



Report of the Training Committee
Model Training Document: 2020

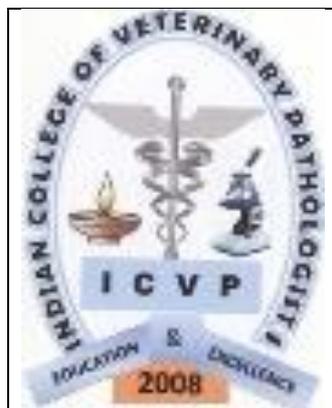
Dr. T. V. Anilkumar
(Chairman)

Dr. K. S. Prasanna
(Member Secretary)

Dr. Kuldip Gupta
(Member)

Dr. A. Arulmozhi
(Member)

Dr. Samir Raval
(Member)





Indian College of Veterinary Pathologists

Preface

We are deeply honoured by the Indian College of Veterinary Pathologist's gesture of the nomination to the Model Training Committee: 2020.

It was a pleasure working with the learned colleagues for about two month, in developing this document. During the deliberations over the digital media, we appreciated the importance of a proficiency development programme for registered trainees. The identified 'thousand skills' may not be the ultimate desirable skill-list, it leaves scope for expansion rather than truncation. The committee unanimously felt the need for a Centralised Training Programme to compliment the 'onsite training' with a qualified diplomate. We propose a Training Committee to oversee various activities associated with the training process and to advice the Executive Council in managing the training programmes.

No doubt, through the proposals and recommendations made herein, the training will become "the sole and spirit of the Indian College of Veterinary Pathologists".

We thank the Executive Council in finding confidence in each one of us and giving us an opportunity to serve the ICVP.

26 June, 2020

Dr. T. V. Anilkumar (Chairman)

Dr. K. S. Prasanna (Member Secretary)

Dr. Kuldip Gupta (Member)



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Dr. A. Arulmozhi (Member)

Dr. Samir Raval (Member)

Members of the Model Training Committee: 2020



Dr. T.V. Anilkumar

PhD (London); FRCPath (England), DipICVP; FNAVS; FIAVP; FIATP.

Scientist-G

Biomedical Technology Wing

Sree Chitra Tirunal Institute for Medical Sciences and Technology

Thiruvananthapuram-695012.

Dr. T. V. Anilkumar has specialization in Comparative Pathology and Toxicology. He pioneered a technology for fabricating tissue-grafts from porcine cholecystic extracellular matrix, for human and veterinary regenerative medical applications. He is working on development and testing of biomedical devices and biomaterials.

Dr Anilkumar played a pivotal role in founding the Indian College of Veterinary Pathologists. As the first Chair of Examinations of the college, he was instrumental in establishing its examination system. Later, he became the first diplomate President (2017-2019) of the college.



Dr. K. S. Prasanna

PhD; PGDIPR. Dip. ICVP

Assistant Professor

Department of Veterinary Pathology, College of Veterinary & Animal Sciences, Pookode, Wayanad, Kerala-673576.

Dr. K.S. Prasanna has an experience of more than twenty-five years in the fields of practising veterinary medicine, teaching & research. Started academic career as Assistant Professor in the Faculty of Veterinary Medicine at Mekelle University under Ministry of Education in Ethiopia. Served as Head, Department of Pathobiology & Infectious diseases here before joining the Kerala Veterinary & Animal Sciences, University. Was instrumental in the development of CertLAM course first time in India in collaboration with University of Guelph, Canada. Conducted the first zonal conference of IAVP in South India as the Organising Secretary. At present acts as Course Director of PG Diploma in Toxicologic



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Pathology, a technology enabled distant learning programme of KVASU.

Dr Prasanna was one among the first batch of ICVP Diplomates and was a member of the Executive Council of the ICVP. Serves as Vice President of ICVP.



Dr. Kuldip Gupta

M VSc, PhD, Dip. ICVP

Professor

Department of Veterinary Pathology, College of Veterinary Science

Guru Angad Dev Veterinary and Animal Sciences University

Ludhiana- 141004.

Dr. Kuldip Gupta has about 20 years' experience in teaching and research in Veterinary Pathology. He completed BVSc & AH with Gold medal. His areas of interest include Surgical pathology, Clinical Pathology and Oncology. He is a recipient of prestigious IAVP awards namely, Prof. (Dr.) S. Ramachandran Memorial "Molecular Oncology" Award, Dr. Patri Rama Rao Award -2012 for best PhD thesis, Drs. Nemi Chand Jain and Jawahar Lal Vegad Award for Outstanding Research in Veterinary Pathology, 'Savithree Jibachch Sinha Best Poster Presentation Award and ASVP President's Poster Award for best poster presentation. He was instrumental in setting up the immunohistochemistry laboratory of the department. At present, Dr. Gupta is In-charge of Centralized Clinical Diagnostic Laboratory and Placement Cell of the College.

Dr. Gupta cleared the certifying examination of ICVP in 2018. He has been actively contributing material for the conduct of the ICVP certifying examinations.



Dr.A.Arulmozhi

MVSc, PhD, Dip ICVP

Assistant Professor

Department of Veterinary Pathology

Veterinary College and Research Institute, Namakkal – 637002.

Tamil Nadu Veterinary and Animal Sciences University

Dr. A. Arulmozhi has 20 years career dedicated to research, education, extension and administration. She is involved in UG, PG and Ph.D., teaching, post-mortem examination of



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various livestock and poultry, histopathology, screening of clinical, field and experimental trials. She published 78 research articles in reputed journals, 72 popular articles and 13 articles in conference proceedings. She has handled three projects under Tamil Nadu State Council for Science and Technology. She acted as major advisor and member for 11 M.V.Sc. and 4 Ph.D. students. She acted as co-organizing secretary for IAVP south zone conference, international workshop on avian diseases and animal health conference. She has special interest on avian pathology, toxicologic pathology and experimental oncology. She got 26 awards, medals and appreciation certificate for various oral and poster presentations and meritorious service.

Dr. Arulmozhi became a diplomate in ICVP in the year 2014. She has contributed significantly for conducting ICVP examination during the year 2018. At present, she is a councillor (2020-2022) of the college.



Dr. Samir H Raval

MVSc, PhD, Dip. ICVP

Assistant Professor

Department of Veterinary Pathology

College of Veterinary Science and Animal Husbandry

Sardarkrushinagar Dantiwada Agricultural University

Sardarkrushinagar - 385 506, Gujarat

Dr. Samir Raval is involved in UG and PG teaching, clinical pathology, post-mortem examination of various livestock and poultry, histopathology, and research for the past 12 years. He published more than 50 research articles in reputed journals, He has special interest in oncology and toxicologic pathology.

Dr Raval became a diplomate of the ICVP in the year 2018.

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Summary

The ICVP constituted a committee identified as ‘Model Training Committee: 2020’ to propose a training system for the benefit of trainees. The committee met 21 times during a period of eight weeks through digital media platform (Google meet) and deliberated various issues related to the current ICVP training system. This report compiles the recommendations of these deliberations. The important observations and the recommendations are the following. The committee identified a list of **‘Thousand Veterinary Pathology Skills’** necessary to accomplish minimum proficiency in the six veterinary pathology practice segments: farm animal pathology, companion animal pathology, poultry pathology, wild animal/bird pathology, non-mammalian/avian pathology and comparative (experimental and toxicologic) pathology. Whereas, **‘Onsite Training’** under the direct supervision of a ICVP-diplomate remains as the best method of training, the committee holds the opinion that all training centres/stations may not have sufficient facilities to give adequate exposure to all the thousand skill components. To fill up the lacunae, the committee proposes a **‘Centralised Training System’** under the guidance of a **Training Committee**. The centralised training may comprise of weekly online lectures, demonstrations and case discussion sessions. The training committee shall also take the responsibility of closely monitoring the progress of all training processes. It is desirable to pool and share resources among trainers and trainees. The committee suggests a detailed **training plan** for effective conduct of the training. Identification of National Trainers and Subject Expert may be necessary for this. A **‘Grading/Scoring System’** and a **Staging system** have been suggested for recording and monitoring the progress in training. In order to bring uniformity in documentation, the committee also proposes a series of forms for documenting morphology of lesions and necropsy reports. The committee has recorded its opinion about the responsibilities of various stakeholders. A strategy for financial management of the training has also been mentioned. The committee feels that the Examination System is the back bone **“the Training System is the spirit of the ICVP”**.



1. Introduction

1.1. Indian College of Veterinary Pathologists (ICVP) was established in 2008 as an independent certification organization for personal accreditation in India. It aims for the advancement of veterinary pathologyby establishing standards of training and experience” (<http://www.icvp.in/>, accessed 05June 2020). The ICVP has an excellent examination system in place, comparable to the examination systems of reputed veterinary pathology certification systems across the globe. Indeed **“the examination system is the backbone of the ICVP”**, for a reason and a cause of its reputation. However, the ICVP lacks a defined **Training System**. The training philosophy of most accreditation systems rests in the concept that **“a competent examination system drives the training”**. Naturally, in such a situation, the responsibility of the training mostly rests on individual trainers and training institutions. In this context, the continuing education programmes in the form of summer schools and workshops have lot of significance. In India also, such programmes contributes a lot for the advancement of the profession. However, there is a wide disparity in the availability of training resources between various training centres/institutions. Therefore, the ICVP, unlike other certifying organisations wanted to go proactive in having a unique training system suitable for the advancing the skill levels of veterinary pathology trainees. Against the above background, in May, 2020 the ICVP formed a committee of five diplomats for developing a “Model Training Document”. The members of the committee were Dr. T.V. Anilkumar (Chairman), Dr. K. S. Prasanna (Member Secretary), Dr. Kuldip Gupta. Dr. Arulmozhi and Dr. Samir Raval (Members).

