Plan Overview

A Data Management Plan created using DMPonline

Title: Birdshot uveitis genotype and visual prognosis

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Template: UMC Utrecht DMP

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Project abstract:

Rationale: Birdshot Uveitis is a rare but potentially blinding disease, that has a highly variable disease course. Whether a patient will suffer from a more serious disease course is as yet unpredictable at presentation of the disease. Patients with birdshot may have a self-limiting disease course, mild but chronic disease or very severe intraocular inflammation. Previous genetic studies of Birdshot Uveitis have revealed an unusually strong association with HLA-A29 (all patients carry this allele) and polymorphisms in ERAP genes. Based on the haplotypes of ERAP we can stratify patients into three genetic groups. Because of the strong association with Birdshot, We hypothesise that these ERAP are embedded in the pathophysiological mechanisms of this disease, and thus, that these haplotypes may be associated with the disease course. We think that using key polymorphisms may help predict the disease course for individual patients in the near future. Objective: To investigate the complication rate and visual prognosis of patients with Birdshot uveitis according to ERAP polymorphism stratified into three groups: both alleles are positive for the before mentioned ERAP polymorphish, one of two is positive or both are negative. Study design: Case control study Study population: Adults with Birdshot Uveitis that have been genotyped at the UMC Utrecht for the GWAS study in 2012 (METC 10-401/C) and are also included in the registry “ocular inflammation” (METC 17-363) in which they gave informed consent for the use of clinical data. Main study parameters/endpoints: The main study parameters are related to visual outcome (visual field score, best corrected visual acuity), Secondary outcomes are the rate of complications (e.g. cataract, glaucoma and the presence or absence of cystoid macular oedema) and need for long term (e.g. >3 months) systemic immunosuppressing therapy.

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Start date: 01-06-2021

End date: 31-12-2021

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Copyright information:

Birdshot uveitis genotype and visual prognosis

1. General features

1.1. Please fill in the table below. When not applicable (yet), please fill in N/A.

DMP template version	29 (don't change)
ABR number *(only for human-related research)*	
METC number *(only for human-related research)*	Te be determined
DEC number *(only for animal-related research)*	
Acronym/short study title	BUGAVP
Name Research Folder	xx-xxx_BUGAVP
Name Division	DHS
Name Department	Ophthalmology
Partner Organization	not applicable
Start date study	June 2021
Planned end date study	December 2021
Name of datamanager consulted*	Dax Steins
Check date by datamanager	22-04-2021

1.2 Select the specifics that are applicable for your research.

- Monocenter study
- Retrospective study
- Non-WMO
- Observational study
- Clinical study

This is a case-control study in which we compare the clinical course and visual outcome of two genotype groups of patients with Birdshot Uveitis. Genotype data from 96 patients are available from a previous study in the UMC Utrecht (Published in 2014 METC 10-401/C). Patients from this study will be included in this study if they are also included in our registry “ocular inflammation” (METC 17-363/C) in which they have given broad consent for the use of clinical data in future studies.

2. Data Collection

2.1 Give a short description of the research data.

Rationale: Birdshot Uveitis is a rare but potentially blinding disease, that has a highly variable disease course. Whether a patient will suffer from a more serious disease course is as yet unpredictable at presentation of the disease. Patients with birdshot may have a self-limiting disease course, mild but chronic disease or very severe intraocular inflammation. Previous genetic studies of

Birdshot Uveitis have revealed an unusually strong association with HLA-A29 (all patients carry this allele) and polymorphisms in ERAP genes. Based on the haplotypes of ERAP we can stratify patients into three genetic groups.

Because of the strong association with Birdshot, We hypothesise that these ERAP are embedded in the pathophysiological mechanisms of this disease, and thus, that these haplotypes may be associated with the disease course. We think that using key polymorphisms may help predict the disease course for individual patients in the near future.

Objective: To investigate the complication rate and visual prognosis of patients with Birdshot uveitis according to ERAP polymorphism stratified into three groups: both alleles are positive for the before mentioned ERAP polymorphish, one of two is positive or both are negative.

Study design: Case control study

Study population: Adults with Birdshot Uveitis that have been genotyped at the UMC Utrecht for the GWAS study in 2012 (METC 10-401/C) and are also included in the registry “ocular inflammation” (METC 17-363) in which they gave informed consent for the use of clinical data.

