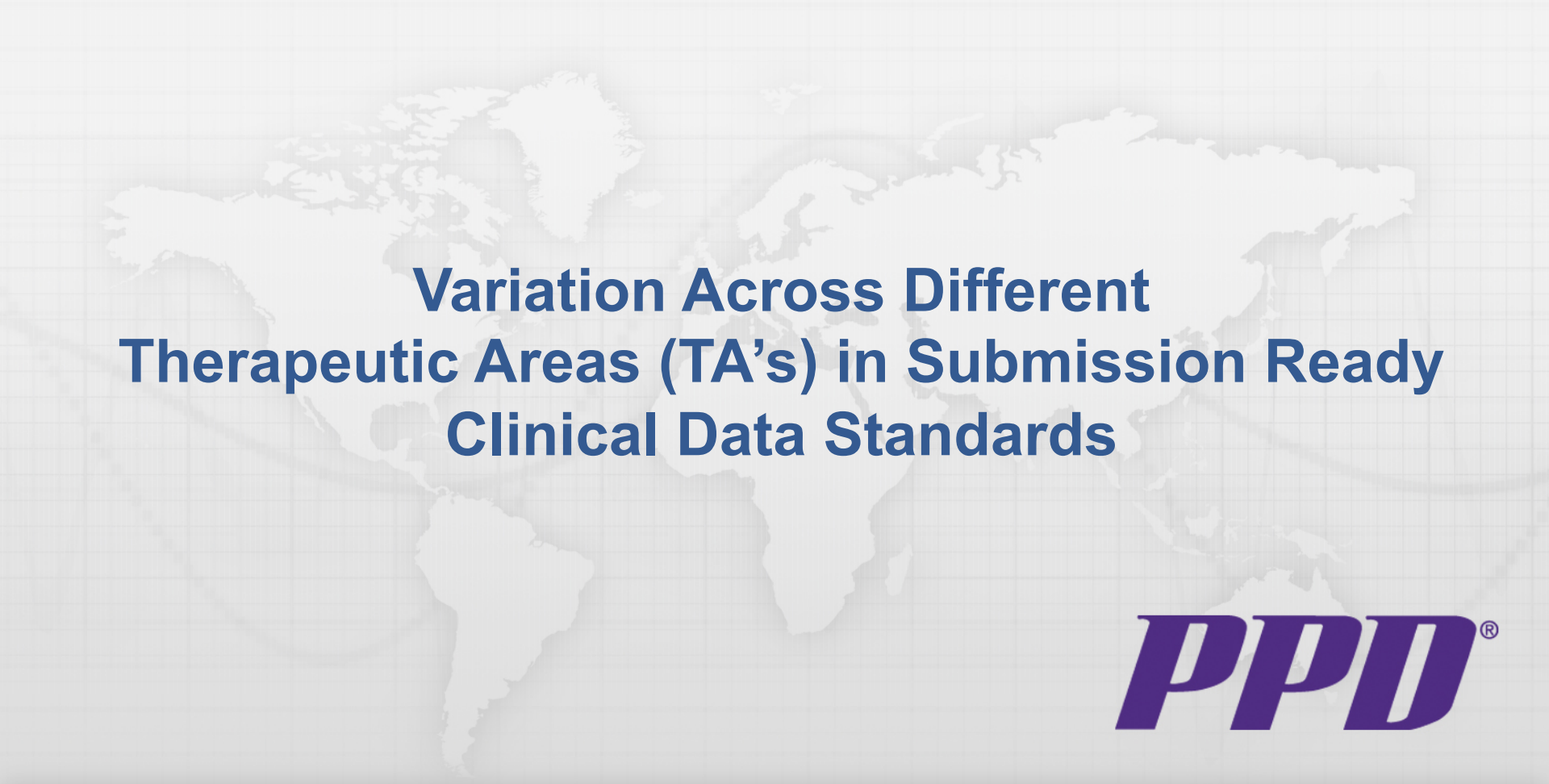




Variation Across Different Therapeutic Areas (TA's) in Submission Ready Clinical Data Standards



