, you can:
  - Enter keywords or partial keywords in the Find box, click the Add button, and switch the display to Custom Set of Items. To search additional keywords you can Add to the list or use Remove All to clear the Custom Set.
  - Drag and drop terms onto other terms to group them.
  - Cut a term and Paste it onto another term to do the same thing.
  - Right-click on a term and select Rename Term.
- If you're working in this area often, consider saving the cleanup as a thesaurus.
- Select the top 20 rows of the cleaned company field, right-click and choose Add Selection to Group and name it "map".
- Return to the Summary sheet using **Sheets | Summary**.
- Ensure phase order sort:** Right-click on the Highest Phase (Prostate cancer) field and choose **Set Data Type | Phase**.
- Select phases you want for your bubble chart:** Double-click on Highest Phase (Prostate cancer). Select the rows for phases to include, right-click and choose Add Selection to Group and name it "map".
- Save your .vpt file.
- Build the bubble chart:** Go to **Scripts | Bubble Chart**. In step 1, use the cleaned Companies field for the rows and change the radio button to Select a group. (The "map" group should be selected by default). In step 2, change the radio button to Select Any and pick the Highest Phase (Prostate cancer) field. Again change the radio button to Select a group and the "map" group should be selected by default. You can check the box to show record counts in step 3. Title your chart and click OK to create the chart.
- Build the chart by overall high phase:** Repeat steps 17-20, this time using the Highest Phase field.

# Creating Simple Pipeline “Piano Charts”

## [Pipeline DP-9]

This recipe shows how to build a “piano chart” (a stacked box bar chart) which shows one box for each drug. In this example we have color coded the columns by phase. A more complex example is included in another recipe. BizInt Smart Charts was used to combine records from multiple sources which we then integrated with Reference Rows. In addition, we used the recipe Extracting the Highest Phase for an Indication to build our chart with the phase for a specific indication (Sjogren’s) rather than the overall highest phase.

VP-SCE was then used to create the chart and export to Excel where it can be further customized.

### Sjogren's Syndrome pipeline by Sjogren's high phase

Preclinical	Phase I	Phase II	Launched
AMG-557	coversin	abatacept	cevimeline hydrochloride
BAFF inhibitors, Kowa	MEDI 4920	belimumab	interleukin-2 follow-on biologic, Shandong Quangang Pharmaceutical
CTLA4-IgG fusion protein (Sjogren's Syndrome), NIDCR	MLN 3126	CFZ 533	interleukin-2, Shenzhen Neptunus
HM-71224	R-348	Estetrol	
IMSO 001		VAY 736	
PDA-002			
Sjogren's therapy, Toleranzia			
TLR antagonist, Janus Biotherapeutics			

## Creating Simple Pipeline “Piano Charts” [Pipeline DP-9]

### How did we create this?

#### SEARCHES:

- Thomson Reuters Cortellis, Adis R&D Insight, Citeline Pharmaprojects: Indication = Sjogren’s Syndrome  
*Field names in this recipe are from Adis R&D Insight.*

**FILES:** Piano Pipeline Chart.vpm (Contact support@bizint.com for the file and installation directions)

**RECIPES:** Extracting the Highest Phase for an Indication

#### BIZINT SMART CHARTS FOR DRUG PIPELINES - *create your combined chart*

- Import each set of search results into BizInt Smart Charts and use **File | Combine** features to create a combined chart.
- Use **Tools | Generate Common Drug Name**.
- Make the Highest Phase and Drug Development Phase columns visible using **View | Columns**.
- Follow the steps in the Extracting the Highest Phase for an Indication recipe [Pipeline DP-4] to create a “Highest Phase (Sjogren’s)” column.
- Save and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *build a single row per drug to send to VP-SCE*

- In the initial reference rows creation click Next to skip regenerating common drug name and then change database order as you wish and then click Next again.
- On the Column Rules window, click to select the Highest Phase (Sjogren’s) field and click Edit. Then click the Selection Rule drop-down to select a rule for this field, for example, Most Recently Updated, and click OK and then Finish.
- Use **File | Export** to export as Vantage Point – XML, chart only. VantagePoint - BizInt Smart Charts Edition (VP-SCE) should open and import the file.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION - *group drugs by phase and build the piano chart*

- Create phase groupings in the Highest Phase field:** Double-click on Highest Phase (Sjogren’s) to display the field and then use **Groups | Group Using Thesaurus**. Then click Next for the first step and in step 2, select the DrugDevelopmentPhases. the thesaurus to group the phases. The default settings (Group for Each Alias and Create New Groups) are appropriate.
- Group Drugs by Highest Phase:** Go to **Scripts | Move Groups** and first click Yes to move groups and then select Common Drug Name as the field to move groups to and click OK.
- Select and Sort Phases:** Go to **Groups | Edit Groups** and reorder groups by selecting a group and using the arrows to move up or down. You should also delete groups you don’t want to chart by selecting them and clicking Delete. Click Close when you are done.
- Build the Chart:** Go to **Scripts | Piano Pipeline Chart**. Click Yes to build the chart with the current field and then click No to coloring boxes based on the first field because we only want to color by phase for this recipe. *See the next recipe for an example using the color coding option.* Finally, click Yes to export all and No to skip empty groups. VP-SCE will now create a new document in Excel and draw the chart.

# Creating Pipeline “Piano Charts” Displaying Multiple Fields [Pipeline DP-10]

This recipe shows how to build a piano chart which shows one box for each drug, with the boxes color-coded by field values and with the boxes labeled by multiple fields. In this example we have color coded the boxes by target category and included both drug name and originator company in the boxes. BizInt Smart Charts was used to combine records from multiple sources which we then integrated with Reference Rows. In Reference Rows we used the Target Families field from Citeline Pharmaprojects as the basis for the target category, using other fields and other sources to fill in the blanks.

VP-SCE was then used to normalize company names and create target categories. The chart is then built and exported to Excel where it can be further customized.

## Sjogren's Syndrome Pipeline

Preclinical	Phase 1	Phase 1/2	Phase 2	Phase 3	Launched
BAFF inhibitors Kowa	AMG-557 Amgen Inc	Interferon alpha kinoid Neovacs	CFZ 533 Novartis	Epratuzumab Immunomedics	abatacept Bristol-Myers Squibb Co
CTLA4-IgG fusion protein National Institute of Dental and Craniofacial Research	coversin Evolutec		Estetrol Karolinska Institute		belimumab Human Genome Sciences Inc
IMSO 001 ImStem Biotechnology	HM-71224 Hanmi		monarsen Yissum		cevimeline hydrochloride Daiichi Sankyo
Sjogren's therapy Toleranzia	MEDI 4920 MedImmune		PDA-002 Celgene Cellular Therapeutics		diquafosol tetrasodium Merck & Co.
TLR antagonist Janus Biotherapeutics	MLN 3126 Millennium Pharmaceuticals		R-348 Rigel		interleukin-2 follow-on Shandong Quangan Pharmaceutical Co Ltd
			VAY 736 Novartis		interleukin-2 follow-on Shenzhen Neptunus
					Rituximab Biogen Idec

Key

CD22
Chemokine
CTLA4/IgG
Enzyme
GPCR
ICOS
IL-2
Interferon alpha
Kinase
Other Receptor
TNF
Unknown

## Creating Pipeline “Piano Charts” Displaying Multiple Fields [Pipeline DP-10]

### How did we create this?

#### SEARCHES:

- Thomson Reuters Cortellis, Adis R&D Insight, Citeline Pharmaprojects: Indication = Sjogren’s Syndrome  
*Field names in this recipe are from Adis R&D Insight.*

**FILES:** Piano Pipeline Chart.vpm (Contact support@bizint.com for the file and installation directions)

#### BIZINT SMART CHARTS FOR DRUG PIPELINES - *create your combined chart*

- Import each set of search results into BizInt Smart Charts and use **File | Combine** features to create a combined chart.
- Use **Tools | Generate Common Drug Name**.
- Make the Highest Phase, Originator, and Target Families columns visible using **View | Columns**.
- Create new columns for the “boxes”:** Use **Edit | Add Column** to add a new column at the end of the chart. Double click on the column title to rename it “Target (chart)”.
- Select the Target Families column and use Ctrl+C to copy the contents and then Ctrl+V to copy it into your new Target (chart) column. *This is the column you’ll use for mechanism of action in your piano chart. You could also use Mechanism of Action as the source column. You’ll have fewer empty cells, but may be more likely to get non-target information.*
- Save and select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS - *build a single row per drug to send to VP-SCE*

- In the initial reference rows creation click Next to skip regenerating common drug name and then change database order as you wish and then click Next again.
- On the Column Rules window, click to select the Highest Phase field and click Edit. Then click the Selection Rule drop-down to select the Most Recently Updated rule, and click OK. Then select Originator and choose the Least Content (characters) rule. Click Finish.
- Choose content to include in the piano chart:** Review the selections (indicated by green checkmarks) and edit as needed, either by right-clicking on a different cell and choosing Select this cell or double-clicking in a cell to edit the contents. In the case of Target (chart) where you see multiple targets per drug you’ll need to decide on a primary target. You will also want to review other fields in cases where Target (chart) is blank.
- Use **File | Export** to export as Vantage Point – XML, chart only. VantagePoint - BizInt Smart Charts Edition (VP-SCE) should open and import the file.

