

Introduction to LabKey

A Genomics England Quick Guide

		Document Record ID Key	
Work stream		Status	
Programme Director		Version	1.0
Document Owner	PG	Version Date	17/01/2016
Document Author	RS		

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Document History

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1.1 Version History

Version	Date	Author	Description
V0.1	12/05/2016	PG	Draft Version
V0.2	13/05/2016	PG	RS & KF updates
V0.3	28/07/16	CM	Updated to reflect views NHS GMC will have in August
V0.4, 0.5	28/07/16	PG	Minor style amends
0.6	30/09/2016	PG	Addition of 'draft' watermark
0.7	24/10/2016	PG	Added reference to Sample Tracking and burst views.
0.8	03/01/2017	PG	Enhanced 'clinical views' section to reflect latest LabKey release
0.9	04/01/2017	RS	Minor updates to reflect future updates to 'clinical views'
1.0	10/01/17	CB	Addition of contents table, feedback note

1.2 Reviewers

This document must be reviewed by the following:

Name	Area
Nathan Hicks	Application Development
Gavin Mulcahy	Testing

1.3 Approvers

This document must be approved by the following:

Name	Responsibility	Date	Version
Peter Counter	CIO	10/01/17	1.0
Tom Fowler	Caldicott Guardian	25/05/16	0.2
Grant Stapleton	SIRO	25/05/16	0.2

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2 Introduction

This guide is intended to give NHS GMC technical users (e.g. data managers) a first view of the information available on LabKey. The initial functionality focuses on data validation.

The views available and described in this guide are:

- Genomics England Portal View
 - This provides a view of the current state of all data items for individual participant records in an easy read format.
- Mercury view
 - This is a searchable table showing a record of all submissions and updates for participants in your NHS GMC. You will see one row for every update. This view is split by:
 - Rare Disease
 - Cancer
- Sample Tracking view (coming soon)
 - This provides a 'normalised' view of only the most up-to-date, successful submissions to Mercury for any given participant or sample
 - A guide to this view will be made available when this view is released to GMCs
- Burst View (coming soon)
 - This shows a table with all the burst messages generated, enabling you to sort and filter through your messages to find the ones relevant to you.
 - A guide to this view will be made available when this view is released to GMCs

3 Getting started

3.1 Log in



LabKey Server

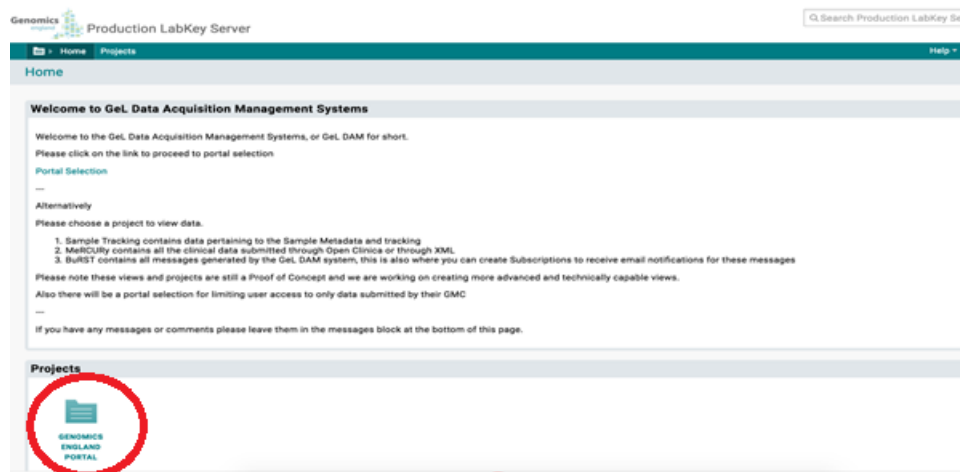
Sign In

Email

Password (forgot password)

Remember my email address

3.2 Click on the folder icon



Genomics England Production LabKey Server

Search Production LabKey Ser

Home Projects Help

Home

Welcome to GeL Data Acquisition Management Systems

Welcome to the GeL Data Acquisition Management Systems, or GeL DAM for short.
Please click on the link to proceed to portal selection

Portal Selection

—

Alternatively

Please choose a project to view data.


