



Software for  
Business Intelligence

**BizInt Smart Charts**

Patents & IP Sequences | Clinical Trials | Drug Pipelines

# Creating reports and visualizations to support decision making with the BizInt Smart Charts product family

2019 Analytics & Visualization Meeting, Nice

*Diane Q. Webb, President*

10 April 2019

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

# BizInt Smart Charts

Patents & IP Sequences | Clinical Trials | Drug Pipelines

## takes your search results

**Pretium – Iaculis Bibendum** Labeling only

**Last Update:** 2017-11-17  
**Accession Number:** 0000000001

**Indications:** Phospho, Nunc, Mucin Phospho  
**Therapeutic Class (IND):** Nunc, Mucin Phospho  
**Therapeutic Class (ANDA):** Nunc, Mucin Phospho  
**Drug Type:** Nunc, Mucin Phospho  
**Other Compounds:** Nunc, Mucin Phospho  
**Last Update:** 2017-11-17  
**Accession Number:** 0000000001  
**Confidence Rating:** High

**High Phase:** Phase 0

Drug Development (Phase Extended)			
Indication	Phase	Route	Country
Phospho	Phase 0	OP	Marocco
Phospho	Phase 1	OP	Marocco
Mucin Phospho	Phase 0	OP	Marocco

**Last Phase Change:** 2016-08-20

**Propriety:**

**Mechanism of Action:** Lactyl condensation Equid

**Route of Administration:** OP

**Generalized Introduction:**

**Etiam Mollis – Aenean** Labeling only

**Last Update:** 2017-11-18  
**Accession Number:** 0000000002

**Indications:** Phospho, Nunc, Mucin Phospho  
**Therapeutic Class (IND):** Nunc, Mucin Phospho  
**Therapeutic Class (ANDA):** Nunc, Mucin Phospho  
**Drug Type:** Nunc, Mucin Phospho  
**Other Compounds:** Nunc, Mucin Phospho  
**Last Update:** 2017-11-18  
**Accession Number:** 0000000002  
**Confidence Rating:** High

**High Phase:** Phase 0

Drug Development (Phase Extended)			
Indication	Phase	Route	Country
Phospho	Phase 0	OP	Marocco
Phospho	Phase 1	OP	Marocco
Mucin Phospho	Phase 0	OP	Marocco

**Last Phase Change:** 2016-08-20

**Propriety:**

**Mechanism of Action:** Lactyl condensation Equid

**Route of Administration:** OP

**Generalized Introduction:**

**Consectetur** Labeling only

**Last Update:** 2017-11-18  
**Accession Number:** 0000000003

**Indications:** Phospho, Nunc, Mucin Phospho  
**Therapeutic Class (IND):** Nunc, Mucin Phospho  
**Therapeutic Class (ANDA):** Nunc, Mucin Phospho  
**Drug Type:** Nunc, Mucin Phospho  
**Other Compounds:** Nunc, Mucin Phospho  
**Last Update:** 2017-11-18  
**Accession Number:** 0000000003  
**Confidence Rating:** High

**High Phase:** Phase 0

Drug Development (Phase Extended)			
Indication	Phase	Route	Country
Phospho	Phase 0	OP	Marocco
Phospho	Phase 1	OP	Marocco
Mucin Phospho	Phase 0	OP	Marocco

**Last Phase Change:** 2016-08-20

**Propriety:**

**Mechanism of Action:** Lactyl condensation Equid

**Route of Administration:** OP

**Generalized Introduction:**

**Toror Felis – Nunc** Labeling only

**Last Update:** 2017-11-18  
**Accession Number:** 0000000004

**Indications:** Phospho, Nunc, Mucin Phospho  
**Therapeutic Class (IND):** Nunc, Mucin Phospho  
**Therapeutic Class (ANDA):** Nunc, Mucin Phospho  
**Drug Type:** Nunc, Mucin Phospho  
**Other Compounds:** Nunc, Mucin Phospho  
**Last Update:** 2017-11-18  
**Accession Number:** 0000000004  
**Confidence Rating:** High

**High Phase:** Phase 0

Drug Development (Phase Extended)			
Indication	Phase	Route	Country
Phospho	Phase 0	OP	Marocco
Phospho	Phase 1	OP	Marocco
Mucin Phospho	Phase 0	OP	Marocco

**Last Phase Change:** 2016-08-20

**Propriety:**

**Mechanism of Action:** Lactyl condensation Equid

**Route of Administration:** OP

**Generalized Introduction:**

...and automatically builds tabular reports.

Integrating results from different databases.

The collage displays multiple overlapping document pages for various drugs. Visible titles include:

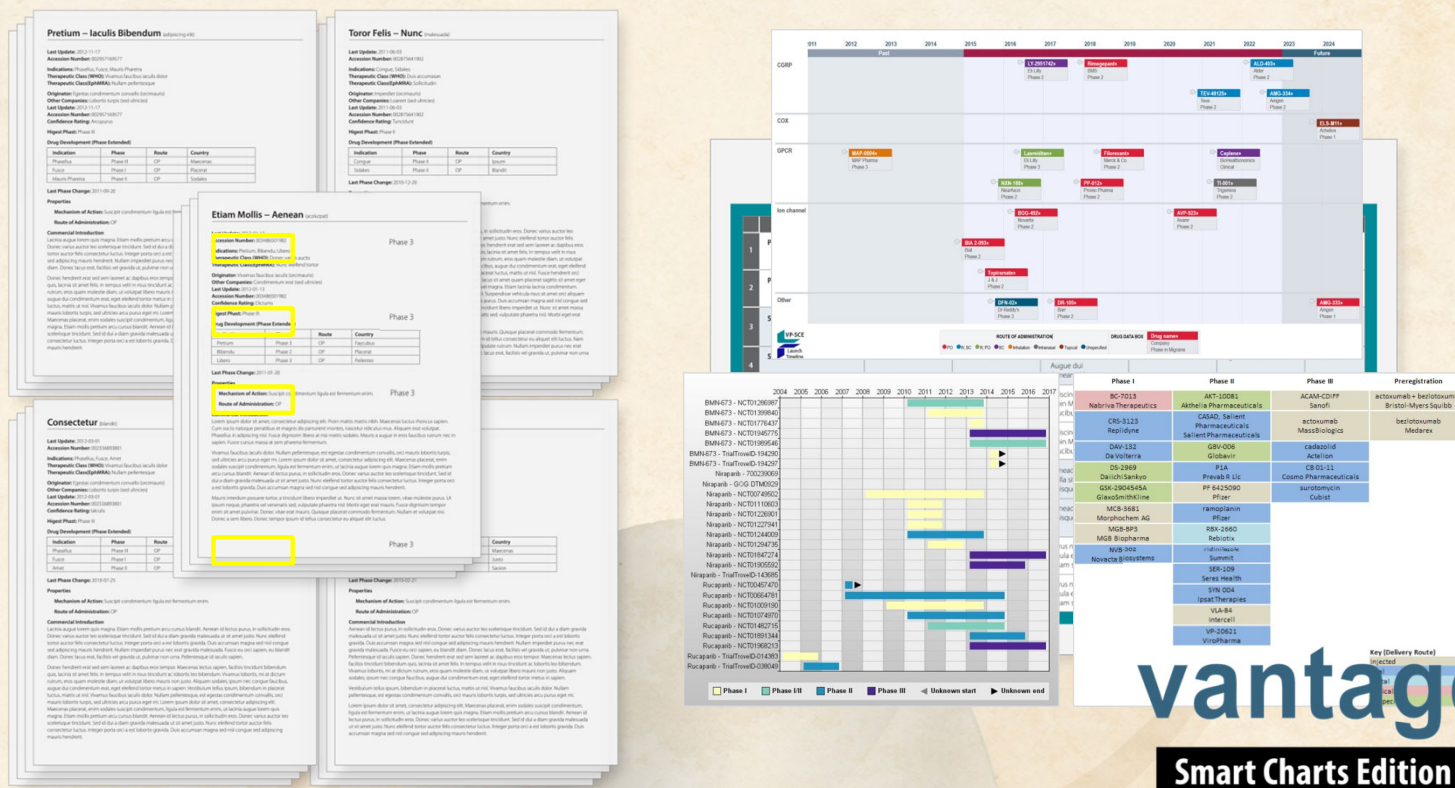
- Pretium - Iaculis Bibendum** (Last Update: 2012-11-17)
- Toror Felis - Nunc** (Last Update: 2011-01-03)
- Etiam Mollis - Aenean** (Last Update: 2012-01-13)
- Consectetur** (Last Update: 2012-03-01)

Each document page contains structured data, including:

- Indications:** Lists of medical conditions and symptoms.
- Therapeutic Class (MMS):** Classification of the drug.
- Other Compounds:** Related chemical entities.
- Drug Development (Phase Extends):** Tables showing the progression through phases (Phase 1, Phase 2, Phase 3) across different countries (e.g., USA, Canada, Europe).
- Properties:** Key characteristics and safety information.
- Route of Administration (R):** How the drug is administered.
- Commercial Introduction:** Details about the drug's market entry.

	Drug	Common Drug Name	Database	Synonyms	Highest Phase	Companies	Last Update
1		Pretium					
2	Pretium XGS	Pretium	Loeet Sem	Virus auctor Diam gravida XS-2	Phase 2	Lobortis Turpis Aliquam Sodales	2012-10-01
3	Sollicitudin 4S	Sollicitudin	Donec	Quam diam Augur du	Phase 3	Egestas Conditum Lobortis Turpis	2011-12-07
4	Sollicitudin	Sollicitudin	Effend-UR	Quam diam Augur du Aenean id lectus	Phase 3	Egestas Conditum	2011-06-07
5	Etiam Mollis	Etiam Mollis	Loeet Sem	Adiscing Pon Mattis Faucibus tectulus	Phase 3	Conditum Erat	2012-01-13
6	Etiam Mollis	Etiam Mollis	Effend-UR	Adiscing Et Sec Pon Mattis Faucibus	Phase 2	Conditum Erat	2012-01-13
7	Toror Felis	Toror Felis	Donec	Aenean lectus purus Nulla sit amet Quisque placerat 2A	Phase 2	Loeet	2011-06-03
8	Toror Felis II	Toror Felis	Loeet Sem	Aenean lectus purus Quisque placerat	Phase 2	Loeet	2011-06-03
9	Consectetur	Consectetur	Donec	Purus non uma Ligula est Quam sem ac	Phase 3	Lobortis turpis	2012-03-01
10	Consectetur 2A	Consectetur	Nullam	Purus non uma Ligula est Quam sem ac	Phase 3	Lobortis turpis	2012-03-01

# And, helps you create visualizations from your reports.



vantage point  
Smart Charts Edition

# Tables are a powerful tool for visualizing information.

*Everyone understands how to read a table!*

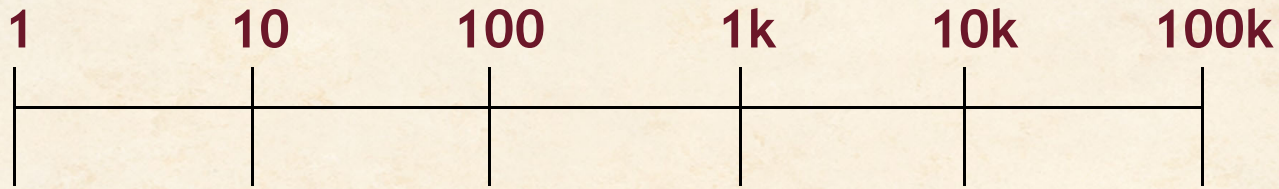


Babylonian table (circa 1800 B.C.)