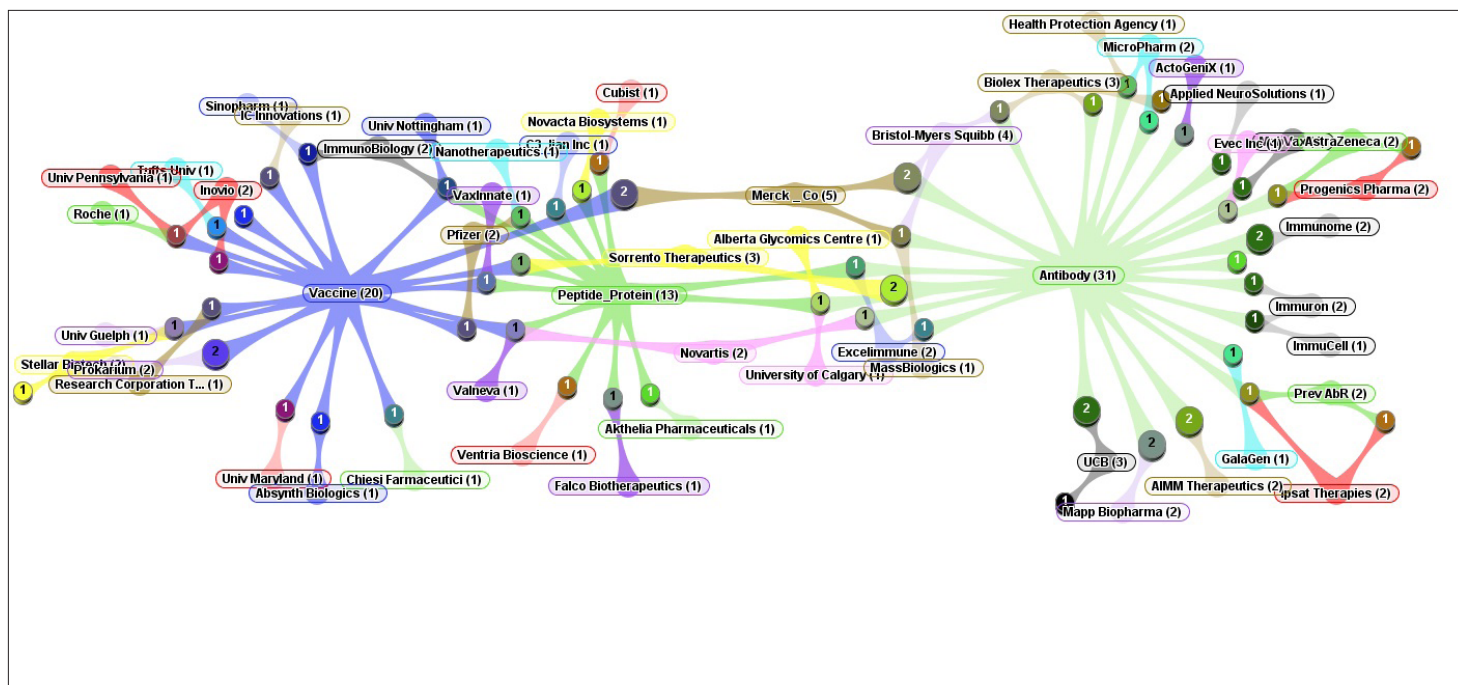
#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION - *group drugs by phase and build the piano chart*

- Clean Originator and Target fields:** Right-click on the Target (chart) field and select List Cleanup. Select the general fuzzy match file and click Use. Use the Cleanup Confirm panel to create target groups: Switch the radio button to All items and drag and drop to combine and then click Accept. *Saving the thesaurus is optional.* Repeat with the Originator field to cleanup company name variations.
- Combine the fields for the boxes:** Use **Scripts | Concatenate Fields** and select your Common Drug Name as the first field and Originator (Cleaned) as the second field, then click OK. Enter a forward slash with a space on either side as the string to place between fields: “ / ”. Enter “Drug+Co” as the name for your new field and click OK.
- Add the target field:** Use **Scripts | Concatenate Fields** a second time, choosing Target (chart) (Cleaned) as the first field and Drug+Co as the second. Again use “ / ” between fields and name the new field “Piano”.
- Create phase groupings in the Highest Phase field:** Go to **Sheets | Summary** to view the summary sheet. Double-click on Highest Phase to display the field and then use **Groups | Group Using Thesaurus**. Then click Next for the first step and in step 2, select the DrugDevelopmentPhases.the thesaurus to group the phases. Then click Next and Finish.
- Move Phase Groups to the Piano field:** Go to **Scripts | Move Groups** and first click Yes to move groups and then select the Piano field you just created as the field to move groups to and click OK.
- Select and Sort Phases:** Go to **Groups | Edit Groups** and reorder groups by selecting a group and using the arrows to move up or down. You should also delete groups you don’t want to chart by selecting them and clicking Delete. Click Close when you are done.
- Build the Chart:** Go to **Scripts | Piano Pipeline Chart**. Click Yes to build the chart with the current field and then Yes to coloring boxes based on the first field. Finally click Yes to export all and No to skip empty groups. VP-SCE will now create a new document in Excel and draw the chart.

# Creating an Aduna Chart Showing Companies by Drug Category [Pipeline DP-7]

This recipe shows how to build an Aduna chart containing multiple fields with VantagePoint – Smart Charts Edition (VP-SCE) using data exported from BizInt Smart Charts for Drug Pipelines. While the Aduna Cluster Map script only works with one field, you can merge fields to get the chart you want. Here the chart shows originators, licensees, and category of biologic based on records from Thomson Reuters Cortellis, Citeline Pharmaprojects, and Adis R&D Insight. Other fields can be used in place of these three. A single record for each drug was created with BizInt Smart Charts Reference Rows and then exported to VP-SCE where we cleaned the company fields. Then we used VP-SCE to generate the chart.

The “category of biologic” terms were generated by merging fields from different databases using VP-SCE, then sending the data to INTELLIXIR to extract the category terms. These new keywords were then sent back to BizInt Smart Charts.



## Creating an Aduna Chart Showing Companies by Drug Category [Pipeline DP-7]

### How did we create this?

#### SEARCHES:

- We searched Thomson Reuters Cortellis, Citeline Pharmaprojects, and Adis R&D Insight for drug records for a specific indication.  
*Field names in this recipe are from Adis R&D Insight.*

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Generate Common Drug Name tool and sort by the Common Drug Name field.
3. Display the Originator, Licensee, and the additional field(s) you wish to include in the Aduna, here we used Category of Biologic. *Category of Biologic was created by exporting the chart as XML Smart Data Exchange and using INTELLIXIR to extract keywords and then exporting as XML and reimporting into BizInt Smart Charts as a new column.*
4. Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

5. Right click on the Originator column and choose Edit Column Rule. Change the rule to "Summarize Unique Values" and repeat for the Licensee and the additional column(s) you want to include in the Aduna chart.
6. Use **File | Export** to export the visible columns to VantagePoint - XML.

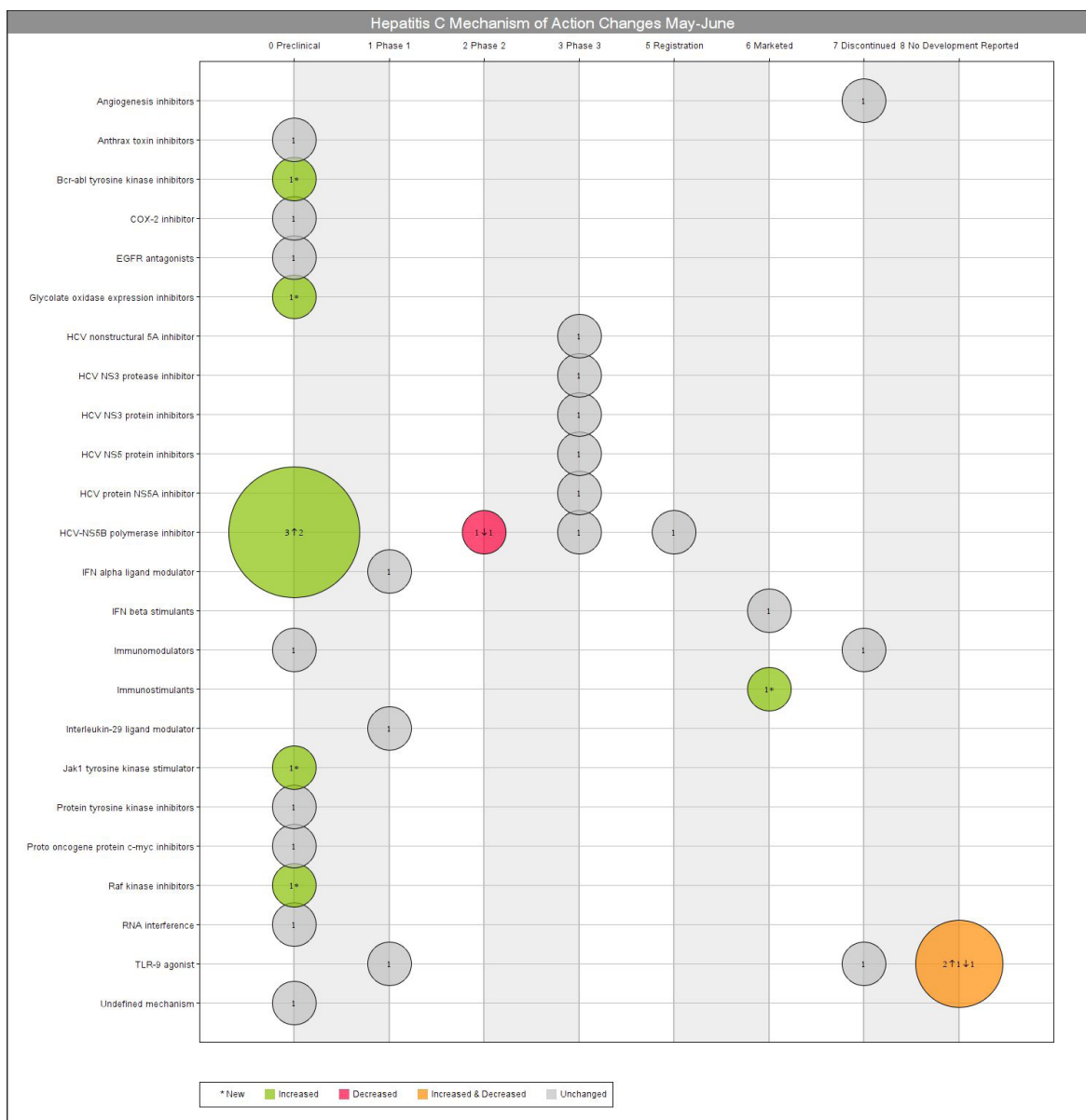
#### VANTAGEPOINT - SMART CHARTS EDITION

7. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
8. **Merge Fields:** Use **Fields | Merge Fields** to combine Originator, Licensee, and Category of Biologic into a single field. Name the new field "Companies+Categories."
9. Choose **Fields | List Cleanup** and choose Organization Names (Pharma).fuz as the fuzzy match file (you don't need to set any other options).
10. Cleanup Confirm provides different tools, you can:
  - Enter keywords or partial keywords in the Find box, click the Add button, and switch the display to Custom Set of Items. To search more keywords you can Add to the list or use Remove All to clear the Custom Set.
  - Drag and drop terms onto other terms to group them.
  - Cut a term and Paste it onto another term to do the same thing.
  - Right-click on a term and select Rename Term.
11. Consider saving as a thesaurus to use with a later cleanup. Then click Accept.
12. **Create the Aduna Chart:** Select **Scripts | Aduna Cluster Map**. Select Companies+Categories (Cleaned) from the Select the field to map: dropdown.

# Bubble Chart Showing Changes in Pipeline Updates (I) [Pipeline DP-11-1]

This is a two part recipe showing how to create a bubble chart showing changes between a new dataset and a previous version. BizInt Smart Charts is used to build and update the charts as well as compare two columns and identify differences in a new column or columns. VP-SCE is used to normalize the field to identify changes in the record rather than simply changes in terminology.

In this first part, the baseline chart is created and the Action field normalized with VP-SCE and returned to BizInt Smart Charts.



## Bubble Chart Showing Changes in Pipeline Updates (I) [Pipeline DP-11-1]

### How did we create this?

#### SEARCHES:

- We searched Thomson Reuters Cortellis, Citeline Pipeline and Adis R&D Insight for drug records where the indication was Hepatitis C. The same searches were run a second time a month later.

*Field names in this recipe are from Adis R&D Insight.*

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Generate Common Drug Name tool and sort by Common Drug Name. Review and make changes if needed.
3. Display the Status and Action columns.
4. Use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

5. Import the .vpxi file into VantagePoint - BizInt Smart Charts Edition using **File | Import** and save your .vpt file.
6. **Cleanup Mechanism of Action:** Right-click on the Action field and select **List Cleanup**. Select to use the general.fuz file and then use the Cleanup Confirm panel to cleanup the Action field.
7. Export back to BizInt Smart Charts using **File|Export Fielded Records**. In the Export Wizard, select "All Records" and click the Next button. Include the cleaned action field and recordID field.
8. In the next panel, select "BizInt Smart Charts for Drug Pipelines" in the Output Type dropdown list, click the "Launch Application" radio button, and then click Finish.

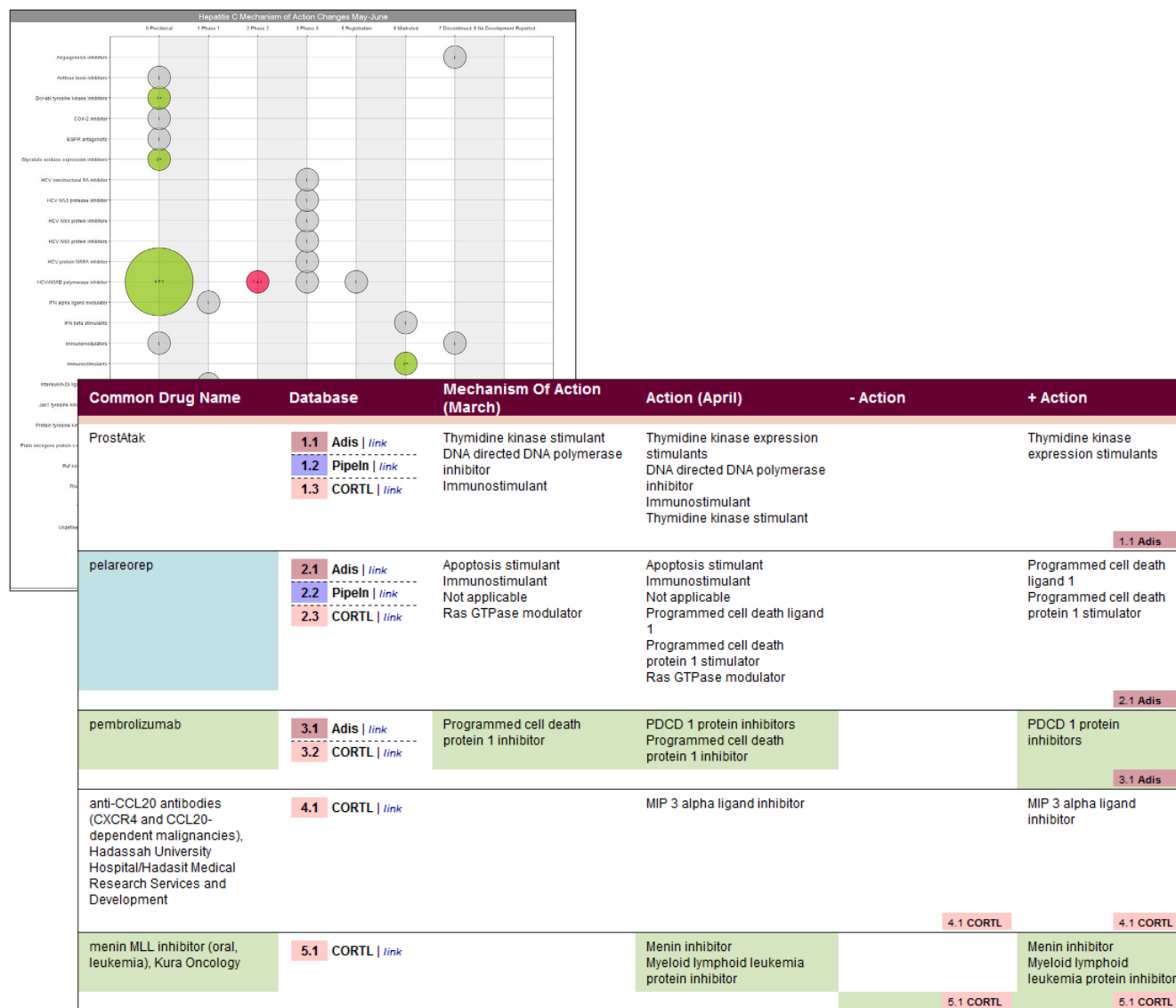
#### BIZINT SMART CHARTS FOR DRUG PIPELINES

9. Select the chart you exported from in step 4 as the chart to import into.
10. Right-click on the new field "Action (Cleaned)", select Column Properties and rename it, adding the update date, such as "Action May". *You now have a chart you can update in the second part of the recipe.*

# Bubble Chart Showing Changes in Pipeline Updates (II) [Pipeline DP-11-2]

This is a two part recipe showing how to creat a bubble chart showing changes between a new dataset and a previous version. BizInt Smart Charts is used to build and update the charts as well as compare two columns and identify differences in a new column or columns. VP-SCE is used to normalize the field to identify changes in the record rather than simply changes in terminology.

In this second part, the updated chart is created, normalized, and Reference Rows is used to compare the Action column from the baseline chart with the Action column in the update chrt. Then VP-SCE is used to create the bubble chart.



## Bubble Chart Showing Changes in Pipeline Updates (II) [Pipeline DP-11-2]

### How did we create this?

*Note: This recipe is for VP-SCE 9.1 users; if you are using an earlier version, please refer to the October 2015 Cookbook.*

#### SEARCHES:

- We searched Thomson Reuters Cortellis, Citeline Pipeline and Adis R&D Insight for drug records where the indication was Hepatitis C. The same searches were run a second time a month later.