The training committee thus formed, had the following mandates:

1. To develop a MTD both for online and offline modes including assigning the credit score requirements for 3 year / one year training.
2. Define a syllabus for training.
3. Revisit the training documents.



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The committee had several sittings through Google Meet during the COVID-19 pandemic lock down days (Table 1) to complete the objectives. This report contains the observations and recommendations of the committee.

Table. 1. Training Committee 2020: list of meetings

Sl. No.	Date of the meeting in 2020	Google meeting ID	Participants				
			Dr TV Anilkumar	Dr KS Prasanna	Dr Kuldip Gupta	Dr A Arulmozhi	Dr Samir Raval
1.	14 May, 2020: 3.00pm	ykj-qkzh-bht	Y	Y	Y	Y	Y
2.	15 May, 2020: 3.00pm	ndn-yvdm-cqk	Y	Y	Y	Y	Y
3.	16 May, 2020: 8.00pm	hgq-vnpx-gvp	Y	Y	Y	Y	Y
4.	16 May, 2020: 8.30pm	cvg-bbja-wkm	Y	Y	Y	Y	Y
5.	20 May, 2020: 8.00pm	ekw-mfos-bbx	Y	Y	Y	Y	N
6.	21 May, 2020, 8.00 pm	jga-zcim-qoj	Y	Y	Y	Y	Y
7.	22 May, 2020: 8.00pm	sxv-bwvf-tbb	Y	Y	Y	Y	N
8.	25 May, 2020: 8.00pm	eji-ynii-vzi	Y	Y	Y	Y	N
9.	27 May, 2020: 8.00pm	qak-urhu-wvk	Y	Y	Y	Y	Y
10.	28 May, 2020: 8.00pm	kgn-frab-stf	Y	Y	Y	Y	N
11.	01 June, 2020: 8.00pm	dch-kwxu-isp	Y	Y	Y	Y	N
12.	04 June, 2020: 8.00pm	dmj-soge-eeu	Y	Y	Y	Y	N
13.	05 June, 2020: 8.00pm	wbt-tkau-fiv	Y	Y	Y	N	N
14.	08 June, 2020: 8.00pm	mcb-eymk-ydm	Y	Y	Y	Y	N
15.	09 June, 2020: 3.30 pm	hpg-jkem-szt	Y	Y	Y	N	Y
16.	11 June, 2020: 8.00 pm	rco-encr-zeb	Y	Y	Y	N	Y



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17.	16 June, 2020: 8.00 pm	tsz-xvbf-hfa	Y	Y	Y	Y	N
18.	17 June, 2020: 8.00 pm	ftk-kihxdxv	Y	Y	Y	Y	N
19.	18 June 2020: 8.00 pm	hpt-qngy-yxm	Y	Y	Y	Y	N
20.	22 June 2020: 8.00 pm	oae-utqv-bzi	Y	Y	Y	Y	N
21.	23 June 2020: 8.00 pm	zkg-auqe-wyz	Y	Y	Y	Y	N
22.	5 Dec 2020 8.00 pm	gtr-exqx-owd	Y	Y	Y	N	N
23.	13 Dec 2020 8.00 pm	fbx-mium-ior	Y	Y	Y	Y	N

Suggestions from the ICVP Diplomataes

- The ICVP conducted online discussion meeting via Google Meet platform (wvg-ofzt-aop) on 23rd July 2020. The suggestions from ICVP Diplomataes have seriously been considered and accordingly a few changes have been made in the syllabus, to accommodate the regional differences in prevalence of pathological conditions in different species of animals, range has been given for the weightage of topics.
- The trainees need to be introduced to all the topics identified. In order to understand all the topics in the given period of time, the following strategies may be adopted without losing the topics at the time of implementation of the MTD-committee recommendations.
 1. By clubbing related topics in one session
 2. By expanding the duration of a session in to 2-3hrs for accommodating more topics
 3. By conducting half or full day sessions in a seminar/workshop-mode at fixed time interval of once in 1-3 months as felt appropriate by the Training Committee at that time of implementation.
- The 'OWS' can be initially fortnightly and later weekly. This is a practical issue to be addressed by the members of the EC or the Training Committee implementing the schedule
- The proforma given in this document are exclusively for training purposes and cannot be considered as a legal or official format of the ICVP. These were prepared after considering several formats of PM reports. These are optional formats. The trainer and trainee may be given the freedom to choose any proforma of their choice including the ones followed in their own organisation or the Gazette notification. However, the trainer and trainee should



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preferably make an earnest attempt to include all the details indicated in the MTD-PM format as far as possible.



2. Training syllabus:

- 2.1. The ICVP-training shall cover all aspects of Veterinary Pathology practice including anatomic pathology, clinical pathology and comparative pathology as applicable to India, on a professional quality platform acceptable to the global Veterinary Pathology fraternity. The training shall foster the ability to perform disease diagnosis and conduct an accurate assessment of patient health, by ascertaining the stage of pathogenesis of infectious, metabolic and genetic diseases at the time of investigation.
- 2.2. The training committee identifies six Veterinary Pathology practice segments, at least for the training purposes incorporating both anatomic and clinical pathology. It may be noted that, unlike the identification of Anatomic Pathology and Clinical Pathology (including Surgical Pathology) as distinct practice disciplines by several reputed Veterinary Pathology personnel accreditation systems across the world, this committee feels that integration of these skills makes the training programme more fruitful.
- 2.2.1. Pathology of farm animals
- 2.2.2. Pathology of companion animals
- 2.2.3. Poultry pathology To be changed as Avian Pathology
- 2.2.4. Pathology of wild animals and birds
- 2.2.5. Pathology of non-mammalian and non-avian species
- 2.2.6. Comparative (experimental and toxicologic) pathology and pathology of laboratory animals
- 2.3. The trainee should have adequate exposure to each and every practice segments. However, the emphasis on different segments may differ (Table 2).

Table 2. Guidelines for defining functional areas for Veterinary Pathology training/ practice (Note: the percentage proposed is not absolute)

Sl. No.	Functional area	Explanation	Relative weightage
1	Pathology of farm animals	All species of animals reared in farm conditions for economic purposes: cattle,	30-35%



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		buffalo, equines, sheep, goat, pig, rabbit	
2	Pathology of companion animals	All species reared as pets: dog, cat	10-25% To be reduced to 10-15%
3	Poultry pathology To be changed as Avian Pathology	All species of birds reared under farm conditions	10-20%
4	Comparative (experimental and toxicologic) pathology and pathology of laboratory animals	Spontaneous and experimental diseases in all species of animals kept under laboratory settings for conducting experiments (e.g.: mouse, rat, rabbit, Guinea pig, hamster, non-human primates, farm animal/birds, reptiles, frog, fish <i>etc</i>)	5-10% To be increased to 10-15%
5	Pathology of wild animals and birds	<ul style="list-style-type: none">All species of terrestrial vertebrate animals existing in the wild which has a bearing on the ecosystem not considered as farm/ domestic/ laboratory animalsSuch animals kept under captivity or zoo: (e.g.: elephant, lion, snakes)	5-10% To be reduced to 5%
6	Pathology of non-mammalian and non-avian species	<ul style="list-style-type: none">All species of invertebratesAll species of animals living in marine and aquatic conditions: marine and fresh water species	5-10%

3. The Thousand Components ICVP-Training

3.1. The focus of the training shall be to develop proficiency in skills related to all segments of each of the functional area of Veterinary Pathology practice. These are identified as training components:

- 3.1.1. Descriptive pathology of gross lesions
- 3.1.2. Descriptive pathology of histomorphology
- 3.1.3. Descriptive pathology of cytology and blood smears
- 3.1.4. Interpretation of results of analytical/clinical tests
- 3.1.5. Interpretation of molecular pathology investigations



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- 3.1.6. Report preparation and development of communication skills with professional (e.g.: doctors, policy makers, legal establishments) and social clients (farmers, pet owners).
- 3.1.7. Capability to articulate the concepts in animal health for advancing livestock economy, maintaining ecology balance and promoting the concept of 'one-health'
- 3.1.8. Awareness and use of opportunities for quality control and continued professional advancement in respective areas
- 3.2. The important professional skills and the activities required for accomplishing these skills are listed in Table 3. These classified as 'Core Activities and Skills' and 'Additional Core Activities' and 'Specialised Professional Skills'.
- 3.3. These activities will have to be performed certain number of times to gain basic skills of a practicing veterinary pathologist. The Table 3 gives the minimum number times of repetitions recommended for acquiring these skills but can be altered at the discretion of the Supervisor/Trainer.
- 3.4. These are named as "The Thousand Components of ICVP-Training"