Vinay Somashekar
PPD, Bengaluru, India

Background

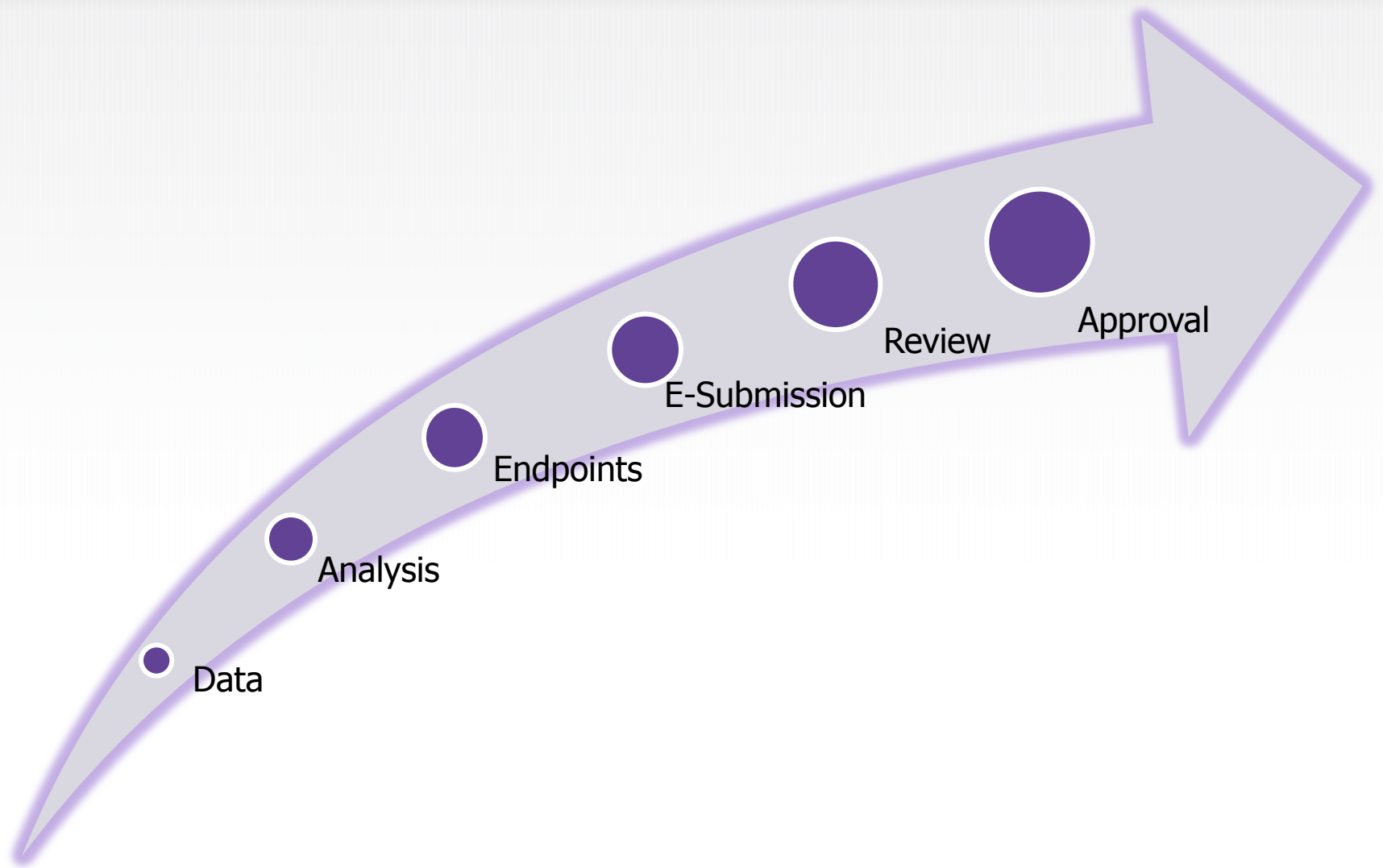
- Support more efficient and effective regulatory decision-making
- Speed up the delivery of new therapies
- Support efficacy analyses