National League											
EAST	W	L	PCT	GB	HOME	ROAD	RS	RA	DIFF	STRK	L10
Philadelphia	17	11	.607	-	8-5	9-6	152	113	+39	Won 3	6-4
NY Mets	15	13	.536	2	11-5	4-8	121	106	+15	Lost 1	6-4
Washington	14	13	.519	2.5	8-7	6-6	116	134	-18	Lost 1	5-5
Florida	13	14	.481	3.5	7-8	6-6	131	126	+5	Lost 2	3-7
Atlanta	12	15	.444	4.5	8-4	4-11	112	117	-5	Won 1	4-6
CENTRAL	W	L	PCT	GB	HOME	ROAD	RS	RA	DIFF	STRK	L10
St. Louis	18	11	.621	-	10-3	8-8	126	92	+34	Lost 3	6-4
Cincinnati	14	14	.500	3.5	8-7	6-7	121	149	-28	Won 1	7-3
Chicago Cubs	13	15	.464	4.5	7-6	6-9	133	124	+9	Lost 2	5-5
Milwaukee	12	15	.444	5	4-8	8-7	150	147	+3	Won 2	4-6
Pittsburgh	12	15	.444	5	7-4	5-11	93	179	-86	Won 2	5-5
Houston	9	18	.333	8	6-12	3-6	77	128	-51	Won 1	2-8
WEST	W	L	PCT	GB	HOME	ROAD	RS	RA	DIFF	STRK	L10
San Francisco	16	10	.615	-	10-5	6-5	120	78	+42	Won 2	7-3
San Diego	17	11	.607	-	11-5	6-6	125	92	+33	Lost 1	6-4
Colorado	14	14	.500	3	7-5	7-9	139	112	+27	Won 1	5-5
Arizona	13	15	.464	4	7-5	6-10	156	160	-4	Lost 1	5-5
LA Dodgers	11	16	.407	5.5	7-5	4-11	140	155	-15	Lost 2	3-7

Sports results table (circa 2010 A.D.)

# Tables are suitable for data sets between a few records and thousands of records (c. 2010)

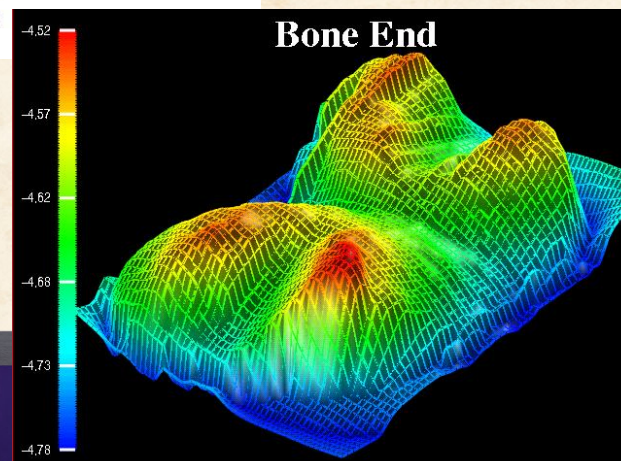
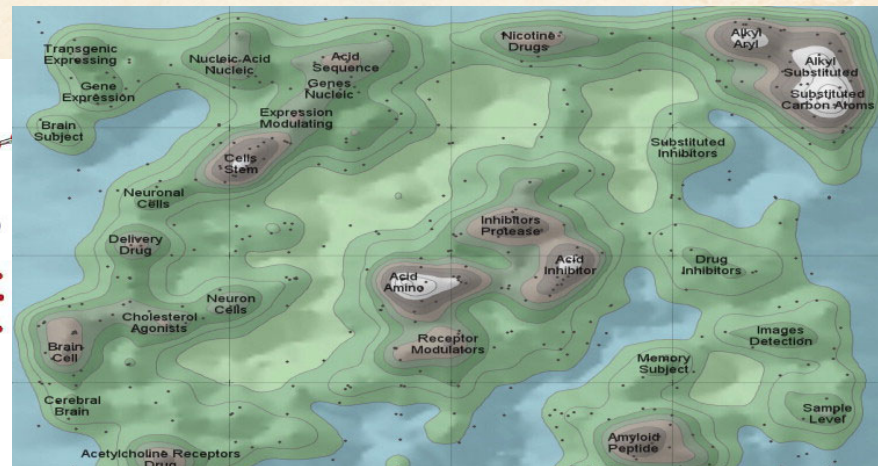
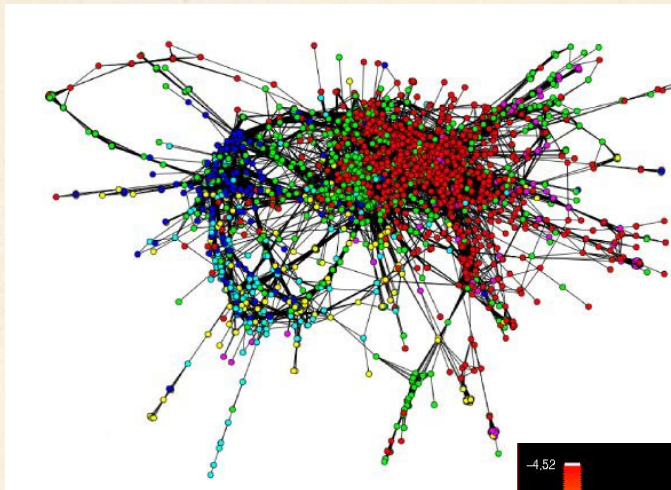


**Records**

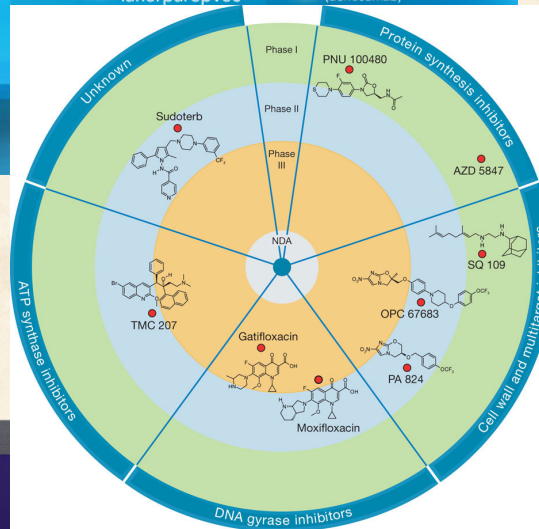
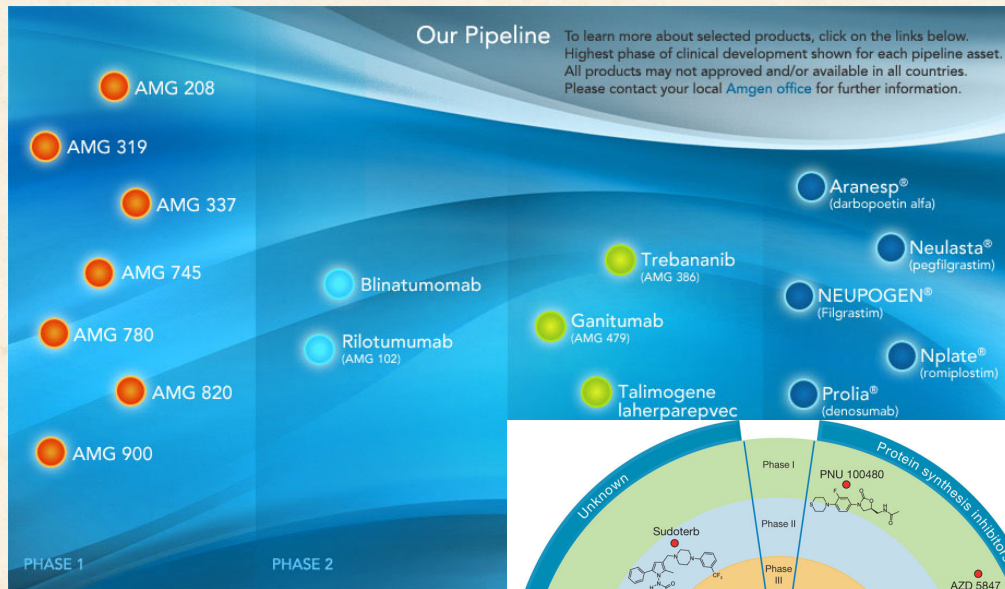
**Tables**

**Statistics/Visualizations**

# Standard technical visualizations display aggregate data...



# But pharma business visualizations display discrete data...

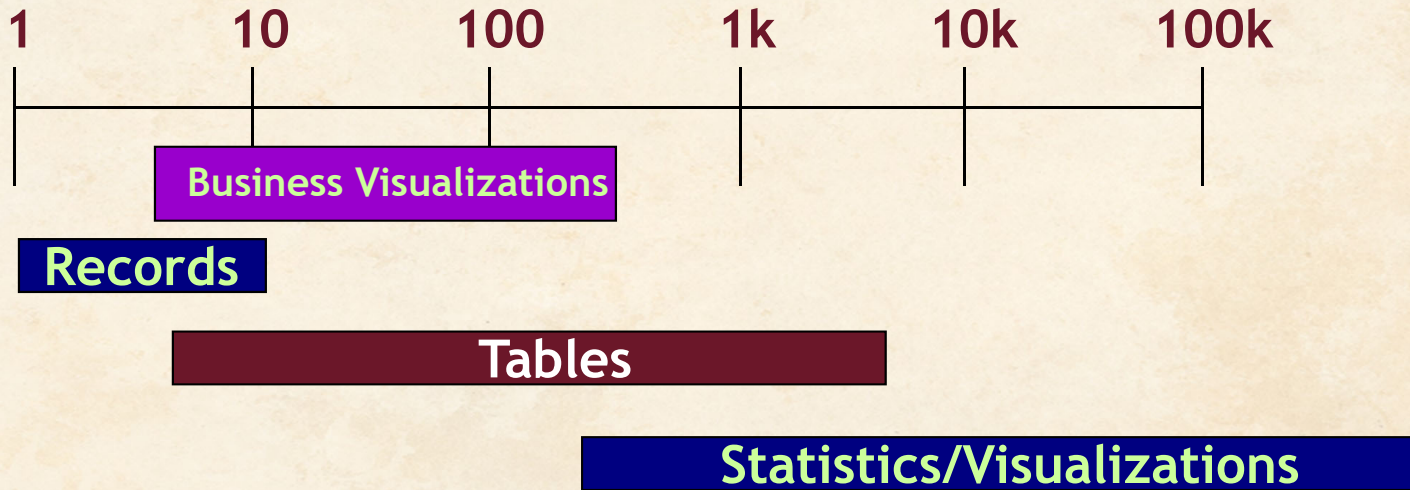


EXPLORATORY	CONFIRMATORY		REGISTRATION
	PHASE II	PHASE III	
HCD122 Hem. tumors	LBQ707 Solid Tumors	EPO906 Ovarian cancer	Tasigna® (JPN) IM7 res. / intoCML <sup>3</sup>
TKI258 Hem./solid tumors	PKC412 AML <sup>1</sup>	SOM230 Acromegaly / Cushing's disease	Exjade® (JPN) Chronic iron overload
RAF265 Melanoma	LBH589 Hemat. tumors	Glivec® GIST <sup>2</sup> adjuvant / CML <sup>3</sup>	<span style="color: red;">■</span> NME <sup>9</sup> <span style="color: orange;">■</span> NME <sup>9</sup> roll-out <span style="color: yellow;">■</span> LCM <sup>10</sup>
LBY135 Solid tumors	ASA404 Solid tumors	RAD001 Neuroend. tum.	
BEZ235 Solid tumors	RAD001 Sol. tumors / breast cancer/ PICT <sup>6</sup>	RAD001 RCC <sup>4</sup>	
AUY922 Solid tumors	SOM230 GEP <sup>11</sup> tumors	Tasigna® GIST <sup>2</sup> / newly diagnosed CML <sup>3</sup> / subop. CML <sup>3</sup>	
BHQ880 Solid tumors	Glivec® Non-oncology indications		
BGT226 Solid tumors	EPO906 Solid tumors		
LBH589 Hem. & solid tumors			
Exjade® HH <sup>8</sup>			