Table 3: The Thousand Components of ICVP-Training

(List of basic professional skills desirable of a practicing veterinary pathologist)

List of skills and activities	Minimum number of times an activity that has to be performed by a trainee during the period of training			
	Total for the group	Major-head of activity	Minor head of activity	Specific activity
Core Activities and Skills (CAS)	875			
CAS 1. Conducting a post-mortem examination		135		
CAS 1.1. Farm animals			35	
CAS 1.1.1. Bovine				10



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CAS 1.1.2.Ovine/caprine				10
CAS 1.1.3. Swine				5
CAS 1.1.4. Rabbit				5
CAS 1.1.5.Equine				3
CAS 1.1.6.Others				2
CAS 1.2.Companion animals			25	
CAS 1.2.1.Canine and Feline				20
CAS 1.2.2.Others				5
CAS 1.3. Avian			50	
CAS 1.3.1.Chicken (layers)				20
CAS 1.3.2.Chicken (broiler)				20
CAS 1.3.3.Duck and/or quail				5
CAS 1.3.4.Others				5
CAS 1.4.Non-domestic animals			25	
CAS 1.4.1.Laboratory animals				
CAS 1.4.2. Laboratory animals (Rat and mouse)				10
CAS 1.4.3. Laboratory animals (Rabbit, Guinea pig, hamster)				3
CAS 1.4.4. Laboratory animals (Non-human primates)				2



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and Large animal species used in research)				
CAS 1.4.5.Wild animals				5
CAS 1.4.6. Aquatic animals & invertebrates				5
CAS 2.Descriptive pathology of gross lesions		250-260		
		To be reduced to 250		
CAS 2.1.On various parts/regions of the body			130	
CAS 2.1.1.Head and neck				20
CAS 2.1.2.Thorax				20
CAS 2.1.3.Abdomen				20
CAS 2.1.4.Pelvis				20
CAS 2.1.5. Fore limbs				20
CAS 2.1.6. Hind limbs				10
CAS 2.1.7.Others (e.g.: tail)				10
CAS 2.1.8. Skin and adnexa				10
CAS 2.2. Systemic Pathology			130	
CAS 2.2.1.Respiratory system				10
CAS 2.2.2. Cardiovascular system				10
CAS 2.2.3. Gastrointestinal				10



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system				
CAS 2.2.4.Hepatobiliary system				10
CAS 2.2.5. Excretory system				10
CAS 2.2.6.Endocrine system				10
CAS 2.2.7. Musculoskeletal systems				10
CAS 2.2.8.Male reproductive system				10
CAS 2.2.9. Female reproductive system				10
CAS 2.2.10. Nervous system				10
CAS 2.2.11.Organs of special senses (eye, ear)				10
CAS 2.2.12. Hematopoetic system				10
CAS 2.2.13. Skin and adenexa				10
CAS 3. Histotechnology		60	60	
CAS 3.1.Tissue processing				5
CAS 3.2. Block making				5
CAS 3.3.Microtomy including cryotomy				5
CAS 3.4. Haematoxylin and eosin staining				15
CAS 3.5. Special stains for infectious agents (bacteria, fungi, parasites & viral inclusions)				9
CAS 3.6. Special stains for non-infectious agents				10



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(muscle, fibrous tissue, glycogen, amyloid, minerals and salts)				
CAS 3.7.Immunohistochemistry				5
CAS 3.8. Hybridization				1
CAS 3.9.Other technique or any of the above technique				5
CAS 4.Descriptive pathology of histomorphology based on haematoxylin and eosin stain(s)		150 (Max. up to 200)	To be increased to 200	150
CAS 4.1.Respiratory system – nasal passage, nasopharynx, larynx, trachea, bronchi, alveoli				15
CAS 4.2. Cardiovascular system – atria, ventricles, blood vessels & lymphatics				15
CAS 4.3.Gastrointestinal system: buccal cavity, teeth, salivary glands, oropharynx, esophagus, rumen, reticulum, omasum, abomasum, true stomach, duodenum, jejunum, ileum, ceacum, colon, rectum and associated glands.				15
CAS 4.4. Hepatobiliary system and pancreas: exocrine pancreas, liver, bile duct and gall bladder				20



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CAS 4.5.Excretory system- kidneys, ureters and urinary bladder and urethra				10
CAS 4.6.Endocrine system- hypothalamus, pituitary, thyroid, endocrine pancreas, adrenal, testis, ovary				10
CAS 4.7. Musculoskeletal systems: skeletal muscle, bones, cartilage joints, tendons and ligaments				10
CAS 4.8. Male reproductive system- testis, epididymis, efferent ductules, vas deferens, spermatic cord, penis , prostate, bulbourethral glands and seminal vesicles				10
CAS 4.9. Female reproductive system- vulva, vagina, cervix, uterus, fallopian tube, ovary and mammary glands				10
CAS 4.10. Nervous system- CNS- Brain (meninges, cerebrum, hypothalamus, thalamus, medulla oblongata, pons and cerebellum) and spinal cord, peripheral nervous system (cranial/spinal nerves, ganglion)				10



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CAS 4.11. Organs of special senses: eye- lacrimal, infraorbital, extraorbital, harderian and zymbal glands and ear				6
CAS 4.12. Skin and adnexa				9
CAS 4.13. Haemopoietic system: bone marrow, spleen, thymus and lymph nodes and mucosal associated lymphoid tissue				10
CAS 5. Descriptive pathology of cytology and blood smears		150-205		
		To be reduced to 155		
CAS 5.1 Haematology			60	
CAS 5.1.1 Preparation of blood smears				8
CAS 5.1.2 Staining of blood smears: Giemsa's, Leishman's, Wright's and supra vital stains)				9
CAS 5.1.3 Interpretation of differential leucocyte count				10
CAS 5.1.4 Interpretation of erythrocytic abnormalities				10
CAS 5.1.5 Interpretation of leucocytic abnormalities				10
CAS 5.1.6 Interpretation of platelet				5



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abnormalities				
CAS 5.1.7 Haemoprotozoa and other infectious agents				8
CAS 5.2 Cytology			45	
CAS 5.2.1 Collection of materials for cytology : FNAC, impression smear, swabs, scrapping and body fluids				10
CAS 5.2.2 Preparation of cytological smears				10
CAS 5.2.3 Staining of cytological smears				10
CAS 5.2.4 Cytopathological interpretation of neoplastic lesions				10
CAS 5.2.5 Cytopathological interpretation of non-neoplastic lesions				5
CAS 5.3 Urine sediment evaluation			20	
CAS 5.3.1 Preparation of urine sediment				5
CAS 5.3.2 Smear preparation from urine sediment				5
CAS 5.3.3 Staining and interpretation of urine sediment smears				5
CAS 5.3.4 Interpretation of nasal washing/ smears				5



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CAS 5.4 Cytopathology of body fluids (pericardial, peritoneal, thoracic, CSF and synovial fluids.)			40	
CAS 5.4.1 Collection of sample				5
CAS 5.4.2 Smear preparation				5
CAS 5.4.3 Staining of body fluid smears				5
CAS 5.4.4 Interpretation of neoplastic and non-neoplastic changes				10
CAS 5.5 Vaginal exfoliative cytology				3
CAS 5.5.1 Preparation of vaginal cytology smears				2
CAS 5.5.2 Staining of vaginal cytology smears				3
CAS 5.5.3 Interpretation of estrous				7
CAS 5.6 Milk sample cell count and cytology			10	
CAS 5.6.1 Collection of milk samples				2
CAS 5.6.2 Preparation of milk smears				2
CAS 5.6.3 Interpretation of milk smears				6
CAS 5.7 Nasal washings and			15	



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transtracheal washing				
CAS 5.7.1 Collection of nasal and transtracheal washings				2
CAS 5.7.2 Preparation of nasal smears				3
CAS 5.7.3 Interpretation of nasal washings for parasites and tumours				5
CAS 5.7.4 Interpretation of transtracheal washings for neoplastic and non-neoplastic conditions				5
CAS 5.8 Clinical Microbiology			15	
CAS 5.8.1 Preparation of sample smears				1
CAS 5.8.2 Staining – Gram's , Ziehl-Neelsen PAS and Lactophenol cotton blue stain				4
CAS 5.8.3 Interpretation of bacterial morphology				5
CAS 5.8.4 Interpretation of fungal morphology				5
CAS 6. Descriptive Ultrastructural pathology		10-15 To be increased to 15%	10	
CAS 6.1. Transmission electron microscopy				5
CAS 6.2. Scanning electron				3



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microscopy				
CAS 6.3. Advanced light microscopy				2
CAS 7. Interpretation of molecular pathology results		5 – 10	5	
		To be increased to 10%		
CAS 7.1. Blotting techniques				1
CAS 7.2. Genomics				1
CAS 7.3. Microarray				1
CAS 7.4. Proteomics				1
CAS 7.5. Flow cytometry				1
CAS 8. Interpretation of serum biochemistry and organ function tests		50	50	
CAS 8.1. Clinical hematology				20
CAS 8.2. Clinical biochemistry				10
CAS 8.3. Body fluids: urine				5
CAS 8.4. Body fluids: milk				5
CAS 8.5 Analytical chemistry of body fluids: synovial fluid, rumen fluid and CSF				5
Additional Core Skills (ACS)	50			
ACS 1. Pre post-mortem examination procedures		25	25	



