

NIAA Annual Meeting

Photographing the Equine's Iris as a Form of Identification



Calgary Video

Link 01:

<http://www.youtube.com/watch?v=tkehCuBQbsA>

Link 02:

http://www.youtube.com/watch?v=79a5_CWhBtc

How eyeD works

Enrollment

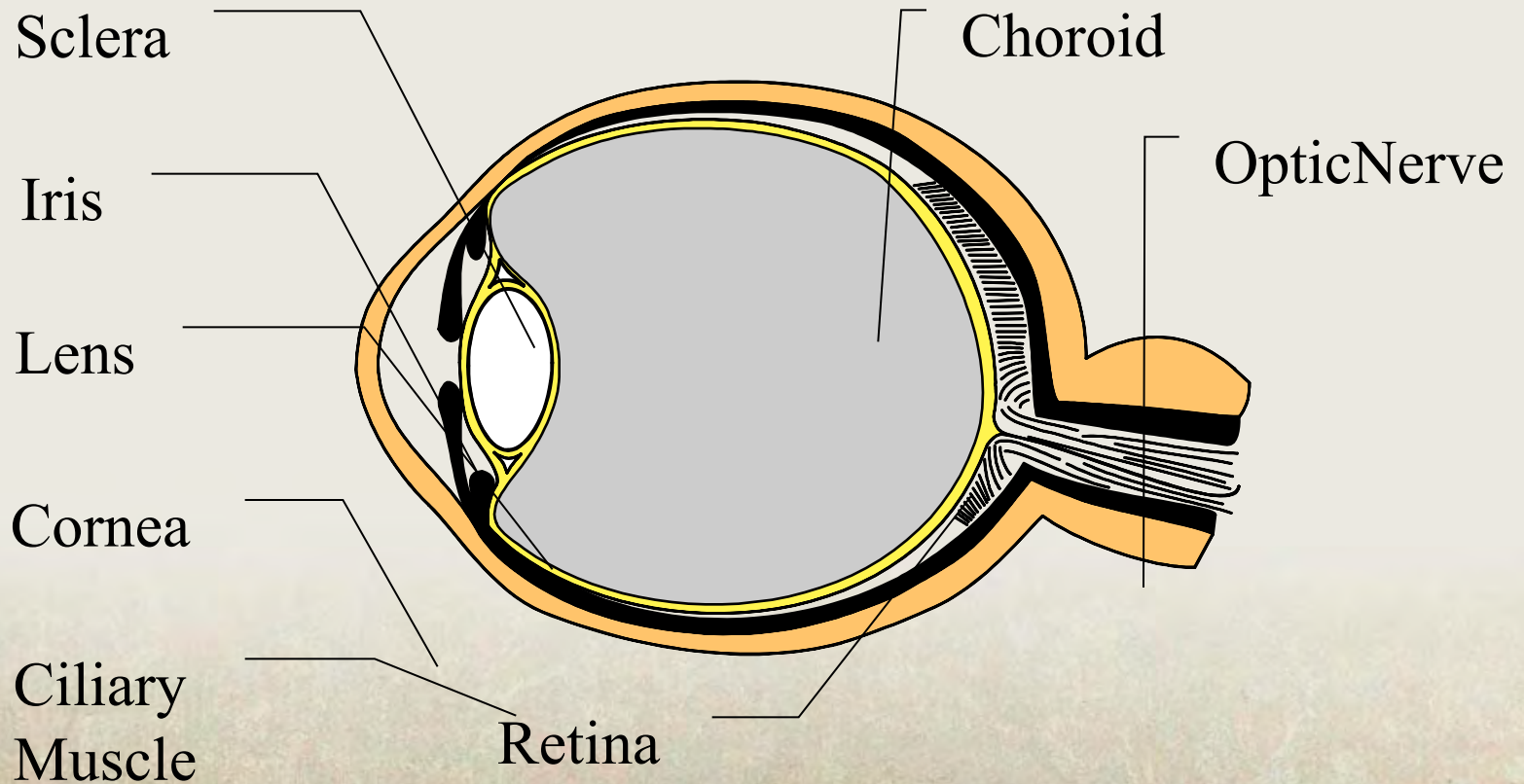
- Uses a video image of the iris
640 x 480
monochrome
- Analyzes the iris patterns
- Creates a eyePrint™ to describe the patterns
- eyePrint is sent to the eyeD processor in order for a 15 digit alpha-numeric unique identifier to be issued