*Field names in this recipe are from Adis R&D Insight.*

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
2. Run the Generate Common Drug Name tool and sort by Common Drug Name. Review and make changes if needed.
3. Display the Status and Action columns.
4. Use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

5. Import the .vpxi file into VantagePoint - BizInt Smart Charts Edition using **File | Import** and save your .vpt file.
6. **Cleanup Mechanism of Action:** Right-click on the Action field and select **List Cleanup**. Select to use the general.fuz file and then use the Cleanup Confirm panel to cleanup the Action field.
7. Export back to BizInt Smart Charts using **File|Export Fielded Records**. In the Export Wizard, select "All Records" and click the Next button. Include the cleaned action field and recordID field.
8. In the next panel, select "BizInt Smart Charts for Drug Pipelines" in the Output Type dropdown list, click the "Launch Application" radio button, and then click Finish.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

9. Select the chart you exported from in step 4 as the chart to import into.
10. Right-click on the new field "Action (Cleaned)", select Column Properties and rename it, adding the update date, such as "Action June."
11. **Update the chart:** Use **File | Update** and choose the chart you created in the first recipe as the older chart, and the current chart as the new chart. Give the chart a new name. Save the chart.
12. Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

13. **Edit Column Rules:** choose Most Recently Updated for Status and Summarize Unique Values for "Action May" and "Action June".
14. Use Tools|Compare Columns and use Action May as the first column and Action June as the second. Choose the third option to show both added and removed items and edit the new column titles to "- Action" and "+Action" respectively. *We compared summarized columns so the default rule will work for the newly created columns.*
15. Ensure that the Status column is visible, then use **File | Export** to export the visible columns to VantagePoint - XML.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

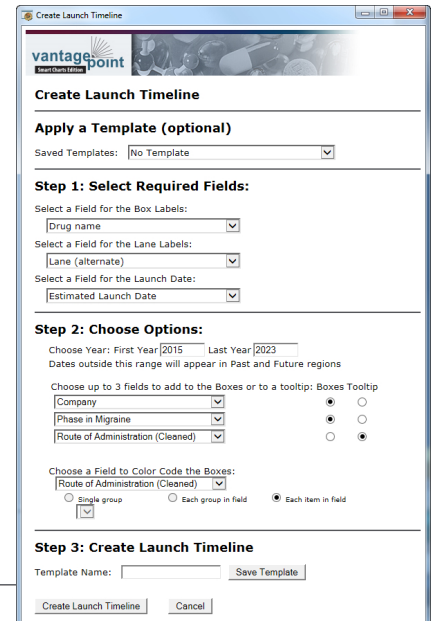
16. Once the file loads, right-click on Status, and choose **Set Data Type | Phase**.
17. Shift-click to select the phases to include in the chart. Right-click and "Add Selection to Group", name the group "map."
18. To include "dropped" bubbles, use **Fields| Merge Fields** and merge "- Action" and "Action June", naming the field "-Action + Action June."
19. Use **Groups | List Comparison** and choose "+ Action" for the list to compare in the middle panel. Name the new group "map". Repeat using "-Action" and uncheck the New group box to add instead to the existing "map" group.
20. Use **File | Save** to save the file.
21. **Generate the bubble chart:** From the Scripts menu select "Bubble Chart - Show Changes." Choose the merged "- Action + Action June" for the rows, and select the "Select a group" radio button and the map group. For columns choose "Select Any" and the Status field and again "Select a group" and the map group. Enter a title and scroll down to click OK.

# Launch Timeline (I) – Creating a Competitive Launch Timeline [Pipeline DP-12-1]

This recipe shows how to create a launch timeline visualization showing estimated launch dates for a set of drugs arranged into horizontal categories, or lanes. This type of chart is also sometimes called a “swimlane” or “fishbone” chart. Most of the data is drawn from a drug pipeline table (see below) with an added column for the estimated launch date. The launch timeline is created in VP-SCE and can be saved as an interactive HTML report.

This example shows a competitive launch timeline for migraine drugs in May 2015. The estimated launch dates were calculated from trial data using the Launch Timeline (II) recipe.

	Drug name	Lane (alternate)	Estimated Launch Date	Company	Phase in Migraine	Route of Administration (Cleaned)
1.	LY-2951742	CGRP	6/1/2016	El Lilly	Phase 2	Subcutaneous
2.	Rimegepant	CGRP	12/1/2017	BMS	Phase 2	Oral
3.	TEV-48125	CGRP	10/1/2020	Teva	Phase 2	IV, Subcutaneous
4.	AMG-334	CGRP	7/1/2022	Amgen	Phase 2	IV, Subcutaneous
5.	ALD-403	CGRP	2/1/2022	Alder	Phase 2	IV, Subcutaneous
6.	ELS-M11	COX	10/1/2023	Achelos	Phase 1	Topical
7.	MAP-0004	GPCR	1/1/2012	MAP Pharma	Phase 3	Inhalation
8.	NXN-188	GPCR	10/1/2015	NeurAxon	Phase 2	IV, Oral
9.	Lasmiditan	GPCR	4/28/2016	El Lilly	Phase 3	IV, Oral



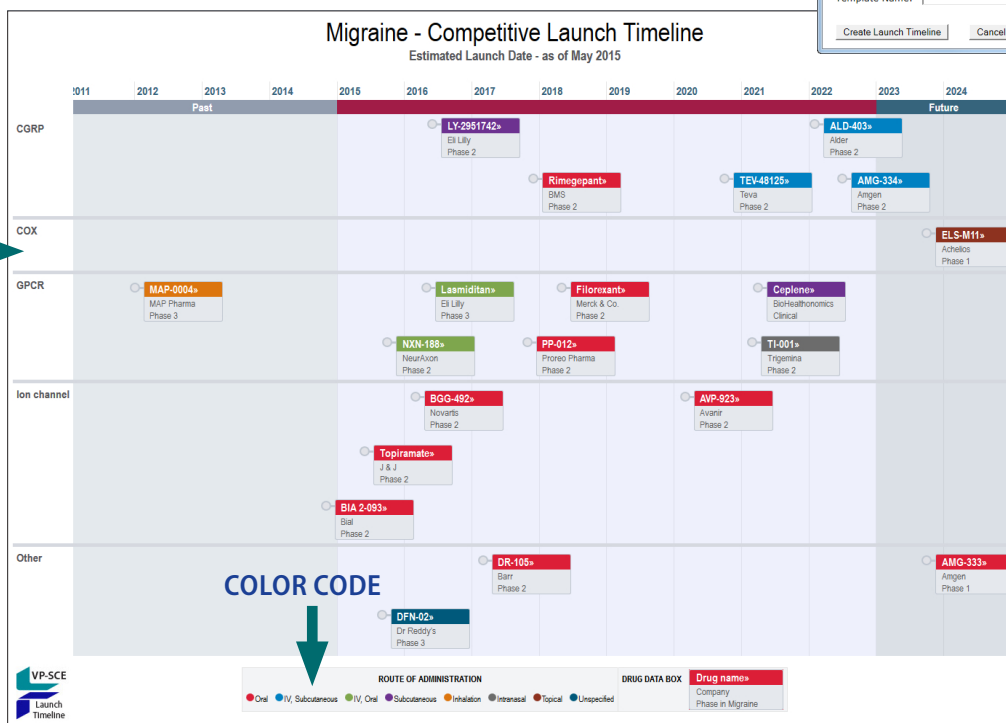
## ESTIMATED LAUNCH DATE

LANE LABEL

BOX LABEL

COLOR CODE

ADDL BOX LABELS



## Launch timeline (I) – Creating a Competitive Launch Timeline [DP-12-1]

### How did we create this?

#### SEARCHES:

- Searches were conducted in Adis R&D Insight, Citeline Pharmaprojects, and Thomson Reuters Cortellis. A complementary search was conducted in Citeline TrialTrove and ClinicalTrials.gov for drugs selected for inclusion in the timeline.

**RECIPES:** Extracting the Highest Phase for an Indication

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. **Create a combined chart:** Import each set of search results into BizInt Smart Charts and use [File | Combine](#) to create a combined chart.
2. **Identify related records:** Use [Tools | Generate Common Drug Names](#) to identify related records.
3. Ensure that any columns you want to review are visible. Use [View | Columns](#) to add or remove as you wish.
4. **Extract phase in indication:** Follow the steps in the recipe Extracting the Highest Phase for an Indication
5. **Select drugs to include:** Hide rows for any drugs that you want to omit from your timeline.
6. Save the chart file and then use [File | Send to Reference Rows](#) to open the chart in BizInt Reference Rows.

#### BIZINT SMART CHARTS REFERENCE ROWS

7. **Prepare the data for the timeline:** *In addition to phase in indication, you will need a column for each component of the timeline. These will be based on pipeline data but may require further selection, such as picking a single company, and cleanup, such as identifying a shorter company name.* Rather than editing the original columns, either use [Edit | Add Column](#) to create new columns or export to VP-SCE and return as new columns for each timeline component. *For our example timeline we will need these columns: drug name, company, phase in indication, route of administration, and mechanism of action.*
8. **Add estimated launch dates:** Use [Edit | Add Column](#) and rename the created column “Estimated Launch Date”. Enter dates for each box that will appear on your timeline. *You can calculate dates from clinical trial dates as shown in the following recipe, Launch timeline (II) Calculating estimated launch dates from trial dates.*
9. Use [File | Export](#) to export the chart as Vantage Point - Smart Charts Edition (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION (VERSION 9.1 OR HIGHER)

10. **Create the Launch Timeline:** Use [Scripts | Create Launch Timeline](#) and select the fields that you want to include in your launch timeline. Field selections used in this example are shown on the opposite page.
  - Field for **Box Labels:** used for the drug box label - white text on colored background (e.g. Drug Name in this example)
  - Field for **Lane Labels:** used to label the lanes on the left of the timeline (e.g. targets)
  - Field for the **Launch Date:** the estimated launch date, used to plot the drug boxes
  - First Year/Last Year: defines the date range of the launch timeline
  - Fields for boxes/tooltips: optional additional labels for the drug boxes (up to 3). These fields can also be used as “tooltips” when your mouse hovers over the drug box in the HTML version.
  - Field for color code: used to color code the drug boxes (e.g. MOA in this example). For the radio button, you will generally pick “Each item in Field.”
11. Click on the [Create Launch Timeline](#) button to open your launch timeline in a VP-SCE window. In VP-SCE, you can click on each box to get more detail.
12. To save the launch timeline as HTML for viewing in a browser, right-click on the timeline and select Save As. *Saved timelines can be viewed in a browser and retain some of the same interactivity- you can zoom, scroll, and click on a drug name to view the record on the publishers’ site.*
13. You can edit the title, subtitle and other information in the HTML window or the VP-SCE window.