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ACS 1.1. Assessment of common documentary requirements				15
ACS 1.2. Assessment of legal requirements				4
ACS 1.3. Assessment of availability of instrumentation requirements for different kinds of necropsy				3
ACS 1.4. Assessment of availability of infrastructure requirements for different kinds of necropsy				3
ACS 2. Gross/Micro photography		25	25	25
Specialised Professional Skills (SPS)				
Specialised Professional Skills (SPS)	75			
SPS 1. Report preparation and development of communication skills with professional (e.g.: doctors, policy makers, legal establishments) and social clients (farmers, pet owners).		70	70	
SPS 1.1. Preparation of technical reports: post mortem examination				30
SPS 1.2. Preparation of technical reports:				25



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histopathology and clinical Pathology				
SPS 1.3. Preparation of technical reports: ultrastructural and molecular pathology				10
SPS 1.4. Preparation of scientific reports for indexed scientific journals				2
SPS 1.5. Preparation of case reports for ICVP competitions				2
SPS 1.6. Preparation of popular articles				1
SPS 2. Capability to articulate the concepts in animal health for advancing livestock economy, maintaining ecology balance and promoting the concept of 'one-health'		2	2	2
SPS 2.1. Participation in IAVP award competitions				
SPS 2.2. Participation in annual conferences of non-Veterinary Pathology organisations				
SPS 3. Awareness and use of opportunities for continued professional advancement and quality control in		3	3	3



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respective areas				
SPS 3.1. Participation in veterinary continuing education programmes				
SPS 3.2. Participation in non-pathology continuing education programmes				
SPS 3.3. Conducting/organising continuing education programmes for farmers and/or professionals				
SPS 3.4. Documentary evidence of awareness of personal accreditation systems				
SPS 3.5. Documentary evidence of awareness of quality system platforms: ISO, GLP, OECD, NABL				
SPS 3.6. Any other relevant activity				



4. Training Methods

4.1. The ICVP-training committee considered the present opportunities of a trainee to get a fair exposure to various Veterinary Pathology practice components, envisaged in the training documents, during the training process of three years. The committee recommends a 'residential training' system for acquiring professional skills. This residential model can be integrated with MVSc and PhD courses by Veterinary Pathology Departments/Divisions in various Universities but the trainer and the trainee together assume the responsibility of satisfying adequate exposure to all the 'Thousand Activities' of the 'Training Component'.

4.2. The committee identified the important features of an ideal training programme.

4.2.1. The training should be organised in any organisation/institutions where Veterinary Pathology can be practiced as a professional activity.

4.2.2. The Executive Council may declare only those centres with adequate facilities as "**ICVP Training Centres**".

4.2.3. All training programmes shall be conducted under the supervision of a certified diplomate.

4.2.4. Every trainee should have a named trainer.

4.2.5. Normally, the head-quarter of the trainer shall be designated as the '**Training Station**'. The 'training station' can be a registered practice-location of the trainer, a veterinary clinic, research institute or organisation.

4.2.6. The ICVP may consider designating organisations or institutions, which has the services of more than one diplomate, as '**Training Centres**'.

4.2.7. **The committee recommends 'all or none' law for completing the training.** Normally, the training shall be deemed incomplete without performing all the 'Thousand activities' of the 'Training Components' (Table 3) but a grading/scoring system (Table 4) has been proposed to monitor the progress of the training.

4.3. The committee senses wide disparity in training skills between trainers and variation in the availability of training resources in different training institutions. At present, all Veterinary Pathology 'Training Stations/Centres' in the country may not have adequate training facilities/resources in all topics at the desired proportion, as expected by ICVP. Therefore, the ICVP leadership must insist minimum standards of facilities required for a 'Training Station/Centre'.



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- 4.4. This Committee recommends creation of a congenial situation for training by pooling and sharing of training resources at national level.
- 4.5. Considering all the above, there can be different ways of naming and administering training programmes. This committee recommends four methods of training processes.
 - 4.5.1. **‘Onsite training’** is a physical training method imparted to a trainee by an ICVP diplomate at an authorised ‘training station’.
 - 4.5.2. **‘Offsite training’** shall be permissible when a diplomate does not have access to all facilities envisaged in the training document, which has to be provided to a candidate. In such instances, with the permission/guidance of the trainer, the trainee can visit other pre-identified institutions or Veterinary Pathology practice centres to get wider exposure to various Veterinary Pathology practice components.
 - 4.5.3. **‘Remote training’** gives the option for a trainee to receive training from a remotely located trainer but both of them meet periodically, at least once in every two months for reviewing the progress of the training.
 - 4.5.4. **‘Centralised training’** shall be a prerogative of the Executive Council of the ICVP, preferably under the supervision of the ‘Vice President’, as stated in the ICVP-constitution.
- 4.6. Major features of the proposed training process and some of the methods recommended for the centralised training are the following:
 - 4.6.1. The Vice President shall co-ordinate all training programmes as delineated in the ICVP constitution. However, the committee is of the opinion that one person cannot handle all activities single handed.
 - 4.6.2. **This committee recommends the formation of a ‘Training Committee’ of five to seven members, under the leadership of the Vice President, to oversee all training related activities and to advise the Executive Council on training related issues.**
 - 4.6.3. The Training Committee may seek the support of diplomates in organising the training process. The Executive Council of the ICVP may identify ICVP diplomates with demonstrated skill and proficiency as “ICVP-National Trainers” or “Subject experts” or “Specialists” to train prospective diplomates as per the ‘Training Plan’ delineated in the Section 5.



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- 4.6.4. This Committee recommends the conduct of a “Centralised Training” programme to compliment the “On-site Training” programmes.
- 4.6.5. This Committee recommends “Virtual Training Programmes” as major components of the centralised training process and may include the following:
- 4.6.5.1. Online short courses
- 4.6.5.2. Periodic webinars
- 4.6.6. The Training Committee may consider building a permanent digital library of ICVP-learning resources in the form of an “ICVP-Digital Image Registry” for conducting the Centralised Training Programmes.
- 4.6.7. The Training Committee may consider collecting, building and maintaining a registry of gross specimens and glass slides.
- 4.6.8. The Training Committee may consider preparing and publishing training manuals on specific subjects and topic related to professional Veterinary Pathology practice.
- 4.6.9. The Training Committee may consider organising training programmes in conjunction with other agencies like International Coalition of Veterinary Pathology Organisation, CL Davis Foundation, Joint Pathology Centre, ICAR, IVRI, State Agricultural/Veterinary Universities *etc.*
- 4.6.10. The Training Committee may consider supporting/sponsoring Summer Institutes, short-courses *etc* by ICVP-Diplomates.

5. Guidelines for the administration of training programmes

- 5.1. The proposed guidelines for conducting ‘On-site Training’ and the ‘Centralised Training are given in Sections 5.3 and 5.4 respectively and a suggested training plan is given in Section 6.
- 5.2. Guidelines for conducting and monitoring ‘On-site Training’.
- 5.2.1. The training shall be organised only in authorised ‘Training Station/Centre’
- 5.2.2. A Diplomate must be available ‘on site’ for supervising the training.
- 5.2.3. The trainee should be allowed to associate and involve with all activities in a Veterinary Pathology practice institution, at least on a rotational basis.
- 5.2.4. If a training Station/Centre does not have sufficient facilities, the trainee may supplement the training process through ‘off-site, remote and/or centralised training’ modes.



- 5.2.5. Each time a trainee performs a skill component listed in Table 3, he/she has to record the details in the ICVP-Trainees Diary (please see ICVP form 7) and the Trainee Log book (please see ICVP form 8) presented in the section on Training Records.
- 5.2.6. The supervisor must meet the trainee periodically (at least twice in a calendar month) and authenticate the recordings, verify the accuracy of the recording and guide him/her for performing the task professionally.
- 5.2.7. The trainee should report the list of skills acquired/performed every month and submit the same to the ICVP, through the supervising Diplomate (Trainer), with supporting documents in specified formats. (*Note: Please see the section on Training Record for details of the formats for reporting*).
- 5.2.8. The ICVP will have the freedom (copy right) to use the above submitted materials for other training procedures and to include them in training manuals and publications of the ICVP.

5.3. Guidelines for Conducting Centralised Training Programmes

- 5.3.1. Executive Council controls the all centralised training process through a 'Training Committee' under the leadership of the Vice President.
- 5.3.2. The 'Training Committee' shall design, lead and conduct the centralised training programme with the approval of the Executive Council, under the leadership of the Vice President.
- 5.3.3. The centralised training programme compliments, but does not replace the on-site, off-site and remote training programmes.
- 5.3.4. The aim of the centralised training programme shall be to fill up the deficiencies in personalised institutional training programmes like the on-site, the off-site or the remote training programmes.
- 5.3.5. The design and conduct of the centralised training programme shall not infringe the rights of a supervisor to adopt innovative and unique training methods.
- 5.3.6. The centralised training programme process essentially pools all training resources to a common platform which shall be shared or made available to all participating trainees without any discrimination with respect to institutional affiliation or the association with a trainer.
- 5.3.7. Participation in the centralised training programme is compulsory for a trainee. Please see Section 5.5.3 and Table 4 for the minimum requirements.