Subjects	Volume	Data Source	Data Capture Tool	File Type	Format	Storage space
Human	~90	electronic data capturing tool 17-363/C	excel	quantitative	.csv	0-10GB
Human	~90	raw data from previous genotyping, translated to binary "yes/no" (genotype present or not) METC 10-401/C	SPSS	quantitative	.sav	0-10-GB
Human	~90	EPD (HiX)	excel	quantitative	.csv	0-10GB

2.2 Do you reuse existing data?

- Yes, please specify

Genotype data from 96 patients are available from a previous study in the UMC Utrecht (Published in 2014 METC 10-401/C). Patients from this study will be included in this study if they are also included in our registry “ocular inflammation” (METC 17-363/C). The registry of ocular inflammation at the department of ophthalmology at the UMC Utrecht has employed a broad consent procedure to facilitate future clinical research. We want to obtain the clinical data with time to event for survival analysis for each the genotype group with 1 versus the genotype group with 2 polymorphisms.

2.3 Describe who will have access to which data during your study.

Type of data	Who has access
Direct identifying personal data	Research team, Datamanager
Key table linking study specific IDs to Patient IDs	PI, Datamanager
Pseudonymized data	Research team, Datamanager

2.4 Describe how you will take care of good data quality.

#	Question	Yes	No	N/A
1.	Do you use a certified Data Capture Tool or Electronic Lab Notebook?		X	
2.	Have you built in skips and validation checks?		X	
3.	Do you perform repeated measurements?		X	
4.	Are your devices calibrated?			X
5.	Are your data (partially) checked by others (4 eyes principle)?		X	
6.	Are your data fully up to date?	X		
7.	Do you lock your raw data (frozen dataset)	X		
8.	Do you keep a logging (audit trail) of all changes?	X		
9.	Do you have a policy for handling missing data?	X		
10.	Do you have a policy for handling outliers?	X		

2.5 Specify data management costs and how you plan to cover these costs.

#	Type of costs	Division ("overhead")	Funder	Other (specify)
1.	time of researcher			X (part of residency)
2.	storage and archiving	x		
3.				
4.				
5.				

2.6 State how ownership of the data and intellectual property rights (IPR) to the data will be managed, and which agreements will be or are made.

The UMC Utrecht is and remains the owner of all collected data for this study. The data is collected in a relatively large patient group and is very valuable for further, broader studies in Europe. It may for example be used to find study subjects for future treatment studies. Our data cannot be protected with IPR, but its value will be taken into account when making our data available to others, when setting up Research Collaborations and when drawing up Data Transfer Agreement(s).

3. Personal data (Data Protection Impact Assessment (DPIA) light)

Will you be using personal data (direct or indirect identifying) from the Electronic Patient Dossier (EPD), DNA, body material, images or any other form of personal data?

- Yes, go to next question

I will process personal data. I have checked the full DPIA checklist and I do not have to complete a full DPIA. I therefore fill out this DPIA light and proceed to 3.1

3.1 Describe which personal data you are collecting and why you need them.

Which personal data?	Why?
HLA-type (not in any way in this study retracable to a patient, but it is still DNA)	because this HLA type is strongly related to disease pathology. If we can link it to any clinical outcome (visual outcome / treatment requirement) this might aid in clinical decision making
visual related outcomes, treatment regimes	see above
gender, age	to describe the study population

3.2 What legal right do you have to process personal data?

- Other, please explain

Genotype data from 96 patients are available from a previous study in the UMC Utrecht (Published in 2014 METC 10-401/C). Patients from this study will be included in this study if they are also included in our registry “ocular inflammation” (METC 17-363/C). The registry of ocular inflammation at the department of ophthalmology at the UMC Utrecht has employed a broad consent procedure to facilitate future clinical research.

3.3 Describe how you manage your data to comply to the rights of study participants.

The study will be conducted according to the Dutch laws: ‘Algemene Verordening Gegevensbescherming’, ‘Wet Gemeenschappelijke Behandelings Overeenkomst’ and the privacy policy by the UMC Utrecht.

The data are pseudonymized and the linking table to personal data is saved. An authorized person manages the linking table, can re-identify study participants when necessary and deliver, correct or delete the data.