# Launch Timeline (II) – Calculating Estimated Launch Dates from Trial Start and End Dates [Pipeline DP-12-2]

The estimated launch date information used to build the launch timeline visualization can come from any source. This recipe shows how you can use a thesaurus to calculate estimated launch dates by adding a set number of months to a trial date based on trial phase. You can have different thesauri for trial start and end dates or different therapeutic areas.

In this recipe, we build a thesaurus from our pipeline drug names and synonyms to help identify those drugs in clinical trials data. We then calculate the estimated launch dates used to build the sample migraine launch timeline in the previous recipe.

	Trial Title	Drug (Pipeline)	Database	Patient Population	Countries	Trial Phase	Completion Date	Calculated Launch Date
1.	A Multi Centre, Double Blind, Randomised, Placebo Controlled Crossover Study to Evaluate the Efficacy and Tolerability of Picotamide in the Prophylaxis of Migraine in Patients Presenting with Migraine with Aura	PP-012	1.1 TROVE   link	Patients presenting with migraine with aura.	Denmark Hungary	Phase 2	2012-03-28 (Start Date)	10/28/2017
	1.1 TROVE	1.1 TROVE		1.1 TROVE	1.1 TROVE	1.1 TROVE	1.1 TROVE	1.1 TROVE
2.	A Multicenter Study to Evaluate the Efficacy of a 91-Day Extended Cycle Oral Contraceptive for Menstrually-Related Migraine Headaches	DR-105	2.1 NCT   link 2.2 TROVE   link	Women with menstrually-related migraine headaches.	United States	Phase 2	2011-08	3/1/2017
	2.1 NCT	2.1 NCT		2.2 TROVE	2.1 NCT	2.1 NCT	2.1 NCT	2.1 NCT
3.	Dose-ranging Study of Oral COL-144 in Acute Migraine Treatment	Lasmiditan	3.1 NCT   link 3.2 TROVE   link	Patients with migraine with or without aura fulfilling Most (87.5%) of the patients were female and the mean age was 40 years.	Belgium Finland France Germany Spain	Phase 2	2010-02	9/1/2015
	3.1 NCT	3.1 NCT		3.2 TROVE	3.1 NCT	3.1 NCT	3.1 NCT	3.1 NCT
4.	Efficacy and Safety of Eslicarbazepine Acetate as Preventive Therapy for Subjects with Migraine: A Doubleblind, Randomised, Placebo-controlled, Parallel-group, Multicentre Clinical Trial	Eslicarbazepine acetate	4.1 TROVE   link	Population in clinical trial: Adults (18-65 years) Male and female patients with migraine. Adult patients with migraine with or without aura.	Austria Bulgaria Czech Republic Germany Italy Lithuania Portugal Russia Slovakia Spain	Phase 2	2013-04-05	11/1/2014
	4.1 TROVE	4.1 TROVE		4.1 TROVE	4.1 TROVE	4.1 TROVE	4.1 TROVE	4.1 TROVE

## Launch Timeline (II) Calculating estimated launch dates from trial dates [DP-12-2]

### How did we create this?

#### SEARCHES:

- Searches were conducted in Adis R&D Insight, Citeline Pharmaprojects, and Thomson Reuters Cortellis. A complementary search was conducted in Citeline TrialTrove and ClinicalTrials.gov for the selected drugs in the launch timeline.
- **FILES:** Calculate Date Estimate.vpm (Contact support@bizint.com for the file and installation directions)

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Open the pipeline chart you created for the launch timeline and use **View | Columns** to add the Common Drug Name, Synonyms, and the column with the drug name, if not already visible.
2. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

3. **Create a Drug Name Thesaurus from your pipeline chart:** Once import completes use **Fields | Merge Fields**. Add the drug name and Synonyms fields by selecting them from the left hand column and clicking the Add button. Then click OK to merge the two fields.
4. Go to **Scripts | Make Thesaurus**, use Common Drug Name as First Field and the merged drug and synonyms as second. Click OK to create the thesaurus. You will apply this later, in step 10. Return to BizInt Smart Charts to create your clinical trials chart.

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

5. **Create your combined clinical trials chart:** Import each set of clinical trial search results into BizInt Smart Charts and use **File | Combine** to create a combined chart.
6. **Identify related trials records:** Use **Tools | Generate Common Trial IDs** to identify related records.
7. Go to **View | Columns** and add the Drugs field if not already visible.
8. **Export your trials chart to VP-SCE:** Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

9. **Cleanup Drug Names:** When the export of your trials chart opens in VP-SCE, right-click on the Drugs field in the Summary sheet and use **Further Processing | Read Until - First | Paren** and then use **Fields | Further Processing | Read Until - First | Comma**.
10. **Apply your pipeline Drug Name Thesaurus to trials:** Then go to **Fields | Thesaurus** and choose the file created in the previous step. Before clicking Use, change two options on the left hand panel: uncheck the option to Include Unmatched Items in New Field and change the name of the New Field to "Drug (Pipeline)".
11. Use **File | Export Fielded Records...** and remove all fields except Drug (Pipeline) and recordID from the list to export back to BizInt Smart Charts.

#### BIZINT SMART CHARTS FOR CLINICAL TRIALS

12. Select your clinical trials chart to import into. *You should see Drug (Pipeline) appear as a new column.*
13. Ensure that any columns you want to review are visible. Use **View | Columns** to add or remove as you wish, adding at least the start and end date columns and phase if not already visible.
14. **Select trials to use to calculate dates:** Hide rows for any trials that you don't want to use to calculate estimated launch dates. *You can use the Drug (Pipeline) field you created to help you identify trials, but note that some relevant trials may not have a drug name identified.*
15. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

16. **Calculate Estimate Launch Dates from trial dates:** First, clean-up the trial dates. To remove text in parentheses, right-click on the completion date field and choose **Further Processing | Read Until - First | Paren**
17. Use **Sheets | Summary** and then right-click on the phase field and select Thesaurus. Use DrugDevelopmentPhase.
18. Go to **Scripts | Calculate Date Estimate**. Choose the cleaned date and phase fields and click OK. Select a date estimate thesaurus, *Launch Estimate - from trial end.the* in our example. *The script creates a new Estimated Date field with calculated launch dates.*

# Technique: Phase and Company Cleanup across Databases [Pipeline DP-2]

This table shows the highest phases of drugs and companies (originators and licensees) in the Human Genome Sciences pipeline, based on searches in Thomson Pharma (Drugs), R&D Insight, R&D Focus (Ovid), and Citeline Pipeline. Phase descriptors and company names were cleaned up using VantagePoint - Smart Charts Edition and BizInt Smart Charts Reference Rows was used to select a single phase and company list for each drug retrieved from multiple databases. The top table shows how BizInt Smart Charts Reference Rows "selection view"; the bottom table shows the exported HTML.

Drug	Database	Status	Status (Arabic)	Companies	Companies (Cleaned)	Update Date
1. balugrastim	Thomson Pharma	Phase 3 Clinical	Phase 3	Aventis Behring LLC CoGenesys Inc Human Genome Sciences Inc Teva Pharmaceutical Industries Ltd	Aventis Behring LLC CoGenesys Inc Human Genome Sciences Teva	2012-08-07
1. ALBUGRANIN	IMS R&D Focus	Preclinical	Preclinical	Human Genome Sciences (USA)	Human Genome Sciences	2003-08-18
1. albumin-GCSE fusion, HGS	Citeline Pipeline	No Development Reported	No Development Reported	Human Genome Sciences	Human Genome Sciences	2004-10-14
2. Darapladib	Adis R&D Insight	Phase III	Phase 3	GlaxoSmithKline (Originator) Human Genome Sciences (Originator)	GlaxoSmithKline Human Genome Sciences	2012-08-14
2. SB 435495	Adis R&D Insight	Discontinued I	Discontinued	GlaxoSmithKline (Originator) Human Genome Sciences (Originator)	GlaxoSmithKline Human Genome Sciences	2009-05-05
2. darapladib (pINN)	IMS R&D Focus	Phase III	Phase 3	GlaxoSmithKline (UK) Human Genome Sciences (USA)	GlaxoSmithKline Human Genome Sciences	2012-08-23
2. darapladib	Citeline Pipeline	Phase III	Phase 3	GlaxoSmithKline Human Genome Sciences	GlaxoSmithKline Human Genome Sciences	2012-07-26
3. FP-1039	Thomson Pharma	Phase 2 Clinical	Phase 2	FivePrime Therapeutics Inc Human Genome Sciences Inc	Five Prime Therapeutics Human Genome Sciences	2012-08-03
3. FP 1039	Adis R&D Insight	Phase I	Phase 1	Five Prime Therapeutics (Originator) Human Genome Sciences (Licensee)	Five Prime Therapeutics Human Genome Sciences	2012-08-07
3. FP 1039	IMS R&D Focus	Phase II	Phase 2	FivePrime (USA) Human Genome Sciences (USA)	Five Prime Therapeutics Human Genome Sciences	2012-06-12
3. FP-1039	Citeline Pipeline	Phase II	Phase 2	Five Prime Therapeutics Human Genome Sciences	Five Prime Therapeutics Human Genome Sciences	2012-06-05
4. lexatumumab	Thomson Pharma	Phase 2 Clinical	Phase 2	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	AstraZeneca Human Genome Sciences	2012-08-03
4. Lexatumumab	Adis R&D Insight	Discontinued	Discontinued	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	AstraZeneca Human Genome Sciences	2012-08-06
4. lexatumumab (USAN)	IMS R&D Focus	Phase I	Phase 1	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	AstraZeneca Human Genome Sciences	2012-08-03
4. lexatumumab	Citeline Pipeline	No Development Reported	No Development Reported	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	AstraZeneca Human Genome Sciences	2012-08-06

