



Australian Animal Pathology Standards Program

STANDARD OPERATING PROCEDURE

PROFICIENCY TESTING FOR HISTOPATHOLOGICAL INTERPRETATION – ASSESSORS’ GUIDELINES

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1. PURPOSE

This procedure is to provide guidance for those assessing the AAPSP rounds of proficiency testing for histopathological interpretation. While it is accepted that assessors will vary in their approach to evaluation and providing feedback to participants, it is important to have accepted uniformity for core components of the Assessment Report in order to allow comparisons and to set a consistent standard for participants. It is also important for assessors to realise that the Assessment Reports are used for training purposes and are scrutinised by NATA Assessors of Veterinary Laboratories for the purposes of auditing for accreditation.

2. SCOPE

This procedure covers assessors' reporting style for written description, diagnosis and diagnostic interpretation and comments on the pathological changes detected in stained tissue sections and in electronic images.

3. DEFINITIONS AND REFERENCES

3.1 Definitions

AAPSP: Australian Animal Pathology Standards Program

NATA: National Association of Testing Authorities

3.2 References

AAPSP Standard Operating Procedure: Proficiency Testing for Histopathological Interpretation (27 September 2007)

[www.animalhealthaustralia.com.au/Animal health Services Program/Australian Animal Pathology Standards Program/ AAPSP Members Extranet/proficiency Testing - Histopathology/ SOP Histopathology AAPSP/](http://www.animalhealthaustralia.com.au/Animal%20health%20Services%20Program/Australian%20Animal%20Pathology%20Standards%20Program/AAPSP%20Members%20Extranet/proficiency%20Testing%20-%20Histopathology/SOP%20Histopathology%20AAPSP/)

Chitwood M and Lichtenfels JR (1972) Identification of Parasitic Metazoa in Tissue Sections. *Experimental Parasitology* 32:407-519.

Gardiner CH and Poynton SL (2006) An Atlas of Metazoan Parasites in Animal Tissues. CL Davis Foundation, Gurnee, Illinois 64 pp. ISBN 1-881041-49-2.

Jubb, Kennedy & Palmer's Pathology of Domestic Animals, 5th Edition, 2007, Saunders Ltd., Ed M. Grant Maxie.

Meuten DJ (Editor) Tumors in Domestic Animals, 4th Edition (2002)

Veterinary Pathology, a journal published by the American College of Veterinary Pathologists

4. EQUIPMENT

Standard compound microscope.

Personal computer with minimum 512 MB RAM, DVD reader and capable of operating Aperio ImageScan software or equivalent.

5. RESPONSIBILITIES

Proficiency testing evaluations are based on the assessment of a single, commonly consensus, report from each of the participating laboratories. Assessors are engaged to review each report and provide individual laboratory feedback within 8 weeks of receiving the reports from AAPSP.

It is the responsibility of the participating laboratories to ensure that the submitted reports are in a format consistent with the AAPSP Standard Operating Procedure: Proficiency Testing for Histopathological Interpretation. Briefly, the report on each case should begin with identification of the tissue(s) (if unstated), a description of the histopathological changes identified, and be followed by a morphological diagnosis, an aetiology (if requested), aetiological diagnosis (if requested), disease name (if requested) and appropriate additional comments

6. PROCESS

6.1 Individual Feedback for participating Laboratories

Assessors must provide comments for each case for each participating laboratory in a tabulated document. An example of this is provided in '7. Documents'. The following must be included in the tabulated document.

6.1.1 Overall Assessment (score/grading)

This must be provided for each case for each participating laboratory. The following grading must be employed:

Inadequate – the report is in an inappropriate format or fails to deliver key components of the histopathological description, morphological diagnosis, aetiological diagnosis or other requested information.

Adequate – the report is in the appropriate format and delivers the majority of key components of the requested information.

Excellent - the report is in the appropriate format and delivers all of the key components of the requested information.

6.1.2 Histopathological Descriptions

Concise, pertinent comments should be provided for each case for each participating laboratory. These assessments should be made on each of the following criteria:

- Style, Grammar: A narrative description of histopathological changes using the present tense and whole sentences is preferred. Reports should be free of typographical, grammatical and spelling errors.
- Terminology: Generally accepted pathological terminology should be employed, such as that found in reputable pathology journals and text books (e.g. *Veterinary Pathology* and *Jubb & Kennedy's Pathology of Domestic Animals*).
- Tissue: Identification of the tissue together with (if appropriate) its anatomical location should be stated.
- Descriptions: Descriptions must be concise and include the salient pathological features observed at all magnifications. Sufficient description must be provided to cover all architectural changes, vascular alterations, appearance of constituent cells, any infiltrating cells and pigments and deposits.
- Aetiologic agents: When aetiologic agents are present in tissues, their description (where possible) should include sufficient morphological features to support a presumptive broad classification. For example, in the case of parasites (Chitwood & Lichtenfels 1972, Gardiner 1995) the reported features should enable classification to the level of taxonomic phyla if not to class (e.g. cestodes, nematodes, arachnids). For protozoa, morphological distinction can usually be made between ciliates, flagellates, amoeba and sporozoa (which may be further identified as apicomplexans, microsporidia or myxozoa). For fungi, descriptive features, if present, may enable identification to the level of taxonomic divisions (e.g. zygomycetes, ascomycetes). Bacteria should be described by their morphological features and Gram staining characteristics.
- Neoplasia, Malformations: Description of disorders of growth, such as neoplasia and malformations, should be consistent with those used in standard texts (e.g. Meuten DJ (Editor) *Tumors in Domestic Animals*, 4th Edition (2002), WHO Histopathological Classification of Tumors of Domestic Animals (www.afip.org/vetpath/who/whoclass.htm) for terminology.

6.1.3 Morphological Diagnosis

Concise, pertinent morphological diagnoses should be provided for each case for each participating laboratory. These assessments should be made on each of the following criteria:

- Pathological process: The first consideration should be the primary pathological process (e.g. inflammation, degeneration, neoplasia, developmental abnormality), followed by descriptors.

- Descriptors: The descriptors should cover the classification of the process (e.g. pyogranulomatous), duration (e.g. acute/subacute/chronic), distribution (e.g. focal/multifocal/focally extensive/diffuse) and severity (e.g. mild/moderate/severe). A qualifying statement may also be necessary (e.g. 'with intralesional coccoid bacteria'). Hence the suggested format for morphological diagnosis is: *process / classification / duration / distribution / severity / qualifier*. An example would be '*dermatitis, pyogranulomatous, chronic, diffuse, severe, with intralesional coccoid bacteria*'
- Special descriptors: For disorders of growth, such as tumours and malformations, a different set of descriptors will apply based on the appearance of the lesion. Recourse should be made to standard texts (e.g. Meuten DJ (Editor) Tumors in Domestic Animals, 4th Edition (2002), WHO Histopathological Classification of Tumors of Domestic Animals www.afip.org/vetpath/who/whoclass.html) for classification of tumours and tumour-like lesions.

6.1.4 Aetiology, Aetiological Diagnosis, Name of Disease

Assessors can usually appraise these together, depending on the requested information. Concise, pertinent comments should be provided for each case for each participating laboratory. An example of a format that may be presented for assessment is the following:

Aetiology: *Mycobacterium avium* subspecies *paratuberculosis*

Aetiological Diagnosis: Mycobacterial enteritis

Name of Disease: Paratuberculosis (Johne's disease)

6.1.5 Comments

Where comments are given in reports (whether these were requested or not), assessors will need to appraise them for relevance to the case, in particular to their usefulness in helping hypothetical submitters manage this or similar cases. In cases where specific comments are requested, these might relate to:

- The diagnosis or presumptive diagnosis (indicating degree of confidence) and realistic differential diagnosis.
- Additional procedures to support or confirm the diagnosis (e.g. histochemistry, immunohistochemistry and immunofluorescence) or eliminate significant differentials.
- Recommended specimen selections in the event that a similar case is subsequently encountered.

6.2 Summary Feedback for all Participating Laboratories

Assessors must provide summary information on each case for all participating laboratories. Summary information should include where appropriate:

- Comments on flaws in the description and how the description may have been improved
- Comments on the morphological diagnosis and how it could have been improved
- Comments on the presentation of aetiological diagnosis, aetiology, disease name (if asked for) and how they could have been improved
- Additional information that might reasonably have been expected.
- Assessors should provide a model report, in the appropriate format, for each case. This can be the assessor's version of the ideal report or an excellent report from a participating laboratory selected by the assessor (with comments on improvement if warranted).). An image of the slide and the model/best report will be placed on the AAPSP website for training purposes.

7. DOCUMENTS

Assessor's reports on submitted proficiency testing reports for each case must be in two parts:

1. For concise individual feedback on each case for participating laboratories a tabulated format must be used as follows:

Laboratory ID	Overall grading/score (I, A, E)	Comments on description	Comments on morphological diagnosis	Comments on aetiological diagnosis, aetiology or disease name	Comments on additional information requested

I: inadequate – the report is in an inappropriate format or fails to deliver key components of the histopathological description, morphological diagnosis, aetiological diagnosis or other requested information.

A: adequate – the report is in the appropriate format and delivers the majority of key components of the requested information.

E: excellent - the report is in the appropriate format and delivers all of the key components of the requested information.

2. For summary feedback on each case for all participating laboratories the format is left to the discretion of the assessor.