Right	Example answers
Right of Access	Research data are coded, but can be linked back to personal data, so we can generate a personal record at the moment the person requires that. This needs to be done by an authorized person.
Right of Rectification	The authorized person will give the code for which data have to be rectified.
Right of Objection	We use informed consents.
Right to be Forgotten	In the informed consent we state that the study participant can stop taking part in the research. Removal of collected data from the research database cannot be granted because this would result in a research bias.

3.4 Describe the tools and procedures that you use to ensure that only authorized persons have access to personal data.

1. We use the secured Research Folder Structure that ensures that only authorized personnel has access to personal data, including the key table that links personal data to the pseudoID.

3.5 Describe how you ensure secure transport of personal data and what contracts are in place for doing that.

1. We will not transport any personal data outside the UMCU network drives.

4. Data Storage and Backup

4.1 Describe where you will store your data and documentation during the research.

1. The digital files will be stored in the secured Research Folder Structure of the UMC Utrecht. We will need +/- 50 GB storage space, so the capacity of the network drive will be sufficient. A project specific procedure is in place for access to the paper dossiers. Documentation of this procedure is stored in the Research Folder Structure.

4.2 Describe your backup strategy or the automated backup strategy of your storage locations.

1. All (research) data is stored on UMC Utrecht networked drives from which backups are made automatically twice a day by the division IT (dIT).

5. Metadata and Documentation

5.1 Describe the metadata that you will collect and which standards you use.

1. For the data collected in SPSS. I prepared a codebook of my research database.
2. Vision is measured in Snellen vision and transformed to LogMar vision for calculations and analysis.

5.2 Describe your version control and file naming standards.

We will distinguish versions by indicating the version in the filename of the master copy by adding a code after each edit, for example V1.1 (first number for major versions, last for minor versions). The most recent copy at the master location is always used as the source, and before any editing, this file is saved with the new version code in the filename. The file with the highest code number is the most recent version. Every month, we will move minor versions to a folder OLD.

6. Data Analysis

6 Describe how you will make the data analysis procedure insightful for peers.

The missing data will not be included in the statistical analysis. Per-protocol analysis will be performed. Statistical analysis of the data will be performed with SPSS (version 26). We will make syntaxes such that it is fully clear how the statistical analysis is performed and peers will be able to repeat the analysis based on these syntaxes.

7. Data Preservation and Archiving

7.1 Describe which data and documents are needed to reproduce your findings.

The data package will contain: the raw data, the study protocol describing the methods and materials, the script to process the data, the scripts leading to tables and figures in the publication, a codebook with explanations on the variable names.

7.2 Describe for how long the data and documents needed for reproducibility will be available.

Data and documentation needed to reproduce findings from this non-WMO study will be stored for at least 15 years.

7.3 Describe which archive or repository (include the link!) you will use for long-term archiving of your data and whether the repository is certified.

After finishing the project, the data package will be stored at the UMC Utrecht Research Folder Structure and is under the responsibility of the Principal Investigator of the research group. When the UMC Utrecht repository is available, the data package will be published here.

7.4 Give the Persistent Identifier (PID) that you will use as a permanent link to your published dataset.

I will be using a DOI-code and will update this plan as soon as I have the code.

8. Data Sharing Statement

8.1 Describe what reuse of your research data you intend or foresee, and what audience will be interested in your data.

To be determined.

8.2 Are there any reasons to make part of the data NOT publicly available or to restrict access to the data once made publicly available?

- No, all data generated in this project will be made publicly available without any restrictions

As the data is privacy-sensitive, we publish the descriptive metadata in the data repository with a description of how a data request can be made (by sending an email to the corresponding author). In the event that peers like to reuse our data this can only be granted if the research question is in line with the original informed consent signed by the study participants. Every application therefore will be screened upon this requirement. If granted, a data usage agreement is signed by the receiving party.

8.3 Describe which metadata will be available with the data and what methods or software tools are needed to reuse the data.

All data and documents in the data package mentioned in 7.1 will be shared under restrictions.

8.4 Describe when and for how long the (meta)data will be available for reuse

- (Meta)data will be available as soon as article is published

8.5 Describe where you will make your data findable and available to others.

As the data is privacy-sensitive, we publish the descriptive metadata in the data repository with a description of how a data request can be made (by sending an email to the corresponding author). In the event that peers like to reuse our data this can only be granted if the research question is in line with the original informed consent signed by the study participants. Every application therefore will be screened upon this requirement. If granted, a data usage agreement is signed by the receiving party.