



ECVP: Examination Structure

(last update: 3rd October 2018)

Examination Structure

The members of the Exam Committee (EC) are ECVP diplomates and are chosen in order to represent various areas of expertise (e.g. large animals, poultry or laboratory animals), area of employment (academia or industry), and different European countries. Each of the members of the EC submits questions for the different parts of the exam and each exam section has a section leader (SL) who is responsible to put the final exam paper for this section together. Questions can also be submitted by all ECVP-diplomates who will be acknowledged by providing CPD points as support for the ECVP. At a 4 full day preparatory meeting in autumn all questions and cases are discussed amongst the EC members.

The complete ECVP exam consists of 5 parts covering all aspects of veterinary pathology (histopathology, gross pathology, general pathology, veterinary pathology and comprehensive pathology). These parts can be taken together or can be splitted (see below).

Histology

The exam consists of 18 glass slides, 1 cytology smear and one print of an EM. Every case carries 20 points, distributed between description, morphological diagnosis, cause/etiology (where appropriate), pathogenesis and/or name the disease and design of the description (style). The case distribution between the different animal species is roughly 30% large animals, 30% small animals and 30% remaining species (exotics, fish, lab animals and poultry). Total time frame is 4.5 hours; one slide set has to be shared between 2 candidates.

Gross

The exam consists of 60 photographs, which are presented via a digital projector. Each slide carries a total of 3 points divided over morphological diagnosis, cause/etiology, lesion in another organ, pathogenesis, and/or clinical signs.

Distribution is roughly 30% large animals, 30% small animals and 30% remaining species (exotics, fish, lab animals and poultry) with an equal distribution between organs and disease processes. The time frame is 2 min per slide (Total time 2 hours).

General pathology

The exam consists of 70 questions: 50 multiple choice questions (MCQ) and 20 short answer questions (SAQ). MCQs are divided into 90% of Old style MCQs and about 10% of New style MCQs questions. The New style MCQs describe a real life situation and ask to come up with a proper answer/diagnosis. For each MCQ one correct choice needs to be chosen out of 4

possibilities. MCQs carry 4 points, SAQs carry 5 points. There is an appropriate distribution between disease processes (e.g. immunopathology, tissue repair, neoplasia), questions taken from books and papers and difficulty levels. The time frame is 4 hours.

Veterinary Pathology

The veterinary pathology part of the examination is divided into two sections, major and minor items, each comprising multiple choice and short answer questions. Candidates are required to select one of the major items (A-C) and one of the minor items (a-f) which has not been chosen under the major items.

Major items:

- A. Large and small domestic animals
- B. Poultry and large animals
- C. Fish and exotic animals

Minor items:

- a. Small domestic animals (dog, cat)
- b. Large domestic animals (horse, pig, cattle, sheep, goat)
- c. Exotic animals (cage birds, zoo animals, wildlife)
- d. Poultry (industrially kept birds)
- e. Laboratory animals (mouse, rat, non-human primate, dog, rabbit, guinea pig and other species used for biomedical research and drug safety assessment)
- f. Fish

The exam consists of 3 subsections. In each subsection there are 25 MCQ and 10 SAQ. MCQs are divided into 75% of Old style MCQs and about 25% of New style MCQs questions. Each MCQ has 4 options and carries 4 points. SAQs carry 5 points. There is an appropriate distribution between disease processes, organ distribution and species (eg. large animals between ruminants, pigs and horses). The first two subsections are given in one session of 3 hours followed by a break and the third subsection is given in a last session of 1.5 hours.

Comprehensive Pathology

The exam consists of five questions which can be comprised of the following topics: assessment of an abstract, evaluation of toxicological pathology data, analysis of a scientific study, and/or assessment of clinical, forensic and/or second opinion cases. Each part is equally valued at 100 points, hence a total of 500 points for the whole comprehensive exam. However, the time needed for each part may not be equal. Total time frame is 4.5 hours.

The abstract is frequently put in the context of reviewing a grant application, a conference participation or article submission and comprises about 400-500 words. It usually contains mistakes that need to be identified and rectified. To fulfil this task background knowledge of general and/or special veterinary pathology will be applied.

The toxicological pathology part of the comprehensive exam could consist of a combination of selected gross and/or histology pictures, survival curves, organ weight tables, clinical pathology parameters, macro and/or microscopic incidence tables not only to be described but also be interpreted. The candidate is asked to apply his knowledge of clinical and/or anatomic pathology findings in laboratory animals comparing treated and non-treated groups. A basic experience regarding the format of toxicological pathology data and the methodology as well as vocabulary of toxicology studies, is highly recommended. Background observations

and/or outlier values will have to be differentiated from test article-related findings. Conclusions or hypotheses regarding the safety of the test article, the dose-dependency of effects, and putative mechanism of action or additional refinements of the study protocol may be asked as well.

For the analysis of a scientific study basic knowledge on molecular pathology needs to be applied. In this part of the exam, original data in various forms (e.g. graphs, blots) are presented. Questions usually ask for data description and interpretation. In addition to the analysis of the provided data, there is usually a sub-question about a technique that was applied in the study. You should therefore know the basic principles of frequently applied techniques. Questions in the last years included techniques to analyze DNA (e.g. PCR, Southern Blotting, BrdU incorporation), RNA (quantitative RT-PCR, Northern Blotting), proteins (e.g. Western Blotting, tissue microarrays, immunohistochemistry, immunofluorescence, ELISA), epigenetic alterations (e.g. DNA methylation, modifications of histones), genetic modifications (e.g. transfection of cells, overexpression of genes, RNA interference, inducible expression, targeting of genes in mice) and reporter assays (e.g. luciferase assays). Experimental details (e.g. the pH of a certain buffer) are not asked for. This part of the exam tests the basic understanding of techniques used to complement pathology findings. The candidates may also be asked for new hypotheses drawn from the data presented. The examiners keep an open mind on the answers given and give points for answers that could make sense.

Regarding the second opinion, a forensic case or a clinical case can be chosen. In this part, the candidate should apply diagnostic knowledge. Pictures of histological and/or gross lesions and/or clinical data (including reference values) and/or special staining may be provided. A detailed description of histology is not asked for, but morphological or etiological diagnoses may be required.

Splitting the examination

It is possible to split the examination. A candidate can choose to take three parts of the examination of her/his own choice as a first block. Of those chosen parts, the candidate must pass at least two parts to progress and reach a minimum score of 30% in the third part. The failed part of the first exam block can be taken separately or together with the parts of the second block. The candidate has 3 attempts to pass the missing parts within the 4 years following the year the first block was taken.

Resitting the exam

Candidates (who sat all 5 parts) failing up to 3 parts of the exam have up to 3 additional attempts within the next 4 years to retake the failed parts. Both following conditions are required to qualify for this scheme:

- passing at least 2 parts at the first attempt of the exam
- reaching a minimum score of 30% in the failed part(s) on the year where it is (they are) taken for the first time.

Candidates who split the exam need to pass two parts of the first block to be allowed to carry these (provided a minimum score of 30% was reached in the failed part). The failed part of the first exam block can be taken separately or together with the parts of the second block. The candidate has 3 attempts to pass the missing parts within the 4 years following the year the first block was taken.