How eyeD Works

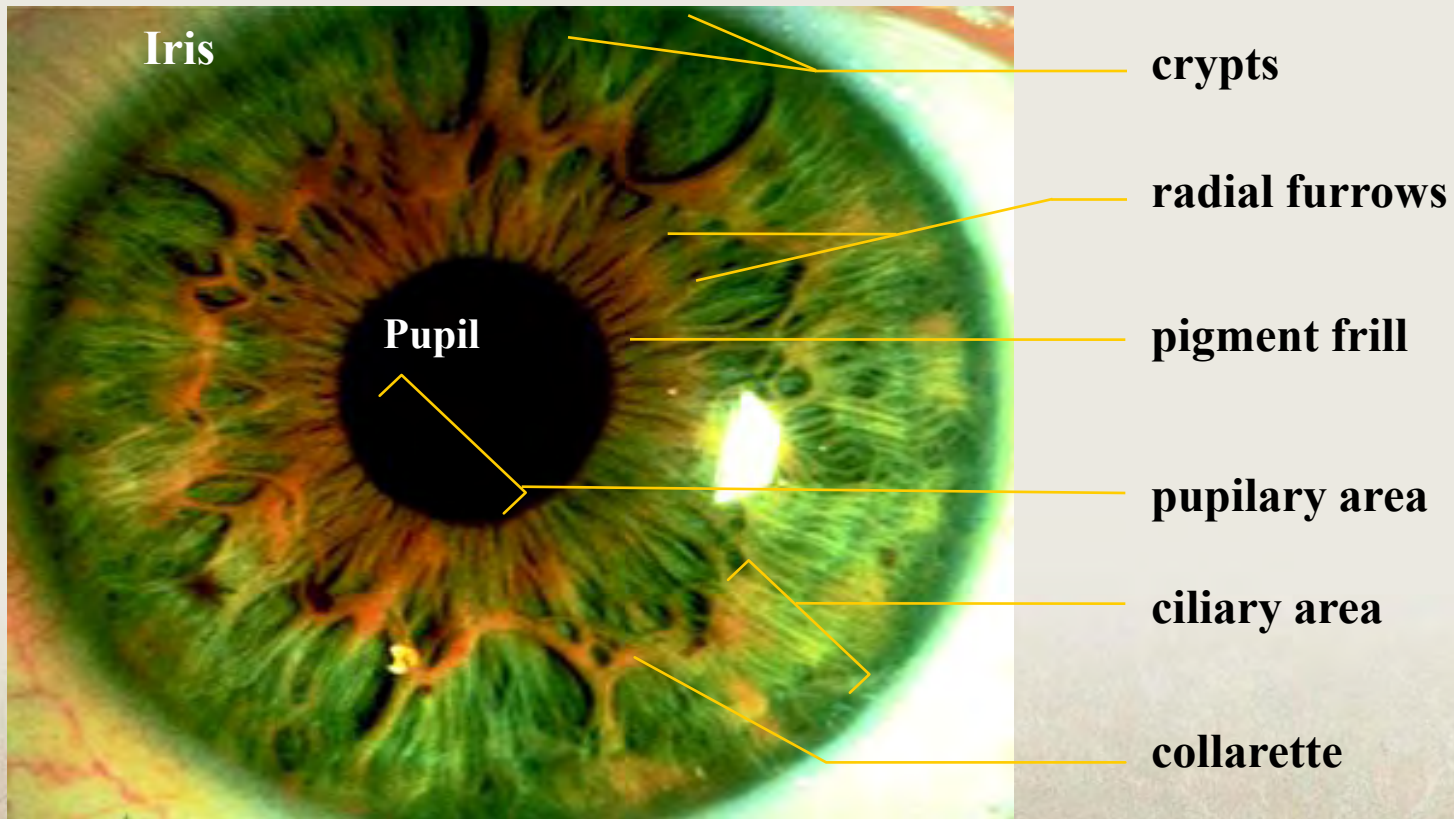
Verification

- Uses a video image of the iris
 - 640 x 480
 - monochrome
- Analyzes the iris patterns
- Matches the code to all eyePrints stored in the eyeD processor
- Authenticates or rejects individual

