

Preparing your resident for the ECVO examination

DAVID GOULD

CHAIR, ECVO EXAMINATION COMMITTEE



ECVO Examination committee

- Chosen by Executive committee, with input from Chair of Examination committee
- Come from a broad range of countries and residency training programmes
- Have varied research, teaching or clinical interests
- Represent academia and private referral practice
- Are experienced in clinical work/ teaching/ examinations
- All current members:
 - Have completed an ECVO or ACVO-approved residency training programme
 - Have passed the ECVO examination
- Chairperson serves 3 year term, renewed as per EC decision

ECVO Examination committee

Current members

David Gould (<i>Chair</i>) (UK)	ECVO
Charlotte Keller (<i>Vice-Chair</i>) (Switzerland/ Canada)	ACVO/ECVO
Christine Heinrich (Germany/ UK)	ECVO
Marta Leiva (Spain)	ECVO
Ernst-Otto Ropstad (Norway)	ECVO
Simon Pot (Netherlands/ Switzerland)	ACVO/ECVO
Barbara Braus (Germany)	ECVO



Sitting the ECVO examination

- Completed approved RRTP/ ARTP
 - Approved by Education & Residency Committee (ERC)
- Approved by Credentials Committee (CC)
- Completed and submitted exam application form and fee in time (1 Dec)
 - Approved by EC Secretary
- Must sit within 3 years of residency completion
- Must pass within 8 years
- May resit up to four times

ECVO examination

Held yearly (usually Feb/April)

First-time candidates must sit full examination

Resit candidates may resit only failed sections (MCQ, slide and/or practical)

- But entire practical section, not single parts

The examination is conducted in English. Candidates should be sufficiently proficient in English to be able to read, write, and understand veterinary publications and examination questions written or spoken in English. The examination is structured to minimise any disadvantage of non-native English language speakers. The College permits the use of a non-medical dictionary during the examinations

ECVO Examination format

MCQ

- 4 papers, 50 MCQ, 2 hours/ paper
- Total 200 MCQ

Slide

- 2 papers x 50 short answer
- Total 100

Practical

- 3 stations
 - Clinical examination
 - Extraocular surgery
 - Intraocular surgery

Day 1

- 9:00- 11:00 MCQ 1
- 11:30-13:30 MCQ 2
- 14:30-16:30 Slide exam 1

Day 2

- 9:00- 11:00 MCQ 3
- 11:30-13:30 MCQ 4
- 14:30-16:30 Slide exam 2

Day 3

- Practical

Practical examination

Station	Time		
	08:30-09:15	09:15-10:15	10:30-11:15
Intraocular surgery	1	2	3
Extraocular surgery	3	1	2
Clinical examination	2	3	1

Station	Time		
	11:30-12:15	12:30-13:15	13:30-14:15
Intraocular surgery	4	5	6
Extraocular surgery	6	4	5
Clinical examination	5	6	4

Station	Time		
	14:30-15:15	15:30-16:45	17:00-17:45
Intraocular surgery	7	8	9
Extraocular surgery	9	7	8
Clinical examination	8	9	7

Clinical examination 45'

- 1 full ophthalmic examination, 1 part examination
- Candidates draw/write findings

Extraocular surgery 45'

- Adnexal surgical procedure on cadaver

Intraocular surgery 45'

- Components of extracapsular cataract extraction on cadaver globe

≥ two examiners per station

Examiners take contemporaneous notes and agree final mark for that station *between candidates*

The Angoff marking scheme

'Considered one of the most reliable and defensible methods available of setting passing points'

Relies on the pooled judgments of content experts

A group of experts is asked to judge each MCQ: 'what is the probability that a 'minimally acceptable' candidate will answer this item correctly?' Prompts the judges to consider a group of minimally acceptable candidates and what proportion of that group will answer each MCQ correctly

Results pooled to represent the minimally acceptable score. The final passing score for the examination is based on this pooled judgment

Statistical adjustment for testing error (SD) is provided to give the benefit of the doubt to examinees that score just below the level judged by the content experts to be the minimal passing point

Since the ECVO exams are revised regularly, the content and difficulty level changes. As a result, the passing point varies from year to year

MCQ and slide marking scheme: Angoff

Example

Angoff score 65% (raw passing point PP)

Candidate scores:

Candidate 1	67%
Candidate 2	82%
Candidate 3	40%
Candidate 4	72%
Candidate 5	70%
Candidate 6	69%
Candidate 7	63%
Candidate 8	53%
Candidate 9	61%
Candidate 10	43%