- 1 Acute myeloid leukemia
- 2 Gastrointestinal stromal tumor
- 3 Chronic myeloid leukemia
- 4 Renal cell carcinoma
- 5 Pancreatic islet cell tumor
- 6 Imatinib
- 7 Hereditary hemochromatosis
- 8 New molecular entity
- 9 Life cycle management
- 10 Gastroenteropancreatic



# Tables are suitable for data sets between a few records and thousands of records (c. 2018)



## **2013 II-SDV Paper: *Challenges in Visualizing Pharmaceutical Business Information***

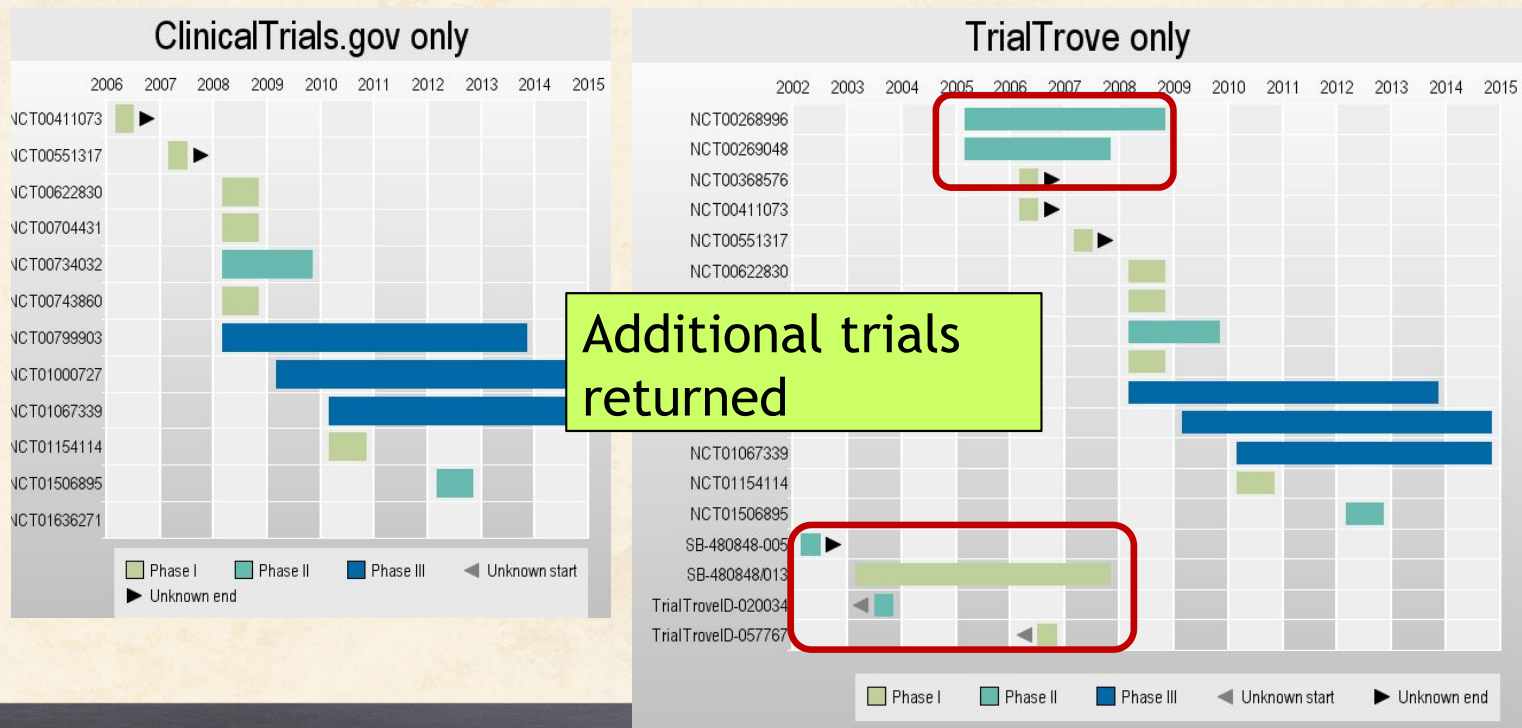
### **The Problem:**

Visualizations developed for scientific and patent data do not do a good job of “telling the story” when applied to drug pipeline data and often need significant changes.

***We returned to this topic in 2016 and 2018:  
[bizint.com/slides](http://bizint.com/slides)***

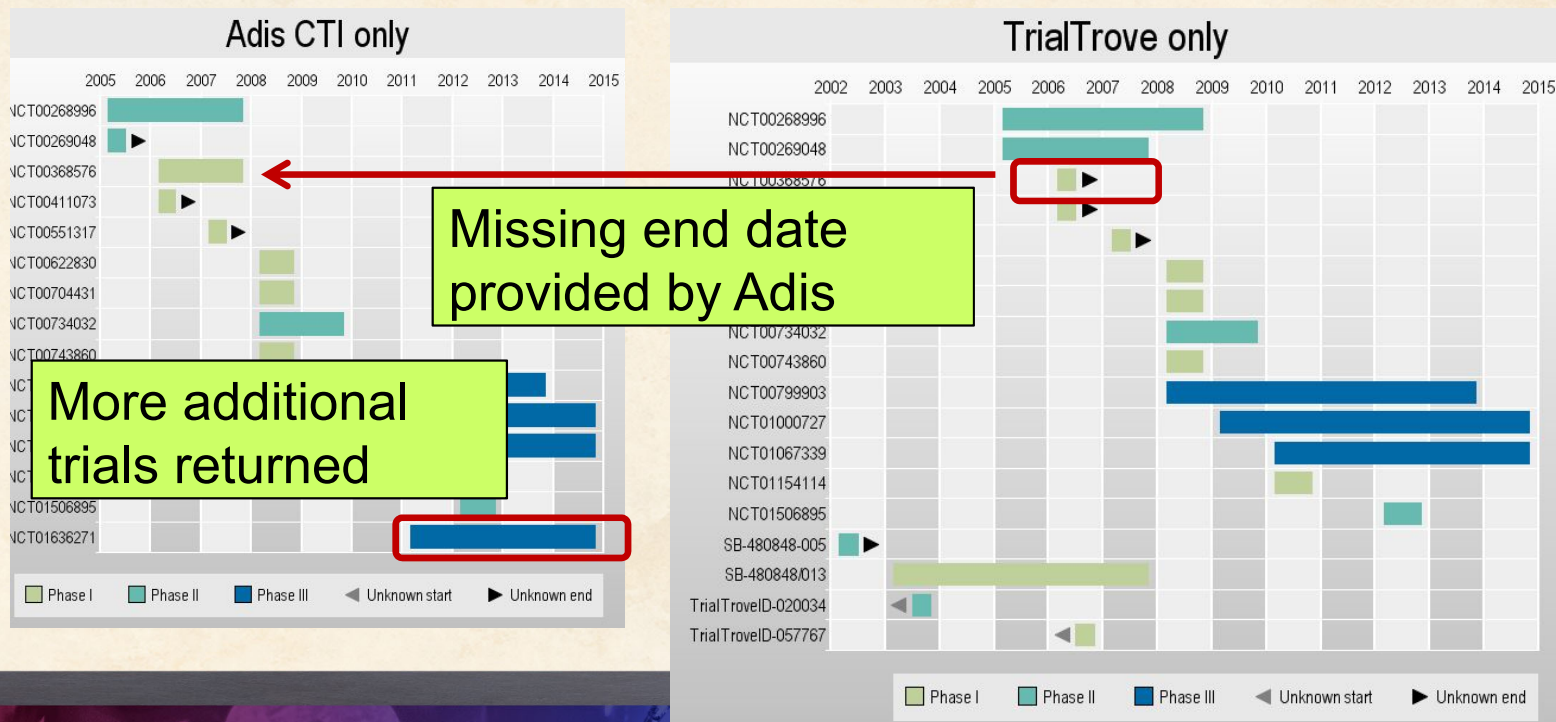
# Using multiple databases produces better visualizations

*Because of indexing variation, searches retrieve different results*



# Using multiple databases produces better visualizations

*And there are content variations between databases*



## But using multiple databases means challenges...

	Common Drug Name	Database	Status	Companies
1	FP-1039	Adis R&D Insight	Phase I	Five Prime Therapeutics (Originator) Human Genome Sciences (Licensee)
2	FP-1039	IMS R&D Focus		Five Prime (USA) Human Genome Sciences (USA)
3	FP-1039	Thomson Pharma		Five Prime Therapeutics Inc Human Genome Sciences Inc
4	FP-1039	Citeline Pipeline	Phase II	Five Prime Therapeutics Human Genome Sciences
5	lexatumumab	Thomson Pharma	Phase 2 Clinical	Cambridge Antibody Technology Group plc Human Genome Sciences Inc
6	lexatumumab	Adis R&D Insight	Discontinued I	Cambridge Antibody Technology (Originator) Human Genome Sciences (Licensee)
7	lexatumumab	Citeline Pipeline	No Development Reported	Human Genome Sciences AstraZeneca
8	lexatumumab	IMS R&D Focus	Phase I	Human Genome Sciences (USA)

**1. Multiple Records for the Same Drug**

## But using multiple databases means challenges...

	Common Drug Name	Database	Status	Companies
1	FP-1039	Adis R&D Insight	Phase I	Five Prime Therapeutics (Originator) Human Genome Sciences (Licensee)
2	FP-1039	IMS R&D Focus	Phase II	FivePrime (USA) Human Genome Sciences (USA)
3	FP-1039	Thomson Pharma	Phase 2 Clinical	FivePrime Therapeutics Inc Human Genome Sciences Inc
4	FP-1039	Citeline Pipeline	Phase II	Five Prime Therapeutics Human Genome Sciences
5	lexatumumab	Thomson Pharma	Phase 2 Clinical	Cambridge Antibody Technology Group plc Human Genome Sciences Inc
6	lexatumumab	Adis R&D Insight	Discontinued I	Cambridge Antibody Technology Group plc (Originator) Human Genome Sciences Inc
7	lexatumumab	Citeline Pipeline	No Development Reported	Human Genome Sciences AstraZeneca
8	lexatumumab	IMS R&D Focus	Phase I	Human Genome Sciences (USA)

**2. Conflicting Data for the Same Drug**

## But using multiple databases means challenges...

	Common Drug Name	Database	Status	Companies
1	FP-1039	Adis R&D Insight	Phase I	Five Prime Therapeutics (Originator) Human Genome Sciences (Licensee)
2	FP-1039	IMS R&D Focus	Phase II	FivePrime (USA) Human Genome Sciences (USA)
3	FP-1039	Thomson Pharma	Phase 2 Clinical	FivePrime Therapeutics Inc Human Genome Sciences Inc
4	FP-1039	Citeline Pipeline	Phase II	Five Prime Therapeutics Human Genome Sciences
5	lexatumumab	Thomson Pharma	Phase 2 Clinical	Cambridge Antibody Technology Group plc Human Genome Sciences Inc
6	lexatumumab	Adis R&D Insight	Discontinued I	Cambridge Antibody Technology (Originator) Human Genome Sciences (Licensee)
7	lexatumumab	Citeline Pipeline	No Development Reported	
8	lexatumumab	IMS R&D Focus	Phase I	Human Genome Sciences (USA)