Anatomy of the eye

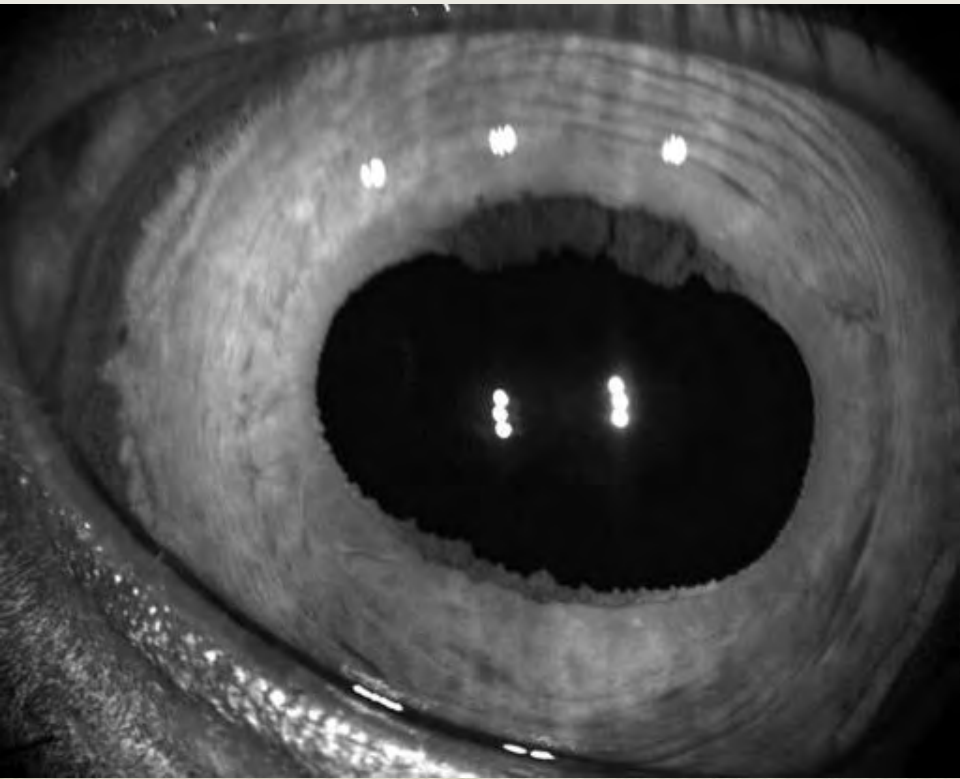


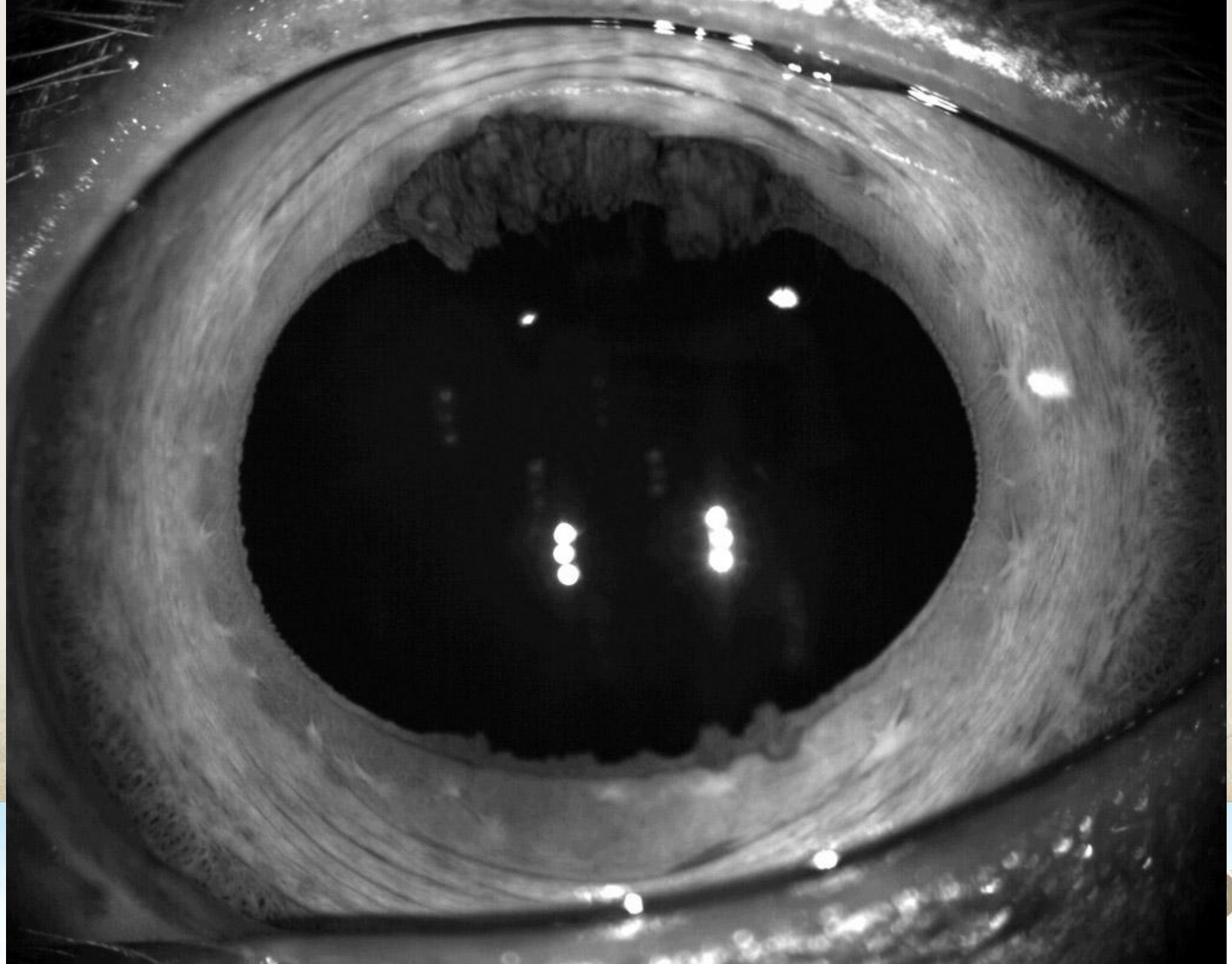
The Iris: Rich in Features

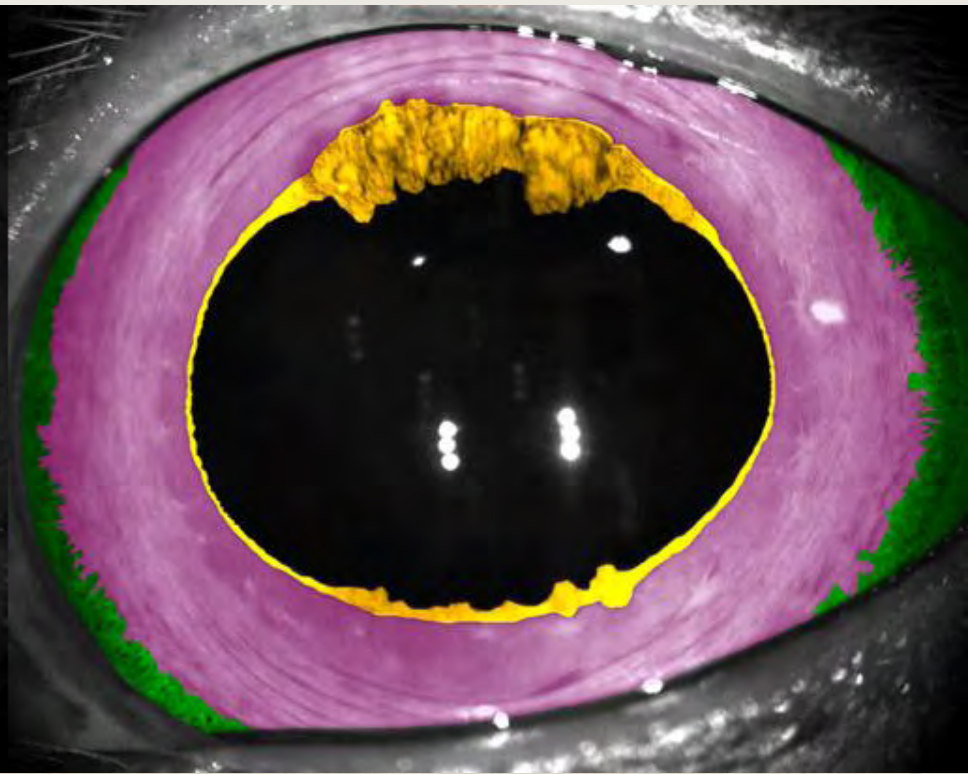
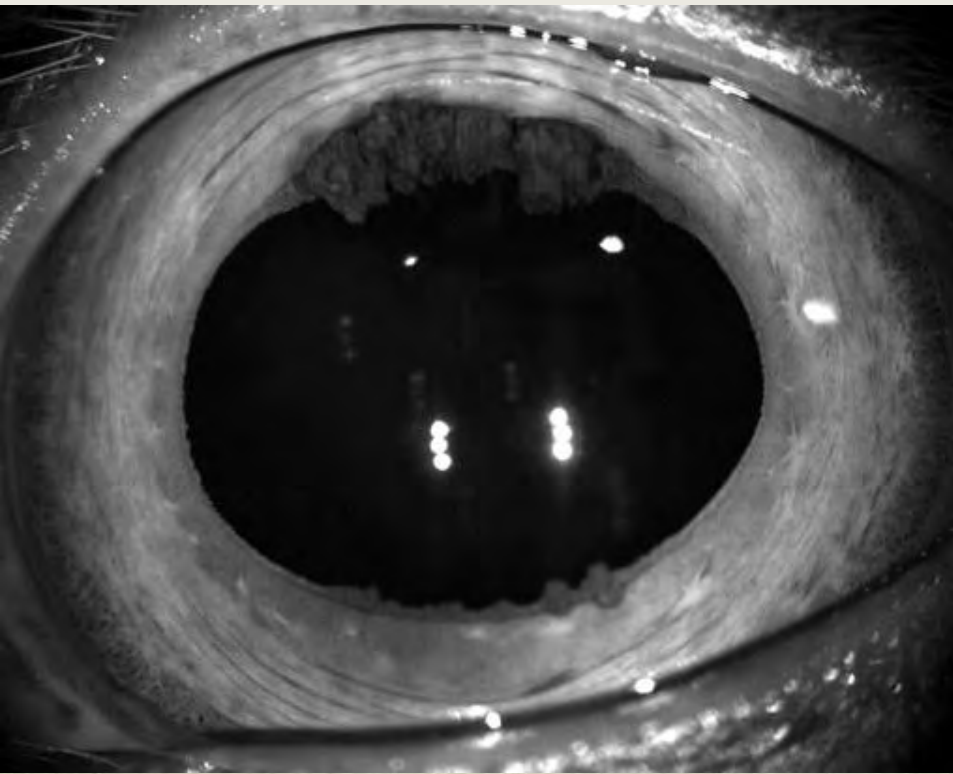


The Iris: Best for Identification

- Measurable with great precision
 - feature extraction & quantification
 - height, width, spatial relationship
- Stable for life
 - formed by one year
 - naturally protected
- Visible without intrusion
 - imaging from a distance