1. Sample Tracking contains data pertaining to the Sample Metadata and tracking
2. MeltCURy contains all the clinical data submitted through Open Clinica or through XML
3. BuST contains all messages generated by the GeL DAM system, this is also where you can create Subscriptions to receive email notifications for these messages

Please note these views and projects are still a Proof of Concept and we are working on creating more advanced and technically capable views.
Also there will be a portal selection for limiting user access to only data submitted by their GMC

—

If you have any messages or comments please leave them in the messages block at the bottom of this page.

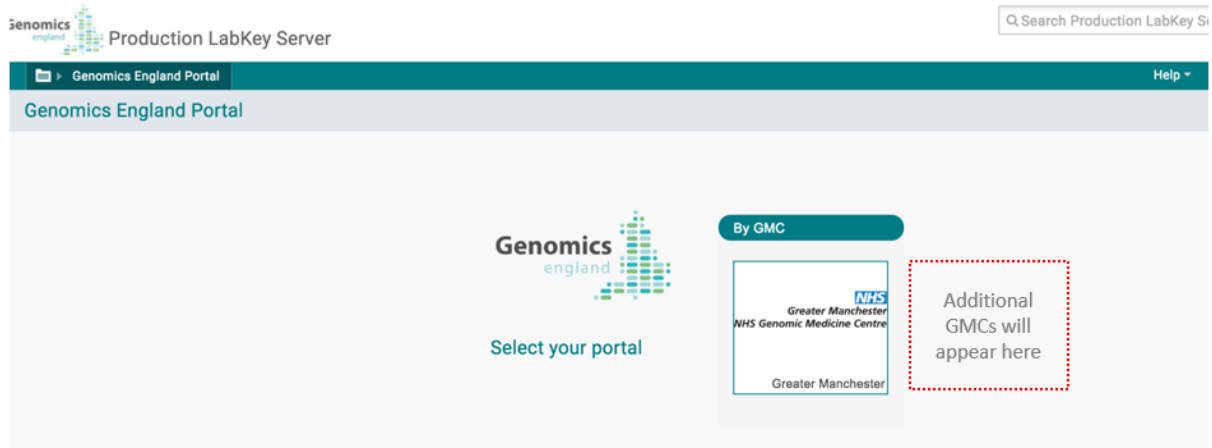
Projects

 GENOMICS ENGLAND PORTAL

This will take you to the portal links for any NHS GMC you have permission to access.

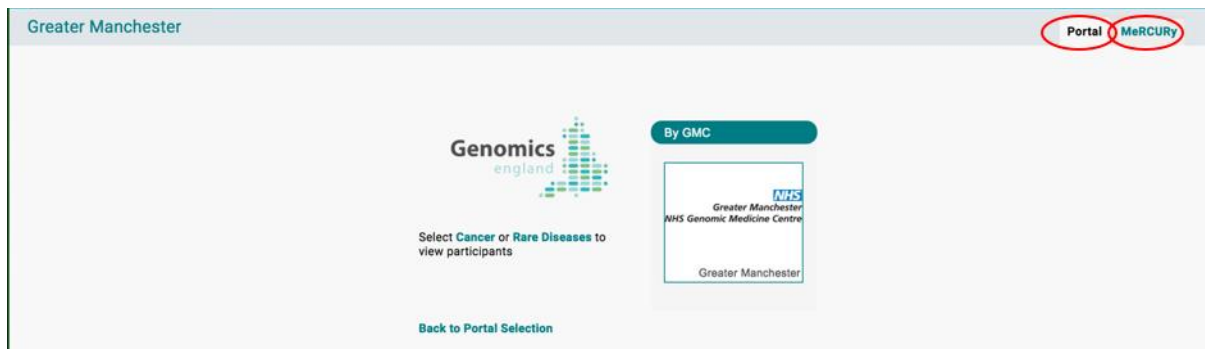
3.3 Select the NHS GMC you wish to review

Most users will only have one option at this point, but if you have permissions to view data for more than one NHS GMC, you will see one box for each of the NHS GMCs.