### 3. Terminology Variation

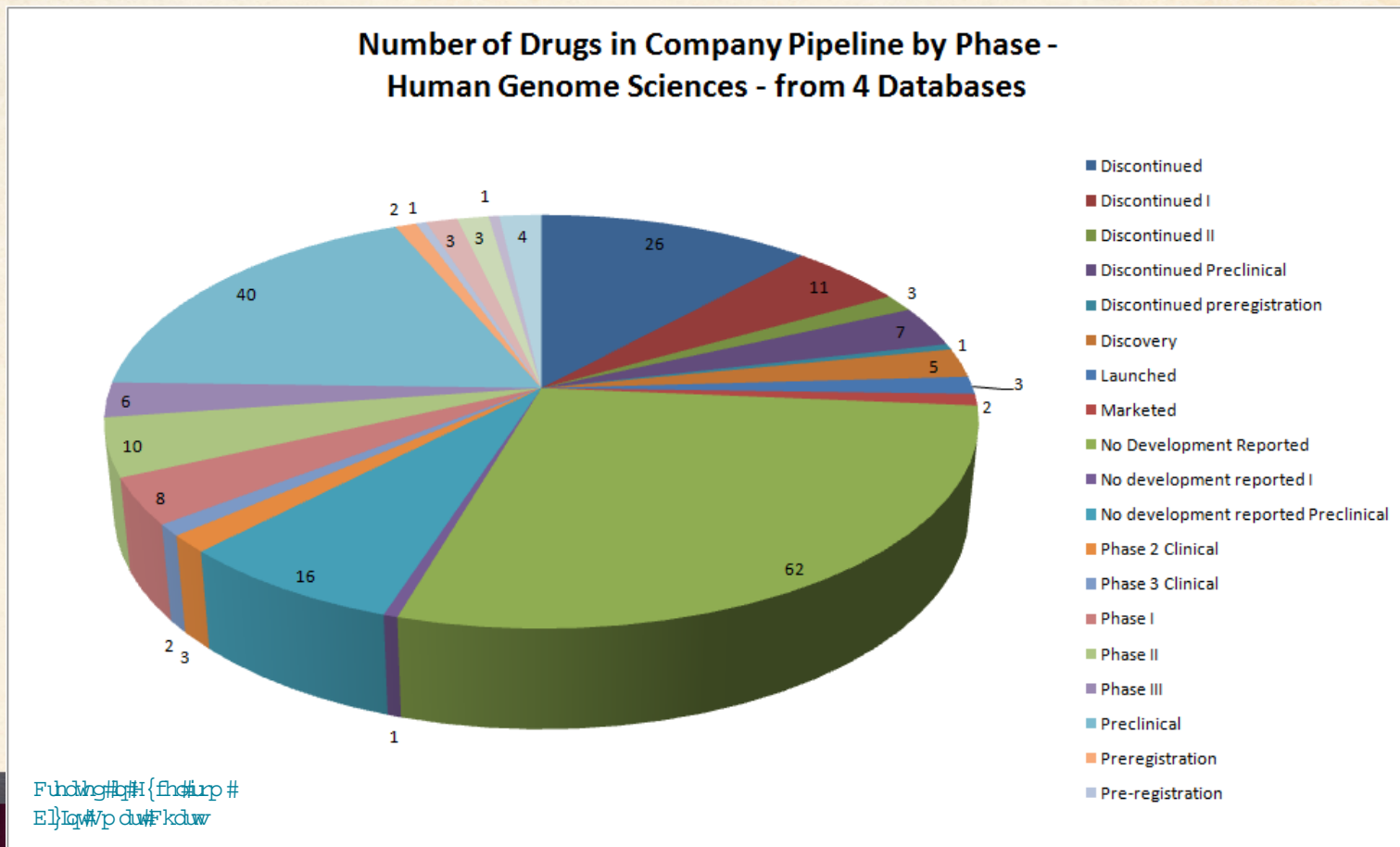
## See our “Surfing the Pipeline” papers: [bizint.com/slides](http://bizint.com/slides)

	Common Drug Name	Database	Status	Companies
1	FP-1039	Adis R&D Insight	Phase I	Five Prime Therapeutics (Originator) Human Genome Sciences (Licensee)
2	FP-1039	IMS R&D Focus	Phase II	FivePrime (USA) Human Genome Sciences (USA)
3	FP-1039	Thomson Pharma	Phase 2 Clinical	FivePrime Therapeutics Inc Human Genome Sciences Inc
4	FP-1039	Citeline Pipeline	Phase II	Five Prime Therapeutics Human Genome Sciences
5	lexatumumab	Thomson Pharma	Phase 2 Clinical	Cambridge Antibody Technology Group plc Human Genome Sciences Inc
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7	lexatumumab	Citeline Pipeline	No Development Reported	Human Genome Sciences AstraZeneca
8	lexatumumab	IMS R&D Focus	Phase I	Human Genome Sciences (USA)





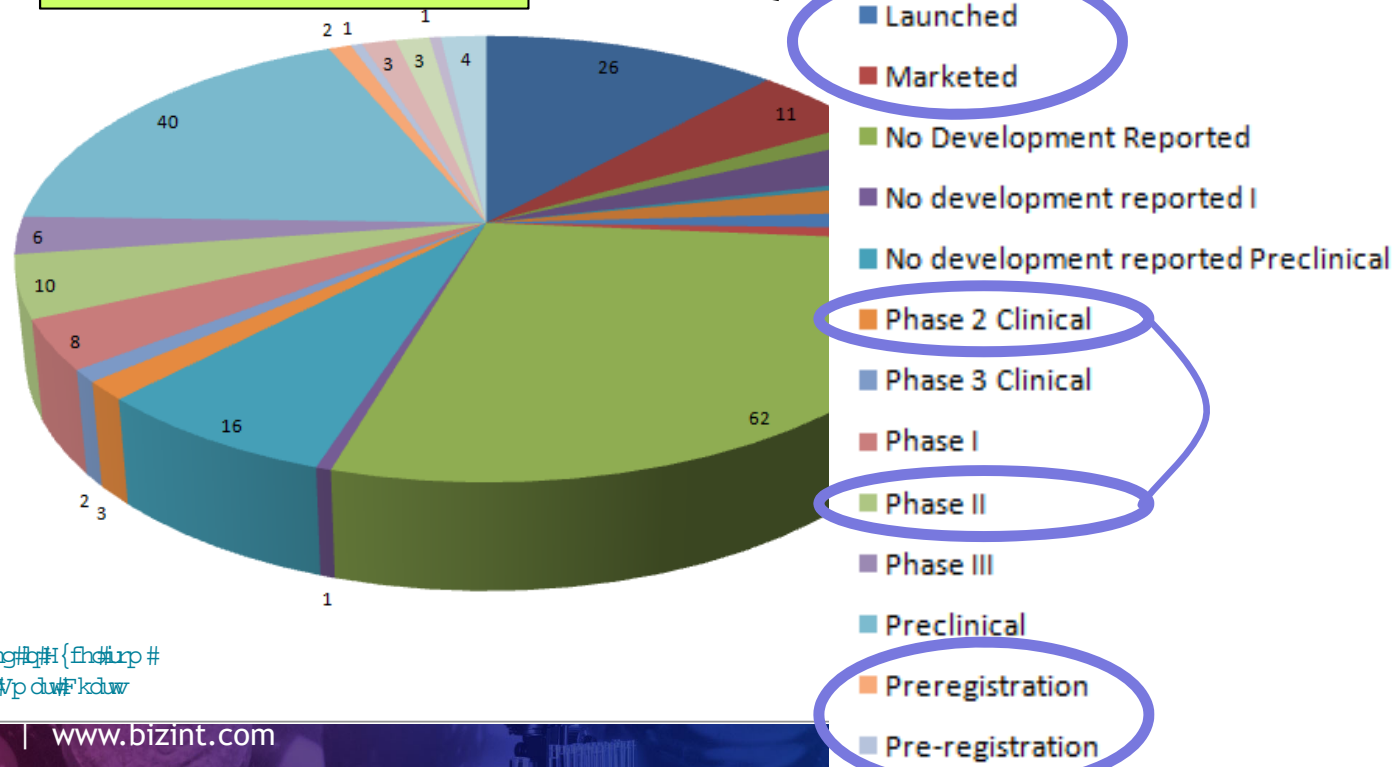
# One of these challenges is data clean-up..



# One of these challenges is data clean

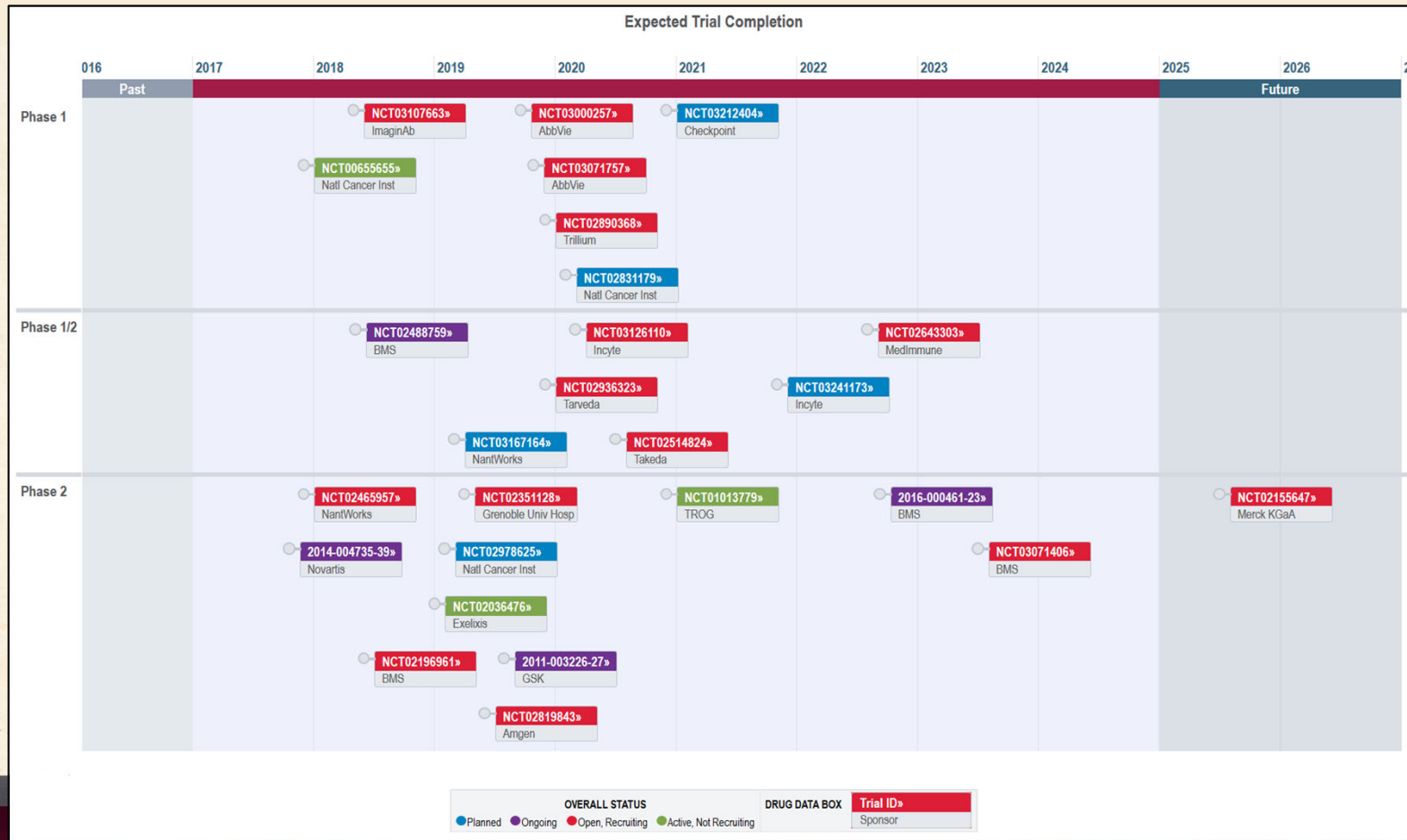
Vocabulary needs to be normalized.