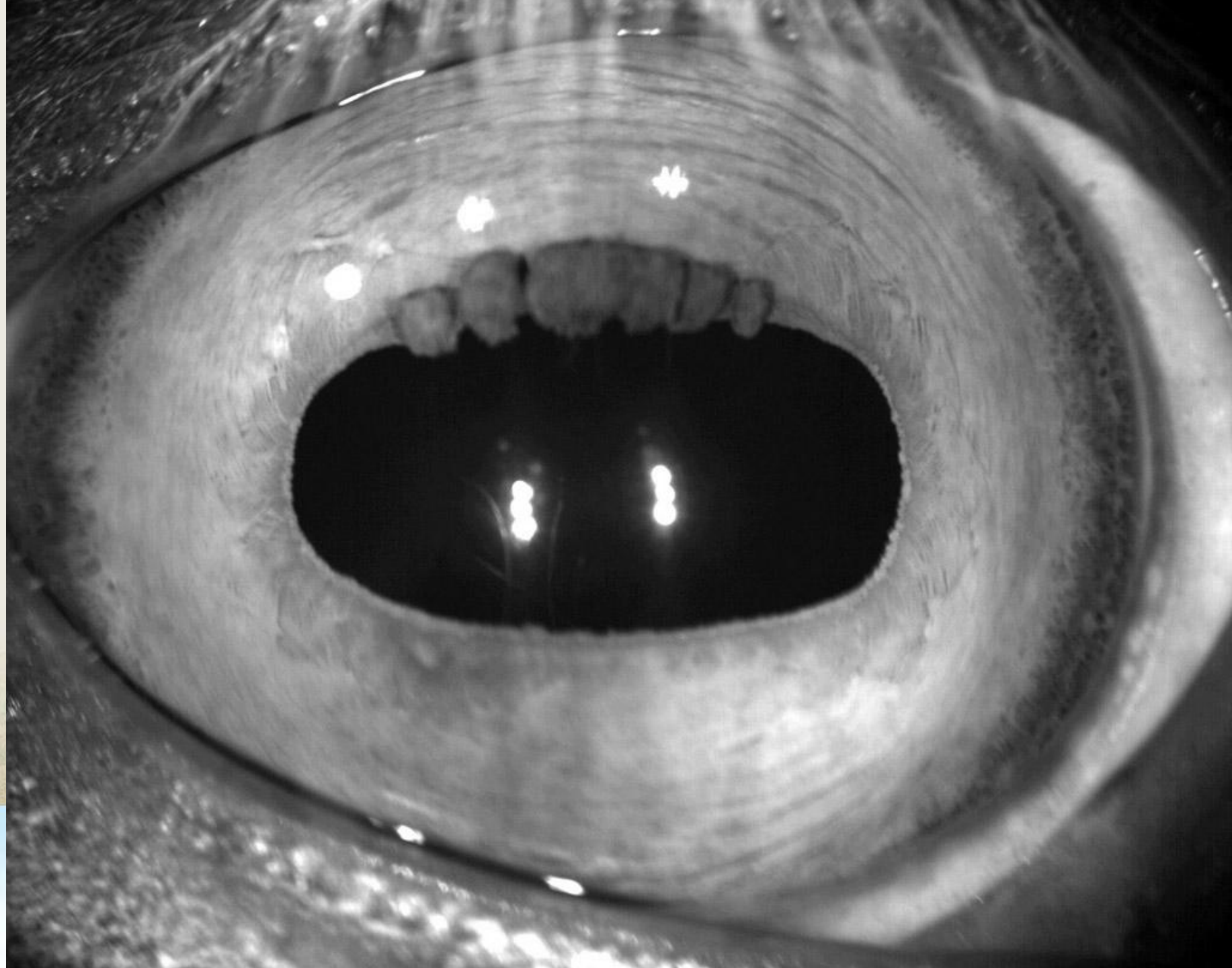


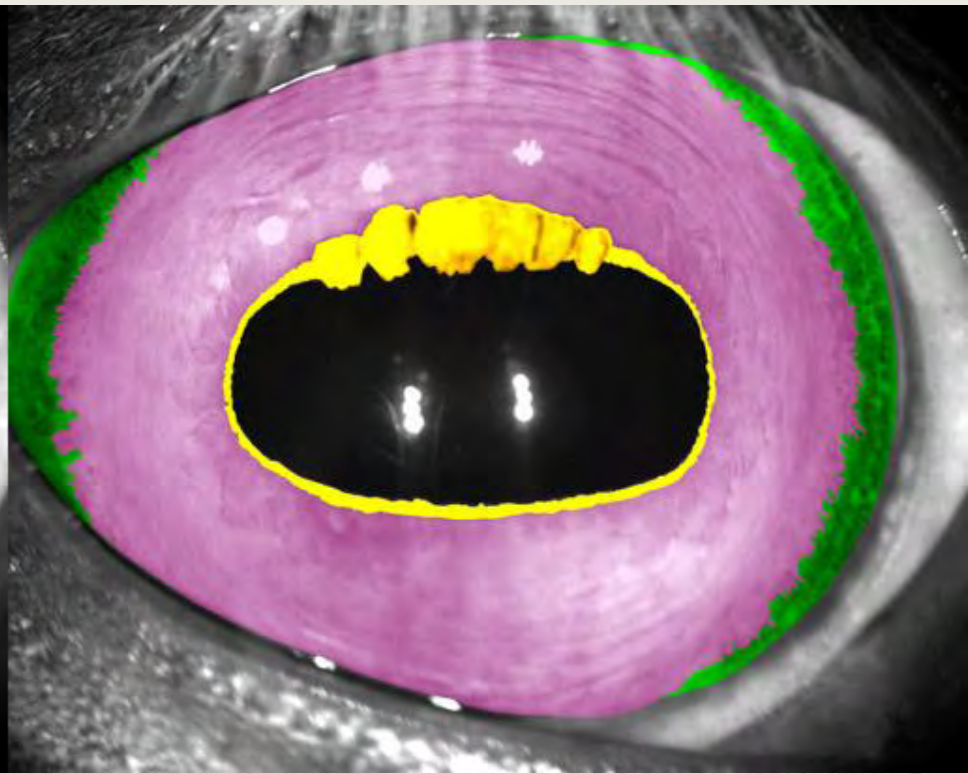
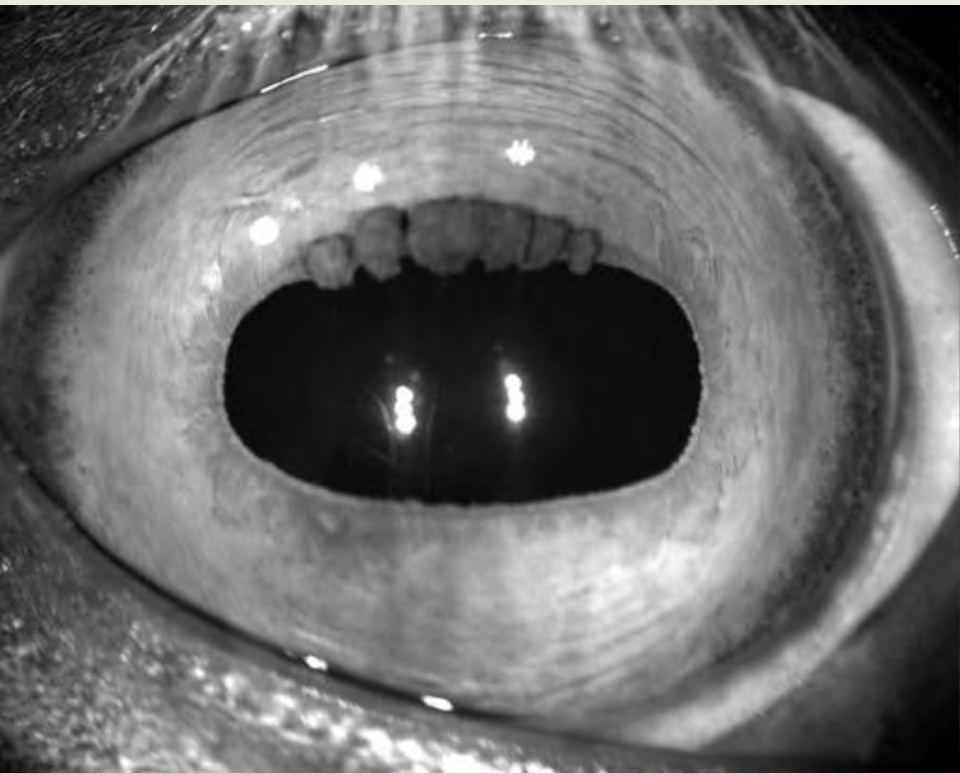