3.4 Choose whether you want to see the Portal View or Mercury view.

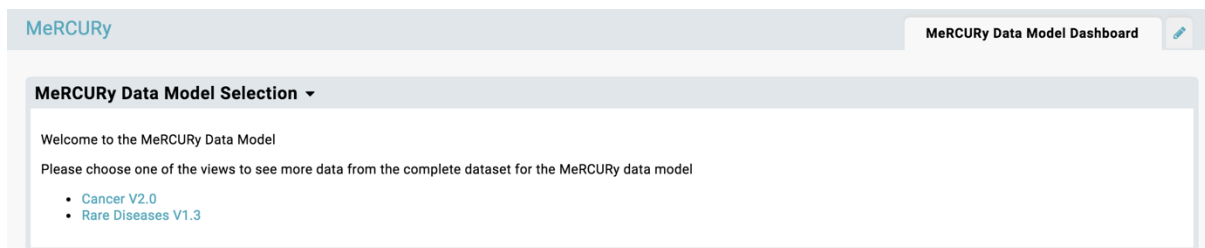
You can now select the Portal or Mercury Views via the tab in the top right. Portal views are better for seeing the current status of all the data items for individual participants. Mercury views are generally more useful for seeing all events and submissions for participants and for aggregating data.



4 Mercury view

4.1 Introduction to Mercury View

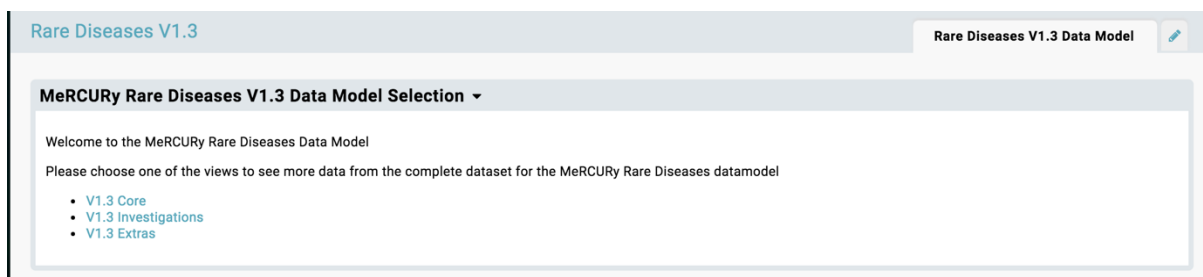
When you've selected the Mercury view, you will be asked to choose between Cancer data and Rare Disease data by clicking on the links in blue.



Once you select Cancer or Rare Disease you are offered an option of

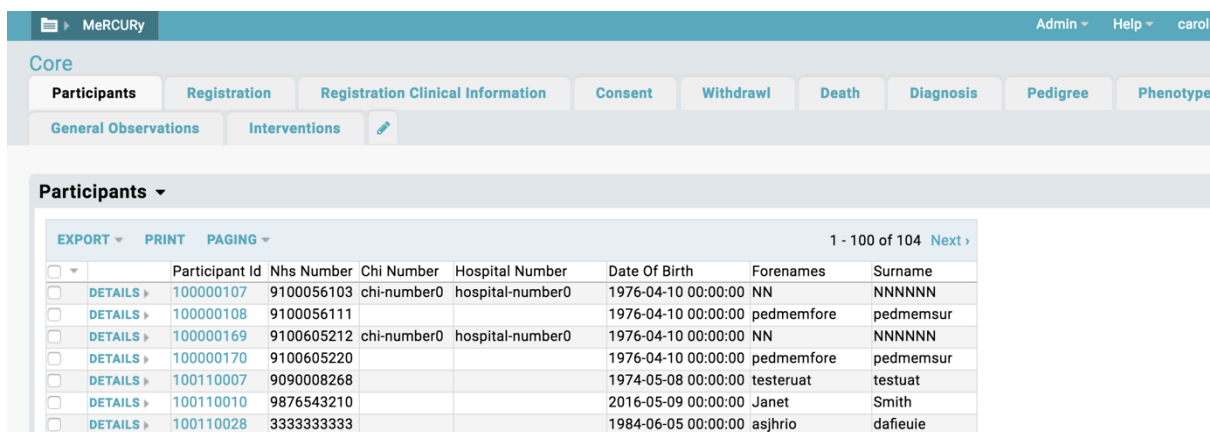
- Core
- Investigations
- Extras

At the current time there is no information available to NHS GMC's via Investigations or Extras options. These views are being developed and will be populated in the coming months.



