

# OCT HMGULA\_OCT\_001

## Purpose

To detect abnormalities in eye morphology.

## Experimental Design

- **Minimum number of animals** : 7M + 7F
- **Age at test**: Week 77
- **Sex**: We do not expect the results of this test to show sexual dimorphism

## Procedure

1. Turn on the OCT and start the database
2. Anaesthetize mouse
3. Prepare mouse eyes with drops and place contact lens (focal length 10 mm) on the right eye
4. Enter mouse data in the “Create new patient file” area and switch to the “ Acquisition” window
5. Move the OCT camera to the right position and activate measurement modus
6. Place mouse collaterally to the OCT camera on the right side of a platform that is fixed in front of the OCT lens
7. Search the contact lens in the live picture of the fundus image field and place the pupil of the mouse eye in the centre of the window
8. Move the OCT camera such that OCT lens and contact lens come close to each other
9. Focus the fundus picture by slightly moving up/down or forward/backward, and lock the camera at this position
10. Take *en face* fundus images
11. Set the "Ref.Arm“ ruler such that the section of the retina is placed in the centre of the blue rectangle
12. Set the mode of measurement on SD-OCT modus
13. Move the green horizontal line in the fundus image field to the optic nerve level
14. Save images of retinal sections

15. Move the OCT camera to the left position
16. Repeat measurement procedure for the left eye

## Notes

- As a minimum, all abnormalities should be imaged.
  - Where capacity permits, all mice can be imaged
- Majority of parameters can be analysed using the standard approach for assessing categorical data. To increase power for analysis purposes, where an abnormality is detected in the left, right or both eyes, the data may be combined to generate one "abnormal" category.

## Data QC

Image QC is typically performed during data collection to ensure high quality images are captured whilst eyes are dilated etc.

## Parameters and Metadata

### Fundus retina HMGULA\_OCT\_001\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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### OCT description HMGULA\_OCT\_002\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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### Left fundus number of main vessels HMGULA\_OCT\_003\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Right fundus number of main vessels HMGULA\_OCT\_004\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Left retinal thickness HMGULA\_OCT\_005\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: true

Unit Measured:  $\mu\text{m}$

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## Right retinal thickness HMGULA\_OCT\_006\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: true

Unit Measured:  $\mu\text{m}$

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## Left fundus pigmentation HMGULA\_OCT\_007\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Right fundus pigmentation HMGULA\_OCT\_008\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Left optic disc HMGULA\_OCT\_009\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Right optic disc HMGULA\_OCT\_010\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Left retinal layers HMGULA\_OCT\_011\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Right retinal layers HMGULA\_OCT\_012\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Datetime of measurement HMGULA\_OCT\_013\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Equipment manufacturer HMGULA\_OCT\_014\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Heidelberg Engineering,

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## Mouse status HMGULA\_OCT\_015\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

**Topical Agents** HMGULA\_OCT\_016\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Atropine,

**Equipment model** HMGULA\_OCT\_017\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Spectralis,

**Equipment ID** HMGULA\_OCT\_018\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

## Date equipment last calibrated HMGULA\_OCT\_019\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Dilation Method HMGULA\_OCT\_020\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: 0.5 % Atropine Solution, Atropine,

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## General Anesthetic HMGULA\_OCT\_021\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Ketamine+Xylazine, Ketamin 0.1 mg/g, Xylazin 0.01mg/g bodyweight,

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