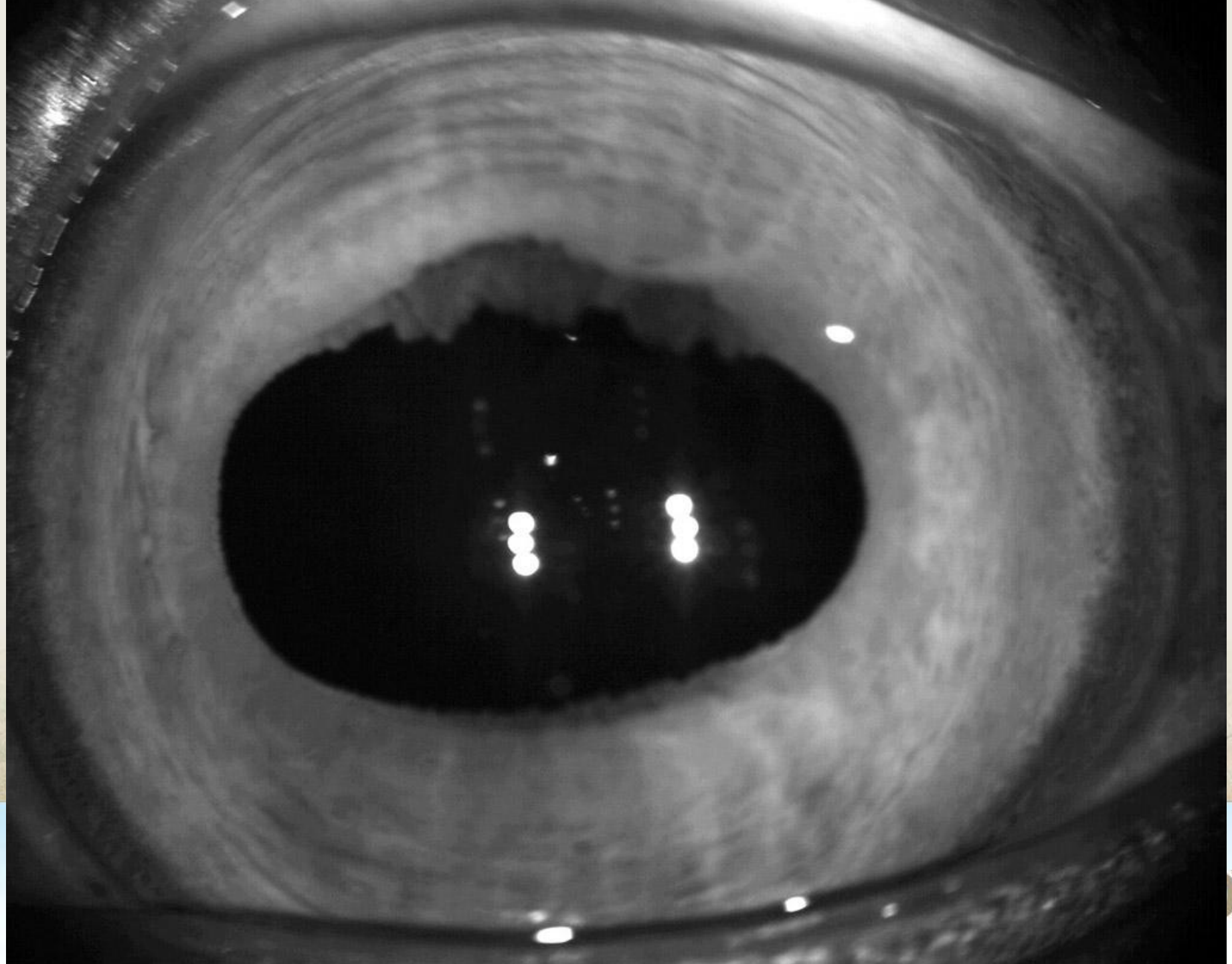


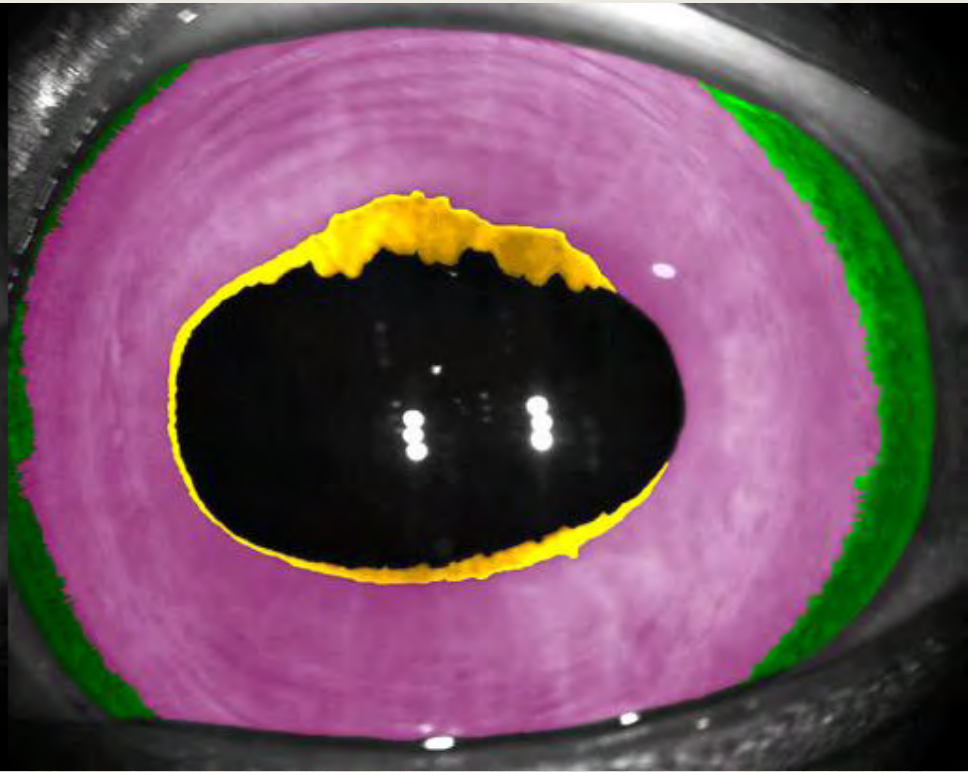
