



Actionable Insights for  
**Better Health™**

## ***eConsent and BioBanking How to Reduce Costs While Improving Efficiencies***

April 2019

# Agenda

- + What is eConsent, and how do I optimize its use?
- + What is BioFortis and how does it fit with eConsent and Biobanking?
- + Where does eConsent intersect with Biobanking?
- + What are some of the basic principles to successfully integrate eConsent with management and use of Biobanked samples?
- + What are the benefits of an integrated approach to eConsent and Biobanking?

# Your Presenters

## *Driving Transformation in Your Clinical Trial Site Payment Process*



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### **Eric Delente**, President, Patient Consent, DrugDev (an IQVIA company)

Eric has been designing, developing, hosting and maintaining award-winning, small and large-scale education portals for healthcare and science organizations for more than 20 years. As the President of the Patient Solutions business unit of DrugDev, Eric's focus is on DrugDev's leading eConsent product that provides a comprehensive electronic informed consent platform and services for clinical trials, registries, biobanking and hospital procedures to a rapidly growing network of Pharmaceutical companies and healthcare providers.



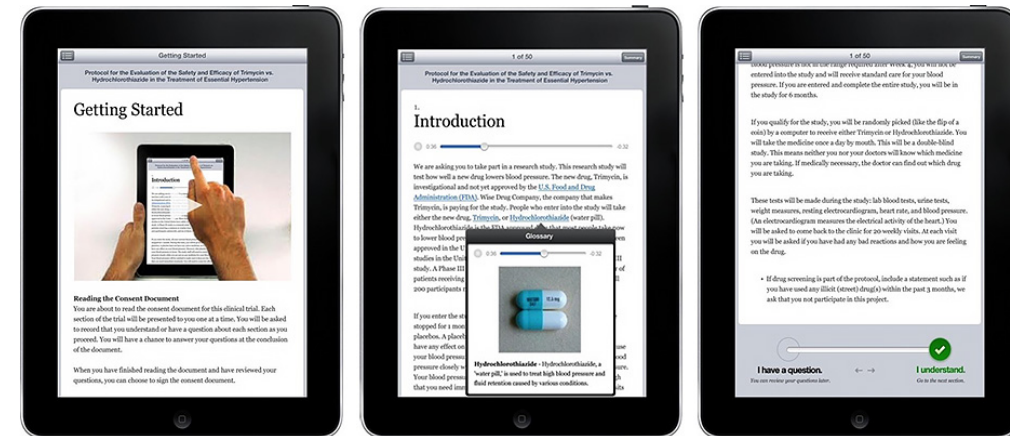
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### **Dr. Jian Wang**, Chief Executive Officer, BioFortis (a Q<sup>2</sup> Solutions company)

Dr. Wang is the CEO of BioFortis, the precision medicine and technology solutions offering, a Q<sup>2</sup> Solutions and IQVIA company. For more than 20 years, Dr. Wang developed several software products with pharmaceutical customers, government agencies, and academia. He has deep knowledge in the rapidly evolving field of precision medicine and its associated biomarker-driven clinical trials, and strives to bring precision medicine technology solutions to researchers to help solve real-world health problems.

# What is eConsent?

- An engaging multi-media approach towards informed consent that uses a combination of technology, graphics, audio, and video to educate and consent patients to clinical trials
- eConsent improves patient comprehension of what their study participation will involve
- eConsent reduces the potential for common consent-related audit findings and deviations through a robust audit trail
- eConsent can be integrated with other 'eSystems', which can reduce manual consent-related data entry and improve data quality
- *Patients who agree to submit biobank samples must consent to do so...*



**DrugDev Spark eConsent** Dashboard Analytics Help e@n4m.net

### DrugDev Spark Demonstration Trial

Site: 100-USA [Switch Site](#)

[Add a Patient](#) [Print/Email](#)