Goals

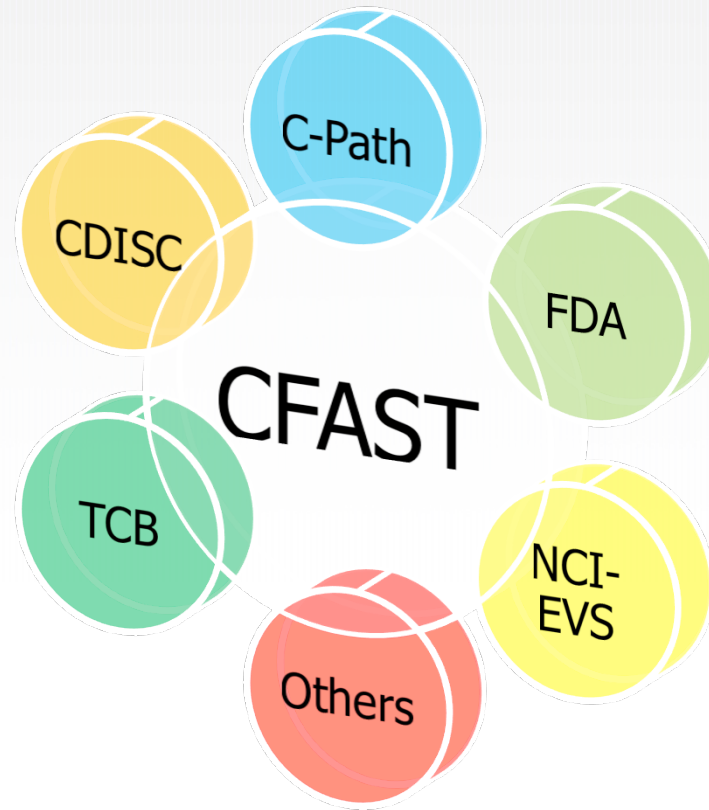
To Explain

- Importance of Therapeutic Area standards (TA's) and development process
- Overview of Therapeutic Area User Guide (TAUG) Cardiovascular (CV)
- New domain's related to TA's in latest version of SDTMIG

Importance of Therapeutic Area Standards



Therapeutic Area Standards Development Process



TAPSC

TAPSC: Therapeutic Area Standards Program Steering Committee

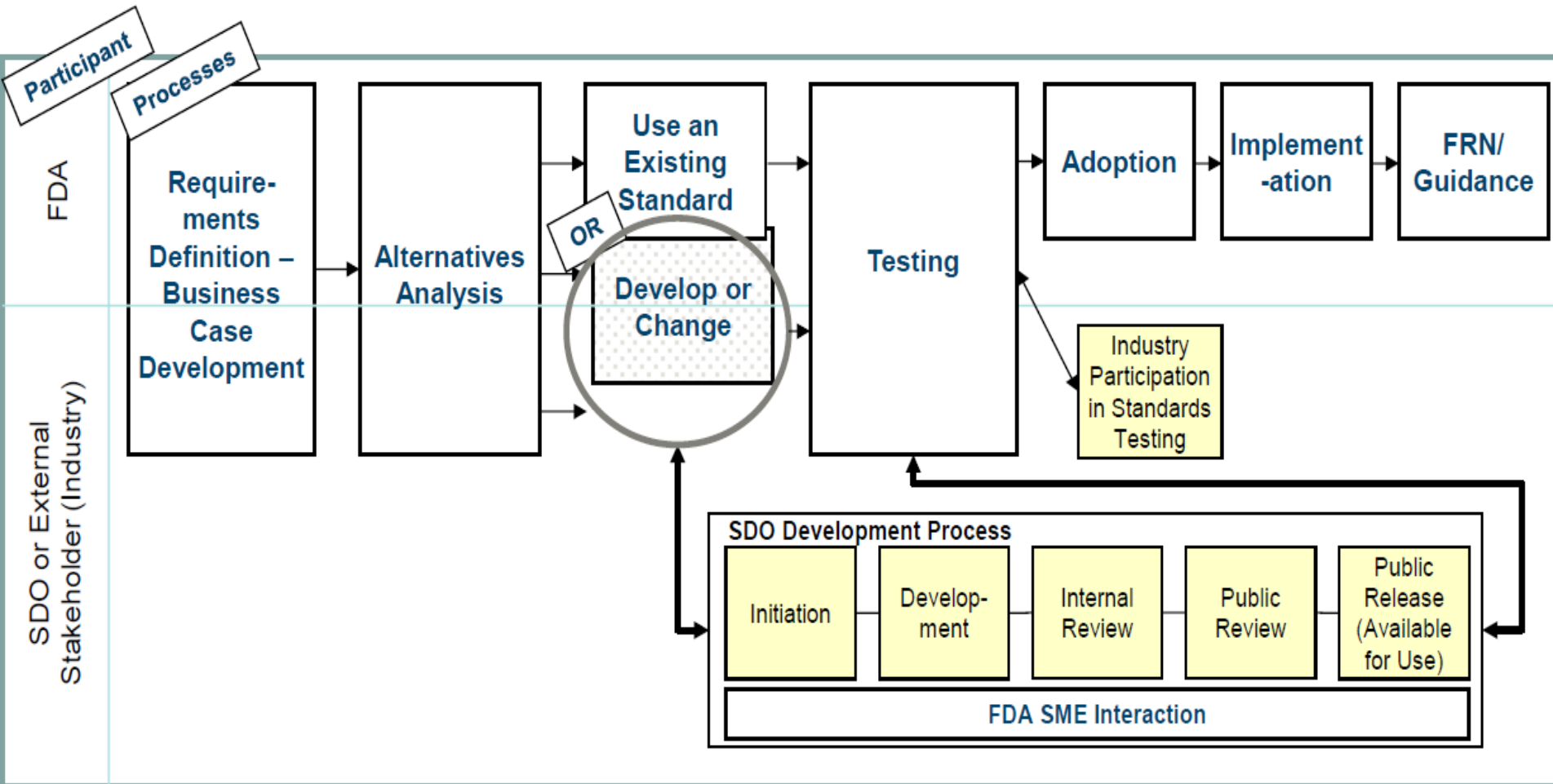
CFAST: Coalition for Accelerating Standards and Therapies

