BRICS Seminar

BRICS

BRICS Overview

Moving clinical trials research forward, the NIH Biomedical Research Informatics Computing System (BRICS) as an effective unified informatics platform

Biomedical Research Informatics Computing System (BRICS) July 8th, 2025











NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE





Logistics

Audio/Video	Please keep your microphone muted
Recording	 Today's session will be recorded Will be posted on the BRICS website: <u>https://brics.cit.nih.gov/demo</u>
Questions & Comments	 We encourage your participation today Please use the chat for questions & comments. The chat will be monitored throughout today's demo. There will also be time <u>after each speaker</u> and at the <u>end</u> of the demo to ask live questions.







Time	Торіс	Speaker(s)
9:05 AM-9:10 AM	BRICS Overview	Dr. Matthew McAuliffe
9:10 AM-9:55 AM	Moving clinical trials research forward, the NIH Biomedical Research Informatics Computing System (BRICS) as an effective unified informatics platform	Dr. Dominic Nathan
9:55 AM-10:00 AM	Closing Remarks	Dr. Matthew McAuliffe



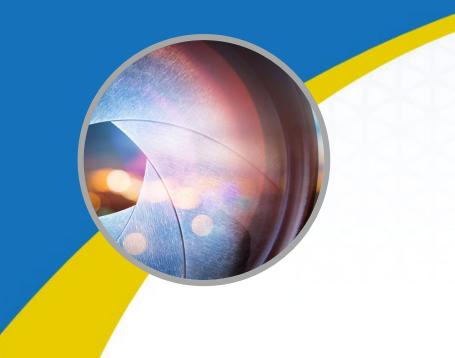




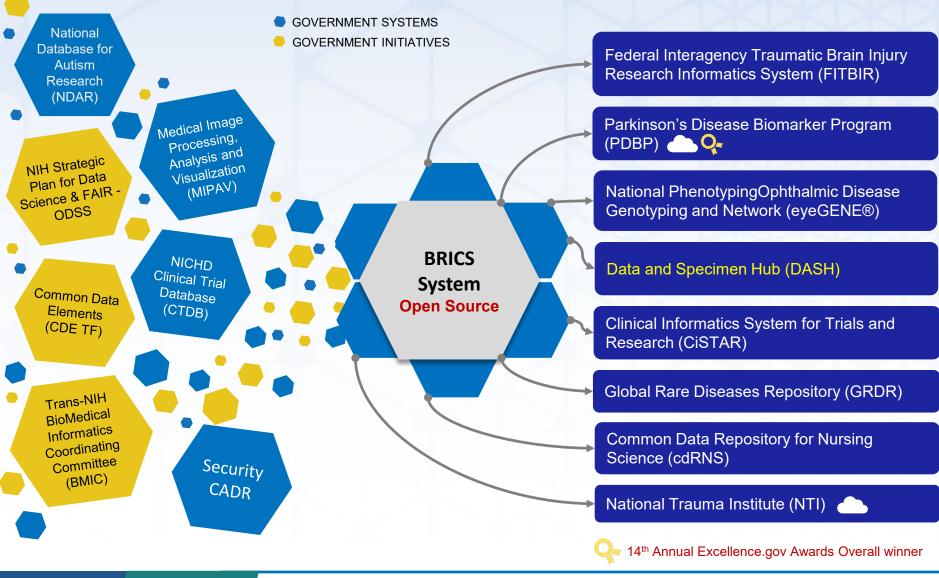


BRICS Overview

Dr. Matthew McAuliffe



BRICS Biomedical Research Informatics Computing System Building from existing projects





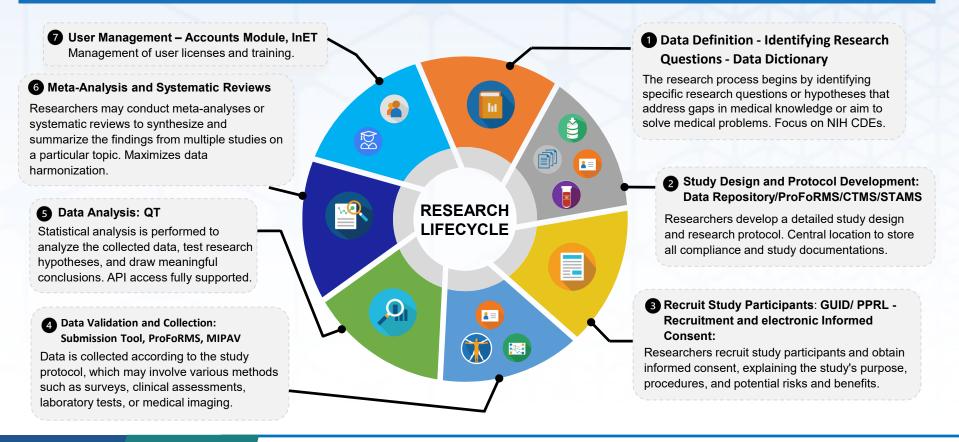
NIH





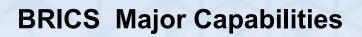
Intramural Clinical Research at NIH

The future of Intramural Clinical Research at NIH will be enabled through integrated, **end-to-end platforms** for clinical trial management which allow investigators to design, conduct, and manage studies easily and securely. Integrated tools support data sharing and management, as well as streamlined regulatory compliance and reporting. – Digital NIH











Provides a fully functional Data Dictionary that supports **Common Data Elements (CDEs)** and automated curation using the CDEs as well as Unique DEs.

- a. OMOP x.0 version CDEs
- b. BTRIS support
- c. UMLS concept IDs
- d. FHIR profiles -> CDEs
- e. CDISC

BRICS



Supports **FHIR** connectivity Prototype using HAPI server.



Core Trust Seal certified – (FITBIR, working on NEI BRICS)



Uses a hashcode ID system (**PPRL**), called the **GUID**, to support deidentified data collection across data types and studies. **DOI** (Datacite) generation



Support **all data** types. Automated DAC and **Biospecimen** Review Access Committee (BRAC) support



Deployable on-prem as well as the Cloud (e.g. STRIDES).



Electronic data collection (eCRF – ProFoRMS) that is <u>21CFR part 11</u> compliant. Provides access to PROMIS tools, PSR, offline collection ...



Al enabled translation/mapping tool source data to BRICS instance data consistent with CDEs. Al augmented repository search



Secure: **FISMA moderate – 800-53 rev 5 certified in Aug 2024**. Nightly scans. Penetration testing.



RAS enabled Globus enable BRICS systems supported: https://brics.cit.nih.gov/partners







Learn more about BRICS at: https://brics.cit.nih.gov

The NIH Biomedical Research Informatic Computing System (BRICS): a unified platform supporting the full lifecycle of clinical trials research

Dominic E. Nathan, PhD

8 July 2025











NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKI Biomarkers Program





Dr. Dominic Nathan, Bioinformatics Director for the Mlitary Traumatic Brain Injury Initiative (MTBI2), [contractor]

Dr. Nathan manages inter-agency collaborative research information systems and resources to support DoD and NIH research, clinical trials, and various repositories. He has developed informatics infrastructure and tools in an accelerated timeline to meet critical needs. Dr. Nathan completed post-doctoral training at Walter Reed National Military Medical Center, the Uniformed Services University of the Health Sciences and the NIH. Dr. Nathan is an adjunct professor at the USUHS and a research collaborator at the NIH. His past experience includes developing and managing an enterprise IT program for a fortune 500 company, and managing a stroke research lab at the VA. Dr. Nathan serves on several national and international biomedical engineering advisory Center for Service Service Service Service of Health





Disclaimer

"The presenter has no conflicts of interest to disclose. The views, information or content, and conclusions presented do not necessarily represent the official position or policy of, nor should any official endorsement be inferred on the part of, the Uniformed Services University, the Department of Defense, the U.S. Government, Department of Health and Human Services, National Institutes of Health, or the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc."









Clinical Research

- 1. Observational studies
 - Goal to monitor individuals
 - Does not test a medical intervention
- 2. Clinical trials
 - Goal to test an intervention in humans
 - New drug, device, therapy, procedure, diagnosis, etc.
 - Phase 1,2,3,4 trials
 - Based on sample size
 - Objectives efficacy, safety, side effects, dosage
 - A positive FDA review during phase 3 provides approval for experimental drug or device.

Referenced from https://www.nia.nih.gov/health/clinical-trials-and-studies/what-are-clinical-trials-and-studies









Clinical Trials Landscape Evolution

1. Increase in:

- 1. Data types (labs, surveys, clinical notes, imaging, omics, etc.)
- 2. Sources of data (surveys, wearable devices, biomarkers, clinic, etc.)

2. Changes in data processes:

- 1. Study management (design, oversight, reporting), sponsor review, and regulatory compliance
- 2. Research subject management (consenting, enrollment, adverse events, protocol compliance)
- 3. Data management collection, curation, storage, access, analysis

3. Shift in data lifespan:

- 1. Funding agencies and journals are increasingly mandating data sharing
- 2. Adoption of the data curation standards i.e. findability, accessibility, interoperability and reusability (FAIR)









Summary PAIN points

- 1. A unified solution or standards are absent from the NIH.
- 2. Compliant digital capabilities to manage research PII and PHI in studies and clinical trials are absent at the NIH.
- 3. Many siloed and disparate systems in use.
- 4. High dependency on manual processes (master list management, auditing, randomization, QA/QC, etc.).
- 5. Variable data collection and management practices often non-confirming to existing standards.
- 6. High level of effort (Financial cost, compliance and personnel resource).
- 7. Difficulty meeting required government data sharing requirements
- 8. Low institute return on investment (ROI), poor sustainability, loss of data and continuity





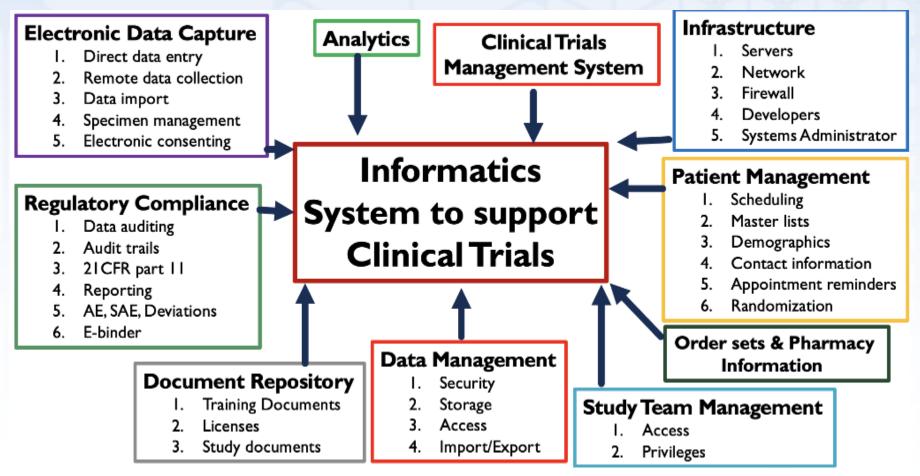


What is needed to support Clinical Trials and Research?