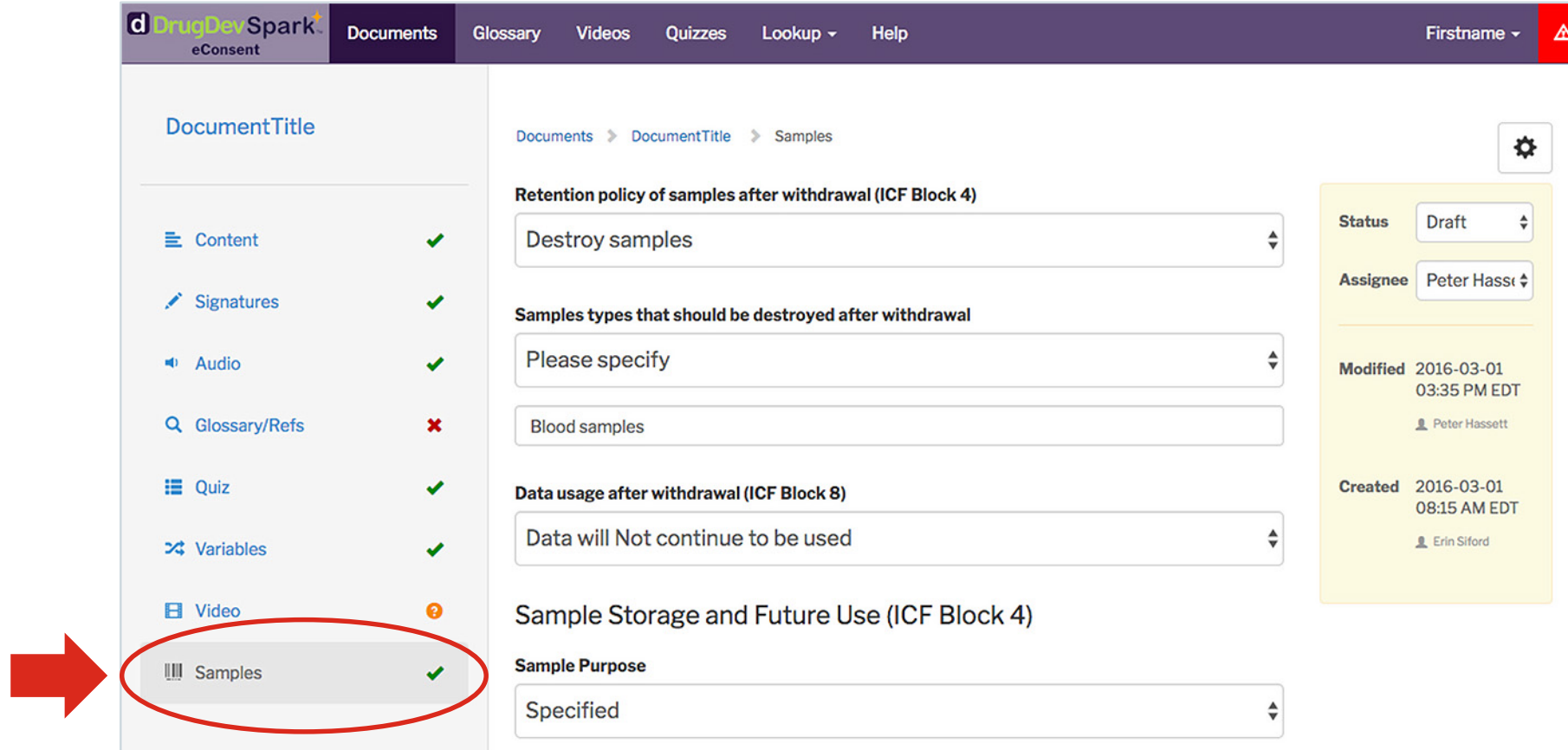
☒ Consented  
☒ Needs to re-consent  
☐ Not consented  
[Update](#)

Consent Document(s)  
Current documents for your site  
English

Show 100 entries

Prescreening No.	Status	
197 Study Subject Number: Not set	Consented 2018-10-23 <a href="#">More...</a>	⚙
196 Study Subject Number: Not set	Consented 2018-10-18 <a href="#">More...</a>	⚙
195 Study Subject Number: Not set	Consented 2018-10-17 <a href="#">More...</a>	⚙
194 Study Subject Number: Not set	Not consented <a href="#">More...</a>	⚙
193 Study Subject Number: Not set	Consented 2018-10-10 <a href="#">More...</a>	⚙
192 Study Subject Number: Not set	Consented 2018-10-09 <a href="#">More...</a>	⚙
191 Study Subject Number: Not set	Not consented <a href="#">More...</a>	⚙