Number of Drugs in Company Pipeline Sciences - from 4



Funding # { funding #  
 El} { funding #  
 El} { funding #

# Event timeline (from clinical trials data)



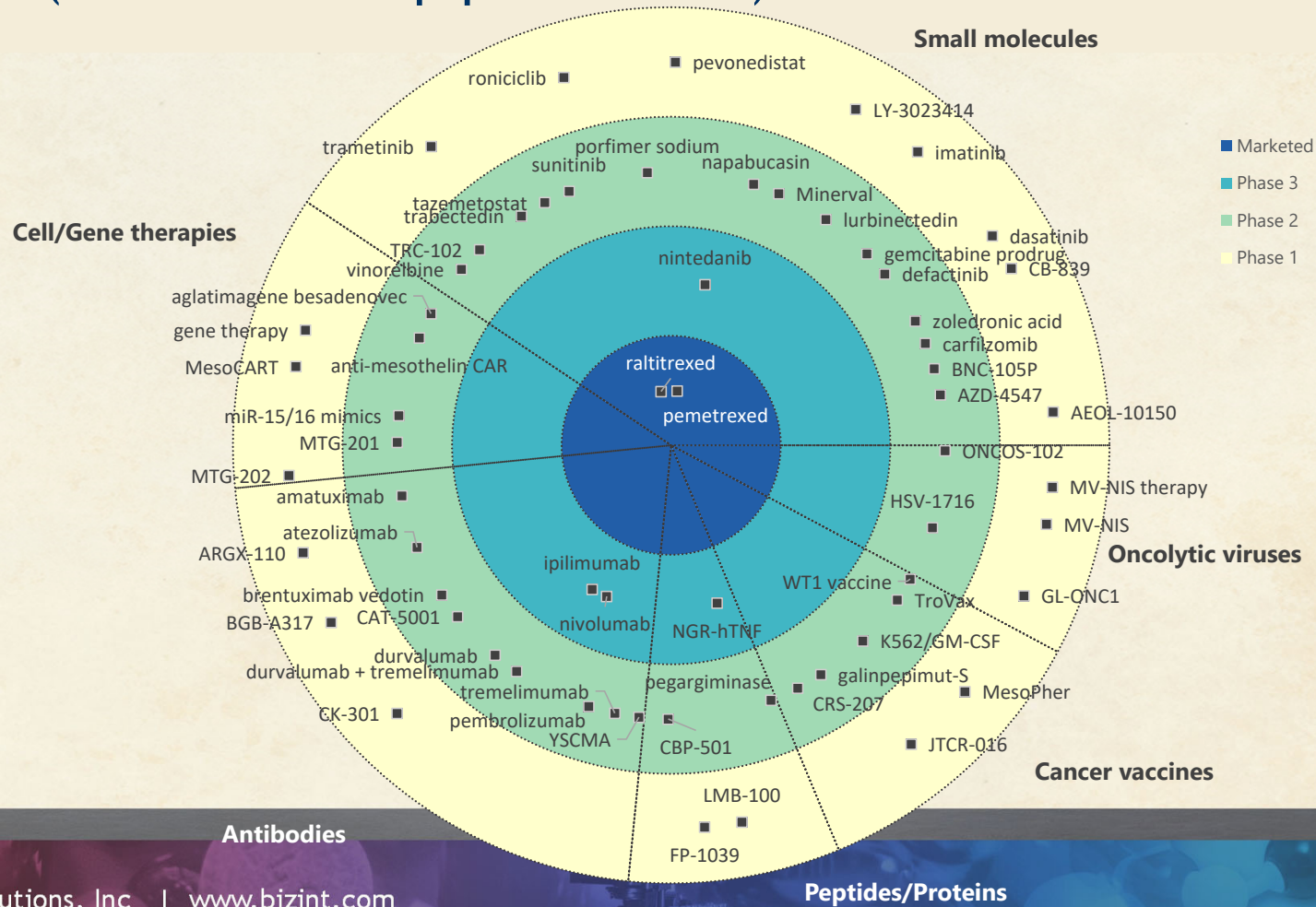
# Piano Chart (from clinical trials data)

Clinical, Phase Unknown	Phase I	Phase I/II	Phase II	Phase III	Phase IV
NCT03089658 Merck KGaA/Pfizer	NCT02035657 Immune Design	NCT03167164 NantWorks	NCT02054884 Phlogon	2010-023827-34 POLICLINICO UNIVERSITARIO AGOSTINO GEMELLI	2005-000402-32 Genetronics Biomedical Corporation
NCT02471352 National Cancer Institute	NCT02831179 National Cancer Institute	NCT03241173 Incyte Corporation	NCT02978625 National Cancer Institute		NCT01794793 Novartis
NCT03210935 University Hospital, Lille	NCT03212404 Checkpoint Therapeutics	NCT02488759 BMS	2011-003226-27 GSK		
NCT00540566 University of California, Irvine	NCT02890368 Tribium	NCT02514824 Millennium	2014-004735-39 Novartis		
NCT00765193 Medical University of Graz	NCT03000257 AbbVie	NCT02584829 Fred Hutchinson Cancer Research Center	2016-000461-23 BMS		
NCT01526486 Emory University	NCT03071757 AbbVie	NCT02643303 Medimmune	NCT02155647 Merck KGaA		
	NCT03107663 ImaginAb	NCT02936323 Tarveda	NCT02196961 BMS		
	NCT00655655 National Cancer Institute	NCT03126110 Incyte Corporation	NCT02351128 University Hospital, Grenoble		
	NCT00346385 ImmunoGen	NCT01758458 Fred Hutchinson Cancer Research Center	NCT02465957 NantWorks		
	NCT01155258 Pfizer		NCT02819843 Amgen		
	NCT01204476 National Cancer Institute		NCT03071406 BMS		
	NCT01652547 Novartis		NCT01013779 Trans-Tasman Radiation Oncology Group (TROG)		
	NCT00002947 National Cancer Institute		NCT02036476 Exelixis		
			NCT02267603 National Cancer Institute		
			NCT00003549 National Cancer Institute		
			NCT00004922 National Cancer Institute		
			NCT00068783 National Cancer Institute		
			NCT00079131 National Cancer Institute		
			NCT00869050 Columbia University		
			NCT01440816 OncoSec Medical Incorporated		
			NCT00003514 Burzynski Research Institute		
			NCT01913691 National Cancer Institute		

## Overall Status

- Unknown status
- Available
- Planned
- Ongoing
- Open, Recruiting
- Active, Not Recruiting
- Completed
- Terminated

# Bullseye (created from pipeline data)



## Lessons Learned - It's all about



- There is some interest in an interactive visualization that people can explore...
- But the primary requirement is for a **PowerPoint slide**.
- An image in a PowerPoint slide is okay...
- But you'd really like to create PowerPoint objects (so you can customize the presentation and make final edits.)

# “Piano Chart” - PowerPoint visualization

Merkel cell carcinoma (MCC) pipeline: Phase for MCC and type of molecule

Biological Testing	Preclinical	Phase I	Phase II	Launched	Discontinued	No Development Reported
Merkel cell carcinoma therapies Vironika	CK-301 TG Therapeutics	BGB-A317 Celgene	ALT 803 Altor BioScience Corporation	avelumab Merck KGaA	lorvotuzumab mertansine ImmunoGen	ATN-161 Attenuon
	ETBX-051 NantWorks	ID-G100 Immune Design	cabozantinib S-malate Exelixis			tivantinib ArQule
	ETBX-061 NantWorks	pasireotide Novartis	CST-101 NantWorks			
	ipilimumab Bristol-Myers Squibb Co	SIRPa-Fc Trillium Therapeutics	F16-IL2 Phlrogen			
	LTvax APCure	utomilumab Pfizer	MCPyV vaccine Fred Hutchinson Cancer Research Center			
	Merkel cell polyomavirus inhibitors Vironika		nivolumab Ono Pharmaceutical Co Ltd			
			pazopanib GlaxoSmithKline plc			
			canalisertib Novartis			
			vec Novartis			
			mid OncoSec Medical			

Option for hyperlink to pipeline record

Each column contains the drugs in that phase

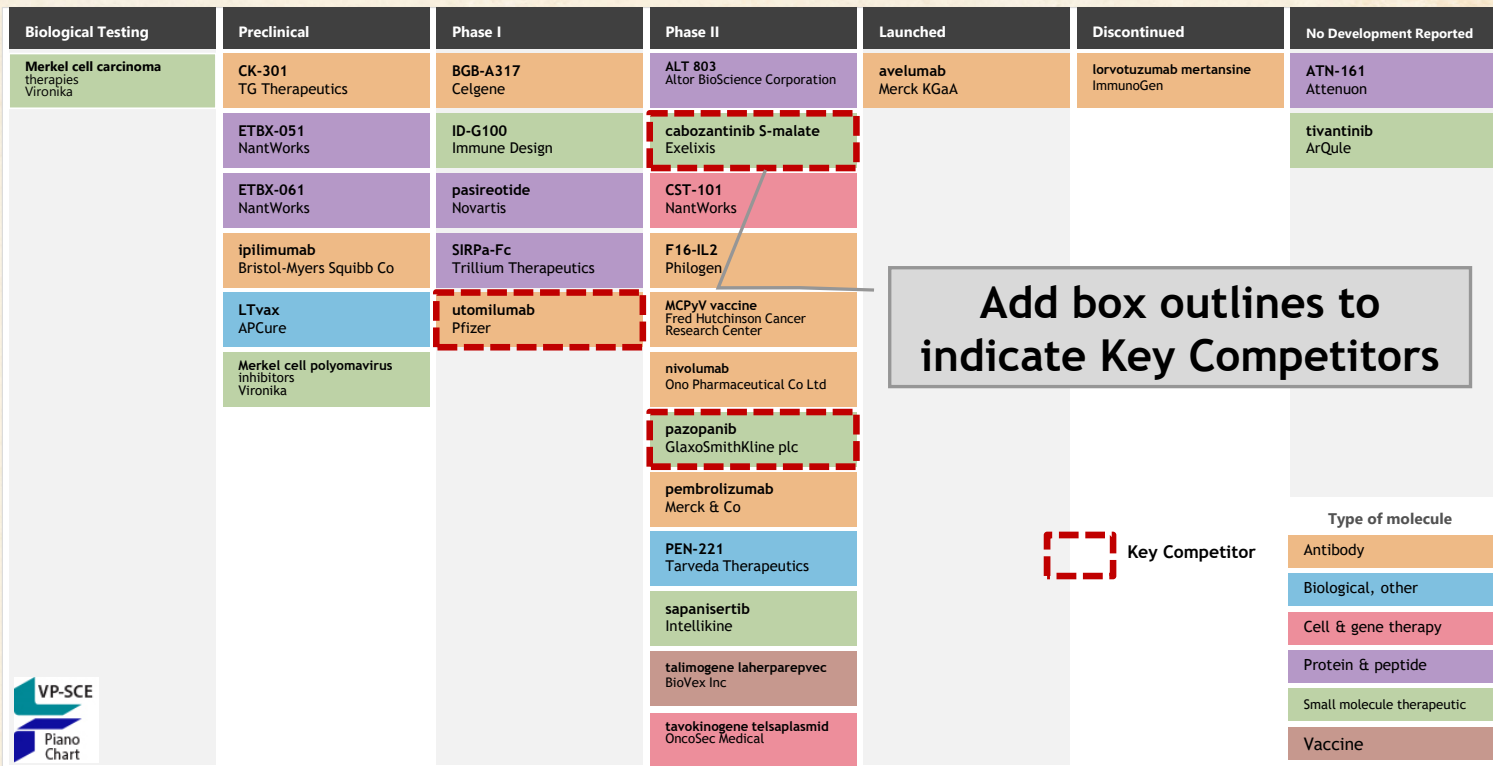
Drugs color-coded by a chosen field

Labeled by drug name and a chosen field

- Type of molecule
- Antibody
  - Biological, other
  - Cell & gene therapy
  - Protein & peptide
  - Small molecule therapeutic
  - Vaccine

