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

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Nationality</th>
<th>Organization</th>
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</thead>
<tbody>
<tr>
<td>David Gould</td>
<td>Chair</td>
<td>UK</td>
<td>ECVO</td>
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<tr>
<td>Charlotte Keller</td>
<td>Vice-Chair</td>
<td>Switzerland/Canada</td>
<td>ACVO/ECVO</td>
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<tr>
<td>Christine Heinrich</td>
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<td>Germany/ UK</td>
<td>ECVO</td>
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<tr>
<td>Marta Leiva</td>
<td></td>
<td>Spain</td>
<td>ECVO</td>
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<tr>
<td>Ernst-Otto Ropstad</td>
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<td>Norway</td>
<td>ECVO</td>
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<tr>
<td>Simon Pot</td>
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<td>Netherlands/ Switzerland</td>
<td>ACVO/ECVO</td>
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<tr>
<td>Barbara Braus</td>
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<td>Germany</td>
<td>ECVO</td>
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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

<table>
<thead>
<tr>
<th>Station</th>
<th>Time</th>
<th>Station</th>
<th>Time</th>
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<tbody>
<tr>
<td></td>
<td>08:30-09:15</td>
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<td>09:15-10:15</td>
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<tr>
<td>Intraocular surgery</td>
<td>1</td>
<td>Extraocular surgery</td>
<td>3</td>
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<tr>
<td></td>
<td>09:15-10:15</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Clinical examination</td>
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<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>10:30-11:15</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>11:30-12:15</td>
<td></td>
<td>12:30-13:15</td>
</tr>
<tr>
<td>Intraocular surgery</td>
<td>4</td>
<td>Extraocular surgery</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11:30-12:15</td>
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<td>12:30-13:15</td>
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<tr>
<td>Clinical examination</td>
<td>5</td>
<td></td>
<td>6</td>
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<tr>
<td></td>
<td>12:30-13:15</td>
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<td>13:30-14:15</td>
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<td>13:30-14:15</td>
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<td></td>
<td>14:30-15:15</td>
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<tr>
<td>Intraocular surgery</td>
<td>7</td>
<td>Extraocular surgery</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>14:30-15:15</td>
<td></td>
<td>15:30-16:45</td>
</tr>
<tr>
<td>Clinical examination</td>
<td>8</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>15:30-16:45</td>
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<tr>
<td></td>
<td>17:00-17:45</td>
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### 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
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**

Pass cluster

MCQ score %
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 ±0.24ml; VH: 3.04 ±1.27ml
b) AH: 0.77 ±0.24ml; VH: 1.7 ±0.86ml
c) AH: 0.24 ±0.14ml; VH: 3.04 ±1.27ml
d) AH: 3.04 ± 1.27ml; VH: 0.24 ± 0.14ml
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
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