BRICS

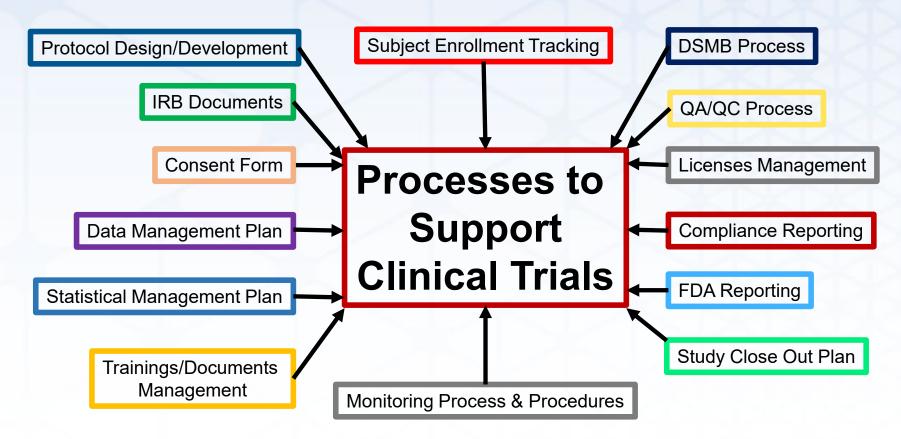
Biomedical Research

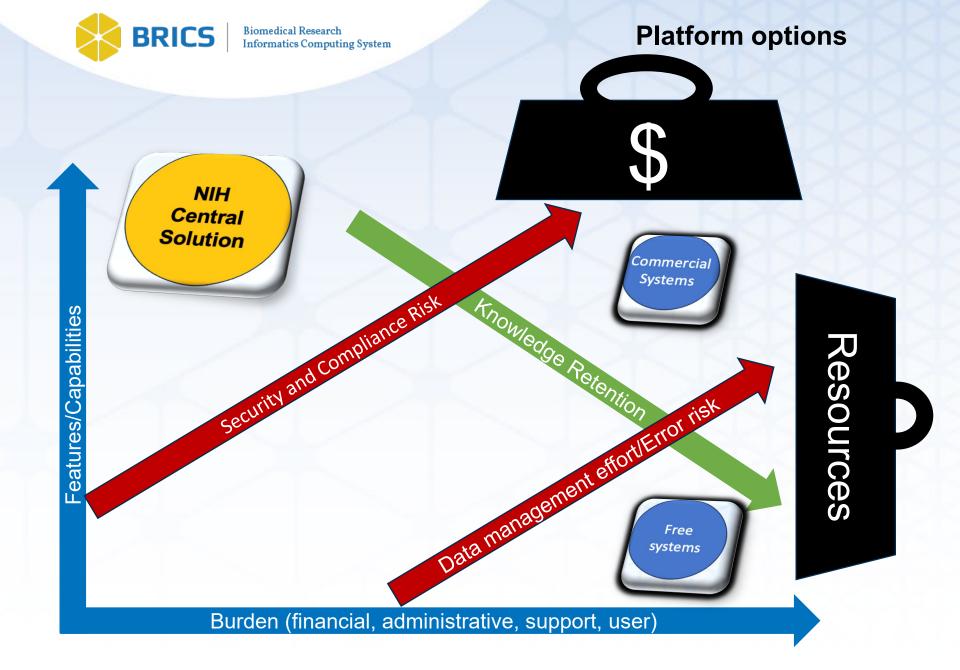
Informatics Computing System





What is needed to support Clinical Trials and Research?













NIH - BRICS

- 1. Collaborative DoD NIH platform
- 2. Secure comprehensive web-based electronic data capture, storage, analytics and sharing platform
- 3. Defined and documented data structures, conforms to NIH CDE guidelines for data collection and harmonization
- 4. Has interoperability inbuilt FHIR, OMOP, UMLS, CDISC mappings
- 5. Available API for more dynamic data analysis including AI and ML applications.
- 6. Role based permissions and access
- 7. Fulfills regulatory compliance needs
- 8. Inbuilt subject management capabilities
- 9. Ability to import and host any data
- 10. 21 CRF Part 11 compliant, and meets other federal regulatory requirements for clinical trials research
- 11. Government Solution Reduce cost, re-use technology/resources, accelerate science



NIH BRICS Use





Module Overview

Plug & Play Components for the Full Research Lifecycle

BRICS offers researchers a secure platform and a suite of web-based and downloadable tools that can be shared across disease categories or deployed and branded independently, depending on the needs of your program.



ProFoRMS

Module for electronic data capture, subject management, and scheduling



Data Repository

Functionality to define and manage studies and contribute or store data



Account Management

Create, approve, and manage user accounts.

InET

Application for assigning new training, tracking current training, licenses and compliance.





Global Unique Identifier Cross-study Privacy Preserving Record Linkage System (PPRLS)

Query

Tool enabling filtering of submitted data using data elements and form structures

Specimen Tracking and Management System (STAMS)

STAMS provides the path to container storage locations (e.g. freezer) that guides the user to the specific container and sample.

BRICS Imaging Tools

Enables quantitative analysis and viewing of medical images, such as PET, MRI, CT, or microscopy.

Forum



Discussion board for account users for posting messages, interacting with each other, and discussing various topics



Data Dictionary

Intelligent clinical research data dictionary that supports cross-system exchange



Meta Study

Workspace that aggregates data and metadata across studies for reference



Clinical Trials Management System (CTMS)

Management of Clinical Trials by enabling insight into trial performance.



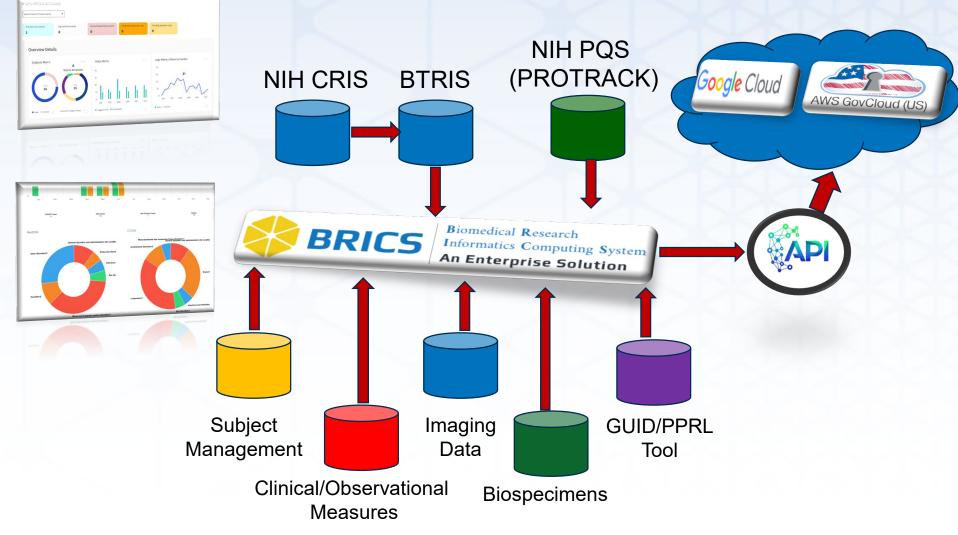
Data Mapping & Transformation

Tool that translates data into CDEs used by BRICS to prepare for validation



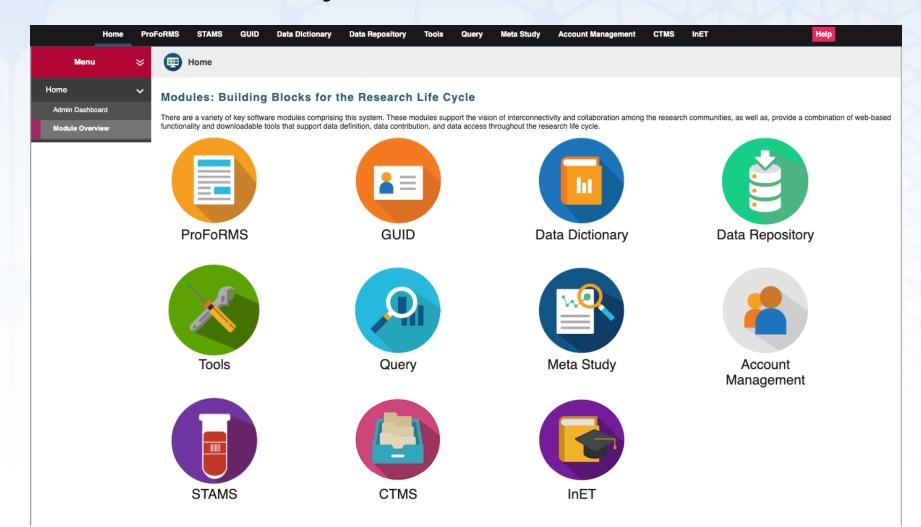


NIH BRICS





System Overview





Data Collection Process

Initial Setup:

- 1. Visit
 - 1. List of eforms
 - 2. Auto-populated data elements

Collection Methods:

- 1. Direct Data Entry
- 2. Patient Self Report
- 3. Offline Collection OSTRICH
- 4. Survey
- 5. Multi-collect eform

Data Collection in PROFORMS

L	_
Welcome OSTRICH is an offline data collection app to interact with CISTAR platforms to collect and state clinical data.	
Connect to CISTAR Stay Off-line	
Use your CISTAR login credentials to connect to the system remotely.	
User Name	
Password	
Login	
Login	

- 1. Collection occurs via electronic case report forms (eCRFs/eforms)
- 2. E-forms:
 - Standard forms
 - Non-standard/unique forms
- 3. Includes PROMIS library and measures (CAT assessments)
- 4. In built workflow for QA/QC individual form locking
- 5. Full audit trail for data collection
- 6. Output data in PDF or CSV format
- 7. Clinical data (Direct pull from BTRIS)
 - Consent information
 - Subject demographics
 - Clinical data assessments, labs, etc.
- 8. Offline data collection capabilities









Electronic Case Report Form - Example

NSI	
Data Element : NSI.FeelingDizzyNum	
1. Feeling dizzy	
Data Element : NSI.LossBalanceNum	Ø Ø
2. Loss of balance	
Data Element : NSI.PoorCoordClumsyNum	Ø Ø
3. Poor coordination clumsy	
Data Element : NSI.HeadachNum	
4. Headaches	
Data Element : NSI.NauseaNum	
5. Nausea	
Data Element : NSI.VisionProblBlurSeeingNum	
6. Vision problems blurring trouble seeing	



Form Structure- Example

NSI (Appears Exactly 1 Time)

#	TITLE	SHORT DESCRIPTION	VARIABLE NAME	REQUIRED?	ТҮРЕ
1	Feeling dizzy number	Document Feeling dizzy number	FeelingDizzyNum	Recommended	UDE
2	Loss of balance number	Document Loss of balance number	LossBalanceNum	Recommended	UDE
3	Poor coordination clumsy number	Document Poor coordination clumsy number	PoorCoordClumsyNum	Recommended	UDE
4	Headaches number_	Document Headaches number	HeadachNum	Recommended	UDE
5	Nausea number	Document Nausea number	NauseaNum	Recommended	UDE
6	Vision problems blurring trouble seeing number	Document Vision problems blurring trouble seeing number	VisionProblBlurSeeingNum	Recommended	UDE
7	Sensitivity to light number	Document Sensitivity to light number	SensitivityLightNum	Recommended	UDE
8	Hearing difficulty number	Document Hearing difficulty number	HearingDifficultyNum	Recommended	UDE
9	Sensitivity to noise number	Document Sensitivity to noise number	SensitivityNoiseNum	Recommended	UDE
10	Numbness or tingling on parts of my body number	Document Numbness or tingling on parts of my body number	NumbnessTinglingBodyNum	Recommended	UDE
11	Change in taste and/or smell number	Document Change in taste and/or smell number	ChangeTasteSmellNum	Recommended	UDE
12	Loss of appetite or increased appetite number	Document Loss of appetite or increased appetite number	Loss_Incre_AppetiteNum	Recommended	UDE
13	Poor concentration can't pay attention easily distracted number	Document Poor concentration can't pay attention easily distracted number	PoorConcentDistractNum	Recommended	UDE
14	Forgetfulness can't remember things number	Document Forgetfulness can't remember things number	ForgetfulnessNum	Recommended	UDE
15	Difficulty making desisions number	Document Difficulty making desisions number	DiffMakeDesisionNum	Recommended	UDE