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- 5.3.8. The Training Committee may develop, publish and implement a training plan for a cycle of two calendar years.
- 5.3.9. The Training Committee may build a “Digital Image Registry”, which shall be a repository of centralised training resources.
- 5.3.10. On recommendation of the Training Committee, the ICVP Executive Council may prescribe appropriate fee for admitting a trainee to the ICVP-Central training programme.
- 5.3.11. On recommendation of the Training Committee, the ICVP Executive Council may prepare a list of experts identified as “ICVP-National Trainers” for acting as faculty for the centralised training.
- 5.4. This committee recommends the following two methods of Centralised Training procedures.
 - 5.4.1. A series of lectures and demonstrations using multimedia
 - 5.4.1.1. The Training Committee shall prepare a list of potential topics (titles) for the lectures/demonstrations
 - 5.4.1.2. The Executive Committee, on recommendation of the Vice President or the Training Committee, identify a list of potential “ICVP-National Trainers” who have sufficient expertise in the topics identified in the Table 5).
 - 5.4.1.3. The Training Committee shall prescribe the qualification of the National Trainers. (*Note: at least three out of six of the following*).
 - 5.4.1.3.1. Qualification 1: Diplomate of ICVP
 - 5.4.1.3.2. Qualification 2: Have at least 5 years of post-Diploma experience
 - 5.4.1.3.3. Qualification 3: Have published at least five case reports or research reports with substantial diagnostic component.
 - 5.4.1.3.4. Qualification 4: Have at least one trainee registered with the trainer
 - 5.4.1.3.5. Qualification 5: Member of the Training Committee
 - 5.4.1.3.6. Qualification 6: Have served in the ‘Model Training Committee: 2020’ or at least two years as a member of the Training Committee
 - 5.4.1.4. Normally, the lecture may be about 30-45 minutes duration which can be subjected to modifications, to the discretion of the Training Committee/ lecturer with clear explanations and acceptable reasons.
 - 5.4.1.5. The lectures may be live streaming (e.g.: YouTube, Zoom, GoogleMeet etc) or previously recorded stored lectures in ICVP-website.



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- 5.4.1.6. The schedule of lectures/demonstrations shall be a well-planned, and announced well in advance (about two weeks). A model schedule is given in Section 6 on “Training Plan”.
- 5.4.1.7. The attendance of trainees in these lectures shall be recorded.
- 5.4.1.8. Training Committee shall monitor the attendance by trainees in these lectures and assign credits (Table 4).
- 5.4.1.9. The trainees attending the training may use the photographs/lesions/PM-reports discussed in the lectures/demonstrations for completing the requirement of ‘Thousand Activities’ with the permission of the Supervising ICVP-Diplomate, if necessary, but never use these for publications.
- 5.4.2. “Online Weekly Discussion Session” (WDS) or Weekly Slide/Case Seminars
 - 5.4.2.1. Salient features of the proposed WDS
 - 5.4.2.1.1. This is a participatory training programme with active involvement of all Diplomates and trainees.
 - 5.4.2.1.2. This is a continuous activity.
 - 5.4.2.1.3. Weekly discussion happens on a specified day of the week (unless otherwise cancelled/postponed by the Training Committee on specific reasons).
 - 5.4.2.1.4. The procedure for organising WDS shall be defined by the Training Committee from time to time as acceptable to the general body of the ICVP. A method for conducting the WDS is given below.
 - 5.4.2.1.5. The WDS may be a physical session happening in a specific institution but should be made available to all participating Diplomates and trainees through appropriate (pre-assigned) digital medium (e.g.: YouTube, Zoom, GoogleMeet etc).
 - 5.4.2.2. A method for conducting WDS
 - 5.4.2.2.1. The Diplomates and trainees submit model necropsy-report and morphology descriptions collected during training or Veterinary Pathology practice to the ICVP-Training Committee in prescribed format.
 - 5.4.2.2.2. The submission shall be in digital format or any other form acceptable and pre-announced by the Training Committee.



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- 5.4.2.3. The participants will submit only those documents/information for which they hold copy rights. The copy right of such documents submitted shall remain with the author but the Training Committee will have the freedom to use them in the same or altered form for training purposes. The training Committee will have to get permission from the author for any other use. Diplomates wishing to use these images/documents will communicate with the author with respect to any other use or matters related to copy right and intellectual property rights.
- 5.4.2.4. The Training Committee screens all receipts and selects one or a few of them for discussion.
- 5.4.2.5. The author (or a member of the Training Committee authorised by the author) presents the case before the audience followed by a discussion.
- 5.4.2.6. A member of the Training Committee shall moderate every session.
- 5.4.2.7. By arrangement and with prior permission of the author, the materials presented may be published or archived by the ICVP.
- 5.4.2.8. The trainees attending the training shall have freedom, to use the photographs/lesions/PM-reports discussed in the lectures/demonstrations for completing the requirement of 'Thousand Activities'. For any other activity the trainee has to get permission from the original contributor.
- 5.5. The Training Committee shall monitor the progress in training and provide "Certificate of Completion of Training" based on a scoring system.
- 5.5.1. The Executive Council may authorise the Training Committee to issue certificate of completion for taking the ICVP-examination.
- 5.5.2. The Executive Council may issue Certificate of "Board Eligibility" or ICVP-Eligibility" to candidates on satisfactory completion of the training which shall be a criteria for sitting in the ICVP-examination.
- 5.5.3. **The Grading/Scoring system for monitoring the progress of the ICVP training**
- 5.5.3.1. The Committee recommends a scoring system for assessing the progress of the training on an annual basis.



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5.5.3.2. The trainee will get credit for completing/participating each activity listed as part of the centralised training process.5.5.3.3. The credit is accrued as marks for each activity: the candidate will get one mark for each activity.

5.5.3.4. Marks for ‘onsite training’ will be based on the number of reports submitted to the Training committee. Thus the trainee can acquire a maximum ‘50 marks’ for submitting on an average one report every week of a year, totalling an opportunity for 52 marks (please see Table 4).

5.5.3.5. Marks will also be credited (one mark each) for participation in every lecture/ demonstration or weekly case study seminars organised by the ICVP Training Committee (please see Table 4).

5.5.3.4. The minimum marks required for completion of the training shall be 90 marks.

Table 4. A grading/scoring system for evaluating progress of the ICVP-Training.

S. No.	Activity	Minimum	Maximum	Remarks
1.	Onsite Training: number of lesion/necropsy reports submitted to the ICVP	28	50	One mark for each report
2.	Participation in Centralised Training-A: Attendance in lectures/ demonstrations	30	45	One mark for each attendance
3.	Participation in Centralised Training-B: Attendance in Weekly case discussion seminars	30	45	One mark for each attendance
4.	Attendance in annual meeting of ICVP	1	5	
5.	Participation in ICVP/IAVP award competitions	1	5	
Total		90	150	

6. The ICVP-Training Plan



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- 6.1. This Committee holds the opinion that the depth of the “On-site Training” has to be a prerogative of the trainer but has to be in consistence with the examination system.
- 6.2. The Training Committee shall be responsible for identifying the topics for lectures/ demonstrations and the resources persons for the Centralised Training
- 6.3. The Training Committee shall be responsible for scheduling and organising lectures.
- 6.4. The lecture topics and the Weekly Group Discussion or the slide seminar shall be announced at least two weeks in advance and a reconfirmation in the announcement at the time of the previous lecture/demonstration or the weekly meeting.
- 6.5. A suggested list of topics and a training plan is presented in the Table 5.



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Table 5. The annual training plan recommended by the Training Committee 2020 (to be reviewed once in five years)

Month/ week	Reporting of onsite training activities to the ICVP (To be repeated every Monday)	Online Centralised Training			Online weekly seminars
		Basic topics (First Year) (To be conducted every Tuesday)	Advanced topics (Second Year) (To be conducted every Wednesday)	Special lectures or Journal club presentations (Third Year) (To be conducted every Thursday)	Online digital Friday group discussion and slide seminars (moderated by trainers and diplomates)
January Week-1	Report a post-mortem examination	Basic requirements for post-mortem examination (tools, infrastructure and documentation)	Regional pathology: gross and microscopic lesions in Head and neck	Special lecture-I: Cell death	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
January Week-2	Report a gross lesion	Post-mortem examination in different species of farm animals	Regional pathology: gross and microscopic lesions in fore limbs and hind limbs	Journal club presentations by trainees-I	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
January Week-3	Report a histopathology lesion	Post-mortem examination in different species of companion animals	Regional pathology: gross and microscopic lesions in thoracic and abdominal cavities	Special lecture-II: Cell adaptation	Topic and moderator will be identified and announced by the ICVP Training Committee



