



# **Guidance Document: Examination of the European College of Veterinary Pathology**

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(based on the AoA and By-laws)

## **1. Examination Structure**

The examination tests a balanced mix of general, specific, theoretical and practical knowledge relevant to the veterinary pathology profession. It is comprised of five sections: Histopathology, Gross Pathology, General Pathology, Veterinary Pathology and Comprehensive Pathology. To pass the examination, a candidate must pass all five sections.

### **Practical aspects**

The examination is usually held in February each year. It starts with Histopathology on Monday morning, followed by Gross Pathology on Monday afternoon. Tuesday starts with General Pathology in the morning followed by Veterinary Pathology in the afternoon. Comprehensive Pathology is on Wednesday morning.

Candidates will be randomly assigned a seat. It is possible for candidates to set up their microscope, whether their own or hired, before the examination (Sunday evening or Monday morning). Either pens or pencils may be used; food, drinks and a silent laboratory timer are permitted on the candidate's table. No other utensils, in particular noisy timers, mobile phones or smartwatches, or any paper, are allowed. A cushion may be used (candidates are required to bring their own) on the seat when needed. Blank paper will be provided in each section. Every year, each candidate has a new anonymous number which is the Examsoft ID. Before each section, a randomly assigned table number is given by the local organizer to each candidate. Bilingual dictionaries in various languages, that cover the native languages of the candidates, are available at the front of the examination room. Candidates are not allowed to talk to each other under any circumstances. In addition, candidates are not allowed to take any examination material or notes in or out the examination room. Contravention is regarded as cheating. Candidates are accompanied if they leave the room during the examination.

### **Histopathology**

This section of the examination is performed on a selection of 18 histological specimens (glass slides, i.e. hematoxylin-eosin stained tissue sections), one cytological preparation and one print-out of a transmission electron micrograph image. The case material represents a balanced mix of animal species, organ systems, and pathologic processes. For each case, 20 points may be obtained; these are distributed between tissue identification, description (including its design), morphologic diagnosis, and, where appropriate, etiology, pathogenesis, "name the disease" etc. The total amount of time allocated to this section is 4 hours and 30 minutes; usually one slide set is shared between two candidates.

## Gross Pathology

This section of the examination is performed on a selection of 60 gross photographs. The case material represents a balanced mix of animal species (domestic, exotic, wild, lab, fish, poultry, birds *etc.*), organ systems, and pathologic processes. Images are projected on a wall screen. Each case carries a total of 3 points, based on questions such as: morphologic diagnosis, etiology, etiologic diagnosis, lesion in another organ, pathogenesis, and clinical signs. The amount of time allocated to each photograph is 2 minutes, with a total of 2 hours for this section. There is no review of the photographs at the end of this section.

## General Pathology

This section of the examination comprises 70 questions, i.e. 50 multiple choice questions (MCQs) and 20 short answer questions (SAQs). For each MCQ, the correct answer must be selected from 4 options. Each MCQ carries 4 points, and each SAQ carries 5 points. Questions cover the various disease processes and are generated from textbooks and journal articles. The total amount of time allocated to this section is 4 hours.

## Veterinary Pathology

This section of the examination is further subdivided into five subsections (small animals, large animals, laboratory animals, poultry and exotic animals). All candidates take small (dog and cat) and large (ruminants, pigs and horses) domestic animal pathology as their major items. Candidates are then requested to select one of the three possible minor items:

- **Laboratory animals** (mouse, rat, non-human primate, dog, rabbit, guinea pig, zebrafish and other species used for biomedical research and drug safety assessment)
- **Poultry** (industrially kept birds)
- **Exotic animals** (cage birds, zoo animals, wildlife)

Each subsection comprises 25 multiple choice questions (MCQs) and 10 short answer questions (SAQs). For each MCQ, the correct answer must be selected from 4 options. Each MCQ carries four 4 points, and each SAQ carries 5 points. Questions are balanced in regard to the topics, i.e. disease processes, organ and species distribution. They are derived from textbooks and journal articles. The two major items are given in a first, single session of 3 hours; the third subsection (minor item) is given in a second session of 1 hour and 30 minutes on the same day; there is a break of 30 minutes between the first and the second session.