# Biosample attributes



The screenshot displays the DrugDevSpark eConsent application interface. The top navigation bar includes links for Documents, Glossary, Videos, Quizzes, Lookup, and Help, along with a user profile dropdown and a red alert icon. The left sidebar lists various document components: Content, Signatures, Audio, Glossary/Refs, Quiz, Variables, Video, and Samples. The 'Samples' item is highlighted with a red oval and a red arrow pointing to it. The main content area shows the 'Biosample attributes' configuration page for a document titled 'DocumentTitle'. The page includes a breadcrumb trail: Documents > DocumentTitle > Samples. The configuration fields are as follows:

- Retention policy of samples after withdrawal (ICF Block 4):** Destroy samples
- Samples types that should be destroyed after withdrawal:** Please specify (with a sub-field containing 'Blood samples')
- Data usage after withdrawal (ICF Block 8):** Data will Not continue to be used
- Sample Storage and Future Use (ICF Block 4):** Sample Purpose: Specified

On the right side, there is a settings gear icon and a yellow information box containing the following details:

- Status:** Draft
- Assignee:** Peter Hassett
- Modified:** 2016-03-01 03:35 PM EDT (by Peter Hassett)
- Created:** 2016-03-01 08:15 AM EDT (by Erin Siford)

**Biosample attributes can now become properties of an IC document.**  
While entering ICF content, admin can also specify its biosample attributes.

# Biosample attributes of ICFs

**Attributes can  
change with each  
version/amendment  
of the ICF**

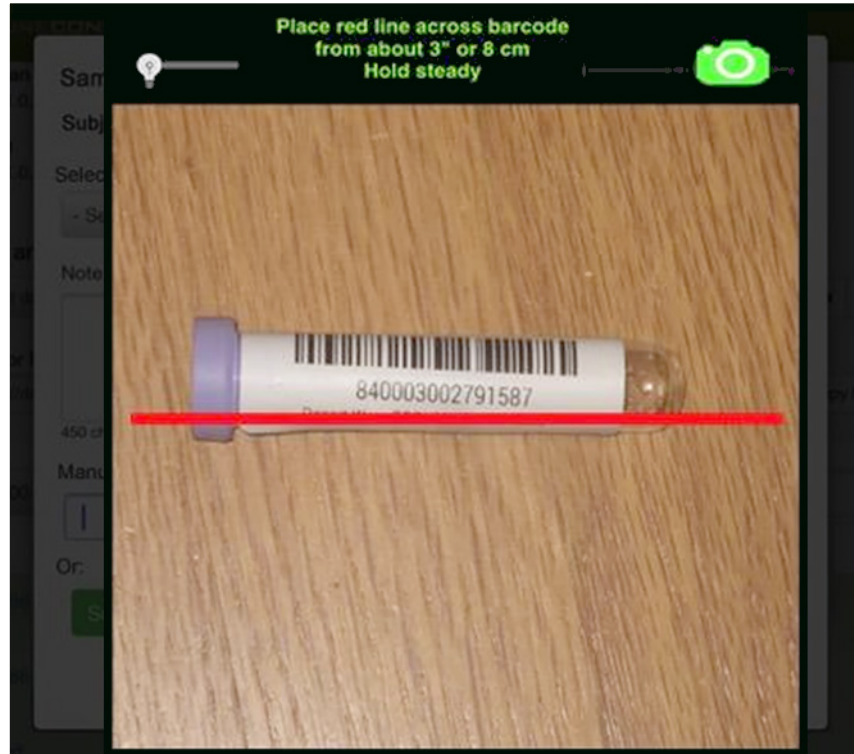
**Attributes  
are queryable:**  
*find all documents/  
sites/studies where  
future use research  
is not limited.*

**If there are multiple  
ICFs, each can contain  
its own attributes**

**Biosample attributes  
per document can be  
exported in CSV.**



# Look up attributes using a sample



1. After subject consents and has sample taken, associate sample with subject by scanning the code.
2. Later, scan the sample again into the consent system using code reader
3. System returns up-to-date biosample attributes for the subject belonging to the sample

**Learn the current disposition of any sample instantly** ...without going back to patient's identity and full-text of their signed ICFs.