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					every previous Friday
January Week-4	Report a clinical pathology investigation	Post-mortem examination in poultry	Regional pathology: gross and microscopic lesions in pelvis and tail	Journal club presentations by trainees-II	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
January Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
February Week-1	Report a PM examination	Post-mortem examination in different wild animals and birds (ruminants, carnivores, birds, reptiles etc)	Gross and histopathology of respiratory system	Special lecture-III: Biology of cell proliferation	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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February Week-2	Report a gross lesion	Post-mortem examination in different non-mammalian and non-vertebrate terrestrial animals	Gross and microscopic lesions of cardiovascular system	Journal club presentations by trainees-III	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
February Week-3	Report a histopathology lesion	Post-mortem examination in different species of marine and aquatic species	Gross and microscopic lesions of gastrointestinal system: gut	Special lecture-IV: Cells participating in inflammation	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
February Week-4	Report a clinical pathology investigation	Post-mortem examination in laboratory animals	Gross and microscopic lesions of gastrointestinal system: hepatobiliary and exocrine glands	Journal club presentations by trainees-IV	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
February Week-5	Report an ultrastructural lesion or a	Revision of topics already discussed during the month (if a	Revision of topics already discussed during the month (if a fifth	Topic be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP



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	molecular pathology result (if a fifth Monday is available)/ Mock Examination	fifth Tuesday is available)/ Mock Examination	Wednesday is available)/ Mock Examination		Training Committee every previous Friday
March Week-1	Report a post-mortem examination	Morphological description of gross lesions	Gross and microscopic lesions of urinary system	Special lecture-V: Chemical mediators of inflammation	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
March Week-2	Report a gross lesion	Basic histotechnology	Gross and microscopic lesions of male genital system	Journal club presentations by trainees-V	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
March Week-3	Report a histopathology lesion	Microscopy for veterinary pathologists	Gross and microscopic lesions of female genital system	Special lecture-VI: Oncogenes	Topic and moderator will be identified and announced by the ICVP Training Committee



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					every previous Friday
March Week-4	Report a clinical pathology investigation	Basic photography skills for veterinary pathologists (macrophotography, microphotography)	Gross and microscopic lesions of nervous system	Journal club presentations by trainees-VI	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
March Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
April Week-1	Report a post-mortem examination	General principles of descriptive histopathology	Gross and microscopic lesions of organs of special sense	Special lecture-VII: Multistage carcinogenesis	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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April Week-2	Report a gross lesion	Histopathology of non-infectious and non-neoplastic lesions	Gross and microscopic lesions of hematopoietic system	Journal club presentations by trainees-VII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
April Week-3	Report a histopathology lesion	Histopathology of infectious diseases	Gross and microscopic lesions of lymphoid system	Special lecture-VIII: Pathobiology of angiogenesis	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
April Week-4	Report a clinical pathology investigation	Histopathology of neoplastic lesions	Gross and microscopic lesions of endocrine system	Journal club presentations by trainees-VIII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
April Week-5	Report an ultrastructural lesion or a molecular	Revision of topics already discussed during the month (if a fifth Tuesday is	Revision of topics already discussed during the month (if a fifth Wednesday is available)/	Topic to be identified / Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee



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	pathology result (if a fifth Monday is available)/ Mock Examination	available)/ Mock Examination	Mock Examination		every previous Friday
May Week-1	Report a PM examination	Special staining techniques in diagnostic pathology	Discussion on common post-mortem lesions in farm animal	Special lecture-IX: Pathobiology of extracellular matrix	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
May Week-2	Report a gross lesion	Diagnostic immunohistochemistry	Discussion on common post-mortem lesions in companion animals	Journal club presentations by trainees-IX	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
May Week-3	Report a histopathology lesion	Flow cytometry	Discussion on common post-mortem lesions in poultry (chicken)	Special lecture-X: Cell signalling	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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May Week-4	Report a clinical pathology investigation	Descriptive electron micrography	Discussion on common post-mortem lesions in poultry (other than chicken)	Journal club presentations by trainees-X	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
May Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic to be identified / Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
June Week-1	Report a post-mortem examination	General principles of laboratory medicine	Discussion on common post-mortem lesions in a laboratory animal	Special lecture-XI: Wound healing	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
June Week-2	Report a gross lesion	Interpretation of leucocyte	Discussion on common post-mortem lesions in	Journal club presentations by	Topic and moderator will be identified and



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		abnormalities	non-mammalian and non-avian species	trainees-XI	announced by the ICVP Training Committee every previous Friday
June Week-3	Report a histopathology lesion	Interpretation of erythrocytic and platelets abnormalities	Discussion on common post-mortem lesions in wild animals (herbivores)	Special lecture-XII: / Stem cells	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
June Week-4	Report a clinical pathology investigation	Interpretation of urinalysis	Discussion on common post-mortem lesions in wild animals (carnivores)	Journal club presentations by trainees-XII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
June Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is	Revision of topics already discussed during the month (if a fifth Tuesday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic to be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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	available)/ Mock Examination				
July Week-1	Report a PM examination	Interpretation results of serum biochemistry findings	Pathology of bacterial diseases	Special lecture-XIII: Tumour markers	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
July Week-2	Report a gross lesion	Examination of CSF, peritoneal, plueral and pericardial effusions and Transtracheal washings	Pathology of viral diseases	Journal club presentations by trainees-XIII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
July Week-3	Report a histopathology lesion	Investigation of lesions in joints	Pathology of mycotic diseases	Special lecture-XIV: Immunopathology	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
July Week-4	Report a clinical pathology	Examination of milk samples	Pathology of parasitic diseases	Journal club presentations by	Topic and moderator will be identified and



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	investigation			trainees-XIV	announced by the ICVP Training Committee every previous Friday
July Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available during the month)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic to be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
August Week-1	Report a post-mortem examination	Clinical pathology of nasal smears and tracheal washings	Pathology of nutritional/metabolic diseases	Special lecture-XV: Molecular targets for disease diagnosis	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
August Week-2	Report a gross lesion	Cytological examination of vaginal smears	Pathology of genetic diseases	Journal club presentations by trainees-XV	Topic and moderator will be identified and announced by the ICVP Training Committee



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					every previous Friday
August Week-3	Report a histopathology lesion		Pathology of diseases caused by physical agents	Special lecture-XVI: Quantification of lesions	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
August Week-4	Report a clinical pathology investigation		Pathobiology of wound healing	Journal club presentations by trainees-XVI	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
August Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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September Week-1	Report a PM examination	<i>In situ</i> hybridisation	Forensic pathology	Special lecture-XVII: Pathology of Xenobiotics	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
September Week-2	Report a gross lesion	Description of cellular and molecular pathology results: ELISA, blotting techniques	One health concept	Journal club presentations by trainees-XVII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
September Week-3	Report a histopathology lesion	Proteomics and genomics	Topic to be identified	Special lecture- XVIII: Ecotoxicology of environmental toxins	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
September Week-4	Report a clinical pathology investigation	Description of cellular and molecular pathology results: nucleic acid, PCR	Topic to be identified	Journal club presentations by trainees-XVIII	Topic and moderator will be identified and announced by the ICVP Training Committee



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					every previous Friday
September Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/Mock Examination	Topic to be identified/ Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
October Week-1	Report a post-mortem examination	Description of ultrastructural pathology	Topic to be identified	Special lecture-XIX: Topic to be identified	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
October Week-2	Report a gross lesion	Quality control platforms: ISO, GLP, interpersonal comparison, proficiency testing	Topic to be identified	Journal club presentations by trainees-XIX	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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October Week-3	Report a histopathology lesion	Principles and practice of Laboratory Medicine: anatomic pathology	Topic to be identified	Special lecture-XX: Topic to be identified	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
October Week-4	Report a clinical pathology investigation	Principles and practice of Laboratory Medicine: clinical pathology	Topic to be identified	Journal club presentations by trainees-XX	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
October Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available) Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available) Mock Examination	Topic to be identified / Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
November Week-1	Report a post-mortem	Preparation of case reports for	Topic to be identified	Special lecture-XXI: Topic to be identified	Topic and moderator will be identified and



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	examination	professional colleagues, judiciary and statutory agencies			announced by the ICVP Training Committee every previous Friday
November Week-2	Report a gross lesion	Preparation of reports in Comparative and Experimental Pathology	Topic to be identified	Journal club presentations by trainees-XXI	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
November Week-3	Report a histopathology lesion	Preparation of study/case reports for scientific communications	Topic to be identified	Special lecture-XXII: Topic be identified	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
November Week-4	Report a clinical pathology investigation	Preparation of Toxicologic Pathology report	Topic to be identified	Journal club presentations by trainees-XXII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
November	Report an	Revision of topics	Revision of topics already	Topic to be identified	Topic and moderator will



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Week-5	ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/Mock Examination	already discussed during the month (if a fifth Tuesday is available) Mock Examination	discussed during the month (if a fifth Wednesday is available) Mock Examination	/ Mock Examination	be identified and announced by the ICVP Training Committee every previous Friday
December Week-1	Report a PM examination	Preparation of reports for ICVP competitions	Topic to be identified	Special lecture-XXIII: Topic to be identified	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
December Week-2	Report a gross lesion	Special topics at the request of trainees and trainers	Topic to be identified	Journal club presentations by trainees-XXIII	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
December Week-3	Report a histopathology lesion	Special topics at the request of trainees and trainers	Topic to be identified	Special lecture-XXIV: Topic to be identified	Topic and moderator will be identified and announced by the ICVP



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					Training Committee every previous Friday
December Week-4	Report a clinical pathology investigation	Special topics at the request of trainees and trainers	Topic to be identified	Journal club presentations by trainees-XXIV	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday
December Week-5	Report an ultrastructural lesion or a molecular pathology result (if a fifth Monday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Tuesday is available)/ Mock Examination	Revision of topics already discussed during the month (if a fifth Wednesday is available)/ Mock Examination	Topic to be identified / Mock Examination	Topic and moderator will be identified and announced by the ICVP Training Committee every previous Friday



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7. Staging of the ICVP- Training

- 7.1. This Committee holds the opinion that the ICVP- training should be a staged process.
- 7.2. The recommended stages are listed in Table 6. The ICVP may designate a trainee as a Junior Resident (Year I), Resident (Year II) and Senior Resident (Year III) and a Super Senior Resident (Year IV and beyond).
- 7.3. A suggested time plan for staging the ICVP training is presented in the Table 6.