## Comprehensive Pathology

This section of the examination tests practical problem solving, data analysis and interpretation skills, as well as knowledge of common research techniques in veterinary pathology. It comprises 5 subsections and covers the following non-exhaustive list of practical fields: data analysis, toxicologic pathology study, lesion assessment/quantification, abstract review, forensic case, second opinion case, clinical pathology investigations; other fields may be included. Each subsection is comprised of a number of questions that require short written answers, ranging from 1–2 lines to a short essay- type answer. The five subsections carry equal weight in the total score. The total amount of time allocated to this subsection is 4 hours and 30 minutes, though the different subsections may not require an equal amount of time. The candidates do not need a microscope for the Comprehensive Pathology section.

Examples:

- **Abstract review:** This is often in the context of a review, for a grant application, a conference participation or a manuscript submission. The abstract usually has a length of 400-500 words and contains scientific errors that need to be identified and corrected. This subsection requires the application of general and/or special veterinary pathology knowledge.
- **Toxicologic pathology:** For this subsection, a combination of selected gross and/or histology pictures, survival curves, organ weight tables, clinical pathology parameters, macroscopic and/or microscopic incidence tables can be provided and will require description and interpretation. This subsection requires the application of knowledge on clinical and/or anatomic pathology findings in laboratory animals, based on the comparison of treated and untreated groups. Basic knowledge about the format of toxicologic pathology data and the methodology as well as the vocabulary used in toxicology studies is helpful. Background observations and/or outlier values will have to be differentiated from test article-related findings, and candidates may be asked to draw conclusions or express hypotheses regarding the safety of the test article, the dose-dependency of effects, and putative mechanism of action; they may also be asked to suggest additional refinements to the study protocol.
- **Data analysis:** This subsection requires basic knowledge on molecular pathology, it is tested in the context of a scientific study. Research data are presented in various forms (e.g. graphs, blots) and require description and interpretation. This subsection usually also requires knowledge about a technique that was applied in the study. It is therefore expected that the candidates know the basic principles of frequently applied techniques. This includes molecular techniques to analyze DNA, RNA, proteins, epigenetic alterations, genetic modifications and reporter assays. This does not require knowledge about protocols (e.g. the pH of a certain buffer), but tests the basic understanding of techniques used to complement pathology findings. Candidates may also be asked to use the data to express a new hypothesis and suggest further experiments to be carried out.
- **Forensic case or clinicopathologic investigation:** This subsection can deal with a forensic case or clinicopathologic investigation. These questions imitate real situations in which the diagnostic veterinary pathologist is required to judge a specific situation. Data might include unknown or questionable morphologic diagnosis. Pictures of histologic and/or gross lesions and/or clinical data (including reference values) and/or special stains may be provided. The candidate is not asked to provide a detailed description of the histological changes but is expected to provide a morphological and/or etiological diagnosis.

## Digital examination

The ECVP examination is delivered digitally using the ExamSoft platform. Detailed information may be found on the respective section on the ECVP homepage.

## 2. Examination Committee and examination preparation process

The Examination Committee is composed of active ECVP Diplomates who have been members for at least 3 years [see AoA Art. 16, By-laws Art. 1]. Members represent specific areas of expertise in the field of veterinary pathology (e.g. large animals, poultry or laboratory animals), the different employment sectors of the profession (academia, diagnostics, industry) and different European countries.

Each examination section (or subsection when applicable) has a section leader who is responsible for the final assembly of that part of the examination. Examination questions are put together from a selection of questions with answers submitted by the Examination Committee members to the different examination section leaders. Questions are then selected by a remote review process and a four-day preparatory meeting in the autumn prior to the examination, where all questions are reviewed by the Examination Committee and the final, consolidated examination is assembled.

### 3. Credentials

The general requirements (credentials) for eligibility to sit the examination are stated in the By-laws. Only a candidate who has been accepted as a resident by the ECVP can apply to sit the examination [By-laws Art. 2].

The final requirement to obtain the full credentials is having passed at least two sections of the examination. If a candidate fails to pass 2 sections, he/she has to resubmit a new application.

### 4. Application

[See also By-laws Art. 2]

An application form is available online on our homepage.

If you are uncertain of your eligibility to take the examination, a “quick eligibility check” from the application committee can be submitted until 01 June prior to the examination application and feedback will be provided on your current position before the application deadline.

An application is valid for only one year.