Drug	Database	Status	Status (Arabic)	Companies	Companies (Cleaned)	Update Date
1. balugrastim	1.1 TPharm   link 1.2 IMS   link 1.3 Pipeln   link	Phase 3 Clinical	Phase 3	Aventis Behring LLC CoGenesys Inc Human Genome Sciences Inc Teva Pharmaceutical Industries Ltd	Aventis Behring LLC CoGenesys Inc Human Genome Sciences Teva	2012-08-07
2. Darapladib	2.1 Adis   link 2.2 Adis   link 2.3 IMS   link 2.4 Pipeln   link	Phase III	Phase 3	GlaxoSmithKline (Originator) Human Genome Sciences (Originator)	GlaxoSmithKline Human Genome Sciences	2012-08-23
3. FP-1039	3.1 TPharm   link 3.2 Adis   link 3.3 IMS   link 3.4 Pipeln   link	Phase I	Phase 2	FivePrime Therapeutics Inc Human Genome Sciences Inc	Five Prime Therapeutics Human Genome Sciences	2012-08-07
4. lexatumumab	4.1 TPharm   link 4.2 Adis   link 4.3 IMS   link 4.4 Pipeln   link	Phase 2 Clinical	Phase 2	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	AstraZeneca Human Genome Sciences	2012-08-03
5. raxibacumab	5.1 TPharm   link 5.2 Adis   link 5.3 IMS   link 5.4 Pipeln   link	Preregistration	Launched	Cambridge Antibody Technology Group plc Human Genome Sciences Inc	Cambridge Antibody Technology Group plc Human Genome Sciences	2012-08-06

## Creating Reference Rows Reports: Phase and Company Cleanup [Pipeline DP-2]

### How did we create this?

#### SEARCHES:

- Thomson Pharma (Drugs): Company = Human Genome Sciences Inc. - 42 (296 No Development Reported deleted)
- R&D Insight (Adis Insight): Organisation Name = Human Genome Sciences - 55
- R&D Focus (Ovid): Company Name = Human Genome Sciences - 69
- Citeline Pipeline: Company = Human Genome Sciences Inc. - 54

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of search results into BizInt Smart Charts to create .cht files.
2. Use the **File | Combine** feature to create a single combined chart. Use **Tools | Generate Common Drug Names** and sort by the resulting Common Drug Name field.
3. Display the Companies (includes both Originators and Licensees) and Status columns.
4. Use **File | Export** to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

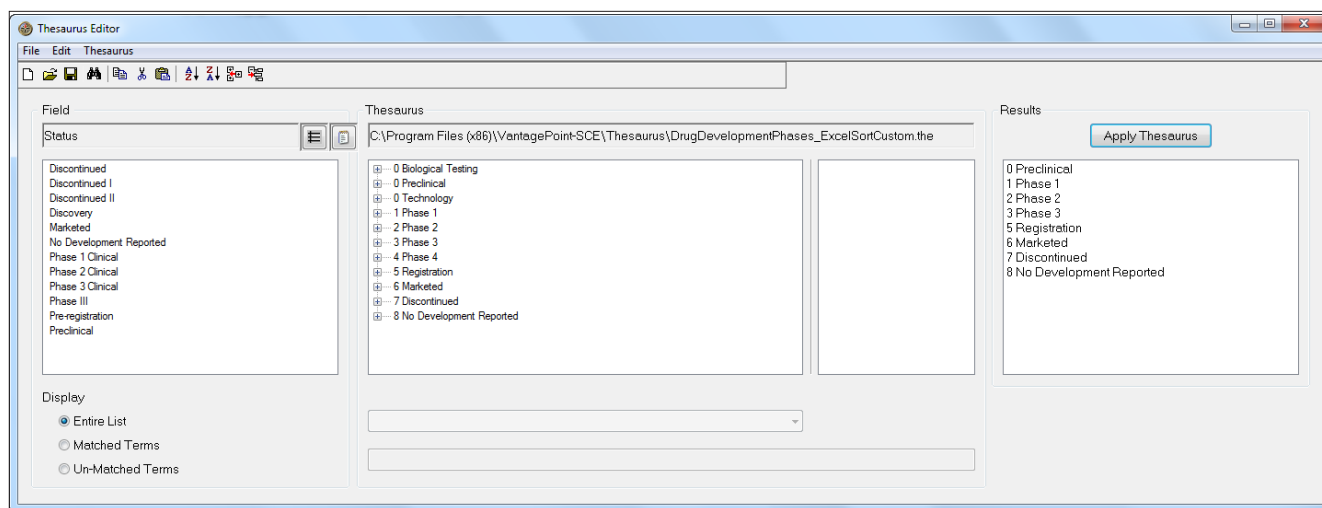
5. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
6. When import completes, double-click on the Companies field in the Summary to view the contents of the field.
7. Apply **Fields | Further Processing | Read until first paren** to remove qualifiers in parenthesis after company names.
8. Bring up the **Fields | List Cleanup...** panel. Select Companies: Read Until - First/Paren from the field list on left. Select the Organization Names (Pharma).fuz file, and click Use.
9. Use the Cleanup Confirm panel to further cleanup company names and then click Accept. You will now have a new field Companies: Read Until - First/Paren (Cleaned).
10. Go to **Sheets | Add List** and choose the Status field to view the contents of the field.
11. Apply **Fields | Thesaurus...**, choose the DrugDevelopmentPhases\_Arabic.the file and click Use. This will normalize the phases using Arabic numbers (e.g. Phase 2).
12. Export the new cleaned up company names and phases back to BizInt Smart Charts as a new column using **File | Export Fielded Records....** In the Export Wizard, select All Records and click the Next button. Select the Companies: Read Until - First/Paren field and click the <Remove button to remove it from the Fields to Export panel. In the next panel, select BizInt Smart Charts for Drug Pipelines in the Output Type dropdown list, click the Launch Application radio button, and then click Finish.

#### BIZINT SMART CHARTS REFERENCE ROWS

13. When BizInt Smart Charts for Drug Pipelines comes to the foreground, select the original chart. It will redisplay with a new column: Companies: Read Until - First/Paren (Cleaned). Use **View | Column Properties** to rename this column "Companies (Cleaned)", and rename the Status (1) column to "Status (Arabic)".
14. Select **File | Send to Reference Rows** to open the chart in BizInt Smart Charts Reference Rows.
15. When the wizard finishes, right-click on the Companies (Cleaned) column and choose Edit Column Rule. Select the Summarize Unique Values rule to include all companies listed for each unique drug.
16. Use the Most Recently Updated rule for the Status (Arabic) column to choose the status from the most recently updated record.
17. Use **File | Export** to export the Reference Rows report to HTML.

## Technique: Working with Thesauri

VP-SCE offers multiple ways to create and work with thesauri. In many recipes you will notice that when you clean a field with List Cleanup, you have the option to save as a thesaurus. You can also edit and create thesauri directly with the Thesaurus Editor. Here we will show how it can be used to edit a Drug Development Thesaurus to provide a custom sort in Excel or in VP-SCE visualizations.



## Technique: Working with Thesauri

### How did we create this?

#### SEARCHES:

- We used the DrugDevelopmentPhases\_ExcelSort.the as a starting point to create a thesaurus that will sort the way we want. We could also create a thesaurus from scratch, or edit a thesaurus created as part of List Cleanup.