Table 6: Time plan for staging ICVP training

Major stages	Objectives	A tentative time frame (in months)					
		0-6	7-12	13-18	19-24	25-30	31-36
Stage –I	Master the skill of conducting a necropsy examination and describing a lesion (gross, histomorphology, ultrastructure, molecular biology).	■	■				
Stage-II	Master the art of diseases diagnosis integrating: anatomic pathology and clinical pathology		■	■			
Stage III	Ability to practice Veterinary Pathology with minimum supervision			■	■		
Stage IV	Ability to practice Veterinary Pathology independently including report preparation				■	■	
Stage V	Ability to prepare scientific documents for publication with minimum supervision					■	■
Stage VI	Ability to act as a consultant in Veterinary Pathology						■



8. Duties and responsibilities of various stake holders in the training process

8.1. Responsibilities of a Trainer

- 8.1.1. Accepting a trainee is a serious and a prestigious activity.
- 8.1.2. Do not accept a trainee without the availability of adequate resources.
- 8.1.3. Allow the trainee to visit other centres and supplement the training process.
- 8.1.4. Encourage the trainee to participate in all permissible ICVP –activities including the centralised training programmes.
- 8.1.5. Give as much time as possible to supervise the training process.
- 8.1.6. Participate in the centralised training process along with the trainee, as much as possible.
- 8.1.7. Be an active member of the band of trainers and participate in the conduct of the centralised training process.
- 8.1.8. Arrange periodic meeting with the trainee, evaluate the records presented by the trainee and arrange to send them to the Vice President.
- 8.1.9. Discuss the problems of the current-day training programmes of the ICVP and thrive for continuous improvement.

8.2. Responsibilities of a Trainee

- 8.2.1. Read all brochures and recommendations received from the ICVP.
- 8.2.2. Keep a copy of receipts of all payment to the ICVP.
- 8.2.3. Keep a record of all training activities and get endorsements from the supervisor at least twice every calendar month. The mandatory formats include the following:
 - 8.2.3.1. The ICVP-format for recording morphologic lesions (ICVP-Form 1 and ICVP Form-2)
 - 8.2.3.2. Relevant necropsy reports (Please see ICVP forms 3-6)
 - 8.2.3.3. Trainees daily diary (ICVP-Form 7)
 - 8.2.3.4. ICVP Trainee's Log Book (ICVP-Form 8)
- 8.2.4. Send at least one Necropsy report or morphology report:
 - 8.2.4.1. One submission every week
 - 8.2.4.2. Four submissions every month
- 8.2.5. Attend at least 80% the lectures and demonstration of the Centralised Training programmes (please see Table 5)



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8.2.6. Participate in the annual meetings of the ICVP and compete for case presentation/award sessions

8.2.7. Interact with as many diplomates as possible and try to expand your knowledge and skill in Veterinary Pathology practice

8.3. Responsibilities of the Vice President or the Chairman (Training Committee)

8.3.1. Be a key person linking the trainers and trainees with the ICVP

8.3.2. Organise all 'Centralised training programmes'

8.3.3. Be the head of the Training Committee and lead the committee

8.3.4. Develop, discharge and modernise all activities of the ICVP training programmes.

8.3.5. Keep a record of all trainees and monitor the progress of on-site training process and report the same to the Registrar once in a year

8.3.6. Issue "Training Completion Certificates" to trainees

8.3.7. Keep a list of National trainers and assign topics for leading the training sessions. Present an annual report of the Centralised training process to the Executive Council of the ICVP.

8.4. Responsibilities of the Registrar

8.4.1.1. To keep all permanent records of trainees and the status of the training, in consultation with the Vice President.

8.4.1.2. To collect and permanently record all annual reports of the Training Committee

8.4.1.3. To report the status of receipt of feedback from the Training Committee (e.g.: annual reports) to the Executive Committee in the absence of the Vice President.

9. **Training records:** A set of formats for various documents to be maintained by various stakeholders for recording and monitoring the training process

9.1. ICVP-TC Form-1: ICVP-Format for recording descriptive morphology of a lesion

9.2. ICVP-TC Form-2: Format for reporting photographic illustration of morphologic description of lesions to the ICVP

9.3. ICVP-TC Form-3: Farm animal necropsy report

9.4. ICVP-TC Form-4: Companion animal necropsy report



- 9.5. ICVP-TC Form-5: Poultry necropsy report
- 9.6. ICVP-TC Form-6: Poultry farm disease investigation report
- 9.7. ICVP-TC Form-7: ICVP Trainee's daily diary
- 9.8. ICVP-TC Form-8: Trainees log-book

10. Financial management of the training process

- 10.1. All expenses for the onsite training shall be managed by the Trainer/supervisor as agreed prior to the start of the training.
- 10.2. The training committee shall prescribe a fees for the centralised training programmes and annual fee shall not be higher than the ICVP-Diplomate Examination fee for the previous year.
- 10.3. The ICVP treasurer may be made responsible for collecting all fees from the trainees.
- 10.4. The ICVP shall meet all expenses, through the Training Committee, for the centralised training process and may include the following.
 - 10.4.1. Web/internet charges for online training process
 - 10.4.2. Honorarium for the resource persons
 - 10.4.3. Secretarial charges to the Training Committee for scheduling and organising the lectures/demonstrations



11. ICVP- TRAINING FORMS AND DOCUMENTS



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ICVP-TC Form-1

ICVP-Format for recording descriptive morphology of a lesion

(Please use separate form for describing lesions in every specimen evaluate)

1. Record of specimen details				
1.1. Source of the specimen		1.2. Identification number given by the client		For office use of the veterinary pathologist
<i>(Client details including cell phone)</i>		<i>If not available, please say 'not available'</i>		<i>Identification number, given by the attending veterinary pathologist</i>
1.3. Species	1.4. Breed/strain	1.5. Age/weight	1.6. Sex	1.7. Organ
1.8. Case history <p style="text-align: center;">(Please include document identification number, wherever possible)</p>				
1.9. Please select the appropriate row for each of the following 3 columns				
*NBF=Neutral buffered formalin ** H&E=Haematoxylin and eosin	1	2	3	
	Description of the specimen received	Description of the processing performed by the veterinary pathologist on the specimen (if any, if not, say 'Nil')	Nature of the specimen evaluated	
1.9.1. Gross specimen				
Unpreserved				
Preserved in 10 % NBF*				
Other preservative (please specify)				
1.9.2. Light microscopy slide				
** H&E stain				
Others				
1.9.3- Blood film/sediments				



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Unstained			
Stained with.....			
1.9.4. Photograph			
Electron micrograph			
1.9.5. Others (Please specify)			
2. Description of the lesion (Please support your claim with an illustration in ICVP-TC-Form 2)			
3. Name of the lesion:			
4.1 Name, signature, date and registration number of the trainee	4.2 Remarks by the trainer (or the ICVP supervisor)	4.3 Signature, date and registration number of the supervisor	

ICVP-TC Form-2

ICVP Format for reporting photographic illustration and morphologic description of lesions to the ICVP

Type of sample evaluated: () gross () histopathology () blood smears () Others.....