The signing sponsor should be the person most responsible for the candidate’s training. When this is not possible, the applicant should provide an appropriate explanation to the Application Committee. In cases where the supervisor of training is not a Diplomat of the ECVP (or ACVP) (i.e. alternative route), the signature of a Diplomat must be obtained to signify that the training has been reviewed for adequacy and is consistent with requirements of the College.

The completed application (signed form with publications and proof of payment) must be received by on time.

Eligibility to sit the examination is determined in early October; applicants are promptly notified as to acceptance. If the applicant’s credentials are not accepted, or if candidates withdraw from the examination prior to 01 December, fees are refunded (except for a 10% processing charge). No refunds are made after this date.

An individual who has received an unfavorable ruling regarding qualifications to sit the examination may appeal against this decision. Such an Appeal must be received in writing to the Secretary within 90 days of the date of the letter informing the individual of the unfavorable decision [See also By-laws Art. 4].

### 5. Withdrawal and illness

Withdrawal prior to the examination or failure to appear for the examination will not constitute an attempt to sit all or any section(s) of the exam but will count as one of the years for which repeat candidates are eligible to pass any previously failed section(s). A candidate’s illness during preparation for, or during the actual examination, will not be considered a valid reason to waive the rules of the College. In the event a candidate starts, but is unable to complete the examination,

results will be determined for all sections for which the candidate is scheduled, regardless of the number of sections completed.

Full disclosure should be made with the application of any disability, condition or other such special circumstances that Council and the Examination Committee should be aware of in order for them to consider special conditions or assistance to sit the ECVP examination. Should any such circumstances arise after the application and prior to the examination, the College has to be informed prior to the examination in writing to the ECVP Office. Formal supporting documentation (medical) should be provided at the same time. If at any time a candidate experiences problems during the examination, a member of the examination committee is informed immediately.

## **6. Examination Rules**

### **Splitting the examination**

It is possible to split the examination. A candidate can choose to take three sections of the examination of her/his own choice as a first part. Of those chosen sections, the candidate must pass at least two sections to progress. If a candidate passes two sections, the failed section of the first examination block has to be taken together with the sections of the second block. The candidate has 3 attempts to pass the remaining sections within the 4 years following the year in which the first block was taken, and two sections were passed (total of 5 years).

### **Passing of individual sections and passing the examination**

The candidate passes at least 2 attempted sections and has reached a minimum score of 30% in the failed section(s). This is now considered as fulfilling all final credentials and the attempt is considered as the first attempt at the examination. The candidate is now offered up to 3 additional attempts within the next 4 years to retake the failed sections. In the case of the split examination, the candidate has 3 attempts in 4 years to sit the remaining sections, including re-sitting any failed sections.

### **Failing the entire examination**

[See By-laws Art. 3 Failure]

### **Passing rate and correction**

Each of the 5 sections is passed by reaching 60% of the total possible marks per section.

For consistency, each Examination Committee member is allocated complete questions to mark (for example histology case 3) from all candidates. Every slide and question are marked independently by two Examination Committee members based on the scoring agreed by all members during the preparatory meeting. They then compare their marks (consolidation). If there is a discrepancy between marks, the answers are looked at again and the discrepancy is discussed until a final agreement is reached. All marks are registered in a computer program which calculates the percentage of points reached per candidate, slide or question. The results from the first 4 sections are statistically analyzed for their quality and discriminatory power. All results are approved before disclosure of candidates' names. A candidate has to have 60% of the total points possible in a section to have passed this section. ECVP Council has the final decision about approval of the results. Candidates are usually informed of their results by e-mail within 10 days. The results of the examination will be announced to all candidates on the same date.

**Retotaling**

A candidate who fails the certifying examination may request that the marks of the section(s) failed should be re-totaled to verify the accuracy of the results reported. The verification process does not re-evaluate the content or interpretation of the examination or candidate responses but determines that the scores are correctly totaled. Such requests must be received in writing, accompanied by a fee of 100 EURO, within 30 days of the date of mailing of the results of the examination to the candidate.

**Appeals**

An individual who has received an unfavorable ruling (e.g. regarding qualifications to sit the examination) may appeal against this decision. Such an Appeal must be received in writing to the ECVF Office within 90 days of the date of the letter informing the individual of the unfavorable decision [See also By-laws Art. 4].