By selecting Core you will be taken to a searchable database view of all your participants recruited under the relevant programme.

There are separate tabs for different information categories, generally corresponding to the CRFs in OpenClinica.



By selecting the various tabs you can see different views of data for all your participants. Where there have been multiple submissions of any CRF, each submission will be shown on its own row.

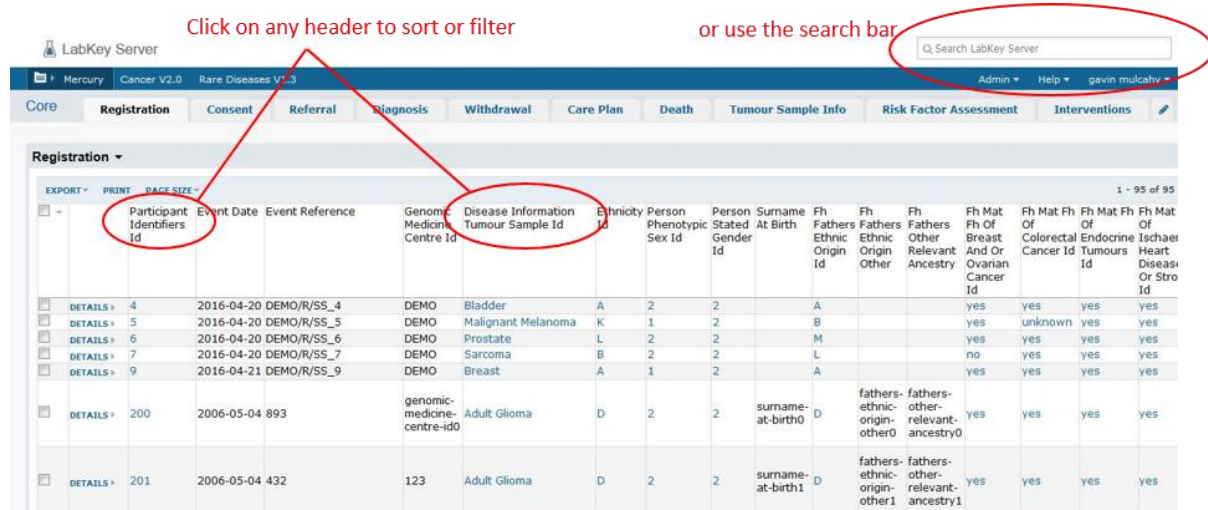
This means you may need to perform deduplication if you are using this data for management information.

For Distribution to NHS GMCs

4.2 How to find participants or other data

On this screen you can sort and filter any column by clicking on the column header.

You can also use the search bar in the top right of the screen to find the information you need.