# Biosample Tracking - Brief Case Study

- Top-20 Sponsor collected over 1.2M samples over the last 8 years
- Following an audit, it was determined that they were unable to adequately determine what patients actually consented to for 600,000 of these samples.





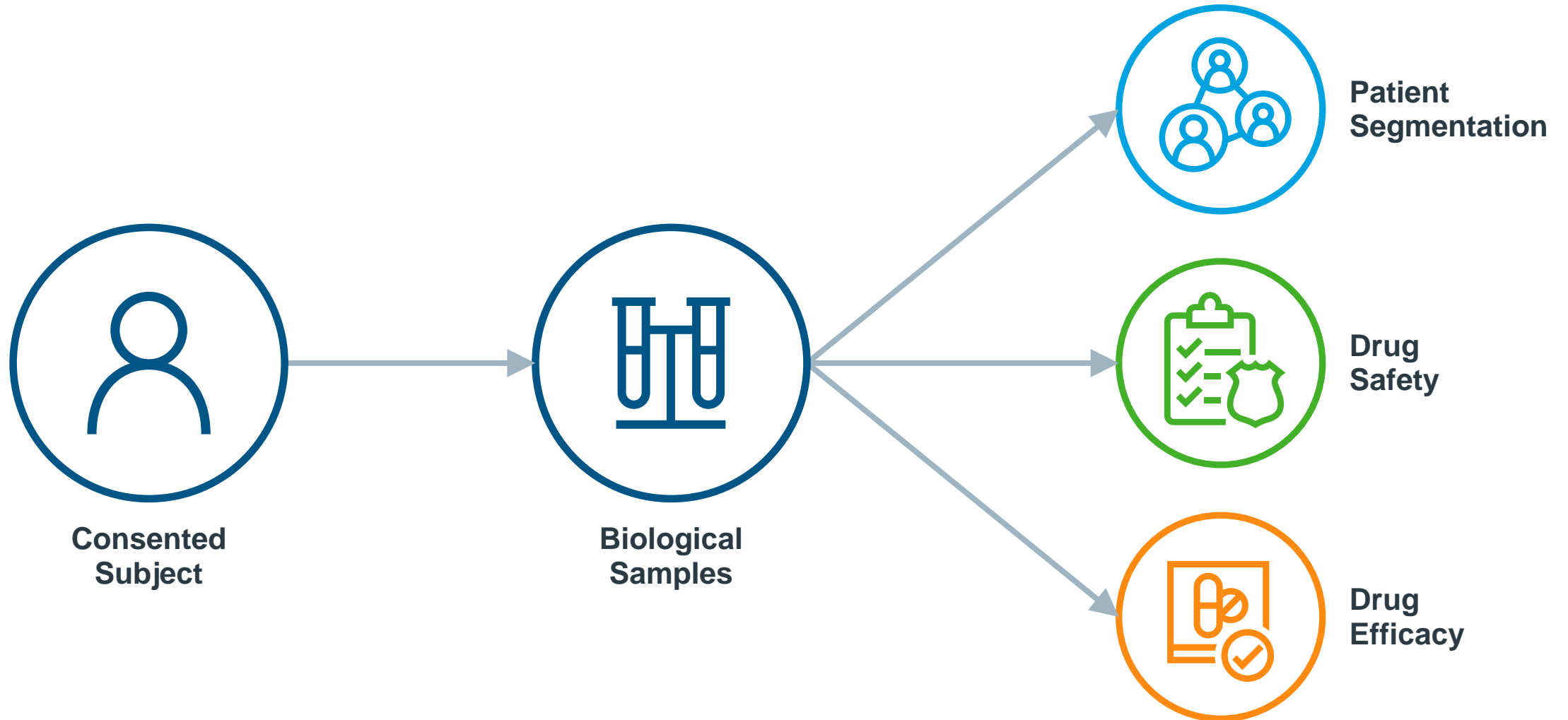
# Biosample Tracking - Brief Case Study

The causes for this issue were mostly related to inadequate/incorrect manual annotation of each consent form into a massive, error-prone spreadsheet tracker.