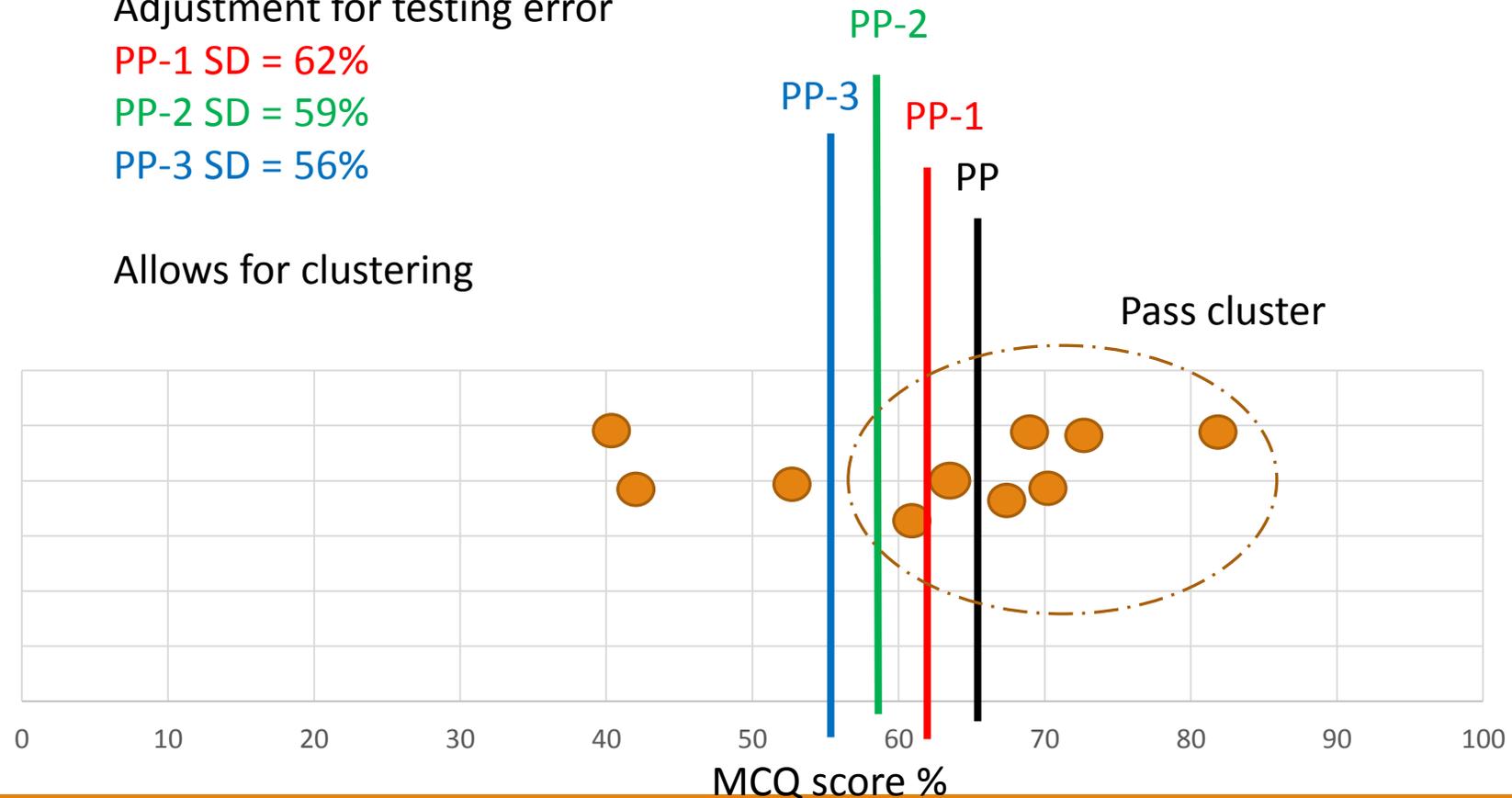
Adjustment for testing error

PP-1 SD = 62%

PP-2 SD = 59%

PP-3 SD = 56%

Allows for clustering



Practical marking scheme

Each station (clinical examination, extraocular surgery, intraocular surgery) graded out of 10

≥ 2 examiners

Contemporaneous notes

Mark agreed immediately

Clinical examination is marked on:

- Choice of equipment
- Approach / technique
- Use of allotted time
- Findings
- Discussion

Practical marking scheme

Each station (clinical examination, extraocular surgery, intraocular surgery) graded out of 10

≥ 2 examiners

Contemporaneous notes

Mark agreed immediately

Extraocular surgery is marked on:

- Set-up
- Surgical planning
- Use of loupes
- Selection and handling of instruments
- Tissue handling
- Surgical technique
- Suture selection, handling
- Use of allotted time

Practical marking scheme

Each station (clinical examination, extraocular surgery, intraocular surgery) graded out of 10

≥ 2 examiners

Contemporaneous notes

Mark agreed immediately

Pass mark 20/30 (66.6%)

If a candidate scores 4/10 or less in any single practical station then they will be judged as having failed the entire practical exam, regardless of their performance in the other two stations

Intraocular surgery is marked on:

- Set-up
- Use of op microscope
- Use of disposables
- Selection and handling of instruments
- Tissue handling
- Surgical technique
- Suture selection, handling
- Use of allotted time

The fail report

Failed practical exam candidates receive detailed report listing important aspects of the relevant practical stations

Written same day, immediately after practical examining has concluded

Discussed and agreed by entire exam committee

Does not list every single point – succinct due to time constraints

Appeals

Within 90 days of the date of results notification, in writing to the ECVO Secretary

- Include a statement of the grounds for reconsideration and documentation in support
- The President shall appoint a committee of three Diplomates who are not officers or members of the Examination Committee to serve as an Appeals Committee within 30 days of notice of an appeal
- Chairperson of the Examination Committee shall submit the examination and scores of the candidate, the complete list of scores of all candidates on that examination, and a statement of the criteria used for the Committee's recommendation for pass and fail to the Appeals Committee indicating the reason(s) for rejecting the candidate
- The Appeals Committee shall return its verdict within 60 days of its appointment

Appeals are welcome, complaining behind the back of the exam committee is not!

Preparing for the MCQ

Exam Instructions for Candidates document states:

200 multiple choice questions designed to test theoretical knowledge in the field of veterinary ophthalmology and associated sciences, covering the disciplines of ocular anatomy, embryology, physiology, pharmacology, microbiology, histopathology, cytology, toxicology, immunology, molecular biology, genetics, medicine, surgery, diagnostics, diagnostic imaging and neuro-ophthalmology in canine, feline, equine, large and small ruminant, poultry, laboratory animal, exotic animal and wildlife species. The questions encompass all the anatomic regions of the eye and incorporate the categories of examination, assessment, diagnosis and treatment.

Questions are based on papers from selected journals, books and classic articles as listed in the ECVO residents reading list

20 sample questions on ECVO website

Preparing for the MCQ

MCQs should:

Be clinically relevant

Avoid trivia

Not be designed to 'trick' candidates

~~According to Gilger et al (2005), the volume of the canine aqueous (AH) and vitreous (VH) humours are:~~

~~a) AH: 0.77 ± 0.24 ml; VH: 3.04 ± 1.27 ml~~

~~b) AH: 0.77 ± 0.24 ml; VH: 1.7 ± 0.86 ml~~

~~c) AH: 0.24 ± 0.14 ml; VH: 3.04 ± 1.27 ml~~

~~d) AH: 3.04 ± 1.27 ml; VH: 0.24 ± 0.14 ml~~

Preparing for the slides

Exam Instructions for Candidates document states:

The Slide Recognition test consists of Powerpoint-projected images of 100 clinical cases, designed to test clinical diagnostic and descriptive skills in the field of veterinary ophthalmology as well as in associated sciences, including applied diagnostic imaging, cytology, microbiology, and histopathology

Questions may involve the identification, assessment, and interpretation of the appearance and information presented on a photographic image. The Slide Recognition test is conducted in a non-verbal fashion, and candidates are asked to respond to written questions with a short answer written response. For each of the 100 clinical cases there are usually 1 to 4 questions

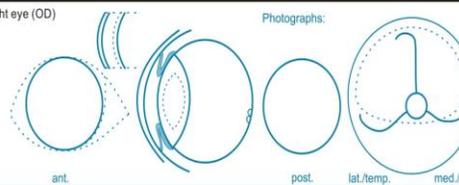
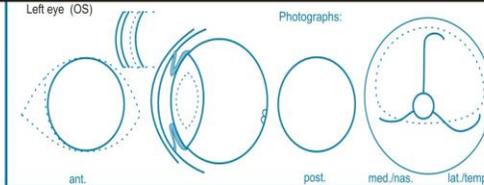
Images include clinical photographs, diagnostic techniques, cytological specimens, and gross and microscopic pathological specimens. Questions typically include such items as listing lesions or abnormalities, differential diagnoses, pathogeneses, morphologic diagnoses, and identifying species, morphologic structures and surgical instruments

20 sample slide questions on ECVO website

Preparing for the slides

Practice:

- Clinical images
- Surgical techniques
- Diagnostic imaging
- Cytology
- Histopathology
- HED forms