Click on any header to sort or filter

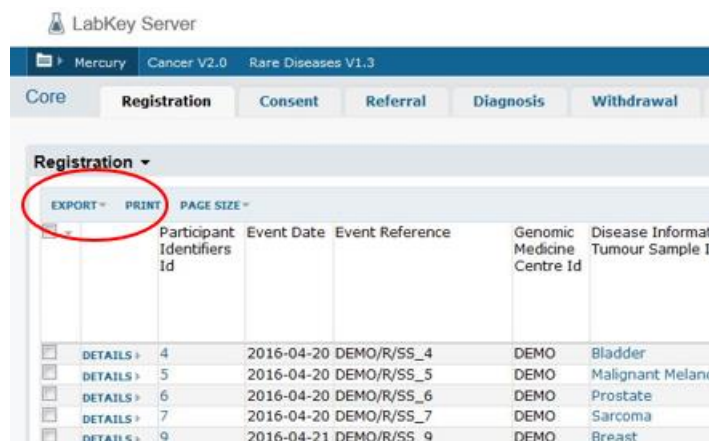
or use the search bar

Participant Identifiers Id	Event Date	Event Reference	Genomic Medicine Centre Id	Disease Information Tumour Sample Id	Ethnicity	Person Phenotypic Sex Id	Person Stated Gender Id	Surname At Birth	Fh Fathers Ethnic Origin Id	Fh Fathers Ethnic Origin Other	Fh Fathers Other Relevant Ancestry	Fh Mat Of Breast And Or Ovarian Cancer Id	Fh Mat Of Colorectal Cancer Id	Fh Mat Of Endocrine Tumours Id	Fh Mat Of Ischaer Heart Disease Or Stro Id
4	2016-04-20	DEMO/R/SS_4	DEMO	Bladder	A	2	2	A				yes	yes	yes	yes
5	2016-04-20	DEMO/R/SS_5	DEMO	Malignant Melanoma	K	1	2	B				yes	unknown	yes	yes
6	2016-04-20	DEMO/R/SS_6	DEMO	Prostate	L	2	2	M				yes	yes	yes	yes
7	2016-04-20	DEMO/R/SS_7	DEMO	Sarcoma	B	2	2	L				no	yes	yes	yes
9	2016-04-21	DEMO/R/SS_9	DEMO	Breast	A	1	2	A				yes	yes	yes	yes
200	2006-05-04	893	genomic-medicine-centre-id0	Adult Glioma	D	2	2	surname-at-birth0	D	fathers-ethnic-origin-other0	fathers-other-relevant-ancestry0	yes	yes	yes	yes
201	2006-05-04	432	123	Adult Glioma	D	2	2	surname-at-birth1	D	fathers-ethnic-origin-other1	fathers-other-relevant-ancestry1	yes	yes	yes	yes

The Mercury view shows every update to a participant's details.

4.3 Exporting data

It's possible to export the data in any given view using the export button on the top left. This will export in Excel format to your local machine.



LabKey Server

Mercury Cancer V2.0 Rare Diseases V1.3

Core Registration Consent Referral Diagnosis Withdrawal

Registration

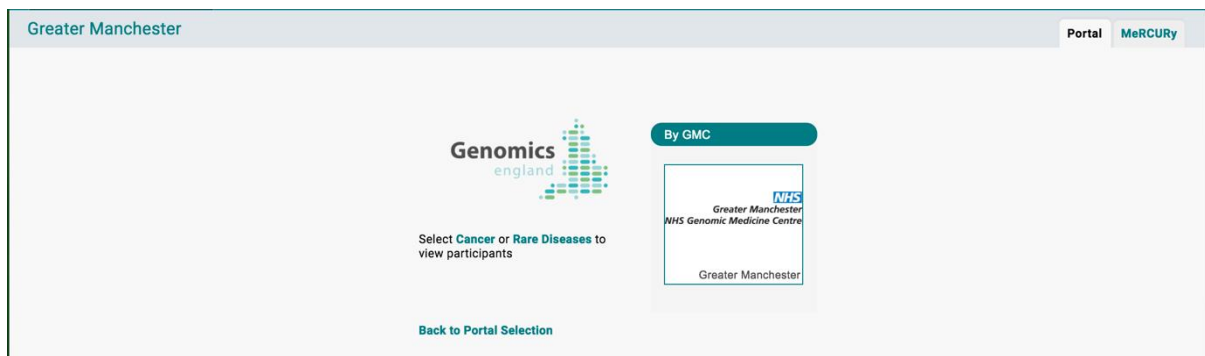
EXPORT PRINT PAGE SIZE

Participant Identifiers Id	Event Date	Event Reference	Genomic Medicine Centre Id	Disease Information Tumour Sample Id
4	2016-04-20	DEMO/R/SS_4	DEMO	Bladder
5	2016-04-20	DEMO/R/SS_5	DEMO	Malignant Melanoma
6	2016-04-20	DEMO/R/SS_6	DEMO	Prostate
7	2016-04-20	DEMO/R/SS_7	DEMO	Sarcoma
9	2016-04-21	DEMO/R/SS_9	DEMO	Breast

5 NHS GMC Portal Views

5.1 Introduction

Using the Portal Views allows you a view of the whole participant's record in a Clinical View. To get started, choose the Portal tab in the top right corner and select one of Cancer or Rare Disease.



5.2 Choose a participant

You will initially be presented with a list of all the participants for the NHS GMC you are looking at. To view the full, current dataset for any participant, simply click on the appropriate row in the table.