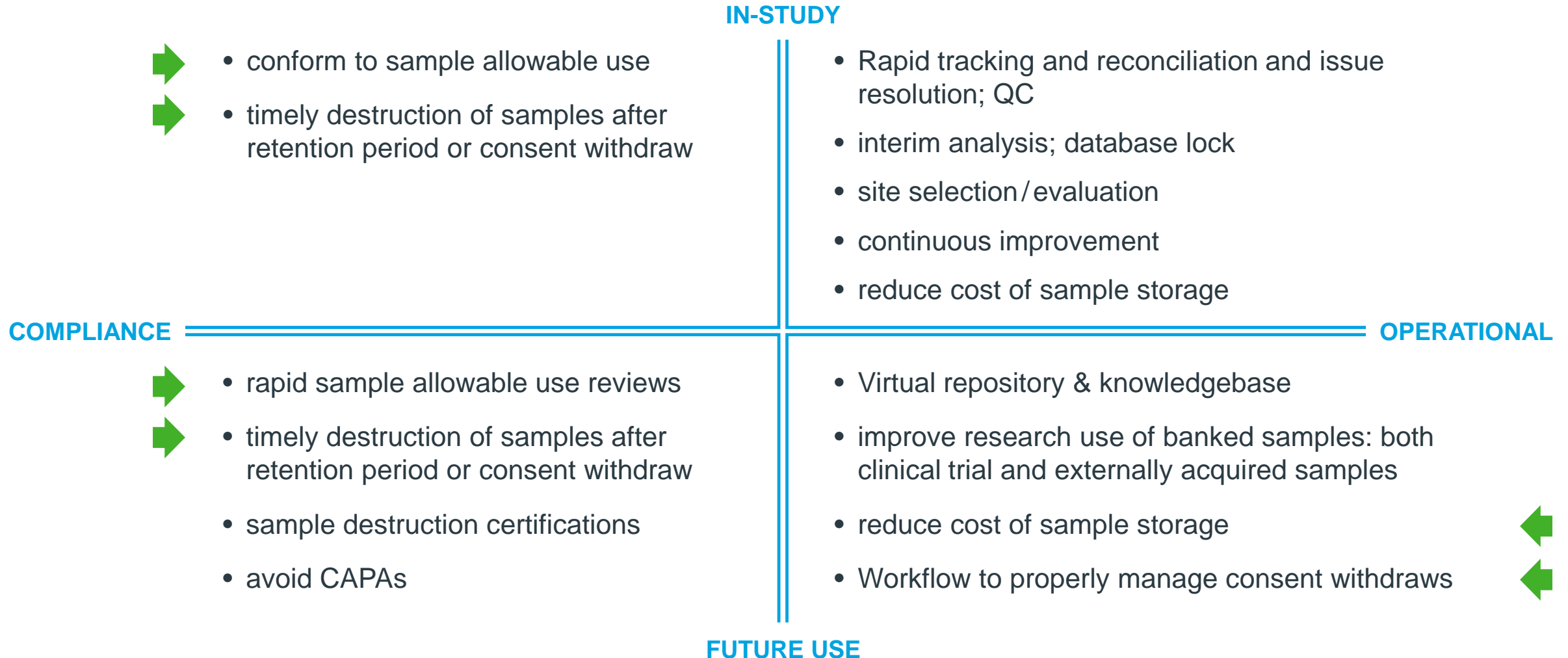
*This sponsor determined that the 'street' value of a sample that is fit-for-purpose is about **\$5,000**.  
(\$5000 X 600,000 = \$3,000,000,000)*