C-Path: Critical Path Institute

TCB: TransCelerate BioPharma

Others: National Institutes of Health, American College of Cardiovascular, etc..

Therapeutic Area Standards Development Process, Continued...



Reference: Therapeutic Area Standards (TAS) Initiative Project Plan, Version 2.0, page no : 4

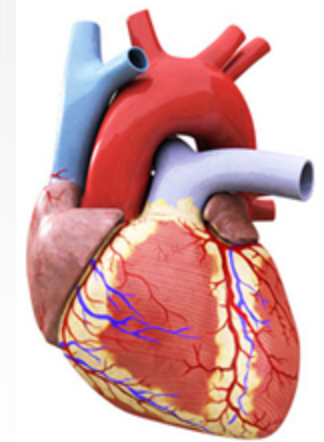
Domains in TAUG (Therapeutic Area User Guide)

TAUG	Alzheimer's	Asthma	Cardiovascular	Chronic Hepatitis C	Diabetes	Influenza	Schizophrenia	Parkinson's Disease	Polycystic Kidney Disease	QT Studies	Multiple Sclerosis	Tuberculosis	Virology
New Domain in SDTM v3.2													
DD - Death Details			X						X				
HO - Healthcare Encounters		X	X				X	X	X				
MI - Microscopic Findings				X				X					
MO - Morphological Findings	X			X				X	X		X	X	
PR - Procedures	X			X					X				
RP - Reproductive System Findings									X				
SR - Skin Response												X	
Provisional Domain													
AG - Procedure Agents	X	X			X								
BS - Bio-Specimen	X												
BE - Bio-Specimen Event	X												
CC - Clinical Classifications							X						
CV - Cardiovascular Physiology			X										
ML - Meals					X								
NV - Nervous System Physiology	X										X		
OE - Ophthalmic Exams							X				X		
QT - ECG QT Correction Model Data										X			
RE - Respiratory System Findings		X				X							
SM - Subject Disease Milestone							X						
UR - Urinary System Findings									X				
VR - Viral Resistance Findings						X							X
TM - Trial Disease Milestones							X						

Overview of TAUG – Cardio Vascular (CV)

CV Endpoints

- Death
- Transient Ischemic Attack and Stroke
- Myocardial Infarction
- Percutaneous Coronary Intervention
- Peripheral Vascular Intervention
- Heart Failure Event
- Unstable Angina Hospitalization Event



SDTM Modeling - Endpoints Standard Team Recommendations

Few Instances:

- Events classification across TA's: CE vs. AE mapping
- Variables: --EVAL (Evaluator) and --EVALID (Evaluator Identifier)
- Domain modification and Usage: TU, TR

TAUG - Mapping Concept

Explain the clinical process, research concepts and its classification

Assessor

The person or organization that reports an observation.

Observation

A test, examination, or other activity that gathers information about a subject.

Observation Result

A finding obtained by an observation.