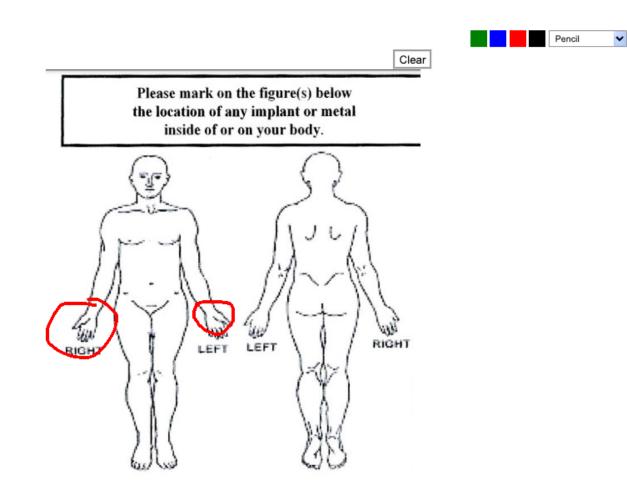


Data Element - Example

Status:	Published	Data Type:	Numeric Values	
/ariable Name:		Minimum Value:	0	
	FeelingDizzyNum	Maximum Value:	4	
Definition:	Document Feeling dizzy number			
Guidelines &		Mapping to external die	<u>ctionaries</u>	
References:				
Preferred Question 1	Fext: 1. Feeling dizzy			
lotes:				
opulation:	Adult and Pediatric			
Input Restrictions:	Free-Form Entry			



Example E-Form - Drawing





Example E-Form – Electronic Consent/Signature

SIGNATURE OF PARTICIPANT	
Data Element : SIGNATURE OF PARTICIPANT.CmpitlegalFiLaNameName	00
Complete legal first and last name:	Jane Doe
Data Element : SIGNATURE OF PARTICIPANT.eSignature	00
eSignature	Dave Dol
Data Element : SIGNATURE OF PARTICIPANT.GeneralDate	00
Date	2024-02-08 05:41
SIGNATURE OF INDIVIDUAL ADMINISTERING CONSENT	
Data Element : SIGNATURE OF INDIVIDUAL ADMINISTERING CONSENT.CmpltlegalFiLaNameName	
*Complete legal first and last name:	John Doe
Data Element : SIGNATURE OF INDIVIDUAL ADMINISTERING CONSENT.eSignature	00
eSignature	Forder



Example E-Form – BTRIS Lab Pull

	MRN: 7387283 Visit Type: DEMO 8 FEB		
Legend ••• Not Started () In Progress	Acute Panel Labs test to pull information from BTRIS for the acute panel, testing 3 elements, sodium, chloride and p	otassium	
Completed			Get All BTRIS Data
Locked Required	Main		
eForms For This Visit Type	Global Unique ID (GUID):	CISTAR_INVAA977XTQ	
Acute Panel Labs			
BTRIS Lab Panels BTRIS test V2	Participant MRN:		



Example E-Form – BTRIS Lab Pull

tions Havin	g BTRIS Data					
	Acute Lab Panel	Value:				
Showing 1 t	to 5 of 5 entries (5 rows selec	ted of 5)		First Prev	ious 1 Next	Last
Get Latest E	Get BTRIS Data					
Get BTRIS o	lata from specific date range					
	Start Date		End	Date		
2024-02-08	00:11		2024-02-15 00:11			
		Get BTRIS data in	Selected Date Range	Update Multiple	Values	
					Update Mu	ultiple Val
						Clos



Patient Management – Subject Profile

Patient Management:

- 1. Subject Profile
 - 1. Demographics information
 - 2. Contact information
 - 3. Diagnosis information
- 2. Randomization
- 3. Protocol Status
- 4. Attachments
- 5. eForm Completion Status
- 6. Protocol compliance status
- 7. GUID Global Unique Identifier



Patient Management – Subject Profile

ProFoRMS	Protocol :	001-007-0123	•		
[-] Subject Information					
MRN*	7387283		First Name [*]	dcrione	
Date of Birth	1960-05-18		Middle Name	TEST	
	Get From BTRIS		Last Name*	nihcctest	
			Sex	Male	~
Birth Country		~	Birth City		
			Race	Other	~
Ethnicity	Not Latino or Hispanic	~	Home Address 1	777 PARL PL	
			Home Address 2	APT. 3421	
E-Mail			City	THUNDER	
Home Phone	773-892-8767		State	Alabama	~
Work Phone			Country	United States of Americ	~
Mobile Phone			Zip	37478	
Cell Phone Service Provider		~	Notes		



Patient Management – Subject Profile

Get From Subject Info	MRN 3746453	First Name Olivia	Last Name	John	Get From BTRIS
Functions Abou	ıt				
Required Fields 1. Complete legal given (first) n		Please Enter Subject's Information (PII)		Please Confirm (Re-Enter) the Subject's	Information
2. Does the subject have a mide	dle name?	No	~	No	~
3. Complete additional (middle)	name or names at birth				
4. Complete legal family (last) n	ame of subject at birth				
5. Day of birth [1-31]					
Month of Birth			~		∼
7. Year of Birth [####]					
 Name of city/municipality in v Country of Birth 	vnich subject was born	Do not use abbreviations (e.g. Saint Louis not St Lo		Do not use abbreviations (e.g. Saint	
Optional Fields			~		~
10. Physical sex of subject at bir	th [M/F]		~		v
11. Government Issued or Natio	nal ID				
12. Country Issuing Government	t-Issued or National ID		~		×
GUID	Generate GUID	Copy GUID Copy GUID and PII Clear/Net	w		
GUID or Pseudo-GUID*	CISTARLU953XT5	VALID			
[-] Protocol					
Please enter protocol information					
Subject ID *	subject021				
Subject Site	NIH	~			
Status in Current Protocol:	Active	~			
Protocol Enrollment Date	Format: YYYY-MM-DD				
[+] Attachments					

Cancel

Reset



Subject Management – Subject Status

[-] Protocol			
Please enter protocol information			
Subject ID *	subject021		
Subject Site			
	- Select One -		
Status in Current Protocol:			
Protocol Enrollment Date	Completed		
l	Withdrawn		
[+] Attachments			
			Save Reset Cancel



Patient Management – Randomization

Control options:

- 1. Screening eForm
- 2. Automatic assignment
- 3. Manual assignment

Randomization list options:

- 1. Simple direct sequence
- 2. Factor ex. Male/female
- 3. Location balancing Site 1, Site 2, Site 3



Patient Management – Randomization List Example

-

Import

InActive

Search:

Randomization List

Please select a file to import. Note: The selected file must be in CSV format.

For reference purposes, you may download the Randomization Import Template.

File:

SEQUENCE	GROUP NAME	GROUP DESCRIPTION	GROUP CATEGORY	🔶 SITE NAME	\$
1	Group 1	Treatment			
2	Group 1	Treatment			
3	Group 1	Treatment			
4	Group 1	Treatment			
5	Group 1	Treatment			
6	Group 1	Treatment			
7	Group 1	Treatment			
8	Group 1	Treatment			
9	Group 1	Treatment			
10	Group 1	Treatment			
11	Group 1	Treatment			



Patient Management – Randomization Eligibility

Randomization		
Data Element : Randomization.randomGrpCatChoTyp	Ø Ø	
Randomization group category:	○ 1. Male <=45 and <=14	
	○ 2. Male <=45 and >14	
	○ 3. Male >45 and <=14	
	○ 4. Male >45 and >14	
	○ 5. Female <=45 and <=14	
	○ 6. Female <=45 and >14	
	○ 7. Female >45 and <=14	
	○ 8. Female >45 and >14	
Data Element : Randomization.randomEligibility	Ø Ø	
Eligible for randomization?	○ No	
	⊖ Yes	

Patient Management – Randomization Assignment

Select	a subject to perfor	m an action.							
Colu	ımn Visibility 🔻	Edit / Delete View Patient Info	View Audit More	e Actions Randor	Download / Export		S	earch: 🗸	
	MRN	🜲 SUBJECT ID	🜲 LAST NAME	븆 FIRST NAME	ENROLLMENT DATE	STATUS ♦ SITE		RANDOMIZATION GROUP DESCRIPTION	¢
	7387283	CISTAR_INVAA977XTQ	nihcctest	dcrione		Active			
	11-N-0084-Sub	subj001	11-N-0084-Sub	11-N-0084-Sub		Active			
	1985198	1234567	Jones	Thomas		Active			
	7657377	CISTAR_INVWF329LUC	nihcctest	dcrinotecetera		Active			
	467	subj002	Test	Test2		Active			
	39874	subject020	Adams	Samuel		Active NIH	4		
	3746453	subject021	John	Olivia		Active NIH	H Group 1	Treatment	
	38167309167	CISTARRR192RT9	Smith	Edward		Active			

Showing 1 to 8 of 8 entries (0 row selected of 8)



Patient Management – Subject Scheduling

								,	Visit Type	Status	
							(O BTRIS (demo	Scheduled	
MRN *	7387283_dcrione ONE nihcctest						O Unpubli	shed demo eform	Scheduled		
Select All MRNs								O Visit 1		Scheduled	
Select MRNs from List								\bigcirc		Scheduled	
Date and Time [*]	2024-02-08			(Baseline	e	Scheduled	
End Date and Time	2024-02-08)1:12		0	February	2024	~	0	few items	Scheduled	
Visit Type [*]	ſ							Sa	Blood Work test	Scheduled	
Comments / Notes	Baseline							3	assessment	Scheduled	
	eseeinn 1						[10			
To allow the subject to self-report, send this URL to the subject with GUID CISTAR_INVAA977XTQ: https://cistar-demo.ninds.nih.gov/proforms/selfreporting/list? token=yqe5efeaj5rwhb5z											
	, 1-	sereajorn									
				Ser	nd Ema	il	Ser	nd S	5MS	Сору	Cancel
7387283 nihcctest	dcrione	DEMO 8 FEB	2024.02.08		i5nwhh5z No		Ser		5MS	Copy 2024-02-23	Cancel