Participants [Click here to view participant's details](#)

GRID VIEWS ▾	REPORTS ▾	CHARTS ▾	EXPORT ▾	PRINT	PAGING ▾	1 - 100 of 13,106 Next > Last >	
<input type="checkbox"/>	Participant Id	Nhs Number	Date Of Birth	Forenames	Surname	Chi Number	Hospital Number
<input type="checkbox"/>	100000002	222222222	2016-06-13 00:00:00	caroline	Moth		
<input type="checkbox"/>	100000010	222222222	2016-07-10 00:00:00	Richard	Scott		

5.3 Summary and detailed views

These views present the data that has been previously submitted by the NHS GMC as well as, in the case of Rare Diseases, information about the medical review and gene panels assigned for the participant.

You will first be presented with a summary view for the participant, which will differ between Rare Disease and Cancer participants.

You can either select the various tabs available for all the data for that participant, or you can simply click through the summary data item you are interested in and you will be automatically taken to the appropriate tab in the top right hand corner.

Please note that these views will be under ongoing development and are likely to change over time.

All Patients Portal MeRCURY

Find detailed info using these tabs

Moth, caroline | DOB: 13/06/2016
NHS: 222222222 (Proband, Family id: 100000002)

Summary Details Family HPO

Participant Summary	
Family Id	100000002
Participant Id	100000002
Forenames	caroline
Surname	Moth
Date of Birth	13/06/2016
NHS Number	222222222
CHI Number	
Person Phenotypic Sex	Female
Relationship	Proband
Vital status	Alive
Consent status	Yes
Responsible Consultant	Another Dr
Hospital of Responsible Consultant	

Rare Disease Diagnoses	
Specific Disease	Age of Onset
Brugada syndrome	1
Familial Thoracic Aortic Aneurysm Disease	7

Other Diagnoses	
Not affected	

General Observations	
No results available	

Clinical Tests	
No results available	

5.3.1 Cancer views

The views for Cancer participants are Summary, Details, Family History, Cancer History, Samples and Documents.

5.3.1.1 Summary

Displays basic participant information, some disease information and a summary of any genetic results submitted by the NHS GMC.

TEST-GRUNARD, PETA MARY | DOB: 09/10/1981
NHS: 9990057966

Summary Details Family History Cancer History Samples Documents

Participant Summary		Cancer Summary	
Basic Participant Info		Basic disease info	
Participant Id	2	No results available	
Forenames	PETA MARY		
Surname	TEST-GRUNARD		
Date of Birth	09/10/1981		
NHS Number	9990057966		
CHI Number			
Person Phenotypic Sex	Female		
Vital status	Alive		
Consent status	Yes		
Responsible Consultant	NOT_PROVIDED		
Hospital of Responsible Consultant	RYJ		

Genetic Results	
Any Genetic results submitted	
No results available	

5.3.1.2 Details

Displays a complete record of participant details, including identifying information, consultant and referral data, contact information, and consent and withdrawal information.

TEST-GRUNARD, PETA MARY | DOB: 09/10/1981
NHS: 9990057966

Summary Details Family History Cancer History Samples Documents

Participant Information	
Participant Id	2
Forenames	PETA MARY
Surname	TEST-GRUNARD
Date of Birth	09/10/1981
NHS Number	9990057966
CHI Number	
Person Phenotypic Sex	Female
Ethnicity	Not Stated
Genomic Medicine Centre	RPY01

Referral	
Responsible Consultant	NOT_PROVIDED
Consultant GMC Number	
Full Name Not Consultant	
Contact number	
Hospital of Responsible Consultant	RYJ

Contact Information	
Participant Email Address	
Participant Home Telephone	01737256897
Participant Mobile Telephone	07958563211

Consent	
Date of Consent	14/07/2015
Name and Version of Consent Form	Patient with cancer(or suspected cancer) Version 2.0, 20.01.2015
Consent Given	Yes
Consent Form	2 consent form 28/10/2015.pdf

Withdrawal	
No results available	

5.3.1.3 Family History

The Family History tab includes details that have been submitted regarding the ethnic origin and any history of disease that has been provided by the NHS GMC.