Examination	Identification						
Date: <input type="text" value="day"/> <input type="text" value="month"/> <input type="text" value="year"/>	Check tattoo: <input type="checkbox"/> Correct <input type="checkbox"/> Partly /Unreadable <input type="checkbox"/> Incorrect <input type="checkbox"/> Absent						
Method minimal: Mydriatic, indirect ophthalmoscopy and binocular biomicroscopy >10x	Check microchip: <input type="checkbox"/> Correct <input type="checkbox"/> Incorrect <input type="checkbox"/> Absent						
Optional: <input type="checkbox"/> Examined before dilatation <input type="checkbox"/> Direct Ophthalmoscopy <input type="checkbox"/> Gonioscopy (without mydriatic)	<input type="checkbox"/> Tonometry (without mydriatic) <input type="checkbox"/> Other: If an other method is used, this form only has value with a specifying certificate.						
Right eye (OD)	Left eye (OS)						
Photographs: 	Photographs: 						
Descriptive comments: Eye disease no. <input type="checkbox"/> mild <input type="checkbox"/> moderate <input type="checkbox"/> severe							
Note: affected Name of disease / Under investigation; not yet proven to be inherited in this breed.							
Results for the presumed inherited eye diseases:				Conditions valid for 12 months			
	UNAFFECTED	** UNDETERMINED	* AFFECTED		UNAFFECTED	*** SUSPICIOUS	* AFFECTED
1. Persistent Pupillary Membrane (PPM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> iris <input type="checkbox"/> cornea <input type="checkbox"/> lens <input type="checkbox"/> lamina	11. Entropion/Trichiasis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Persistent Hyperpl. Tunica Vasculosa Lentic/Primary Vitreous (PHTVL/PHPV)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> grade 1 <input type="checkbox"/> grade 2-6	12. Ectropion/Macroblepharon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Cataract (congenital)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (multifocal) <input type="checkbox"/> geographical <input type="checkbox"/> total	13. Distichiasis /Ectopic cilia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Retinal Dysplasia (RD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> choroid, hypoplasia <input type="checkbox"/> coloboma <input type="checkbox"/> other:	14. Corneal dystrophy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> cortical <input type="checkbox"/> post. pol. <input type="checkbox"/> ant. sut. l. <input type="checkbox"/> punctata <input type="checkbox"/> nucleus
5. Hypoplasia-/Micropapilla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> fibrae latae <input type="checkbox"/> laminae <input type="checkbox"/> occlusio	15. Cataract (non-congenital)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Collie Eye Anomaly (CEA)	<input type="checkbox"/>	<input type="checkbox"/>		16. Lens luxation (primary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Other:	<input type="checkbox"/>	<input type="checkbox"/>		17. Retinal degeneration (PRA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. L. pectinatum abn. (only after gonioscopy)	<input type="checkbox"/>	<input type="checkbox"/>		18. Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpretation							

Preparing for the slides

Practice:

- Clinical images
- Surgical techniques
- Diagnostic imaging
- Cytology
- Histopathology
- HED forms

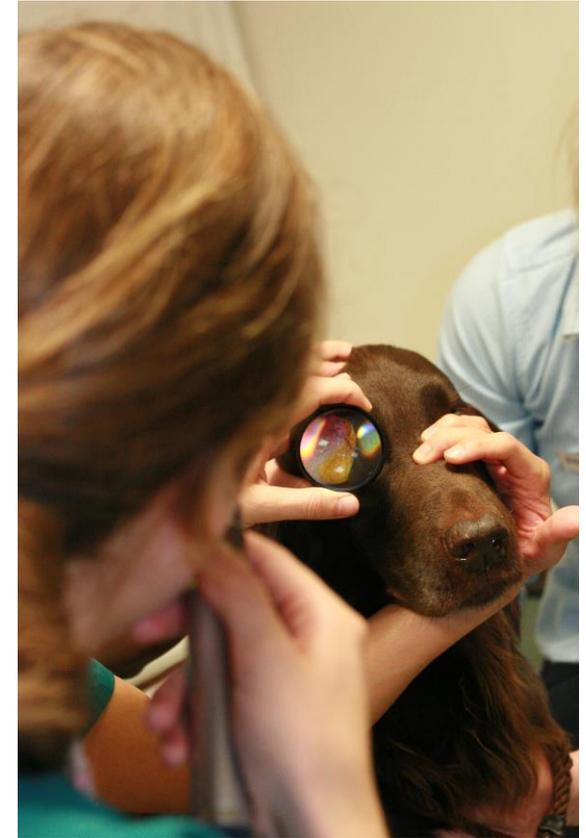
Describe the radiographic findings



Preparing for the practical

Practice with your resident:

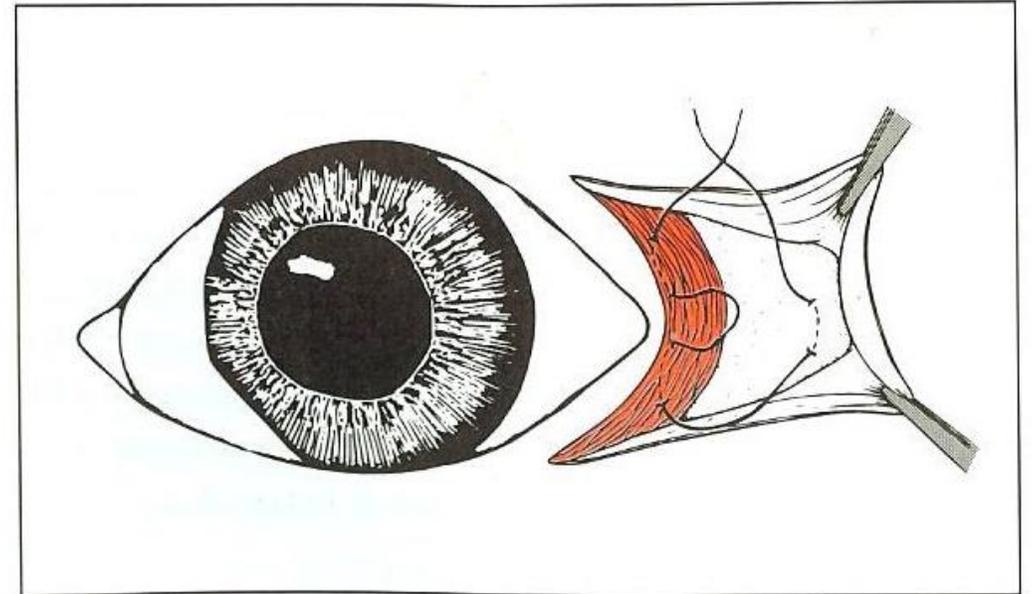
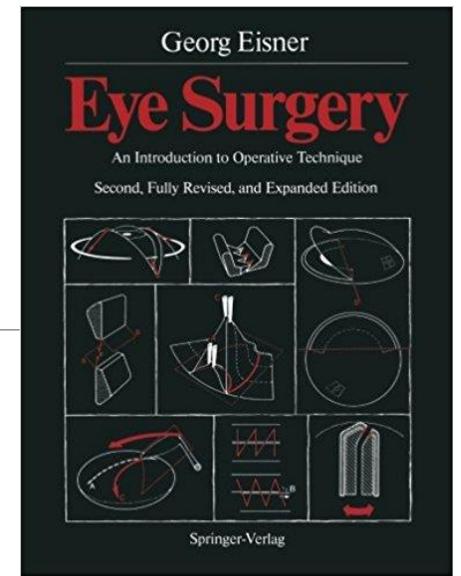
- Ordered, thorough clinical examination



Preparing for the practical

Practice with your resident:

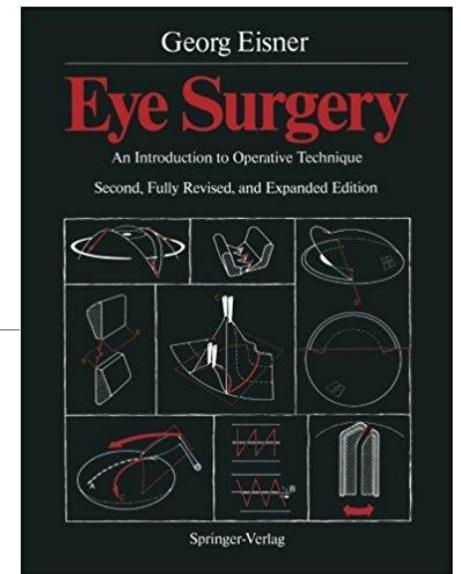
- Ordered, thorough clinical examination
- Cadaver surgery
 - Suturing, instrument and tissue handling
 - Adnexal techniques



Preparing for the practical

Practice with your resident:

- Ordered, thorough clinical examination
- Cadaver surgery
 - Suturing, instrument and tissue handling
 - Adnexal techniques
- Eyeballs
 - ECCE



Why might a candidate fail?

CAUSES

- Inadequate training programme
- Inadequate supervision
- Individual personality
- The Examination
 - Exam nerves
 - Insufficient revision or practice