Terminology

Healthcare Encounter

Admission to or visit with a healthcare facility or healthcare provider. +

Substance Administration

An activity that administers a product to a subject.

Product

Anything made. Includes drugs and devices.

Other Activity

An activity not otherwise classified.

Surgical Intervention

An invasive treatment.

Specimen Collection

An activity that takes a sample for later analysis.

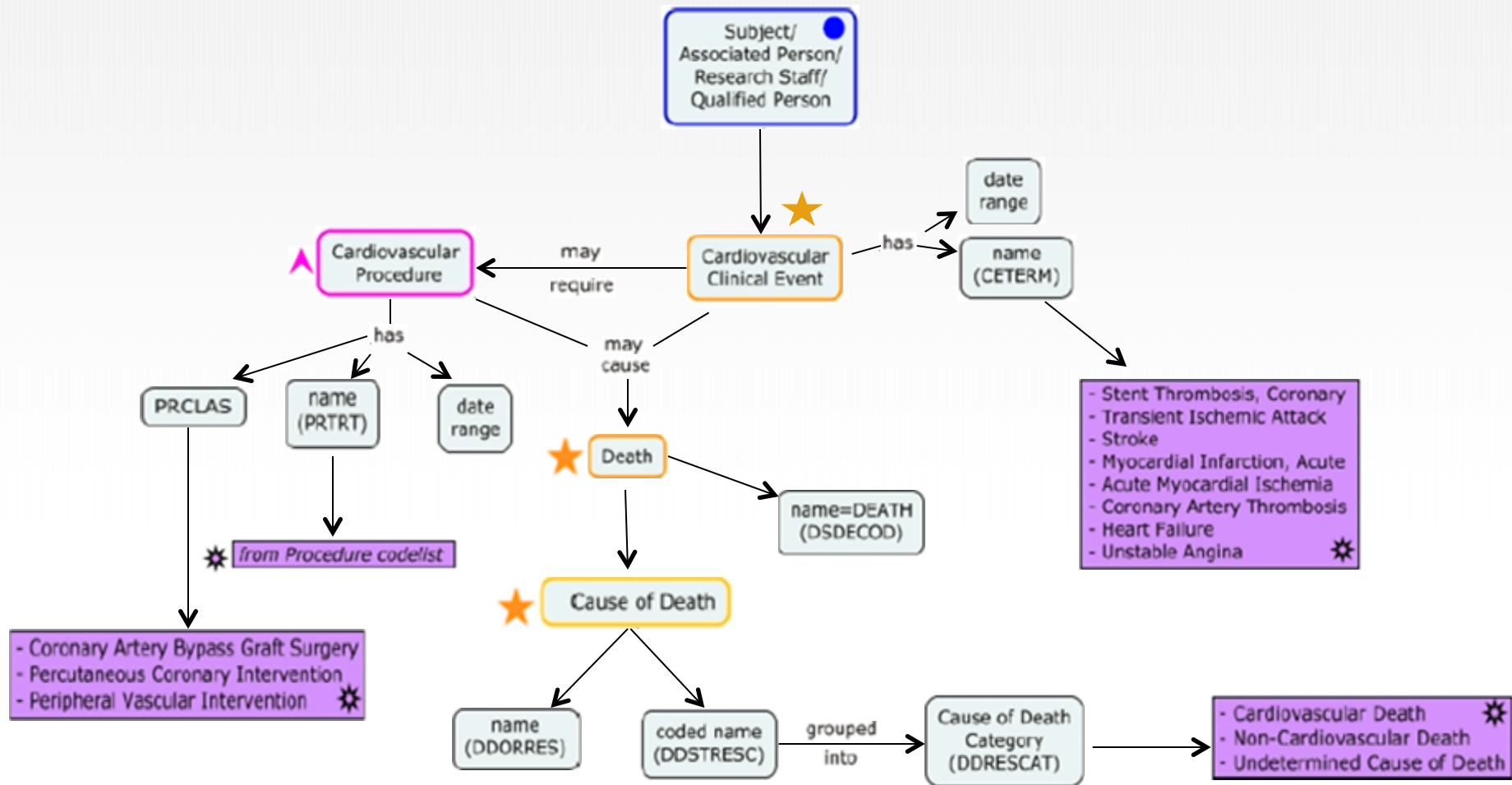
Specimen

A sample taken from a subject or existing specimen for analysis.

Composite Activity

An activity with multiple classifications. Often has component sub-activities.