*It takes at least **15** minutes to enter this data – after the ICFs are pulled from TMF, or about **150,000** hours for **600,000** samples...*

# Consent → Subject → Sample → Data → Drug



# Value of Properly Tracking Samples and Consents



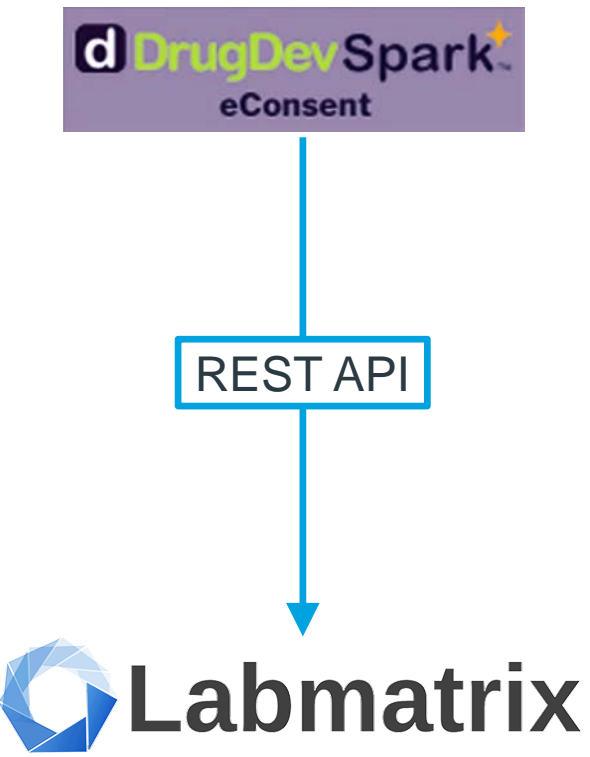
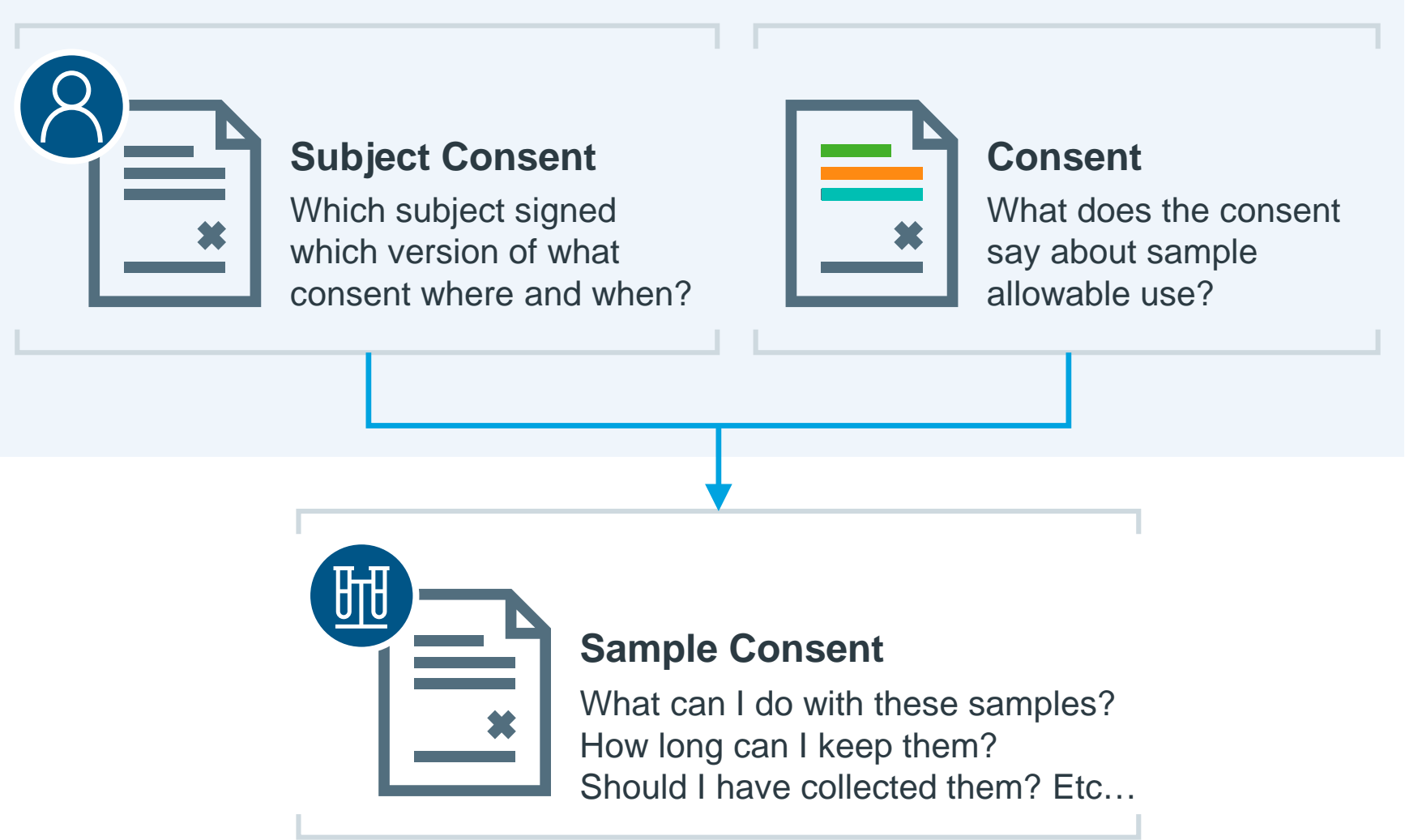