#### VANTAGEPOINT - BIZINT SMART CHARTS EDITION

1. Go to **Tools | Thesaurus Editor** to open the Thesaurus Editor in a new window.
2. Use **File | Open Thesaurus** and select the thesaurus you want to work with. We'll use DrugDevelopmentPhases\_ExcelSort.the.
3. Before making changes, save under a new name. From the **File** menu select **Save as**.
4. There are two levels in a VP-SCE thesaurus, Top Level Items and Sub Items. The center pane of the Thesaurus Editor shows the structure of the current thesaurus. When you open a thesaurus only the Top Level Items are shown. These are the terms that will replace anything matching the associated Sub Items when the thesaurus is used. To expand an item and view the Sub Items associated with a Top Level Item you can click the plus sign.
5. **Combine Phases:** Drag one Top Level Item under another one to consolidate them. Here we drag "0 Biological Testing" onto "0 Preclinical" so that records with either preclinical or biological testing as the phase will be treated as preclinical in our custom thesaurus.
6. **Change Phase Sorting:** Right-click on the Top Level Item for the phase you want to change and select **Rename Item**. Then change the numbering to reflect your preferred sort order. We will right-click on "7 Discontinued" and change the 7 to a 0, moving the Discontinued items from the bottom to the top of the list.
7. You can use outline numbering convention of 1, 1.1, 1.1.1, and so on to have phases sort between the existing numbers. Because of the text descriptions, phases will sort alphanumerically, so standard numbering 10 and above will not sort as expected.
8. **Add a New Phase:** To add a new phase, from the **Thesaurus** menu select **Insert Top Level Item** and enter the preferred term that should replace the existing text when the thesaurus is run. For this thesaurus, we use a number followed by a text description for the added phase. Here we want to add Phase 1/2 as a separate phase, "1 Phase 1/2".
9. **Check the sort:** Right-click on your new Top Level Item and select **Re-Sort Thesaurus**. To change the sort, change the number.
10. **Move the Phase 1/2 terms:** Use ctrl-click to select all the Phase 1/2 Sub Items from the "1 Phase 1" Top Level Item and drag and drop them to your new "1 Phase 1/2" Top Level Item.
11. You can also add Sub Items to the new phase by right-clicking on the new Top Level Item and selecting Insert Sub Item. The drop-down box controls whether you want to match exactly or search within the existing term "contains."
12. Sub Items use regular expressions and can be quite complex, but can also be literal matches. For literal matches begin the Sub Item with a caret (^) and end with a dollar sign (\$).
13. Check your thesaurus: Use **File|Load Field** and select a field with matching terms, here choose the Phase field and click the Apply Thesaurus button.
14. You'll see the results of applying the thesaurus in the right-hand column, You can also change the radio button on the left-hand side to show only Un-Matched or Matched terms from the field you loaded. This allows you to see what you want to add to your thesaurus.
15. Save your thesaurus.

# Technique: Extracting Keywords

You may find yourself wanting to extract a set of keywords from a field. For example, you might want to visualize Endpoint Classifications in search results from Citeline TrialTrove. TrialTrove provides this information as part of the "Study Design" column, in one of two different formats. This Technique shows how to extract a set of keywords from a field in VP-SCE using the My Keywords feature.

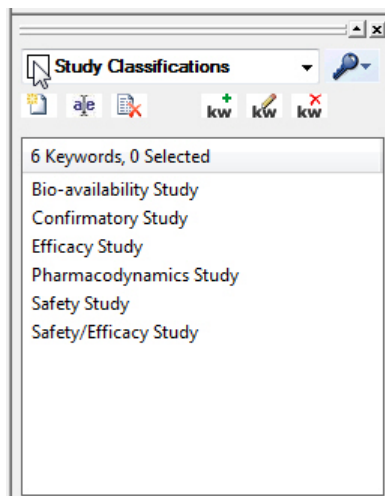


FIGURE 1. THE MY KEYWORDS PANEL

Study Design	Study Design : Study Classifications
This is a double-blind, randomized, active controlled, phase 2, multi-centre, dose ranging, safety study. This was an immunogenicity, single dose study.	Safety Study
Study Type: Interventional Study Design: Allocation: Randomized Control: Active Control Endpoint Classification: Safety/Efficacy Study Intervention Model: Parallel Assignment Masking: Single Blind (Outcomes Assessor) Primary Purpose: Prevention This is a controlled, multicenter, immunogenicity study. This is an observer blinded and tolerability study.	Efficacy Study Safety/Efficacy Study
Study Type: Interventional Study Design: Allocation: Randomized Endpoint Classification: Safety/Efficacy Study Intervention Model: Parallel Assignment Masking: Single Blind (Outcomes Assessor) Primary Purpose: Prevention This is a multicenter, active comparator, immunogenicity study. This is dose response, non-inferiority, tolerability, exploratory study.	Efficacy Study Safety/Efficacy Study

FIGURE 2. KEYWORDS EXTRACTED USING SIMPLE KEYWORDS

Study Design	Study Design : Study Classifications	Study Design : Study Classifications (2)
Study Type: Interventional Study Design: Allocation: Randomized Endpoint Classification: Safety/Efficacy Study Intervention Model: Parallel Assignment Masking: Double-Blind Primary Purpose: Prevention This is an observer blind, multi-center, active controlled, immunogenicity and tolerability study.	Efficacy Study Safety/Efficacy Study	Safety/Efficacy Study

FIGURE 3. KEYWORDS EXTRACTED USING REGULAR EXPRESSIONS

## Technique: Extracting Keywords

### How did we create this?

#### SEARCHES:

- For this particular example, we used an export from Citeline TrialTrove. If you would like to follow along, you can import any results from TrialTrove into BizInt Smart Charts for Drug Pipelines, make the Study Design column visible, and then export to VP-SCE.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import the search results into BizInt Smart Charts to create .cht files.
2. Display the "Study Design" column.
3. Use **File | Export** to export the chart as "Vantage Point - XML" (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

4. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using **File | Import**.
5. Double-click on the Study Design field.
6. Make sure the My Keywords panel is visible. Look on the **View** menu and make sure **My Keywords** is checked. The My Keywords panel is shown in Figure 1 (on the previous page.)
7. Click the +kw button or press Insert on your keyboard to insert a new keyword. Type the phrase you would like to extract from the raw data. In the example in Figure 1, you can see that we have entered some of the Endpoint Classifications that we see in our data.
8. To extract your keywords from a field, bring up the Manage Keywords menu (under the blue-gray key icon), and hold your mouse over **Extract My Keywords From | Study Design**. (Move your mouse over Extract My Keywords From and then move the mouse to the field name that you want to extract from). This will create a new field with only the extracted keywords.
9. You can now export the extracted keywords back to BizInt Smart Charts as a new column using **File | Export Fielded Records...** In the Export Wizard, select All Records and click the Next button. The Study Design : Study Classifications field should be listed in the Fields to Export panel.
10. In the next panel, select BizInt Smart Charts for Drug Pipelines in the Output Type dropdown list, click the Launch Application radio button, and then click Finish.

#### GOING FURTHER

11. Keywords can be case sensitive or not. You can control whether a set of keywords is case sensitive on the Manage Keywords menu (under the blue-gray key icon), and then follow to the **Keyword Options** sub-menu. If you look at the Figure 2 (on the previous page), the first row lists "safety study" in all lower case, but our standard keyword is used in the extracted column.
12. My Keywords can do more than simply match phrases. For example, if you look more carefully at the example in Figure 2, you will see that we are extracting both "Safety/Efficacy Study" and "Efficacy Study" from records where the original text contains "Safety/Efficacy Study". We can use a regular expression to ensure that we only match the exact term "Efficacy Study".
13. To use a regular expression, make sure that there is a check mark next to **Regular Expressions** on the **Keyword Options** sub-menu. Then modify your keyword to include the necessary regular expression code. In this case, we want to only match when the character before "Efficacy" is not a "/". You can see the regular expression we used in the keyword on the right
14. When we Extract My Keywords from the Study Design field again, you see in Figure 3 that we now only extract "Efficacy Study" when that exact text is present, and not when the classification is "Safety/Efficacy Study".

(?<!/Efficacy Study

# Technique: Using Pipeline Data to Cleanup Drug Names in Trial Data [Trials CT-5]

This recipe shows how to use drug names and synonyms from pipeline records and apply them to clinical trial data. As a result we can go from a field listing all drugs used in each trial to a single drug of interest for each trial as shown in the HTML export pictured.

In this example we used two searches: a pipeline search for the drug target poly ADP ribose polymerase (PARP) and a clinical trials search for selected PARP inhibitors. The results of the pipeline search were combined and then a single record for each trial was created with BizInt Smart Charts Reference Rows. The same was done with the clinical trials set. We then exported the pipeline records to VantagePoint – Smart Charts Edition (VP-SCE) and generated a custom thesaurus using Common Drug Name as the main term and Synonyms as the sub term. Then the clinical trials set was exported to VP-SCE. Using VP-SCE, the data was cleaned and then the thesaurus we just created was applied to transform the Drugs field down to a single term for each PARP inhibitor.