Electronic Data Capture – Direct Data Entry

Menu	×	ProFoRMS	Protocol : 001-007-0123	¥					
ProFoRMS Home	>	Please select by subject, by s	Please select by subject, by subject form or by non-subject eForm from the drop-down, and then perform an action.						
Manage Subjects	>	View By Subject (MRN)	•						
Manage Data	~	Upcoming Collections							
Collect Data		View list of data, search for a	data, or select data to view or perform an action.						
My Collections		Start Data Collection Da	ata Entry Summary		Search: -				
Audits and Reviews		MRN	SUBJECT NAME	🜲 VISIT TYPE	SCHEDULED VISIT DATE				
Import Data		39874	Samuel Adams	Randomization Eligibility	2024-02-08 06:24				
Deleted Collections		1985198	Thomas Jones	DEMO 8 FEB	2024-02-08 00:20				
Attachments in Data Col	llections	7387283	dcrione nihcctest	DEMO 8 FEB	2024-02-08 00:11				
Manage Protocol	>	3746453	Olivia John	Visit 1	2022-08-26 00:00				
Reports	>	1985198	Thomas Jones	MoCA test	2022-08-04 16:34				
Logs	>	7387283	dcrione nihcctest	demo a few items	2022-07-19 00:00				
Site Administration	>	1985198	Thomas Jones	skip test	2022-07-11 12:19				
Narrow your searc	ch	1985198	Thomas Jones	Conmed	2022-07-06 11:52				
Clear Filters		7387283	dcrione nihcctest	evening assessment	2022-07-01 16:25				
		7387283	dcrione nihcctest	Unpublished demo eform	2022-04-25 11:16				
MRN	\sim	1985198	Thomas Jones	Unpublished demo eform	2022-04-25 11:09				
		7657377	dcrinotecetera nihcctest	000428 Blood Work test	2021-07-23 11:33				
Scheduled Visit Date	~	7387283	dcrione nihcctest	000428 Blood Work test	2021-07-23 11:33				
YYYY-MM-DD		7387283	dcrione nihcctest	Baseline	2021-07-20 12:09				
		1985198	Thomas Jones	Visit 1	2021-07-07 15:55				



Electronic Data Capture – Direct Data Entry

me frame related context (if any) to which the questions were answered:	○ After injury	
	○ At time of assessment	
	⊖ Before injury	
	○ Last 2 weeks	
	◯ Last 6 months	
	◯ Last 24 hours	
	◯ Last month	
	◯ Last week	
	⊖ Last year	
	○ Prior to death	
	◯ Since the last interview	
	◯ Time of injury	
	◯ Other, specify	
ther, specify		
om whom/ what were the medical history data obtained	Brother	
	Chart/Medical record	
	Daughter	
	Family, specify relation	
	Father	
	□ Friend	
	□ Mother	
	Participant/subject Previous	
	☐ Sister ☐ Son	
	Son Spouse	
	 Other, specify 	
ther, specify		



Electronic Data Capture – Patient Self Report



Listed below are the forms that are available to you for completion. These forms will be available from 01/24/2024 until 02/23/2024.

- To begin, click on the form name.
- You can click Save at any time and come back to complete the survey.
- For Computer Adaptive Test (CAT) surveys, you will not be able to save your progress, and will need to complete the survey in its entirety. Further, CAT surveys cannot be edited once they are submitted. CAT surveys are identified via a notation at the top of the survey.
- At the end of the form, click the Complete button.
- Once you have completed a form, you will see the status change to "complete".
- After a form is completed, you will be unable to edit the form.
- If you are unable to complete these forms within the timeframe, please contact your study coordinator.

My Forms

		Search: -
EFORM NAME	🔶 STATUS	🔶 LAST UPDATED
Neurobehavioral Symptom Inventory (NSI)	Not Started	Not Started
Pittsburgh Sleep Quality Index (PSQI)	Not Started	Not Started
PTSD Checklist for DSM-5 (PCL-5)	Not Started	Not Started
Chausing 1 to 2 of 2 antrias (0 row calented of 2)		

Showing 1 to 3 of 3 entries (0 row selected of 3)

First Previous 1 Next Last



Data Management – My Collections Table

ProFoRMS Home								
ProFoRMS Home								
Manage Subjects	Data Collection							
Manage Data 🗸 🗸	Select a form to view or perform ar	action						
Collect Data	Narrow your search							
My Collections								
Audits and Reviews	Column Visibility View Entr	y Edit View Audit Reassign	Delete Entry	Download / Export Adjudicate Refresh		Search:	•	
Import Data			T _≜ VISIT _		🔷 STATUS 🔶		LOCK DATE 🖨	INSTANCE
Deleted Collections		DATE DATE	▼ ТҮРЕ ▼		• • • • •	BY Mersha,	2020-12-28	
Attachments in Data Collections	Test-101 Doe Jane	2020-08-31 19:48 2020-08-31 19:55	Visit 5	PCL5 multi test	Locked	Megdelawit	12:40	1
Manage Protocol	Test-101 Doe Jane	2020-08-31 19:48 2020-08-31 19:56	Visit 5	PCL5 multi test	In Progress	Mersha, Megdelawit		2
Reports >	Test-101 Doe Jane	2020-08-31 19:48 2020-08-31 19:57	Visit 5	PCL5 multi test	Locked	Mersha, Megdelawit	2021-08-31 10:20	3
Logs >	Test-101 Doe Jane	2020-08-31 19:48 2020-09-18 15:10	Visit 5	PCL5 multi test	In Progress	Mersha, Megdelawit		4
Site Administration	Test-101 Doe Jane	2020-08-31 17:30 2020-08-31 17:31	Visit 4	Physiological and Balance Measures - Neurotech	Locked	Mersha, Megdelawit	2020-08-31 17:33	
	Test-101 Doe Jane	2020-09-18 13:44 2020-09-18 13:45	Visit 20	TestForm_6.3V2Release	In Progress	Mersha, Megdelawit		
	Test-120 Doe Jane	2020-09-14 13:29 2020-09-14 13:29	Visit 2	TestForm_6.3Release	In Progress	Mersha, Megdelawit		
	Test-101 Doe Jane	2020-08-31 18:30 2020-10-02 10:58	Visit 2	OLD - Pittsburgh Sleep Quality Index (PSQI) - INVICTA	Locked	Mersha, Megdelawit	2021-07-13 12:22	
	Test-120 Doe Jane	2020-09-14 13:25 2020-09-14 13:26	Visit 11	PCL5 multi test	In Progress	Mersha, Megdelawit		1
	Test-120 Doe Jane	2020-09-14 13:25 2020-09-14 13:27	Visit 11	PCL5 multi test	In Progress	Mersha, Megdelawit		2
	Test-120 Doe Jane	2020-09-14 13:25 2020-10-21 10:35	Visit 11	PCL5 multi test	In Progress	Mersha, Megdelawit		3
	Test-120 Doe Jane	2020-09-14 13:25 2020-10-21 10:36	Visit 11	PCL5 multi test	in Progress	Mersha, Megdelawit		4
	Test-101 Doe Jane	2020-10-29 19:55 2020-10-29 19:58	Visit 11	PCL5 multi test	In Progress	Mersha, Megdelawit		1
	Test-101 Doe Jane	2020-09-08 13:28 2020-09-08 13:29	Visit 10	Alcohol Use Disorders Identification Test - Consumption Questions (AUDIT-C)-Test	Locked	Mersha, Megdelawit	2020-09-08 13:58	



Data Management – Export Options

Collect Data	► Narrow your search	
My Collections		
Audits and Reviews	Column Visibility View Entry Edit View Audit Reassign Delete Entry Download / Export Adjudicate Refresh Search: -	
Import Data		ANCE
Deleted Collections Attachments in Data Collections	Image: Control of the state Date Date <thdate< th=""> Date Date <th< td=""><td></td></th<></thdate<>	
Manage Protocol >	ExcEL - Multiple Sheet ExcEL - Multiple Sheet Locked Mersha, Megdelawit 2021-08-31 10:20 3	
Reports >	Test-101 Doe Jane 2020-08-31 19:48 2020-09-18 15:10 Visit 5 PCL5 multi test In Mersha, Megdelawit 4	
Logs >	Test-101 Doe Jane 2020-08-31 17:30 2020-08-31 17:31 Visit 4 Physiological and Balance Measures - Neurotech Locked Mersha, Megdelawit 17:33	
Site Administration	Test-101 Doe Jane 2020-09-18 13:44 2020-09-18 13:45 Visit 20 TestForm_6.3V2Release In Mersha, Megdelawit	
	Test-120 Doe Jane 2020-09-14 13:29 2020-09-14 13:29 Visit 2 TestForm_6.3Release In Mersha, Megdelawit	
	Test-101 Doe Jane 2020-08-31 18:30 2020-10-02 10:58 Visit 2 OLD - Pittsburgh Sleep Quality Index (PSQI) - INVICTA Locked Mersha. Megdelawit 2021-07-13 12:22	
	Test-120 Doe Jane 2020-09-14 13:25 2020-09-14 13:26 Visit 11 PCL5 multi test In Progress Mersha, Megdelawit 1	
	Test-120 Doe Jane 2020-09-14 13:25 2020-09-14 13:27 Visit 11 PCL5 multi test In Progress Mersha, Megdelawit 2	
	Test-120 Doe Jane 2020-09-14 13:25 2020-10-21 10:35 Visit 11 PCL5 multi test In Progress Mersha, Megdelawit 3	
	Test-120 Doe Jane 2020-09-14 13:25 2020-10-21 10:36 Visit 11 PCL5 multi test In Progress Mersha, Megdelawit 4	
	Test-101 Doe Jane 2020-10-29 19:55 2020-10-29 19:58 Visit 11 PCL5 multi test In Mersha, Megdelawit 1	
	Test-101 Doe Jane 2020-09-08 13:28 2020-09-08 13:29 Visit 10 Alcohol Use Disorders Identification Test - Consumption Locked Mersha. Megdelawit 13:58	
	Test-101 Doe Jane 2020-09-08 13:28 2020-09-08 13:39 Visit 10 NP - Beck Depression Inventory II (BDI-II) - 0118 Locked Mersha. Megdelawit 2020-09-08 13:59	



Data Management - Export Filter

Export Filter

PCL5multitest

Check	Main
	Q: Global Unique ID (GUID) which uniquely identifies the subject:
	Q: Subject ID number:
	Q: Subject's age (recorded in years):
	Q: Visit date:
	Q: Name of the site:
	Q: Is the subject in the case or control arm of the study?
	Q: Additional information (if any):
Check	PCL-5
	Q: How much were you bothered by: Repeated, disturbing, and unwanted memories of the stressful experience?
	Q: How much were you bothered by: Repeated, disturbing dreams of the stressful experience?
	Q: How much were you bothered by: Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?
	Q: How much were you bothered by: Feeling very upset when something reminded you of the stressful experience?
	Q: How much were you bothered by: Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?
	Q: How much were you bothered by: Avoiding memories, thoughts, or feelings related to the stressful experience?
	Q: How much were you bothered by: Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?
	Q: How much were you bothered by: Trouble remembering important parts of the stressful experience?
	Q: How much were you bothered by: Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?
	Q: How much were you bothered by: Blaming yourself or someone else for the stressful experience or what happened after it?
	Q: How much were you bothered by: Having strong negative feelings such as fear, horror, anger, guilt, or shame?
	Q: How much were you bothered by: Loss of interest in activities that you used to enjoy?