# How to leverage your clinical specimen assets?

Is not about # samples you store

Is about # samples you effectively use  
...or destroy

# eConsent Integration





# Consent - Key Concepts



CONSENT

# Consent - Key Concepts



STUDY



SITE



SAMPLE



COUNTRY



SUBJECT

# Hierarchical Consent Example

## Consent Configuration:

Level	Consent Type	Country	Site	Storage Duration	Genetic Study
Study	Main			15	Yes
Country		United Kingdom		10	
Site	Main	United Kingdom	100	5	No
	Main	United Kingdom	101		No
	Main	United Kingdom	102	5	

## In Effect:

- Site 100: 5 year storage; No genetic study
- Site 101: 10 year storage; No genetic study
- Site 102: 5 year storage; Yes genetic study
- Site 103: 15 year storage; Yes genetic study

# Consent Versioning Example in Labmatrix

## Consent Configuration:

Site	Consent Type	Start Date	End Date	Storage Duration	Genetic Study
100	Main	1/1/2015	12/31/2015	10	No
100	Main	1/1/2016		11	Yes
101	Main	3/1/2015		12	Yes

## Subject Consent:

Site	Subject	Consent Date	Consent Type	Withdrawn
100	100-001	5/5/2015	Main	No
100	100-002	3/5/2016	Main	No
101	101-001	6/1/2015	Main	No

## In Effect:

Site	Subject	Consent Date	Consent Type	Storage Duration	Genetic Study
100	100-001	5/5/2015	Main	10	No
100	100-002	3/5/2016	Main	11	Yes
101	101-001	6/1/2015	Main	12	Yes

# Finally...

**Demo-Study-2** | Edit

General Collection Plan Routing Plan Study Consents Study Sites Study Visit Plan Study Issues Timepoints Forms Subjects Biomaterials Reports

Unassigned Samples

CTST

- 201.01 - Biomaterial Collection Plan
- 202.02 - Actual Biomaterial Collection
- 203.01 - Actual Biomaterial Collection ( )
- 204.01 - Current Biomaterial Inventory
- 205.02 - Reconciliation by Subject
- 205.02c - Reconciliation by Subject with
- 205.02opt - Optional Collections
- 205.03 - Reconciliation Summary by Site
- 205.03a - Reconciliation Summary by Subject
- 205.04 - Reconciliation Summary by Visit
- 206.01 - Allowable Use of Biomaterials
- 207.01 - Projected Subject Visits
- 208.01 - Projected Collections
- 209.01 - Biomaterial Movement
- 211.01 - Routing Reconciliation Summary
- 214.01 - Effective Consent Parameters
- New 205.02 - Reconciliation by Subject
- New 205.03 - Reconciliation Summary by Subject
- New 205.04 - Reconciliation Summary by Visit