Combined: 3 PARP drugs					
	Trial Title	Trial Identifier	Common Trial ID	Database	Drugs
11	A Study of MK4827 in Participants With Advanced Solid Tumors or Hematologic Malignancies (MK-4827-001 AM8)	MK-4827-001 2008_501 NCT00749502	NCT00749502	ClinicalTrials.gov	MK-4827
12	A Parallel Arms Phase 1 Safety, Pharmacokinetic And Pharmacodynamic Study Of The Intravenous Poly (ADP-Ribose) Polymerase (PARP) Inhibitor PF-01367338 (AG-014699) In Combination With Several Chemotherapeutic Regimens In Adult Patients With Advanced Solid Tumor.	700051012 (Clinical Trials Insight) 7737 (United Kingdom Clinical Research Network) A4991014 (Pfizer) CO338-1014 (Clovis Oncology) NCRN135 (National Cancer Research Network) NCT01009190 (ClinicalTrials.gov; US National Institutes of Health)	NCT01009190	Adis Clinical Trials Database	Carboplatin Cisplatin Cyclophosphamide Epirubicin Paclitaxel Pemetrexed Rucaparib-phosphate
13	A Study Of Poly (ADP-Ribose) Polymerase Inhibitor PF-01367338 In Combination With Several Chemotherapeutic Regimens	CO-338-1014 NCT01009190	NCT01009190	ClinicalTrials.gov	PF-01367338
14	A Parallel Arms Phase 1 Safety, Pharmacokinetic And Pharmacodynamic Study Of The Intravenous Poly (ADP-Ribose) Polymerase (PARP) Inhibitor PF-01367338 (AG-014699) In Combination With Several Chemotherapeutic Regimens In Adult Patients With Advanced Solid Tumor	A4991014 CO-338-1014 EudraCT 2009-013879-22 NCRN135 NCT01009190 RECF1166 SA136 TrialTroveID-118370 UKCRN ID 7737			

# Records	# Instances	Drugs: Read Until - FirstParam	PARP
1	11	Niraparib	✓
2	9	Rucaparib	✓
3	6	BMN 673	✓

Trial Title	Trial Identifier	Common Trial ID	Database	Drugs	Primary Drug
6. A Study Of Poly (ADP-Ribose) Polymerase Inhibitor PF-01367338 In Combination With Several Chemotherapeutic Regimens	CO-338-1014 NCT01009190	NCT01009190	NCT ACT3 TROVE	PF-01367338 Carboplatin Cisplatin Cyclophosphamide Epirubicin Paclitaxel Pemetrexed Rucaparib-phosphate rucaparib (iv) rucaparib (oral) carboplatin (iv)	Rucaparib
7. PARP Inhibition for Triple Negative Breast Cancer (ER-PR-HER2-JWith BRCA1/2 Mutations)	BRE09-146 NCT01074970	NCT01074970	NCT ACT3 TROVE	Cisplatin Rucaparib Cisplatin Rucaparib-phosphate rucaparib (iv) rucaparib (oral) cisplatin	Rucaparib
8. A Study of MK-4827 in Combination With Standard Chemotherapy in Participants With Advanced Solid Tumors (MK-4827-008 AM1)	2010_528 MK-4827-008 NCT01110603	NCT01110603	NCT ACT3 TROVE	MK-4827 carboplatin paclitaxel liposomal doxorubicin Carboplatin Doxorubicin-liposomal Niraparib Paclitaxel niraparib carboplatin (iv) doxorubicin citrate, GP Pharm paclitaxel	Niraparib

## Technique: Using Pipeline Data to Cleanup Drug Names in Trial Data [Trials CT-5]

### How did we create this?

#### SEARCHES:

- **Pipeline:** We searched Thomson Reuters Cortellis, Citeline Pipeline and Adis R&D Insight for drug records where Mechanism of Action = ADP ribose polymerase (PARP) inhibitor.  
*Pipeline field names in this recipe are from Adis R&D Insight.*
- **Clinical Trials:** We searched ClinicalTrials.gov, Citeline TrialTrove and Adis Clinical Trials Insight for trial records for Niraparib, BMS-673 & Rucaparib (and synonyms) -- three Phase III PARP drugs identified in the pipeline recipe.  
*Trial field names in this recipe are from ClinicalTrials.gov.*

**FILE:** AdditionalDivideAt.conf (Contact support@bizcharts for the file and installation directions)

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

1. Import each set of pipeline search results into BizInt Smart Charts and use [File | Combine](#) to create a combined chart.
2. Run the Generate Common Drug Names tool and sort by the Common Drug Name field.
3. Display the Synonyms column.
4. Use [File | Export](#) to export the chart as Vantage Point - XML (creates a .vpxi file.)

#### VANTAGEPOINT - SMART CHARTS EDITION

5. If the file does not launch automatically in VantagePoint - Smart Charts Edition (VP-SCE), then import the .vpxi file into VP-SCE using [File | Import](#).
6. Use [Scripts | Make Thesaurus](#) and select Common Drug Name for the Main Field and Synonyms for Sub Field and click OK.
7. Name your thesaurus and save it in your VantagePoint-SCE/Thesaurus/ folder.
8. Switch back to BizInt Smart Charts for Drug Pipelines.

#### BIZINT SMART CHARTS FOR DRUG PIPELINES

9. Import each set of clinical trial search results into BizInt Smart Charts and use [File | Combine](#) to create a combined chart.
10. Run the Generate Common Trial IDs tool and sort by the Common Trial ID field.
11. Display the Drugs column, save and select [File | Send to Reference Rows](#) and then use [File | Export](#) to export as Vantage Point - XML.

#### VANTAGEPOINT - SMART CHARTS EDITION

12. On the Summary page, double-click on the Drugs field.
13. Review the list and note where multiple drugs are linked as one item using and, +,vs., etc. We're going to split drug terms on these links, one at a time.
14. Use [Fields | Further Processing | Divide At | Plus](#) to split any terms joined with +.
15. Repeat the previous step on the new list to split remaining joined drugs.
16. Apply [Fields | Further Processing | Read Until - First | Paren](#) to remove anything in parentheses to help the thesaurus match.
17. Go to [Fields | Thesaurus](#) and select the thesaurus you created earlier and click Use.
18. Use [Fields | List Cleanup...](#), select the General.fuz file, and click Use. Drag and drop to complete the cleanup for your drugs of interest and then click Accept. *Saving the thesaurus is optional but can save time for future company cleanup tasks.*
19. Select the rows for your drugs of interest, right-click and select Add Selection to Group..., and name your group.
20. Go to [Fields | Create Field from Group Items](#) and choose the group you just created.
21. Now you have a normalized field with just your selected drugs which you can export back to BizInt Smart Charts or use to build a timeline chart.

## About this Cookbook

This “Cookbook” illustrates how to create some popular visualizations and reports from patent, clinical trials, drug pipeline, and gene sequence data using tools in the BizInt Smart Charts family.

To use these “recipes”, you’ll need the following software:

- BizInt Smart Charts for Drug Pipelines 3.7.0 (4.0 required for some recipes)
- BizInt Smart Charts for Patents 3.7.0 (4.0 required for some recipes)
- BizInt Smart Charts for Clinical Trials 4.0 (or later)
- BizInt Smart Charts Reference Rows 1.2.0 (or later)
- VantagePoint - Smart Charts Edition (9.1 required for some recipes)

### BIZINT SMART CHARTS TRIAL SOFTWARE

You can download BizInt Smart Charts trial software at: <http://www.bizint.com/try>

You can request a trial of VantagePoint - Smart Charts Edition at <http://www.bizint.com/vpsce> or contact us (email: [support@bizint.com](mailto:support@bizint.com)).

### BIZINT SMART CHARTS PRODUCT DOCUMENTATION

You’ll find more information on how to use BizInt Smart Charts software tools at:  
<http://www.bizint.com/tips>

*Note: These recipes are constantly being tested and revised based on user feedback. We suggest that you check the website to see if there is a more recent version of your recipe. If you find any errors or need help, please contact us!*

*February 2016*

## Download the Software

- **Customer downloads:** <http://www.bizint.com/downloads/>  
You will need to enter the userid and password supplied to your company.
- **Trial downloads:** <http://www.bizint.com/try>  
We encourage you to evaluate BizInt Smart Charts using your own data!

## Keep up with the Latest Releases

- **Latest release information web page:** provides details on all releases.  
[http://www.bizint.com/product/patents/latest\\_release.php](http://www.bizint.com/product/patents/latest_release.php)  
[http://www.bizint.com/product/drugdevsuite/latest\\_release.php](http://www.bizint.com/product/drugdevsuite/latest_release.php)
- **Subscribe to release announcements** by email or RSS feeds.  
<http://www.bizint.com/support/SubscribeReleases.php>

## Using the Software

- **Creating Reports from Databases and Hosts web page:** follow the links on the left side of the web page for step by step instructions for each database/host.  
<http://www.bizint.com/support/create/>

## Go to [www.bizint.com/tips](http://www.bizint.com/tips) for links to these useful documents —

- **Mini Guide:** provides a step-by-step overview of the key features of each BizInt Smart Charts product.
- **Combining and Updating Reports:** a detailed discussion of features and options for creating combined and updated reports.
- **Distributing Reports:** a guide to choosing and using the export formats available with BizInt Smart Charts, including HTML, Word, Acrobat, and Excel.
- **BizInt Smart Charts Reference Rows Mini Guide:** a guide to using the Reference Rows utility for creating single rows combining information from related records.
- **Gene Sequence Reports:** describes the latest features for using BizInt Smart Charts with IP sequence databases.
- **Cookbook of Reports and Visualizations:** [www.bizint.com/Cookbook](http://www.bizint.com/Cookbook)



## Contact Us for Help

- **Email us** at [support@bizint.com](mailto:support@bizint.com)
- **Call us** at +1 (714) 289 1000 (office hours are 8 am - 5 pm Pacific)



Software for  
Business Intelligence

## **BizInt Smart Charts**

# *Cookbook of Reports & Visualizations*

The *Cookbook of Reports & Visualizations* illustrates how to create some popular visualizations and reports from drug pipeline, clinical trials, and patent data using tools in the BizInt Smart Charts family.

The Cookbook provides step-by-step recipes showing how you can create these reports and visualizations with your own data.

[www.bizint.com/Cookbook](http://www.bizint.com/Cookbook)