Data Management - Attachment Management

Manage Subjects	This report shows the forms that have attachments in data collection.					
Manage Data 🗸 🗸	Download Downlo	bad Attachment/s			Search: -	
Collect Data	SUBJECT ID	EFORM NAME	VISIT TYPE NAME	🔷 ATTACHMENT FILE NAME	🜲 ATTACHMENT SIZE 🛛 🜲	
My Collections	419	V1 Baseline Visit Checklist-INVICTA	15 year eform test	Capture.JPG	163.56 KB	
Audits and Reviews	406	Pre-processed MRI (Raw Data) - INVICTA	Test-Attachment	CiSTARStage6.5.1Release-1_6_21Demo.xlsx	11.82 KB	
Import Data	419	Pre-processed MRI (Raw Data) - INVICTA	MRIUploadTst	test100MB	95.37 MB	
Deleted Collections	424	Pre-processed MRI (Raw Data) - INVICTA	Test-Attachment	CiSTARStage6.5.1Release-12_29_2020.xlsx	11.50 KB	
Attachments in Data Collections	1323	Pre-processed MRI (Raw Data) - INVICTA	Visit1	1.9GiB.zip	1.90 GB	
Manage Protocol	2023	Pre-processed MRI (Raw Data) - INVICTA	MRIUploadTst	CiSTAR Study Monitors Guide_fnl V1.3.docx	1.69 MB	
Reports >	406	PET Scan Upload 1 - 18-03690	Test upload	test100MB	95.37 MB	
	419	PET Scan Upload 1 - 18-03690	Test upload	test100MB	95.37 MB	
Logs >	424	PET Scan Upload 1 - 18-03690	Test upload	test100MB	95.37 MB	
Site Administration	2233	PET Scan Upload 1 - 18-03690	MIR upload test	cnrm.nih.gov_recepit.pdf	49.58 KB	
Narrow your search	426	Document Attachament MBLT	upload testing	testfle2k.txt	2.00 KB	
Clear Filters	426	Document Attachament MBLT	upload testing	testfie1k.txt	1.00 KB	
	428	Document Attachament MBLT	upload testing	testfle1k.txt	1.00 KB	
Subject ID	1					



Regulatory Compliance Tools

- 1. eBinder
- 2. Electronic Logs (examples)
 - 1. Adverse events
 - 2. Delegation of authority
 - 3. Non-compliance
 - 4. Enrollment
- 3. Audit Trail
- 4. Protocol Auditing



Regulatory Compliance - eBinder

🕀 🛅 test main	Current Dir: /Demo test/Institutional Review Board(IRB)/			Audit	Clipboard 0 items
😑 🚞 Demo test					
🗆 🚞 Documents	Upload New Directory Paste Select all Deselect all				
😑 🚞 Study Contact List					
🗆 🚞 Monitoring Visit Lo	Menu Name	Туре	Size	Last Modified	Author
🕀 📴 Screening and Enr	🔁Back	Dir			
🕀 📴 Delegation of Auth	🔚 IRB Roster	Dir	0	2023-04-11 10:39:59	Dominic Nathan
🕀 📴 Site Training Log			-		
🕀 🔚 Serious Adverse E 🕀 🚘 Deviation or Violat	🔚 IRB Submission Log	Dir	0	2023-04-11 10:39:59	Dominic Nathan
Deviation of violat E Unanticipated Adv	IRB Approval Notification	Dir	0	2023-04-11 10:39:59	Dominic Nathan
🕀 📄 Unanticipated Prot	IRB Submissions	Dir	0	2023-04-11 10:39:59	Dominic Nathan
😑 🚞 Personnel		Di	0	2023-04-11 10.39.39	Dominic Nathan
🕀 🚞 Protocol Signature	Approved Protocol	Dir	0	2023-04-11 10:39:59	Dominic Nathan
🕀 📴 Curriculum Vitae	Approved Informed Consent Form	Dir	0	2023-04-11 10:39:59	Dominic Nathan
🕀 🚞 Training Certificate		Di	0	2023-04-11 10.39.39	Dominic Nathan
🕀 🚞 Medical Licenses	Other Approved Study Documents	Dir	0	2023-04-11 10:39:59	Dominic Nathan
🕀 📴 Financial Disclosur					
Institutional Review B					
🕀 📴 IRB Roster					
🕀 📴 IRB Submission Lo					
🕀 📴 IRB Approval Notif					
IRB Submissions IRB Submissions					
🗄 🥁 Approved Protocol					
Approved Informe Give Approved St					
Communication					

🖽 🚘 Communica



Regulatory Compliance – Logs – Adverse Event

Adverse Events Log		
The study team will log Adverse Ev	ents associated with the protocol	
MRN	38167309167 -)
Patient Name	Edward Smith	
Site	NIH	
[-] CTCAE Information		
Select CTCAE	Select CTCAE	
CTCAE Term	Headache × •]
CTCAE Category		
Definition	A disorder characterized by a sensation of marked discomfort in various parts of the head, not confined to the area of distribution of any nerve.	
Navigational Note		
Description	Mild pain	
Grade	1	



Regulatory Compliance – Logs – Adverse Event

[-] MedDRA Information

Select MedDRA	Select MedDRA		
LLT MedDRA Term	Headache - Nervous system disorders	×	•
LLT MedDRA Code	10019211		
SOC MedDRA Term	Nervous system disorders		
SOC Code	10029205		



Regulatory Compliance – Audit Trail

								Export To PD	F Exp	ort to CSV
Data Collection Audit Lo	g									
Protocol Name: Vive Collection Visit Date: 202 Scheduled Visit Date: 202										
Form Summary Status										
Download								Search: 🗸		
NAME			E		ACTION	# OF QUESTIONS ANSWERED		🔶 E-SIGNAT	JRE	+
Wondemagegn, Mahlet		2022-04-	20 17:10		Started					
In Progress Entries								Search: 🗢		
NAME	DATE/TIME	SECTION NAME	DATA ELEMENT NAME	🔶 QUES	STION TEXT		\$ A	NSWERS BEFORE AN	WERS AFTE	R (
Wondemagegn, Mahlet	2022-04-20 17:10	Main	GUID	Glob	al Unique ID (GUID):			CI	STAR_INVVD	953UEW
Wondemagegn, Mahlet	2022-04-20 17:10	Main	VisitDate	Visit	Date:			20	22-04-20 17:0)9
Wondemagegn, Mahlet	2022-04-20 17:10	Main	VisitOTH	Visit	Туре			2		
Wondemagegn, Mahlet	2022-04-20 17:10	Inclusion Criteria	AduitAgeGT18Ind	Adul	lt age >18 years			No		
Wondemagegn, Mahlet	2022-04-20 17:10	Inclusion Criteria	DefiniteProbablePMLInd	Defi	nite or Probable PML			Ye	3	
Wondemagegn, Mahlet	2022-04-20 17:10	Inclusion Criteria	EffectiveBirthControl_Ind	Agre	ement to use effective	method of birth control during and up to 3 months after:		Ye	3	

Adult age >18 years

History of underlying autoimmune disease involving the CNS indicator

Wondemagegn, Mahlet

Nathan, Dominic

2022-04-20 17:10

2024-02-08 06:06

Exclusion Criteria

Inclusion Criteria

HxUnderlAutoDxCNS

AdultAgeGT18Ind

No

Yes

No

BRICS Biomedical Research Informatics Computing System

Regulatory Compliance – Audit Trail

Answers Edited After Being Completed/Locked

Download								Search: 🗸	
NAME A DATE/TIME	SECTION NAME	🔷 DATA ELEMENT NAME	QUESTION TEXT	ANSWERS BEFORE	ANSWERS AFTER	REASON FOR	CHANGE 🔶 FORM	STATUS	🔷 E-SIGNATURE 🛛 🜲
			There a	re no edited answers to disp	ay at this time.				
Showing 0 to 0 of 0 entries	5							Firs	t Previous Next Last
Auditor Comments									
Download								Search: 🗸	
NAME A DATE/TIME	SECTION NAME	E 🛛 🜲 DATA ELEMENT NAME	e 🔶 question	N TEXT 🔶 ANSWEF	IS BEFORE 🛛 🔶 ANS	WERS AFTER	AUDITOR COMMENT	г 🔶	E-SIGNATURE
			There a	are no edited answers to disp	ay at this time.				
Showing 0 to 0 of 0 entries	5							Firs	t Previous Next Last
Sent Emails									
Download								Search: 🔻	
DATE SENT	A SENT T	O 🔶 CARBON (СОРҮ	🔶 EMAIL SUB	JECT	🔶 TRIGGI	ERED ANSWER		\$
				No emails have been se	nt.				
Showing 0 to 0 of 0 entries	3							Firs	t Previous Next Last

Track Downloads

Download	wnload									Search: 👻		
NAME	A DATE/TIME	🜲 EFORM NAME	SHORT NAME	🜲 MRN	🜲 VISIT TYPE	SCHEDULED VISIT DATE	🔶 DATA ENTERED BY	🔷 STATUS	INSTANCEVERSION	\$		
Nathan, Dominic	2023-06-21 12:04	Testing_M	Testing_M	7387283	12 months	2022-04-11 12:59	wondemagegnmg	In Progress				
Nathan, Dominic	2023-06-21 12:05	Testing_M	Testing_M	7387283	12 months	2022-04-11 12:59	wondemagegnmg	In Progress				
Wondemagegn, Mahlet	2023-06-05 13:45	Testing_M	Testing_M	7387283	12 months	2022-04-11 12:59	wondemagegnmg	In Progress				
Wondemagegn, Mahlet	2023-06-05 13:45	Testing_M	Testing_M	7387283	12 months	2022-04-11 12:59	wondemagegnmg	In Progress				



Regulatory Compliance – Protocol Auditing

The followin questions.	The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.									
1. During	Review	er Comme	ent						×	
(Use the Example			Reviewer Comme	ent *				1		
*Hour							Save Comm	ents Verify	Close	
*2. During night? NI					Reviewer Con	nments History				
3. During t	Archive	Comments							Search: 🔻	
(Use the Example		NAME 🔺	DATE/TIME	SECTION NAME	DATA ELEMENT _≜ NAME	QUESTION TEXT \$	ISWERS & ANSW	VERS AFTER REVIEW		
*Hour		Nathan, Dominic	2024-02-08 06:11	PSQI	PSQIBedPstMnt MinTime	Minutes			d was left npty	
	Showing	1 to 1 of 1	entries (0 row select	ed of 1)				First Previous 1	lext Last)



Regulatory Compliance – Protocol Auditing

View Auditor Comments Summary

Download		Search: 🕶
SUBJECT	EFORM	🜲 # OF AUDITOR COMMENTS 🛛 🜲
1985198	Alcohol Use Disorders Identification Test: Self-Report Version (AUDIT)	5
1985198	(000089) Vaccine information Form	2
Showing 1 to 2 of 2 en	tries	First Previous 1 Next Last

View Auditor Comments Details

Download			Search:	•
SUBJECT	EFORM	🔶 DATE/TIME	QUESTION TEXT	🜲 AUDIT STATUS 🜲
1985198	Alcohol Use Disorders Identification Test: Self-Report Version (AUDIT)	2021-07-08 11:20	Is the subject in the case or control arm of the study?	Locked
1985198	(000089) Vaccine information Form	2022-07-28 12:23	If other, please specify:	In Progress
1985198	Alcohol Use Disorders Identification Test: Self-Report Version (AUDIT)	2021-07-08 11:14	How often do you have a drink containing alcohol?	In Progress
Showing 1 to 3	3 of 3 entries		Firs	t Previous 1 Next Last

First Previous 1 Next Last



Regulatory Compliance – Protocol Auditing

Auditor Comment Response								
Auditor Comment Response [*]								
			Save Comments Close					
	Auditor Com	ments History						
Archive Comments		······	Search: 🔻					
NAME A DATE/TIME & SECT	TION NAME DATA ELEMENT	QUESTION TEXT ANSWERS	🖨 ANSWERS AFTER AUDIT COMMENT					
Nathan, Dominic 2022-07-28 12:23 F	irst Dose YesNoOther1Tx t	If other, please /nnull specify:	this was blank					
Showing 1 to 1 of 1 entries (0 row selected of 1	.)		First Previous 1 Next Last					