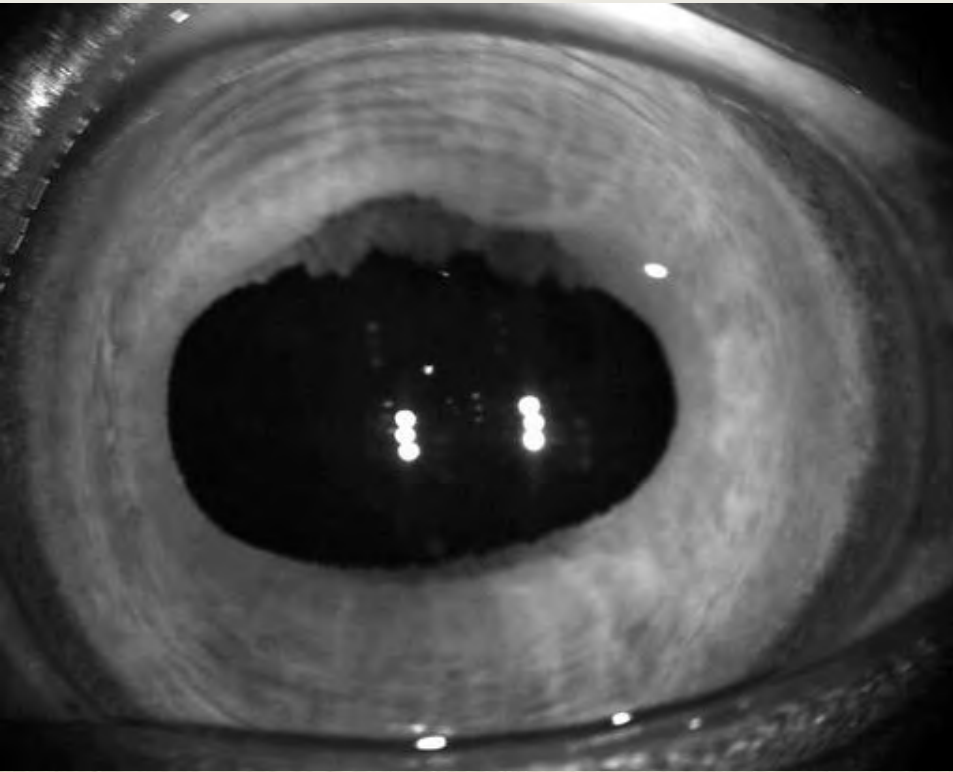