# Annotating the Piano Chart in PowerPoint

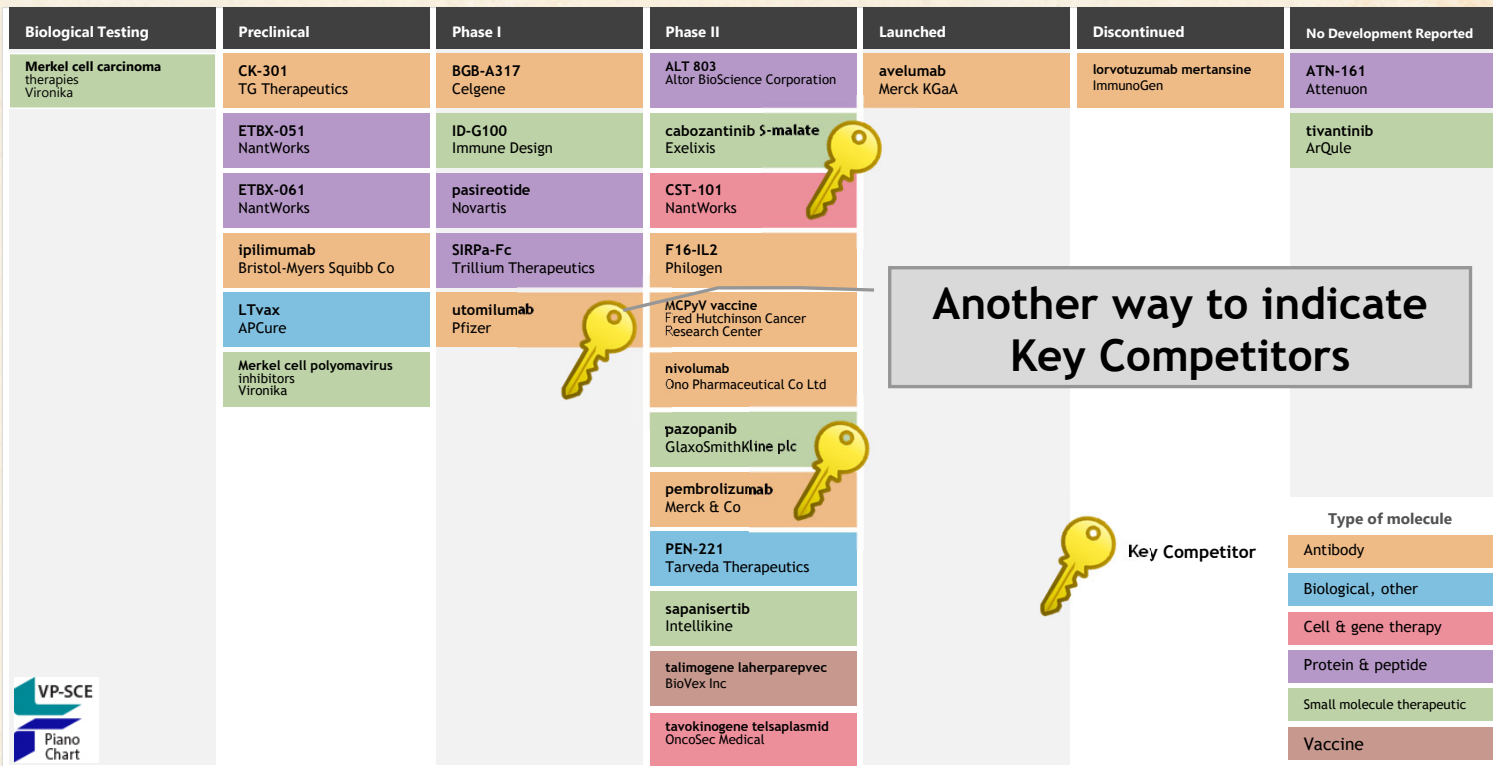
Merkel cell carcinoma (MCC) pipeline: Phase for MCC and type of molecule





# Annotating the Piano Chart in PowerPoint

Merkel cell carcinoma (MCC) pipeline: Phase for MCC and type of molecule

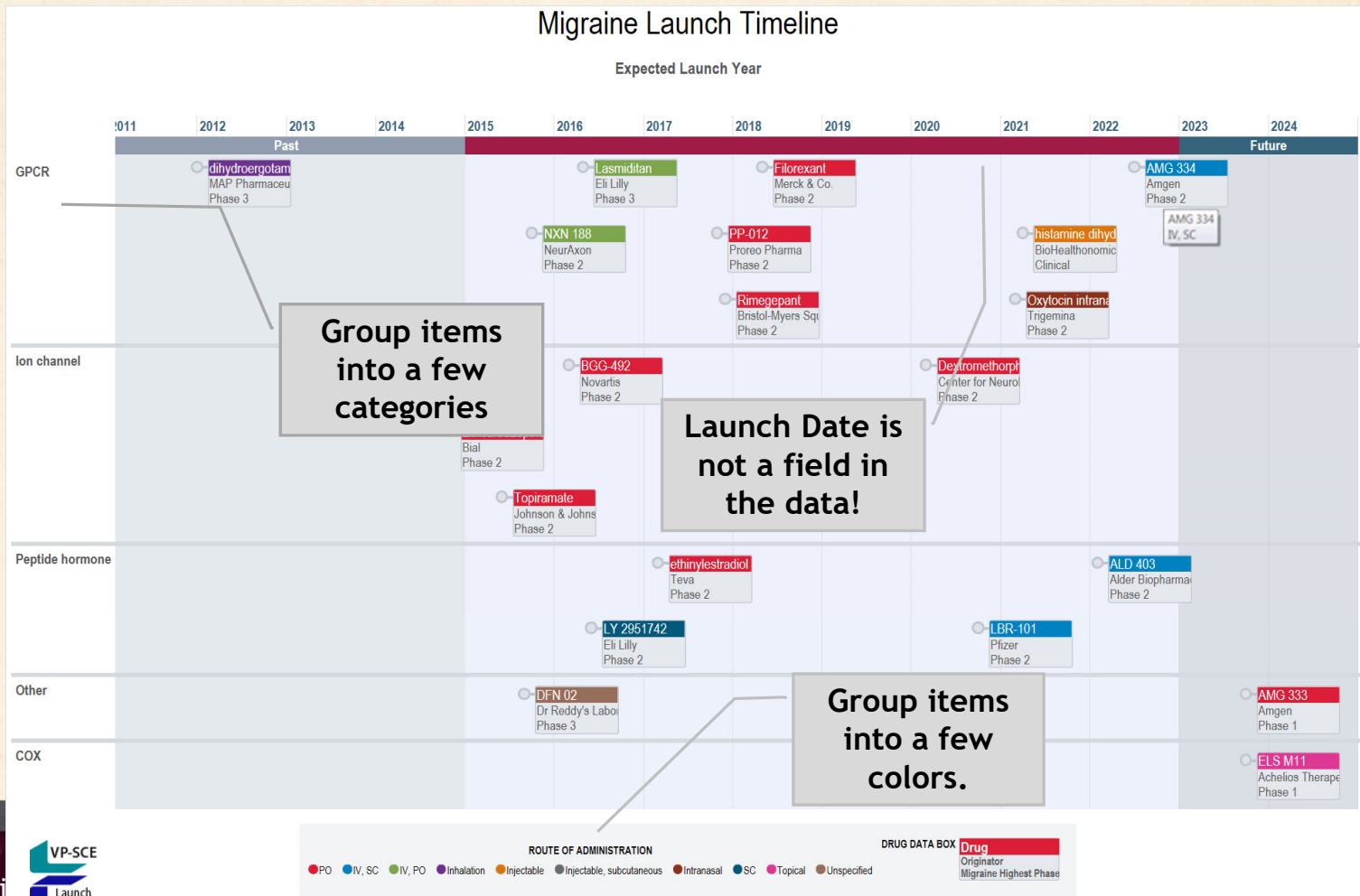


## Lessons Learned - It's not "Easy"

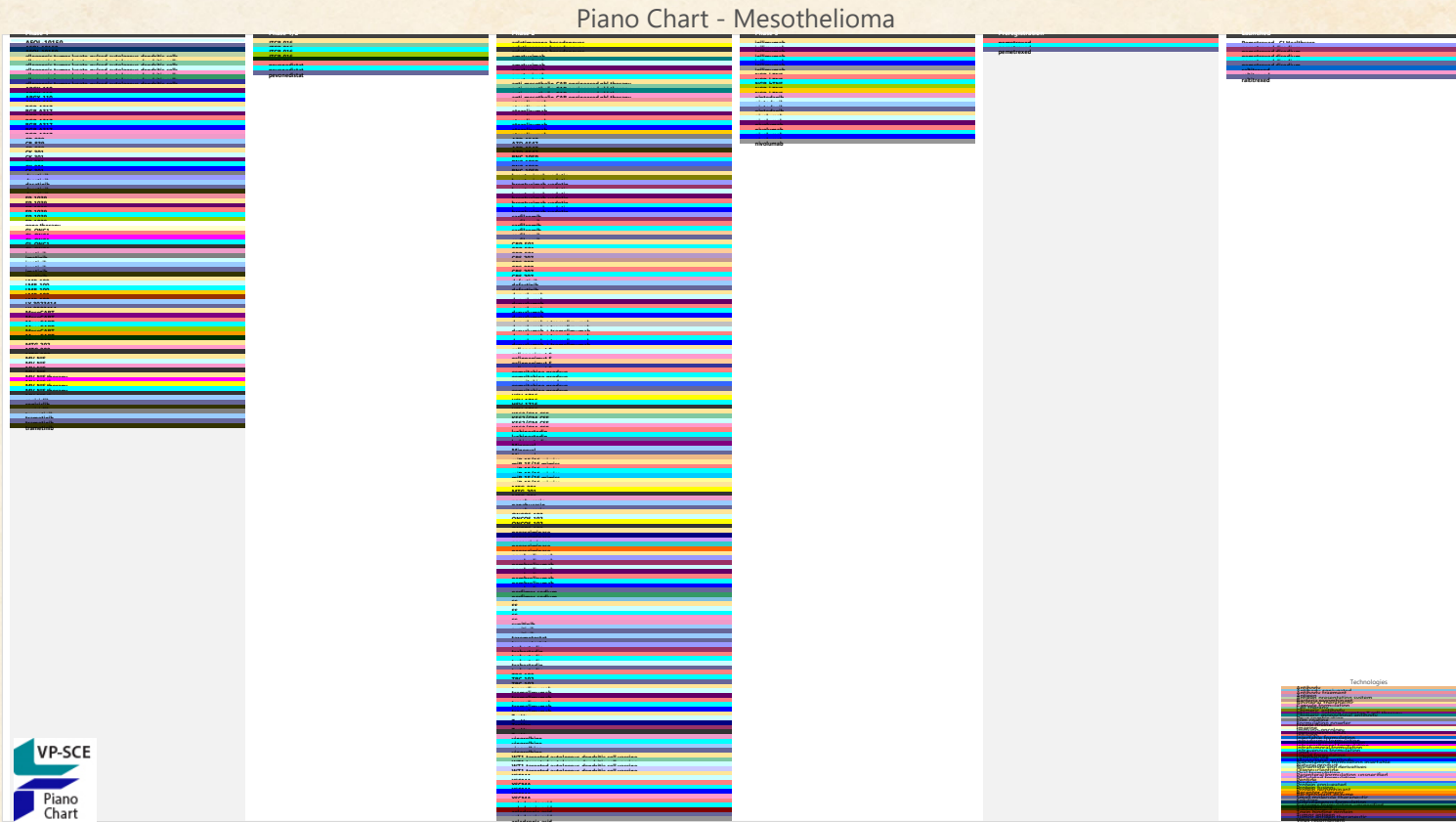


- Everyone wants an “easy” button!
- We’ve made the actual drawing of the visualizations easy.
- But a lot of data preparation is necessary --
  - Filter large datasets to the most critical items
  - Group values to create useful categories.
  - Shorten labels to fit.
  - Apply expertise for values not in the data.