Access Control – User Roles

ProFoRMS Home	View I	roles or add/edit a role with associated privileges to ProFoRM system.					
Manage Subjects	Syste	em Roles					
Manage Data >	Add a	new role or select a role to perform an action.					
Manage Protocol		Role Edit Role Copy Role Delete Role		Search: -			
Reports >		SYSTEM ROLE	ROLE DESCRIPTION	\$			
Logs >	Associate Investigator		NINDS role				
		Auditor	NINDS role				
Site Administration	Clinical Research Associate		Legacy role not used by NINDS				
Dashboard Configuration		Data Manager	NINDS role				
Roles & Privileges		Lead Associate Investigator	NINDS role				
Create Visit Type Group		Principal Investigator	NINDS role				
Manage Visit Type Groups		Principal Investigator Unblinded	Principal Investigator Unblinded not able to see randomization details				
Manage Diagnosis		Principle Investigator No Dashboard	NINDS role (no dashboard)				
Manage MedDRA Version		Protocol Navigator	NINDS role				
Import MedDRA Information		Protocol Navigator AE Permission	Protocol Navigator with AE Permission (temporary role)				
Import CTCAE Information		Research Associate	Legacy role not used by NINDS				
Admin Form Submit		Research Associate No Dashboard	NINDS role - no dashboard				
Admin Form Search		Research Coordinator	NINDS role				
		Research Coordinator No Dashboard	NINDS role (no dashboard)				
		STAMS Lab Personnel	Lab personnel access to get subject demographics				
	Showi	ing 1 to 15 of 18 entries (0 row selected of 18)	במי אפוסטווופו מניפסט ני שני שטופני עפווועצומאווונט	First Provinue 1 2 Next Last			

First Previous 1 2 Next Last



Access Control – User Role Assignment

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ProFoRMS Home > Assign users to roles Manage Subjects > Manage Data Search: -> ROLE EBINDER NOTIFICATION USERNAME A NAME PROTOCOL SITE Manage Protocol × ~ kunnathiv Kunnath, Isac Protocol Navigator -- Select Site -- 🔊 Ŧ ---Protocol Information Assign Roles Faith07058 rothenberg, faith Principal Investigator ¥ -- Select Site -- 👩 Ŧ ---Create Visit Type ~ -- Select Site -- 👩 Ŧ Meg Mersha, Meg Auditor ---Import Visit Type Group My Visit Types administrator Admin, Portal ---~ Ŧ ---Order Visit Type Configure Data Elements Pre-Admin, Sikandar ¥ Ŧ sahmed1 ------Population Configure eForm and PVs testadmin Admin, Test × Ŧ ------Configure eForm Display ctubrad Alvarez, Bradley ---¥ Ŧ ---E-Binder **Regulatory E-Binder** LeonelAmpie Ampie, Leonel ~ Ŧ ------Protocol Close-out × Ŧ Randomization List andersoncf Anderson, Caroline ------Reports > augustink Augustine, Karen ¥ Ŧ ------Logs ELBarnhart Barnhart, Elizabeth × Ŧ ------Site Administration > ebartrum Bartrum, Elizabeth ~ ¥ ------



STAMS

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STAMS





B R Office of Biomedical Translational Research Informatics

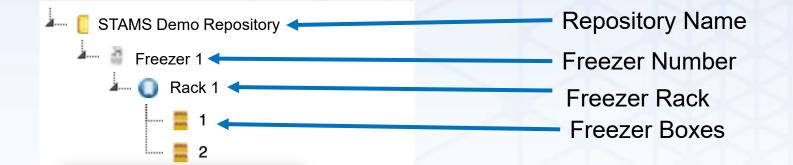








Repository Structure











Box set up

[-] Box Type information											
Name *											
Layout *	Layout * OCoordinated Non-Coordinated (user-organized)										
Display Coordinate *	A,1								*		
Rows*	10								_		
Columns * Type *		fault							*		
Box Grid *	•	A	В	С	D	E	F	G	н	1	J
	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	3	\bigcirc	0	0	0	0	0	0	0	\bigcirc	0
	4	\bigcirc	0	\bigcirc	0	0	0	0	0	\bigcirc	0
	5	\bigcirc	0	\bigcirc	0	0	0	0	0	\bigcirc	\bigcirc
	6	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc	0
	7	\bigcirc	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0









Cell types

My Cell Types

Select a cell type to view or perform an action.

Ado	Edit	Delete				Search: 🗸	
	ICON 🔺	NAME		🜲 UNIT 🌲	CRYO SOLUTION	♦ NOTE	🔷 PARENT 🜲
	0	Blood	Blood	mL	30% BSA + CRYOSOLUTION (1:1)	Blood draw collection from patient	
	(***)	Brain Tissue	Brain Tissue Sample	mL		Brain Tissue extracted from patient	
		CSF	Cerebral Spinal Fluid	mL	FCS + DMSO + MEM		
	٢	Plasma	Plasma isolated from blood sample	mL		cell type note	
	0	Saliva	Saliva collection	mL			
		Urine	Urine sample	mL			

Showing 1 to 6 of 6 entries (0 row selected of 6)

First Previous 1 Next Last



NIH Center Informat Technol





Diagnosis

My Diagnosis

Select a diagnosis to view or perform an action.

Ad	d Edit	Search: -	
	CODE 🔺	DISPLAY NAME	DESCRIPTION
	C71.9	Malignant neoplasm: Brain, unspecified	Brain cancer tumor
	E23	Diabetes insipidus	Type 1 Excludes nephrogenic diabetes insipidus
	163	Stroke	Acute Ischemic Stroke

Showing 1 to 3 of 3 entries (0 row selected of 3)

NIH National Institutes of Health





First Previous 1 Next Last



Adding Subjects

Menu	×		STAMS	Switch Box		•			
Manage Repositories	>	Enroll	ed Subjects						
Brain Repository	>	Select	a subject to view or p	erform an action.					
Configure Repository	>								
Manage Subjects	~		Proto	COI* TEST PROTOCOL	. •				
My Subjects		Colu	mn Visibility 🔻 🛛 🗛	dd Patient Add Animal	Edit Delete In	nport From ProForms		Search: -	
Reports	>		MRN 🔺	IDENTIFIERS[OTHERS]	PATIENT NAME	PROTOCOL #(S)	🔶 TYPE	🜲 GENDER	♦ ETHNICITY ♦
	,		1231231241		tanya banny	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT	Female	
Site Administration	>		1234		Robert Timmy	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
			123654		Tim Johnson	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT	Male	Unknown
			1351t31t		Mark jones	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
			256413		Ben Jerry	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		Unknown
			324234324	asdsad	324	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
			35345345	other id	345345345	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT	Female	Non-Hispanic
			4561233		Candy Cane	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
			5454244		Eddy Jamersson	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
			7387283	123	Dcrione nihcctest	TEST PROTOCOL FOR STAMS - Dominic, Nathan MW TEST PROTOCOL - Mahlet, Wondemagegn	PATIENT	Male	Non-Hispanic
			986532		Hot Dog	TEST PROTOCOL FOR STAMS - Dominic, Nathan	PATIENT		
		Showir	ng 1 to 11 of 11 entrie	s (0 row selected of 11)				First	Previous 1 Next Last

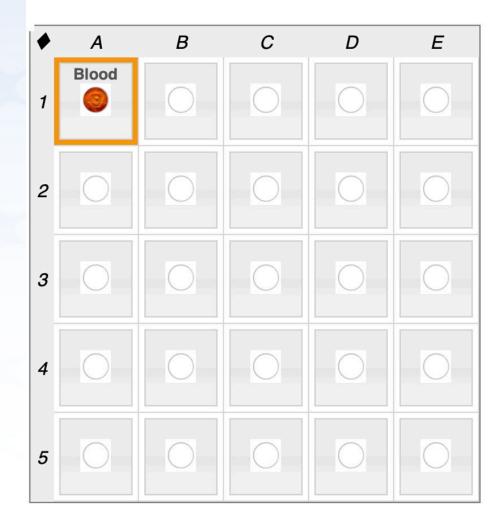






Example

Box 3/New Container 1740128212/Freezer #1





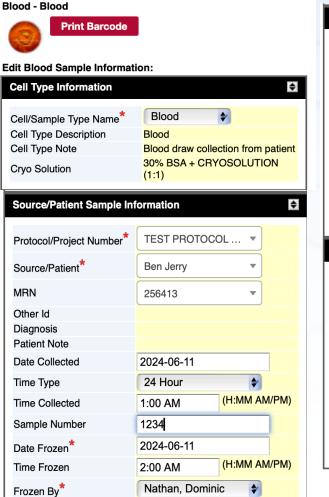




Biomedical Research Informatics Computing System

Adding a Sample

BRICS



			_
Additonal Samp	ole Informat	lion	\$
Sample Barcode)	584006	
Position X / Y		A/1	
Current Volume		1	mL
Procurer			
Original Volume		0	mL
Note			1
Sample Parent H	listory	Independent Sample, No Par	ent
Sample Tracking	•	Remaining Samples	
Processed Perso	on Informatio	on:	
Sample Process	ed By	Nathan, Dominic on 2024-06	-11
Sample Last Up	dated By	Nathan, Dominic on 2024-06	-11
Sample Diagnos Preliminary Diagnosis	× Stroke	inton	¢
Final Diagnosis	× Stroke × Maligna	nt neoplasm: Brain, unspecifie	d
Final Diagnosis Notes		nt came in with a stroke, but or was also detected	a //









External Distribution

External Sample Inform	ation		BI	lood - Blo	bd				
[-] Sample Recipient					Edit Aliquot External	Copy View Histo External Dis	· 1	Delete Print Barcode	
Туре		ume OPercentage		Cell Type	nformation			¢	
Volume									
Shipment Date					e Type Name				
Recipients	Jacob Smith				Description	Blood			
		Save	Cancel	Cell Type I Cryo Solut				on from patient SOLUTION	
			\sim	Source/Pa	tient Sample	Information		÷	
				Additonal	Sample Info	mation		\$	
					Field	Old V	/alue		New Value
	UPDATE	nathande	2024-06-1	1	Original Volume				0.0
	OPDATE	nathande	1:37 PM EDT		Final Dia Notes	g			The patient came in with a stroke, but a brain tumor was also detected
	UPDATE	nathande	2024-06-1 1:38 PM EDT	11	Field	Old V	/alue		New Value
					Field	Old V	/alue		New Value
			2024.06		Volume	1			0.9
	UPDATE	nathande	2024-06-1 1:40 PM EDT	11	Sample Recipien	t			[Volume=0.1,Date=2024- 06-12,Recipient=Sarah Simon]







Aliquot

Box	STAN		e] I [Empt or Copy	y Clipboar Blood @/	d and Clos A/1 in Boy	e] 3/New Container 1740128212/Fr	eezer #1 to the select	ed cell [Remove]
•	A	В	С	D	E		Add New Sample	
1	Blood	0	0	0			Position X / Y	B/1 Add Sample
2		0	0	0	Please	enter the volume of the new sample		
3					0.1			
4				0			Cancel OK	
5								
Virt	tual Place	eholder						