TEST-GRUNARD, PETA MARY | DOB: 09/10/1981
NHS: 9990057966

Summary Details Family History Cancer History Samples Documents

Family History	
Mothers Ethnic Origin	Mixed: White and Black African
Mothers Ethnic Origin Other	Unknown
Mothers Other Relevant Ancestry	No
Fathers Ethnic Origin	Mixed: Any other mixed background
Father Ethnic Origin Other	Unknown
Fathers Relevant Ancestry	NO
Maternal Family History of Breast and/or Ovarian Cancer	No
Maternal Family History of Colorectal Cancer	No
Maternal Family History of Endocrine Tumours	No
Maternal Family History of Ischaemic Heart Disease or Stroke	No
Other Relevant Maternal Family History	TEST
Paternal Family History of Breast and/or Ovarian Cancer	No
Paternal Family History of Colorectal Cancer	No
Paternal Family History of Endocrine Tumours	No
Paternal Family History of Ischaemic Heart Disease or	No

5.3.1.4 Cancer History

The Cancer History tab presents a visualisation of the cancer events such as diagnosis, referral and treatments that have been submitted by the NHS GMC.

This tab allows users to view a summary of the cancer timeline, as well as clicking on given events to view more detail, presented below the timeline report.

Flintstone, Fred | DOB: 05/01/1976
NHS: 9467210029

Summary Details Family History Cancer History Samples Documents

Expand Event Subtypes Clear All Filters

Cancer History Timeline Report

Event history shown here

Selected row highlighted in blue

Cancer History - Filtered for event type: Tumour Sample

Event Date	Type	Sub Type
22/01/2016	Tumour Sample	
22/01/2016	Tumour Sample	

Events on highlighted row shown here

Tumour Sample

Detail of highlighted event shown in this section

Event Date	22/01/2016
Event Reference	RGT/R/SS_21100000_4345

5.3.1.5 Samples

The Samples tab is intended to present a view of the current state of samples that have been submitted to Genomics England. At this time, this view remains under development.

5.3.1.6 Documents

Any documents which have been submitted for this participant will be presented here as links.

TEST-GRUNARD, PETA MARY | DOB: 09/10/1981
NHS: 9990057966

Summary Details Family History Cancer History Samples Documents

Documents

File Name	Document Type	Last Updated
2_consent_form_28/10/2015.pdf	Consent form	19/06/2016

5.3.2 Rare Disease views

The views for Rare Disease participants are Summary, Details, Genetic Tests, Observations, Family and HPO.

5.3.2.1 Summary

Information provided in the Summary tab includes basic Participant information such as identifying information, name of the responsible consultant, consent status, Rare Disease and other diagnoses, General Observations where these have been provided by the NHS For Distribution to NHS GMCs

GMC, details of other family members recruited (with hyperlinks to their data) and details of HPO terms entered as present or absent and, if available, information about the family's pre-interpretation 'medical review'.

From late January 2017, this view will also contain an image of the current pedigree for the family. Once released for NHS GMC use, the Pedigree Editor will be accessible through a link here to allow pedigrees to be created and edited.

Mouse, Micky | DOB: 12/07/2016
NHS: 222222222 (Proband, Family Id: 656564)
 Family Medical Review: No state assigned
 Participant Medical Review: Awaiting medical review

Summary | Details | Genetic Tests | Observations | Family | HPO

Participant Summary

Family Id	656564
Participant Id	100110033
Forenames	Micky
Surname	Mouse
Date of Birth	12/07/2016
NHS Number	222222222
CHI Number	
Person Phenotypic Sex	Female
Relationship	Proband
Disease Status	Familial cerebral small vessel disease
Vital status	Dead
Consanguinity	U
Consent status	Yes
Responsible Consultant	me

Rare Disease Diagnoses

Specific Disease	Age of Onset
Familial cerebral small vessel disease	5

Other Diagnoses

Not affected

General Observations

Measurement	Value	Type	Date
Head Circumference	50.00 cm	Measured	08/08/2016

Family
Medical Review: No state assigned

Participant Id	Name	DOB	Relationship	Disease Status	Participant Medical Review
100110033	Micky Mouse	12/07/2016	Proband	Familial cerebral small vessel disease	Awaiting medical review

Phenotype Statement

HPO Term	Present	Modifiers
Migraine with aura	Yes	Right, Middle Age Onset, Non-Progressive, Moderate, Distal
Unilateral deafness	Yes	
Reduced consciousness/confusion	Yes	
Anxiety	Yes	
Diabetes mellitus	Yes	