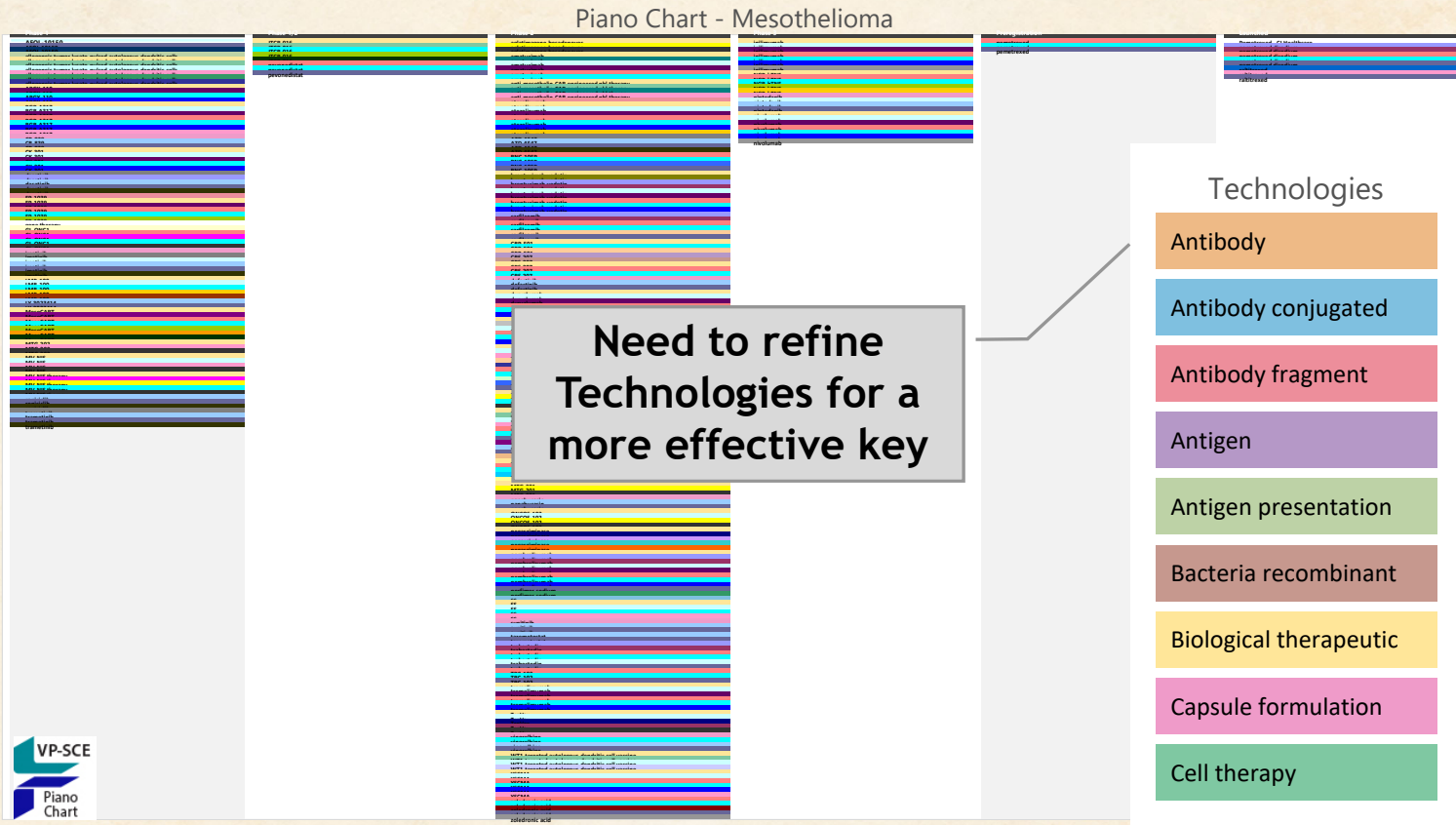
# Data Preparation for a drug Launch Timeline



# Piano Chart without data preparation

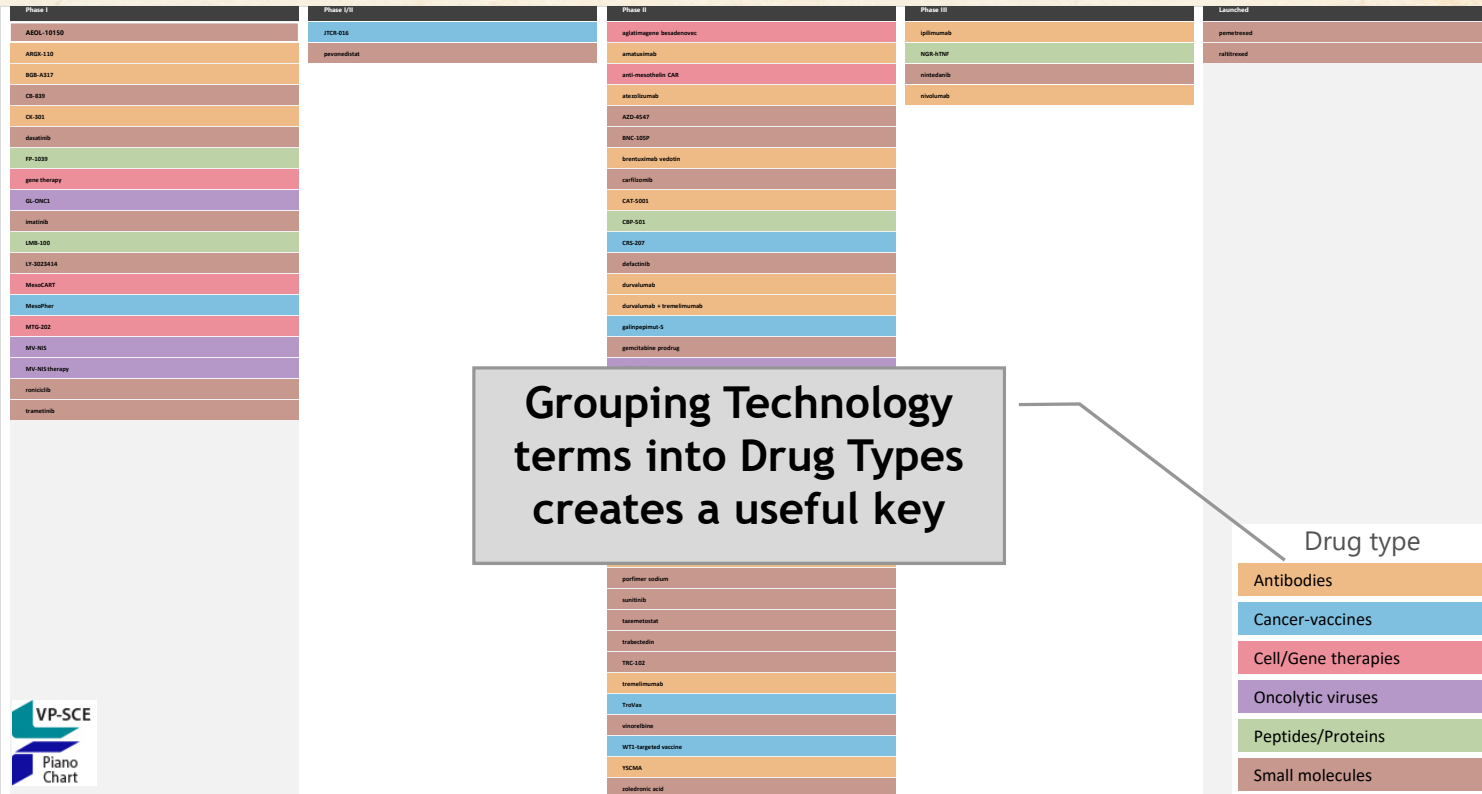


# Piano Chart without data preparation



# Piano Chart - creating a useful color key

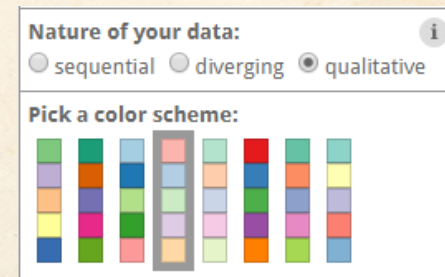
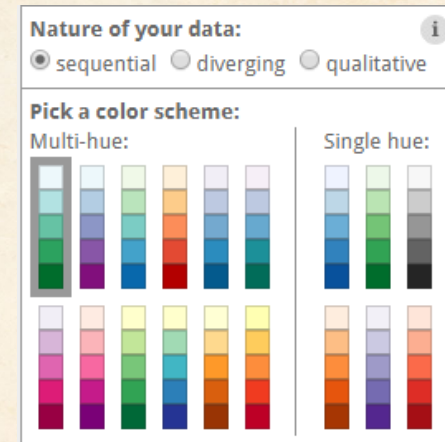
Piano Chart Mesothelioma



## Lessons Learned - Choose the Right Colors

- Color code key should have no more than 8 colors; 5-6 is better.
- For key values with a progression (e.g. phase, trial status) choose a **sequential** color scheme.
- For key values with no order (e.g. companies) choose a **qualitative** color scheme.