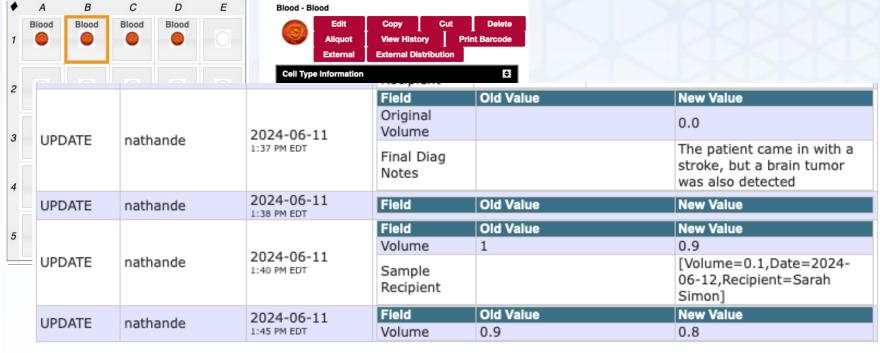


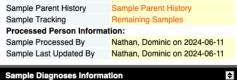






Aliquot











Search samples and sort

Menu	*	STAMS	Switch B	ox	•				
Manage Repositories	~	[-] Search Filters	4						
Select A Repository			arch and perform an actio	n					
View Dashboard									
View Repository		Searc	h Repository						
Brain Repository	>								
Configure Repository		Search							
	>								
Manage Subjects	>	[-] Subjects With	out Final Diagnosis						
Reports	~	Download						Search: -	
Search & Export		BARCODE	A PATIENT NAME	🜲 MRN	🜲 SAMPLE TYPE	🜲 SAMPLE DATE	🜲 X, Y POSITION	PROTOCOL NUMBER	\$
Search & Export Sample Audit Trail		BARCODE 400001	PATIENT NAME 345345345	♦ MRN 35345345	SAMPLE TYPE	SAMPLE DATE 2020-07-31	\$ X, Y POSITION	PROTOCOL NUMBER TEST PROTOCOL FOR STAMS	\$
				•	•	•	♦ X, Y POSITION G/4	• • • • • • • • • • • • • • • • • • • •	\$
Sample Audit Trail		400001	345345345	35345345	Plasma	2020-07-31		TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report	ľ	400001 400004	345345345 345345345	35345345 35345345	Piasma Piasma	2020-07-31 2020-07-01	G/4	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report Samples Report		400001 400004 400001	345345345 345345345 345345345	35345345 35345345 35345345	Plasma Plasma Plasma	2020-07-31 2020-07-01	G/4 A/9	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report Samples Report Summary Report		400001 400004 400001 400006	345345345 345345345 345345345 345345345	35345345 35345345 35345345 35345345 35345345	Plasma Plasma Plasma Plasma	2020-07-31 2020-07-01 2020-07-31	G/4 A/9 C/4	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report Samples Report Summary Report External Report	>	400001 400004 400001 400006 400007	345345345 345345345 345345345 345345345 345345345 345345345 345345345	35345345 35345345 35345345 35345345 35345345 35345345	Plasma Plasma Plasma Plasma Plasma	2020-07-31 2020-07-01 2020-07-31 2020-07-31	G/4 A/9 C/4 H/5	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report Samples Report Summary Report External Report Noki Report		400001 400004 400001 400006 400007 400001	345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345	35345345 35345345 35345345 35345345 35345345 35345345 35345345	Plasma Plasma Plasma Plasma Plasma Plasma	2020-07-31 2020-07-01 2020-07-31 2020-07-31 2020-07-31	G/4 A/9 C/4 H/5 A/7	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$
Sample Audit Trail Patients Report Samples Report Summary Report External Report Noki Report		400001 400004 400001 400006 400007 400001 500061	345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345 345345345	35345345 35345345 35345345 35345345 35345345 35345345 35345345 35345345	Plasma Plasma Plasma Plasma Plasma Plasma Blood	2020-07-31 2020-07-01 2020-07-31 2020-07-31 2020-07-31 2021-07-14	G/4 A/9 C/4 H/5 A/7 J/1	TEST PROTOCOL FOR STAMS TEST PROTOCOL FOR STAMS	\$









Label Printing

1 Blood 2 0 3 0 4 0 5 0 Blood 8 1 1 1 1 1 1		Α	В	С	D	E		
3 0 Print Barcodes 4 0 0 4 0 0 Label Template:* 5 5 0	1	Blood	Blood			0		
3 Sample Barcode(\$): 584006 4 Sample Barcode(\$): 584006 5 Sample Barcode(\$): 1	2			0	0	0		
4 0 0 Label Template:* 5 0 0 Number of Copies:* 1	3			Print		-	504006	
5 Number of Copies:* 1	4			-	Sample B	arcoue(s).	584006	
	5			-			1	
Virtual Placeholder Cancel Pri			eholder				Cancel	Prin

Blood - Bl	lood	
	Edit	Copy Cut Delete
	Aliquot	View History Print Barcode
	External	External Distribution
Cell Typ	e Information	¢
Cell/Sam	nple Type Name	e Blood
	e Description	Blood
Cell Type	e Note	Blood draw collection from patient
Cryo Sol	lution	30% BSA + CRYOSOLUTION (1:1)
Source/	Patient Sample	e Information
Dratagel	/Droject Number	er TEST PROTOCOL FOR STAMS
Source/F	Project Numbe	Ben Jerry
MRN	auent	256413
Other Id		250415
Diagnosi		
Patient N		
Date Co		
Time Typ	liootoa	NONE
Time Co		
Sample		
Date Fro		
Time Fro	zen	
Frozen E	Зу	Nathan, Dominic
Additon	al Sample Info	ormation 😫
Sample	Barcode	584006
Position		A/1
Current		0.6 mL
Procurer		
Original		0 mL
Note		
	Parent History	Independent Sample, No Parent
Sample	,	Remaining Samples
	ed Person Inf	
Sample	Processed By	Nathan, Dominic on 2024-06-11
Sample	Last Updated E	By Nathan, Dominic on 2024-06-11





other id





Reports

Menu	≽	STAMS Switch Box	
Manage Repositories	>		
Brain Repository	>	[-] Search & Export	
Configure Repository	>	Patient Diagnosis contains "Tumor" × Sample Date after 06/11/2022 × Patient Age > 35 × Ger	ender equals "female" ×
Manage Subjects	>	+	
Reports	~		
Search & Export			
Sample Audit Trail			
Patients Report			
Samples Report			
Summary Report			
External Report			
Noki Report			
Site Administration	>		









Brain Repository – Case Intake

Menu	STAMS S	witch Box	¥
Manage Repositories	>		
Brain Repository	Case Intake Case H	istory Grossing Histology	
Cases			
Tissue Requests/Shipmen	[-] Case Information		
SOPs	RB Number*		
Noki Logs	Protocol Number*	Select	•
Pathologist Workbench	Patient Name*	Select	•
onfigure Repository	> Case Arrival Date and	Format: YYYY-MM-DD HH:MM	
nage Subjects	> Time*		
	Date of Birth	Format: YYYY-MM-DD	
ports	> Date of Death	Format: YYYY-MM-DD	
Administration	> Time of Death	1	
	Age	1	
	Time Zone for Time Of Death		
	Source of Donation	Select	*
	Consent for Donation	n OY ON	
	Consent for Genetic Testing		









Brain Repository – Case History

Menu	*	STAMS Switch Box	
Manage Repositories	>		
Brain Repository	~	Case Intake Case History Grossing Histology	
Cases			
Tissue Requests/Shipmer	nts	[-] Case History	
SOPs		Name	
Noki Logs Pathologist Workbench		Ethnicity	
		Occupation	
Configure Repository	>	Service BranchSelect	
Manage Subjects	>	MOS	
Reports	>	Special Forces	
Site Administration	>	Rank	
		Twin	
		Imaging Diagnoses	
		[-] Demographic Info	
		COD	
		Height	
		Weight	
		BMI	









Brain Repository - Grossing

Menu 💝	STAN	IS	Switch B	ox								
lanage Repositories 🔉 🗲												
rain Repository 🗸 🗸	Case Int	ake C	Case History	Gro	ssing	Histology	V					
Cases												
Tissue Requests/Shipments	[-] Gross	ing Info	rmation									
SOPs	Add Ad	ditional	Note									
Noki Logs	Select	Block	Select All Stains	H&E	GFAP	AT8	4G8	APP	lba1	6E10	Color	Additional
Pathologist Workbench		A	Stains								Green 🛊	
onfigure Repository 🔉		В									Green 🛊	
		с									Yellow 🐓	
anage Subjects >		D									Green 🕏	
eports >		E									Green 🕏	
		F									Green 🕏	
ite Administration		G									Green 💠	
2		н									Green 💠	
		I									Green 💠	
		J									Green 🕏	
		к									Green 🕏	
		L									Yellow 🛊	
		м									Yellow 🛊	







Brain Repository - Histology

Menu	≈	I STAMS	Switch Box	r.		•	
Manage Repositories	>						
Brain Repository	~	Case Intake	Case History	Grossing	Histology		
Cases							
Tissue Requests/Shipme	ents	[-] Histology Ir	nformation				
SOPs		Lab Rece	eipt Date Forma	at: YYYY-MM-DI	D		
Noki Logs		Blocks F	Received				
Pathologist Workbench		Stainings Pe	rformed				
Configure Repository	>	Date of S		at: YYYY-MM-DI	D		
Manage Subjects	>	Number of Ea Pe	ch Stain rformed				
Reports	>	Unstaine	d Slides				
Site Administration	>	P	roduced				
		Total Slides P	roduced				
		Digitizat	ion Date Forma	at: YYYY-MM-DI	D		







Brain Repository – Tissue Request/Shipment Tracking

Menu	×	STAMS	Switch Box
Manage Repositories	>		
Brain Repository	~	[-] Individual tissue request/s	shipment
Cases		Request ID *	
Tissue Requests/Shipm	ents	Associated Cases	Select
SOPs		Request Status	- Select One -
Noki Logs		Tissue Request Received Date	Format: YYYY-MM-DD
Pathologist Workbench			
Configure Repository	>	Tissue Request Approved Date	Format: YYYY-MM-DD
Manage Subjects	>	Tissue Shipment Date	Format: YYYY-MM-DD
manago cabjeeto	1	Recipient	- Select One -
Reports	>	Address	
Site Administration	>	Tracking Number	
		Contents of Shipment	
		Note for Case	
		Notes	





BRICS





Brain Repository - NOKI

Menu	≽	G STAMS	Switch Box	•	
Manage Repositories	>				
Brain Repository	~	[-] [-] Donor Information			
Cases			Case *	- Select One -	*
Tissue Requests/Shipme	nts		Name *		
SOPs			Date of Birth	Format: YYYY-MM-DD	
Noki Logs			Sex	Select	*
Pathologist Workbench			Military Service	⊖Y ⊖N	
Fathologist Workbench			Marital Status	Select	
Configure Repository	>				
Manage Subjects	>		Race	Select	
	1		Did donor have a twin	OY ON	
Reports	>		Occupation		
Site Administration	>				
		[-] [+] Medical History			
		[-] [+] Psychiatric History			
		[-] [+] Family History			



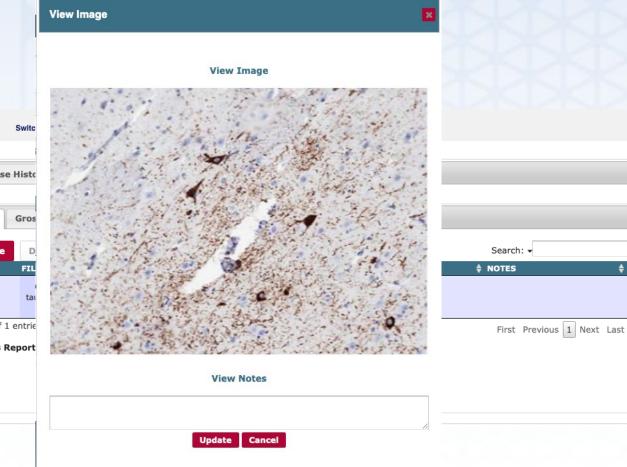






Analysis

STAMS Menu \geq Manage Repositories Case Intake Case Histo **Brain Repository** Cases Tissue Requests/Shipments **Upload Picture** SOPs **Upload Picture** Noki Logs Pathologist Workbench \Box **Configure Repository** Manage Subjects Showing 1 to 1 of 1 entrie > **Pictures Report** Reports > Site Administration >











Report Generator



National Institute of Neurological Disorders and Stroke

NEUROPATHOLOGY REPORT

12234

Attending Pathologist :

CLINICAL SUMMARY:

GROSS DESCRIPTION : The brain was received on . It weighed .