Medical Review - Participant

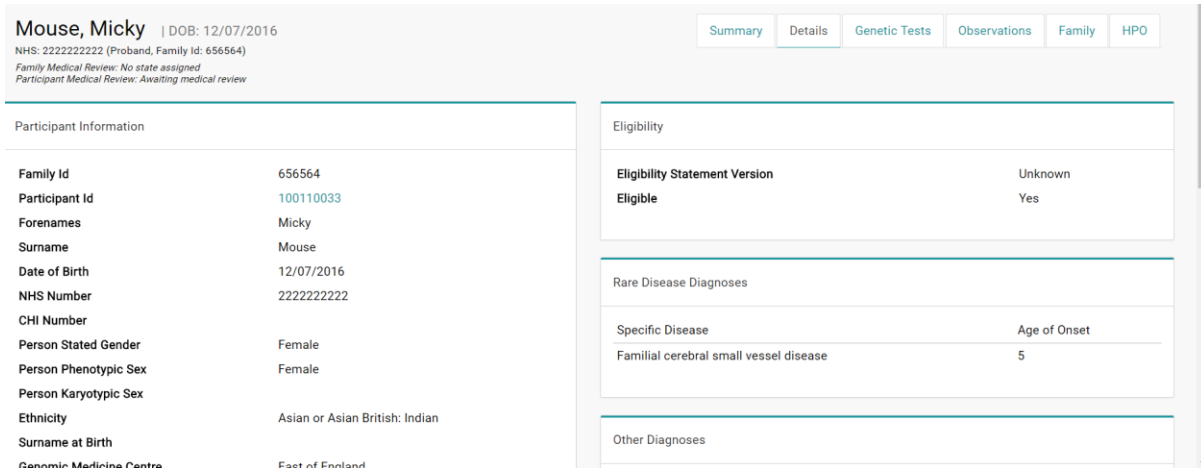
Event Date	
Reviewer	
Review Outcome	Awaiting medical review
Comments regarding outcome of medical review	
Specific Disease(s)	Familial cerebral small vessel disease
Comments regarding specific rare disease	

Medical Review - Family

Reviewer	
Event Date	
Review Outcome	No state assigned
Outcome Comments	

5.3.2.2 Details

The details tab includes identification and contact information for the participant, eligibility and diagnosis information, and consent/withdrawal information.



5.3.2.3 Genetic Tests

If any data on Genetic Test have been provided, this will be displayed on the Genetic Tests tab.

5.3.2.4 Observations

The Observations tab will display any General Observation data that the NHS GMC has submitted, such as height and weight.



5.3.2.5 Family

The Family tab currently displays a summary of the family members recruited, their disease status and medical review status. Each family member's participant ID and name contains a hyperlink that will take you to that participant's record.

From late January 2017, this view will also contain an image of the current pedigree for the family and details of all of the uploaded pedigree files. Once released for NHS GMC use, the Pedigree Editor will be accessible through a link here to allow pedigrees to be created and edited.

5.3.2.6 HPO

Any HPO terms that have been submitted as being 'present', 'absent' or of 'unknown' status will be available in the HPO tab, including modifiers.

For Distribution to NHS GMCs

Mouse, Micky | DOB: 12/07/2016
 NHS: 222222222 (Proband, Family Id: 656564)
 Family Medical Review: No state assigned
 Participant Medical Review: Awaiting medical review

[Summary](#) | [Details](#) | [Genetic Tests](#) | [Observations](#) | [Family](#) | [HPO](#)

Phenotype Statement

HPO Term	Present	Modifiers
Migraine with aura	Yes	Right, Middle Age Onset, Non-Progressive, Moderate, Distal
Unilateral deafness	Yes	
Reduced consciousness/confusion	Yes	
Anxiety	Yes	
Diabetes mellitus	Yes	
Transient ischemic attack	Yes	
Subcortical white matter calcifications	Yes	Right, Neonatal Onset, Progressive, Borderline, Localized
Seizures	No	
Generalized tonic-clonic seizures	No	

6 If you need more information

If you are having issues or need more information on the LabKey views, please contact Genomics England’s contact desk by telephone on 0300 3 035 035 or at ssd.genomics@hscic.gov.uk