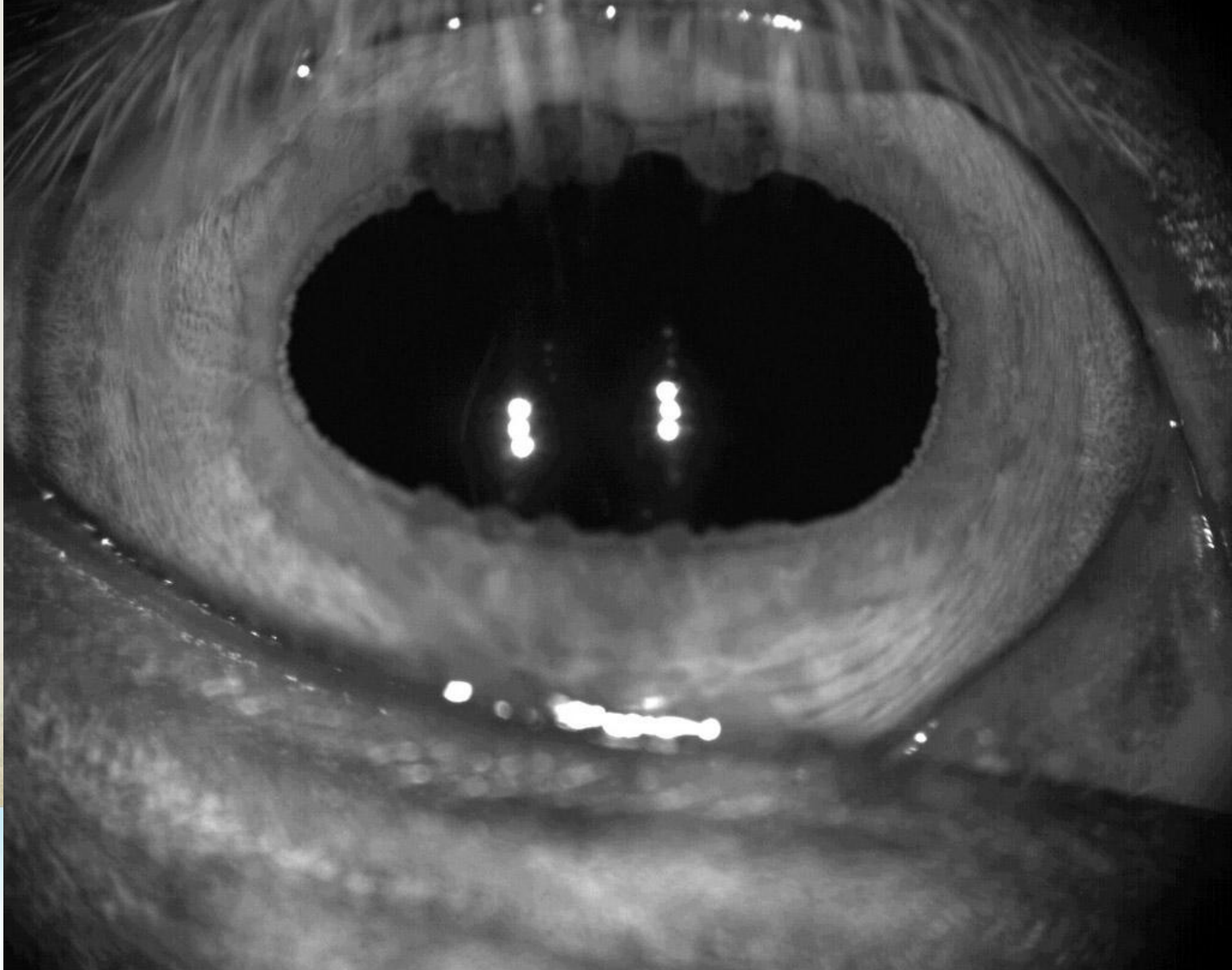


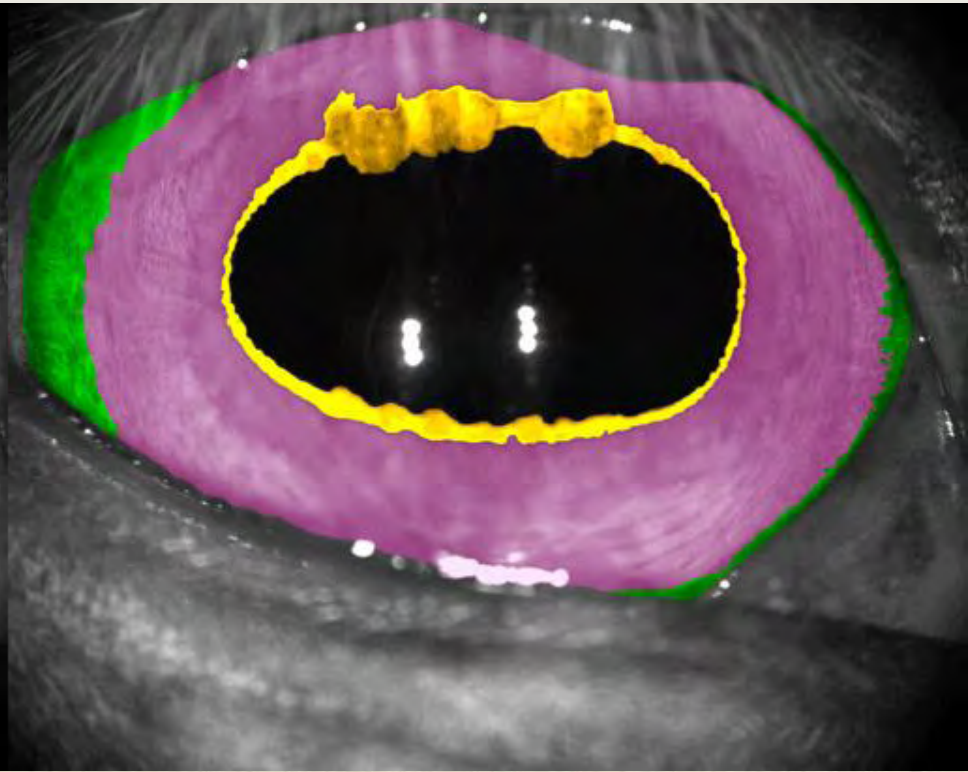












Technology Performance

- Accuracy

More accurate than current Human Iris Algorithms

- Speed

enrollment

- < 5 seconds per eye
- Data entry is quick

verification

- < 5 seconds

eyeD vs. other ID Methods

Advantages	Methods				
	eyeD	RFID Chip	Retinal ID	Ear Tags, Markings, Tattoo's, Etc.	DNA
Low Risk of Identifier Loss	x		x		
Low Risk of Contamination	x		x	x	x
Security	x		x		x
Accuracy	x	x			x
Speed	x	x		x	
Ease of Use	x			x	
Non-Invasive	x		x		
Animal Safety	x		x		x
Low Cost	x	x			
Digital	x	x	x		x
Totals	10	5	6	3	6

Summary

Three Simple Steps

1. A digital photo is taken of each of the horse's eyes using a special camera
2. The images are then automatically converted into a unique eyePrint – one for each eye.
3. The eyePrints are electronically stored in the eyeD processor along with other optional information and records. When verification is necessary, a photo is taken of either eye and the resulting eyePrint is then matched to those that have been stored with the eyeD processor.

Summary

More Accurate than a Fingerprint

No two irises are alike – even clones have different iris patterns – making an eyeD eyePrint more accurate than a fingerprint.

Summary

Easy to Use

If you can take a digital photograph, you can take an eyeD iris scan. Once the scan is taken, the eyePrint is stored electronically. When verification is necessary, another scan is taken and the eyePrint is matched to the original. It's that easy