Block Inventory : A, B, D, E, F, G, H, I, J, K, O, Q, R, U, V, W, X, Y, Z, EE

MICROSCOPIC DESCRIPTION For a list of the blocks sectioned and the immunohistochemical stains ordered, see histochemistry request.

H&E:

Immuno Histochemistry :

Final Neuropathologic Diagnoses :

Comment:











Report Generator



National Institute of Neurological Disorders and Stroke

Dear,

I am writing to provide you with a summary of our evaluation of the brain donation of , 324 which you graciously gifted to the DoD/USU Brain Tissue Repository. The process of this evaluation has involved the preparation and investigation of numerous microscopic slides, providing us with an ability to view all of the major cellular constituents of the brain within a large number of anatomic brain compartments. This type of assessment involves a very lengthy and tedious process but is the only way to fully evaluate a case of this type. Accordingly, we thank you for your patience in what may have seemed to be a very slow process.

Finally, I want to express our sincere thanks for the gift that you have provided through your donation for this kind of research. The opportunity to study this brain specimen, and others like it, will undoubtedly lead to a better understanding of the extent and nature of brain damage that occurs following exposure to a variety of conditions, especially those occurring on the battlefield. We hope you can take some comfort in knowing that the insights provided through the precious gift you provided through donation of your's brain to this research has provided a means by which null can continue to serve null Country.

If I can answer any questions you might have about our ongoing research or on the nature of our findings on this case, please do not hesitate to contact me.

Sincerely yours,







CTMS - Use

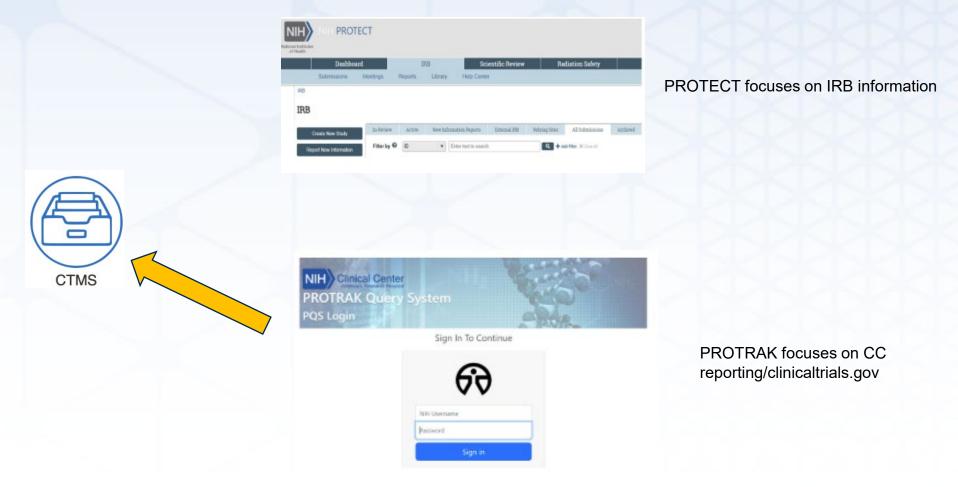
- Study management
 - Accrual
 - Study timelines
 - New Drug/Device status, management, distribution, tracking
 - Monitoring
 - Pharmacy information
 - Personnel management
 - Publications
- Management of study documents
 - Regulatory documents
 - IRB approvals, reviews, etc.
 - Consent forms
 - Trainings/certificates
- Generate reports







CTMS – Data Sources











CTMS – **Protocol Information**

Menu and Filters 🛛 💝	СТМЯ	
CTMS 🗸	Protocol Details	
Select A Protocol		
Protocol Details	Protocol Information	IMPORT FROM PROTRACT
Study Personnel	Listed below are the details of the protocol.	
Scientific Review	IRB Protocol Number * : CISTAR-S Study Title: CISTAR Te	
IRB Review	· ·	is to assess 2 treatments for post traumatic stress
FDA Information	Principal Investigator: Dominic, N	
An	Closed:	
Sponsor Documents	Study Status: Participant	s currently recruited/enrolled
IP Administration	Study Type: Interventio	nal
Data Management Plan	Research Type: Clinical Tri	alPhase 0
	FDA Regulated: Yes	
Contracts & Tech Transfer	Studies a U.S. FDA-Regulated Yes Drug Product?:	
CT.gov	Studies a U.S. FDA-Regulated No Device Product?:	
Monitoring	Sponsor Type: Industry Sp	oonsored
Auditing	Number Enrolled (Signed 30 Consent):	
Investigational Device	Accrual Ceiling: 500	
Investigational Drug	Covered: Covered	
	IRB Initial Approval: 6/11/24 12	:00:00 AM.000
Data & Safety Monitoring Information	NCT Number: 123445	
Statistician Activity and		





Manuscripts





CTMS Study Personnel

Study Personnel - Protocol CISTAR-STUDY0000000

Add	Edit Delete Print Export	View Audit Deleted Entries IMPORT FROM PROTRACT Search: -					
	STUDY TEAM PERSONNEL	🔶 CTU STAFF	ROLE	HOURS PER WEEK	븆 CREATED BY	▼ CREATED DATE 🔶	
	Dominic E. Nathan	Yes	Principal Investigator	40	Nathan, Dominic	2024-06-11	
	Tammy Nguyen	Yes	Associate Investigator	40	Nathan, Dominic	2024-06-11	
	Elizabeth Barnhart	Yes	Data Manager	40	Nathan, Dominic	2024-06-11	
	Isaac Kunath	Yes	Protocol Navigator	40	Nathan, Dominic	2024-06-11	
	Sherri Gollins	Yes	Research Coordinator	40	Nathan, Dominic	2024-06-11	
	Gina Narato	Yes	Statistician	40	Nathan, Dominic	2024-06-11	
Showin	g 1 to 6 of 6 entries (0 row selected	of 6)				First Previous 1 Next Last	









Scientific Review

Scientific Review - Protocol CISTAR-STUDY0000000

Add	dd Edit Delete View Audit Deleted Entries Print Download Search:							
		MEETING DATE	SRC NUMBER	♦ OUTCOME	APPROVAL DATE	COMMENTS	CREATED BY	CREATED DATE
	Concept Review	2022-06-01	122344	Approved	2022-08-08		Nathan, Dominic	2024-06-11
	Initial Review	2022-08-20	112334	Approved	2022-09-03		Nathan, Dominic	2024-06-11

Showing 1 to 2 of 2 entries (0 row selected of 2)

First Previous 1 Next Last









IRB Review

IRB Review - Protocol CISTAR-STUDY0000000

IRB Submission Dates

Add	Edit Delete View Audit Deleted	Entries Print Download			Search:	•				
	INITIAL APPROVAL DATE EXPIRATION DATE									
	2022-10-11			2027-10-11						
Showin	g 1 to 1 of 1 entries (0 row selected of	1)			F	rst Previous 1 Next Last				
IRB S	ubmission Information									
Add	Edit Delete View Audit Deleted	Entries Print Download			Search:	•				
	SUBMISSION TYPE	SUBMISSION DATE	APPROVAL DATE			COMMENTS				
	IRB Review	2022-10-11	2022-11-22	1223445	Approved					
Showin	a 1 to 1 of 1 entries (0 row selected of	1)			F	rst Previous 1 Next Last				









FDA Information

FDA Information - Protocol CISTAR-STUDY000000

Sponsor Information

Add Edit Delete Print Export View Audit	Deleted Entries			Search: 👻	
IND/IDE 🔶 SPONSOR		SENTATIVE	CREATED BY	CREATED D/	ATE 🔻
	Dr. James Hook		Nathan, Dominic	2024-06-11	
Showing 1 to 1 of 1 entries (0 row selected of 1)				First Pr	evious 1 Next Last
IP Information					
Add Edit Delete Print Export View Audit	Deleted Entries			Search: 🗸	
INVESTIGATIONAL PRODUCT	♦ sou	JRCE OF IP	CREATED BY	CREATED DATE	•
		No data available in table			
Showing 0 to 0 of 0 entries (0 row selected of 0)				First	Previous Next Last
FDA Correspondence					
Add Edit Delete Print Export View Audit	Deleted Entries			Search: 🗸	
SUBMISSION TYPE 🛔 SERIAL NUMBER	A 🜲 SUBMISSION DATE 🜲	FDA ACKNOWLEDGEMENT DATE	🔻 FDA APPROVAL DATE 🛔	CREATED BY	CREATED DATE
Initial IND 1223456	2023-07-12	2023-09-13	2024-01-22	Nathan, Dominic	2024-06-11
Showing 1 to 1 of 1 entries (0 row selected of 1)				First Pr	evious 1 Next Last









New Tools

- Al tools for data set generation
- LLMs









Acknowledgements

DoD/NINDS BRICS Team

NIH CIT BRICS Team









Rohith Vallabhaneni







Dominic Nathan, PhD Lead

Lloyd Dallas

Mahlet Wondemagegn

Sindhu Prasannakumar

Sireesha Kolla

Vivek Mannur



Alaa Haddad

Dagm Sirak

Mallisa Johnson

-

Alex Trudov

Dan Gillis

Michelle Harris

Alexander Burnett

Derrick Fox

Michael Stump

Alexandra Bokinsky

Erkan Ince

Mihir Bhave

Alisa Ridjanovic

Andrea Lutz

Carmela Sangalang

Carter Gran Christopher Sciumbata Colton Farlow





Regina Ball

Joshua Park





Sayan Ekambarapu

Nalaka Premathilaka

Erik Meyer



Nishith Pandya

Francis Chen









Tuhin Zaman

Warren Overholt

Zhenis Ismagambetov

Ronnie Tan

Ryan Stewart-Frederick

Scott Mitchell

Sid Ambarkar

Swenja Rohde

Olga Vovk

George Popkhadze









Henry Ogoe













Preeti Roy

Josh Eng

Rajeev Nedumpally



Priya Raju



Taylor Truong







A huge "Thank You" to our users and various working groups



Questions?



Thank you for joining in!

We will take a pause for summer and reconvene in fall!