CTST \*

- 202.99 - EDC Reported Collections
- 205.08 - Reconciliation By Subject - Opt
- 205.09 - Reconciliation by Country and
- 205.99 - Reconciliation to EDC By Subject
- 208.02 - Collected plus Projected Sample
- 210.01 - Routing Reconciliation By Biomaterial
- 210.02 - Biomaterials Shipped Later than
- 211.01 - Lab Shipment Reconciliation

	Site Number	Subject Code	Visit Name	Assay Type	CTST Code	Biomaterial Type	Biomaterial Name	Consent Type	Consent Date	Protocol	Storage Duration	Based On Date	Geographic Restriction	Study Indication
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0003	Day 60	Pharmacokinetic	PK	Serum	Study-2 003-TEST0003PK224	Main Study	11/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Screening	Standard Lab Tests	CBC	Whole Blood	Study-2 003-TEST0004_46430162	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Screening	Standard Lab Tests	CBC	Whole Blood	Study-2 003-TEST0004_46430163	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 1	Biopsy	Core Biopsy	Muscle	Study-2 003-TEST0004_46430166	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 300	Biopsy	Core Biopsy	Muscle	Study-2 003-TEST0004Core Biopsy240	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 31	Biopsy	Core Biopsy	Muscle	Study-2 003-TEST0004_46430167	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 1	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004_46430164	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 150	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004Flow237	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 180	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004Flow238	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 300	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004Flow241	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 31	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004_46430165	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 60	Flow Cytometry	Flow	Whole Blood	Study-2 003-TEST0004Flow234	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Screening	Genetic Analysis	Genotyping	DNA	Study-2 003-TEST0004_46430170	Genetic Future Use	12/11/2015	0	15	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 1	Pharmacokinetic	PK	Serum	Study-2 003-TEST0004_46430168	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 120	Pharmacokinetic	PK	Serum	Study-2 003-TEST0004PK236	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 180	Pharmacokinetic	PK	Serum	Study-2 003-TEST0004PK239	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 31	Pharmacokinetic	PK	Serum	Study-2 003-TEST0004_46430169	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0004	Day 60	Pharmacokinetic	PK	Serum	Study-2 003-TEST0004PK235	Main Study	12/11/2015	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0006	Screening	Standard Lab Tests	CBC	Whole Blood	Study-2 003-TEST0006_46430179	Main Study	1/11/2016	0	10	Study Closure Date	No	Yes
	Study-2 003	DEMO-Study-2 - Study-2 003-TEST0006	Screening	Standard Lab Tests	CBC	Whole Blood	Study-2 003-TEST00							



# Benefits



## Reduction in Risk

Improvements to monitoring and management of consents will reduce the company's exposure to potential compliance risk in the use of samples for exploratory purposes. Furthermore, a near real-time holistic view will reduce the time to respond to regulatory questions.



## Reduction in Costs

Consolidating sample, patient and trial information will improve the usage of samples. Exploratory samples were underutilized, because of consent issues and because a holistic view of sample information is not available. Improving sample usage will reduce additional sample procurements, resulting in significant savings (25%-35%) to the current annual multimillion dollar sample procurement budget. Increased operational efficiency (due to fewer sample issues) also improves timeline and reduces cost.

# Integrating eConsent and Consent Lifecycle Management

- Joint Offering: automated codification (parameter generation) from eConsent platform to Labmatrix
- The eConsent data is transferred to the Labmatrix biobank management system
- Consent Variables are associated with samples and stored in the Labmatrix database for each study, subject, and sample
- Automated alerts for storage deadline adherence
- Alerts and reports provided via portal
- Consent withdrawals entered; sample destruction notification included



# Thank You

- Eric Delente
- President, Patient Consent, DrugDev (an IQVIA company)
- [Eric.Delente@DrugDev.com](mailto:Eric.Delente@DrugDev.com)
- Dr. Jian Wang
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