Mapping Concept for an Endpoint: Death



Mapping Concept for an Endpoint: Death, Continued...

- Disposition (DS) domain captures Death as an event

ds

Row	STUDYID	DOMAIN	USUBJID	DSSEQ	DSLKNKID	DSTERM	DSDECOD	DSCAT	DSDTC	DSSTDTC
1	STUDY01	DS	40945	1	DTH-1	Death due to stroke	DEATH	DISPOSITION EVENT	2007-11-27	2007-11-27

- Death (DD) domain captures cause and other details of Death

dd

Row	STUDYID	DOMAIN	USUBJID	DDSEQ	DDLKNKID	DDTESTCD	DDTEST	DDORRES	DDSTRESC
1	STUDY01	DD	40945	1	DTH-1	PRCDTH	Primary Cause of Death	DEATH DUE TO STROKE	CARDIOVASCULAR: STROKE
2	STUDY01	DD	40945	2	DTH-1	SECDTH	Secondary Cause of Death	KIDNEY FAILURE	RENAL FAILURE

Row	DDRESCAT	VISITNUM	DDDTC
1 (cont)	CARDIOVASCULAR DEATH	9	2007-11-27
2 (cont)	NON-CARDIOVASCULAR DEATH	9	2007-11-27

Advancements in TAUG & Pipeline

2011	2012-2013	2014	2015	2016
Alzheimer's v1	Asthma	Traumatic Brain Injury ⁴	Rheumatoid Arthritis ³	<i>Oncology (solid tumor; e.g., Lung⁵, Colon⁵, Kidney) V3¹</i>
	Alzheimer's v2	Hepatitis C ²	Tuberculosis v2 ³	<i>Duchenne Muscular Dystrophy¹</i>
	Multiple Sclerosis	Oncology – Breast Cancer ²	CV Imaging (Echo) ⁴	<i>Irritable Bowel Syndrome¹</i>
	Diabetes ²	Influenza	Virology v2 ¹ (Viral Resistance)	<i>Skin and Skin Structure Infections^{1 3}</i>
	Cardiovascular Endpoints ⁴	Schizophrenia ⁴	Oncology v2 - Prostate ³	<i>Complicated UTIs^{1 2}</i>
	QT Studies	Dyslipidemia ²	<i>Solid Organ Transplant²</i>	<i>HIV^{1 3}</i>
	Pain v1	COPD	<i>Major Depressive Disorder⁴</i>	<i>Cardiovascular v3¹</i>
	Tuberculosis v1	Diabetic Kidney Disease ³	<i>Post – Menopausal Osteoporosis³</i>	<i>Oncology V4¹</i>
	Parkinson's Disease v1		<i>Psoriasis³</i>	<i>TBD (Pneumonia or Antibiotics)¹</i>
	Virology v1		<i>Parkinson's Disease v2¹</i>	
	Polycystic Kidney Disease V1			

Projects in *Italics* are candidates to be scheduled and subject to change

¹ Indicates Project Proposal Summary and Approval Pending

² Indicates Project completed (Provisional)

³ Indicates FDA requirements definition. Project planned or in process

⁴ Indicates CDE inputs or domain analysis models from third party (e.g., DCRI)

⁵ Indicates high NCI Priority

New Domains in latest SDTMIG

- SDTMIG Version 3.2
- Additional Domains
 - **Death Details (DD)** : Additional Death related information
 - **Healthcare Encounters (HO)**: Inpatient and Outpatient Healthcare Events
 - **Microscopic Findings (MI)**: Examinations are performed on a Specimen
 - **Morphological Findings (MO)**: Macroscopic Results observed by Naked Eye
 - **Procedures (PR)**: Therapeutic and Diagnostic procedures
 - **Reproductive System Findings (RP)**: Findings and Treatment information
 - **Skin Response (SR)**: Methods and Response evidence

Conclusions

- Standardized Process and Universal Acceptance
- Time efficient for Review process
- Operational Expenses



References

- *Therapeutic Area Standards (TAS) Initiative Project Plan, Version 2.0*
- *Wood, F., et al. (2014) Data Standards Development for Therapeutic Areas: A Focus on SDTM-Based Datasets.*
- *Study Data Tabulation Model Implementation Guide, Version 3.2*
- Web links

www.cdisc.org/therapeutic
www.fda.gov



THANK YOU!