**COLORBREWER 2.0**  
color advice for cartography




# Piano chart: Qualitative Color Code Key

## Merkel cell carcinoma (MCC) pipeline: by Type of Molecule

Biological Testing	Preclinical	Phase I	Phase II	Launched	Discontinued	No Development Reported
<b>Merkel cell carcinoma therapies</b> Vironika	<b>CK-301</b> TG Therapeutics	<b>BGB-A317</b> Celgene	<b>ALT 803</b> Altor BioScience Corporation	<b>avelumab</b> Merck KGaA	<b>lorvotuzumab mertansine</b> ImmunoGen	<b>ATN-161</b> Attenuon
	<b>ETBX-051</b> NantWorks	<b>ID-G100</b> Immune Design	<b>cabozantinib S-malate</b> Exelixis			<b>tivantinib</b> ArQule
	<b>ETBX-061</b> NantWorks	<b>pasireotide</b> Novartis	<b>CST-101</b> NantWorks			
	<b>ipilimumab</b> Bristol-Myers Squibb Co	<b>SIRPa-Fc</b> Trillium Therapeutics	<b>F16-IL2</b> Philogen			
	<b>LTvax</b> APCure	<b>utomilumab</b> Pfizer	<b>MCPyV vaccine</b> Fred Hutchinson Cancer Research Center			
	<b>Merkel cell polyomavirus inhibitors</b> Vironika		<b>nivolumab</b> Ono Pharmaceutical Co Ltd			
			<b>pazopanib</b> GlaxoSmithKline plc			
			<b>pembrolizumab</b> Merck & Co			
			<b>PEN-221</b> Tarveda Therapeutics			
			<b>sapanisertib</b> Intellikine			
			<b>talimogene laherparepvec</b> BioVex Inc			
			<b>tavokinogene tetsaplasmid</b> OncoSec Medical			

**Type of molecule**

- Antibody
- Biological, other
- Cell & gene therapy
- Protein & peptide
- Small molecule therapeutic
- Vaccine





# Piano chart: Sequential Color Code Key

## Merkel cell carcinoma (MCC) trials: by Trial Status

Phase I	Phase I/II	Phase II	Phase III
NCT02035657 Immune Design	NCT03167164 NantWorks	NCT02054884 Philogen	2010-023827-34 POLICLINICO UNIVERSITARIO AGOSTINO GEMELLI
NCT02831179 National Cancer Institute	NCT03241173 Incyte Corporation	NCT02978625 National Cancer Institute	
NCT03212404 Checkpoint Therapeutics	NCT02488759 BMS	2011-003226-27 GSK	
NCT02890368 Tribium	NCT02514824 Millennium	2014-004735-39 Novartis	
NCT03000257 AbbVie	NCT02584829 Fred Hutchinson Cancer Research Center	2016-000461-23 BMS	
NCT03071757 AbbVie	NCT02643303 MedImmune	NCT02155647 Merck KGAA	
NCT03107663 ImaginAb	NCT02936323 Tarveda	NCT02196961 BMS	
NCT00659655 National Cancer Institute	NCT03126110 Incyte Corporation	NCT02351128 University Hospital, Grenoble	
NCT00346385 ImmunoGen	NCT01758458 Fred Hutchinson Cancer Research Center	NCT02465957 NantWorks	
NCT01155258 Pfizer		NCT02819843 Amgen	
NCT01204476 National Cancer Institute		NCT03071406 BMS	
NCT01652547 Novartis		NCT01013779 Trans-Tasman Radiation Oncology Group (TROG)	
NCT00002947 National Cancer Institute		NCT02036476 Exelixis	
		NCT02267603 National Cancer Institute	
		NCT00003549 National Cancer Institute	
		NCT00004922 National Cancer Institute	
		NCT00068783 National Cancer Institute	
		NCT00079131 National Cancer Institute	
		NCT00869050 Columbia University	
		NCT01440816 OncoSec Medical Incorporated	
		NCT00003514 Burzynski Research Institute	
		NCT01913691 National Cancer Institute	

Overall Status
Unknown status
Planned
Ongoing
Open, Recruiting
Active, Not Recruiting
Completed
Terminated

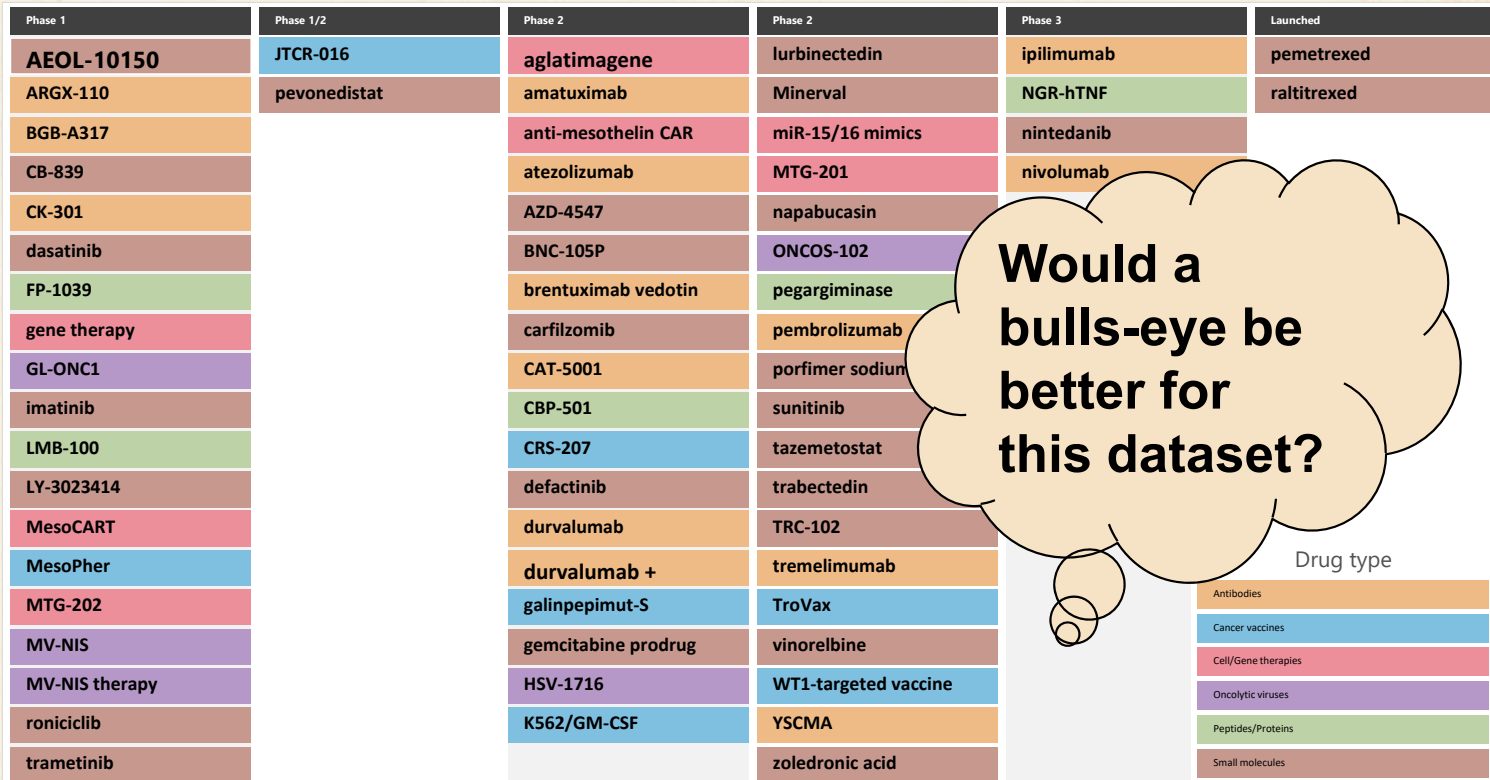
## Lessons Learned - The Best Visualization is...

- The one that “tells the story” for your topic and data.
- Try different visualizations and different categorizations/color code keys.
- A visualization that works well for one data set might not be very interesting for your next project.



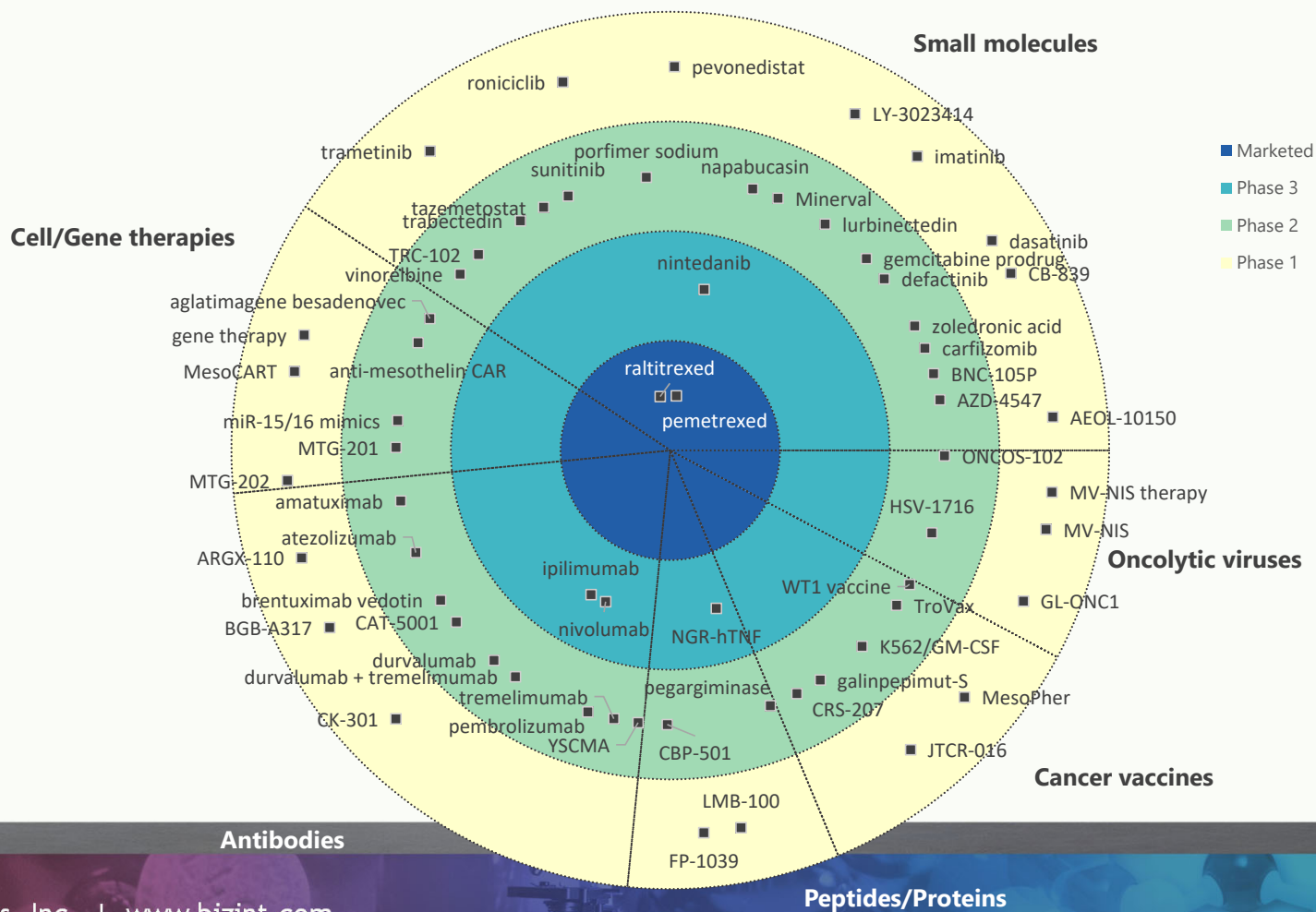
# Mesothelioma pipeline in a Piano Chart

Piano Chart – Mesothelioma





# Mesothelioma - Bulls-Eye created for PowerPoint



## Lessons Learned - It's not "Easy"

- But we have developed tools...
- ... and you can learn to use them!



## Tools in the BizInt Smart Charts Product Family

- **Import** search results to create tabular reports.
  - **Combine** data from different databases.
  - **Identify** related records.
  - **Customize** your report.
  - **Summarize** data from related records.
- 
- **Clean-up** and filter data; extract keywords.
  - **Visualize** key data aspects.

**BizInt Smart Charts**

*Drug Development Suite*

**BizInt Smart Charts**

*for Patents*

**BizInt Smart Charts**

*Reference Rows™*

**vantage**  
point  
Smart Charts Edition

## BizInt Workshops



THE JOURNEY CONTINUES...

- **Workshop I:** focus on creating and customizing tabular reports, using *clinical trials* data
- **Workshop II:** tools for integrating data, including Reference Rows, using *patents* data
- **Workshop III:** refining and visualizing data, using *pipeline and trials* data (recipes from our new Version 11 Cookbook - timelines, piano charts, bullseye.)



## Schedule



THE JOURNEY CONTINUES...

- 10:30 - 10:45 am: Coffee break
- 10:45 - 11:30 am: Workshop I
- 11:45 - 12:30 pm: Workshop II
- 12:30 - 1:30 pm: Lunch
- 1:30 - 3:30 pm: Workshop III
- 3:30 pm: Coffee break and finish