1. Title: Bold and brief
2. Name of the trainee/author (ICVP Registration No.....) Name of the department/institution/affiliation (optional) Complete contact details with PIN and e-mail id (optional)
3. Brief Clinical history: Species, breed/strain, sex, age/body weight/ name of the organ/tissue and such other essential details not more than three lines



4. Image (s):

Picture quality: 8 bit images for black and white images

3 x 8 bit colour (RGB) or CYMK images

Pictures must fit in this space: any size/shape

Composite pictures may be used

5. Description of the lesion

6. Discussion notes on corroborative evidence

7. Interpretation/Impression/Diagnosis

8. Pathogenesis: step1> step2> step 3> step 4> step5 etc



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9. Published references: one or two lines only (if any)		
10.1 Name, signature, date and registration number of the trainee	10.2 Remarks by the trainer (or the ICVP supervisor)	10.2 Signature, date & registration number of the supervisor

ICVP-TC Form-3

ICVP Proforma for Farm Animal Necropsy Report

PM report No:		PM date & time:	
Ref. letter & date:			
PM requested by:		PM conducted by:	
1. Animal owner details			
Name		Contact number and mail ID if available	
Address			
2. Animal details			
Species:	Breed: -	Sex:	Age:
Colour: -	Calving/kidding history: -	Animal ID :-	
Clinical, & laboratory investigation data (If available):-			
A. HISTORY OF THE CASE			
1. Date of admission		2. Date and time of death	
3. Date and time of necropsy		4. Clinical diagnosis	
5. Case history			
Abbreviations: NA: Not applicable, NAD: No appreciable gross abnormality detected. Signs for color box : √ - collected for HP in 10% NBF, X – not collected for laboratory investigation, M - Collected for microbiologic/molecular investigation			

B. EXTERNAL EXAMINATION



1. Condition of the carcass
2. Rigor mortis
3. Natural orifices
4. Visible mucous-membranes
5. Eye – Cornea and pupil
6. Presence of wounds, if any
7. Any other abnormalities
8. Result of examination of blood smear taken after death to confirm anthrax before opening the carcass

C. INTERNAL EXAMINATION

1. Subcutaneous tissue and superficial lymph nodes
2. Mouth (Lips, teeth, gums, tongue, palate)
3. Eye ball – Aqueous humour, lens, etc.
4. Ears-Auditory canal
5. Pharynx and associated lymph nodes
6. Oesophagus
7. Nasal cavity, larynx and trachea
8. Thyroid and parathyroid
9. Thymus
10. **Abdominal cavity**



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- 10.1. Peritoneal cavity and peritoneum
- 10.2. Position of organs
- 10.3. Any other abnormality

- 11. **Thoracic cavity**
- 11.1. Pleural cavity and pleura
- 11.2. Position of organs
- 11.3. Any other abnormality

- 12. Diaphragm
- 13. Pericardial sac

- 14. **Heart**
- 14.1 Gross appearance
- 14.2. Chambers
- 14.3. Valves
- 14.4. Myocardium
- 14.5. Blood vessels

- 15 **Lungs**
- 15.1. Gross appearance
- 15.2. Palpable abnormalities



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15.3.	Section	
15.4.	Parasites	
15.5.	Lymph nodes	
16.	Bronchi and trachea-bronchial lymph nodes	
17.	Spleen	
18.	Pancreas	
19.	Adrenal glands	
20.	Kidneys	
20.1.	Gross appearance	
20.2.	Capsule	
20.3.	Cortical surface	
20.4.	Section	
20.5.	Renal Pelvis	
20.6.	Parasites and calculi	
21.	Liver	
21.1.	Gross appearance	
21.2.	Surface	
21.3.	Borders	
21.4.	Parenchyma	
21.5.	Lymph nodes	
21.6.	Gall bladder	
21.7.	Parasites	



22. **Stomach(s) & (Forestomach
in ruminants)**

Rumen, reticulum, omasum

Abomasum/True stomach

22.1. Serous surface

22.2. Contents and mucosa

22.3. Parasites

23. **Intestines**

23.1. Mesentery, mesenteric lymph
nodes and parasites

23.2. Surfaces (serous and mucous)

23.3. Ileocaecal valves

23.4. Contents

23.5. Parasites

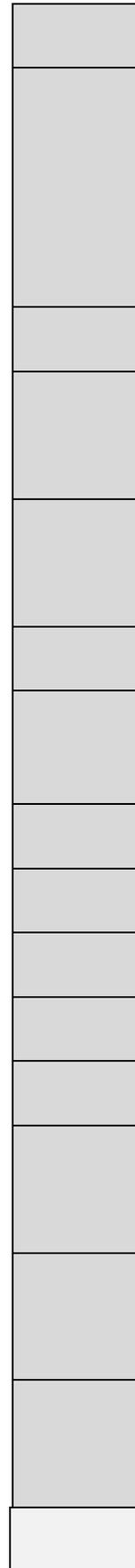
24. **Pelvic cavity**

24.1. Urinary Bladder

24.2. Genital organs

24.3. Accessory sex glands

24.4. Lymph nodes





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25. Musculature

26. Skeleton

27. Brain

28. Spinal cord

PRESUMPTIVE DIAGNOSIS:

D. RESULTS OF LABORATORY EXAMINATION

(attach separate sheets, if required or from other laboratories)

1 Smears

2 Swabs

3 Scrapings

4 Fluids

5 Parasites

6 Any other material

7 Histopathology

8 Results of any other
laboratory investigation

DIAGNOSIS



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Impression/Recommendation/Advice (if any): _____

Signature of the Veterinary Pathologist _____

Date/ Time _____

Name _____

ICVP Registration No. _____



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ICVP-TC Form-4

ICVP Proforma for Companion Animal Necropsy Report

PM report No:	PM date & time:		
Ref. letter & date:			
PM requested by:	PM conducted by:		
1. Animal owner details			
Name	Contact number and mail ID if available		
Address			
2. Animal details			
Species:	Breed: -	Sex:-	Age: -
Colour:-	Height: -	Weight:-	Neutered: Y/N
Animal ID and/or name : -			
Date and time of death			
If euthanized (Specify method & agent used.)			
Clinical, & laboratory investigation data (if available):-			
Abbreviations: NA: Not applicable, NAD: No appreciable gross abnormality detected. Signs for color box : ✓ - collected for HP in 10% NBF, X - not collected for laboratory investigation, M - Collected for microbiologic/molecular investigation			

3. External Examination		
Rigor mortis:		
External orifices:		
Condition of the carcass :		
Wound/tumour :		
Visible mucous membranes:		



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Other observations:		
4. Subcutaneous tissue & Neck		
Subcutaneous fat:		
Musculature:		
Superficial lymph nodes:		
Mammary glands:		
Salivary glands:		
Larynx:		
Trachea:		
Oesophagus:		
Major blood vessels:		
Thyroid	L – Weight (gm)	
/Parathyroid	R – Weight (gm)	
Other observations:		
5. Internal examination		
Thoracic Cavity		
Thymus/Thymic remnants:		
Ribs, Cartilage:		
Pleura:		
Diaphragm:		
Trachea:		
Bronchi:		
Lungs:	Weight (gm)	
Mediastinal lymph nodes:		



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Heart:	Weight (gm)			
Pericardium:				
Pericardial fluid (colour & quantity):				
Epicardium:				
Endocardium:				
Myocardium:				
Major blood vessels:				
Auricles:				
Ventricle:	RV (mm)	LV (mm)	IVS (mm)	
Valves:				
Coronary vessels:				
Oesophagus:				
Other observations:				
Abdominal cavity				
Peritoneum:				
Peritoneal fluid (colour & quantity)				
Lymph nodes:				
Stomach				
Small intestine:				
Large intestine:				
Omentum & Mesentery:				
Vasculature (Arteries, veins, & lymphatics):				



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Spleen	Weight (gm)		
Liver	Weight (gm)		
Gall bladder:			
Pancreas:			
Adrenals:	L – Weight (gm)		
	R – Weight (gm)		
Kidney :	L – Weight (gm)		
	R – Weight (gm)		
Ureters:			
Urinary bladder:			
Urine (colour& quantity):			
Urethra:			
Other observations:			
Pelvic cavity			
Testicle / Ovary:			
Epididymis / Uterus:			
Prostate / Cervix:			
Penis / Vagina:			
Other observations:			
6. Head			
Eye:			
Skull bones:			
Meninges:			
Brain:			
Spinal cord:			



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Pituitary:		
Nasal cavity & sinuses:		
Tongue:		
Teeth & gums:		
Mouth Cavity:		
Tonsils:		
Ear & ear canal:		
Other observations:		
7. Limbs, Bones & Joints		
Bones of limbs:		
Bone marrow (collect two unstained cytology smears):		
Vertebral column:		
Joint :		
Muscles:		
Peripheral Nerves:		
Special observation or abnormalities:		
PRESUMPTIVE DIAGNOSIS:		



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RESULTS OF LABORATORY EXAMINATION

(attach separate sheets, if required or from other laboratories)

- 1 Smears
- 2 Swabs
- 3 Scrapings
- 4 Fluids
- 5 Parasites
- 6 Any other material
- 7 Histopathology

- 8 Results of any other
laboratory investigation

DIAGNOSIS

Impression/Recommendation/Advice (if any): _____

Signature of the Veterinary Pathologist _____

Date/ Time _____

Name _____

ICVP Registration No. _____



ICVP Proforma for Poultry Necropsy Report

Farm details

1. Name of the owner _____ Cell Phone No. _____
2. Address _____
3. Type of the bird _____ Breed/strain _____ Age _____ Hatchery Source _____
4. Type of operation (floor, cage, range, etc.) _____
5. Feeding schedule _____ Source of feed _____
6. Vaccination history _____
7. De worming history _____

Clinical History

8. Date of first notice of the illness _____ Number of birds in the flock _____
Number of birds affected by the illness _____ Number of dead birds in the flock _____
9. Symptoms/observations/Medication _____

10. Any other details _____

Necropsy Findings

1. External Examination

- 1.1. Condition of bird _____ External Parasites _____
- 1.2. Comb and wattles _____
- 1.3. Ears _____
- 1.4. Vent Opening _____

2. Head

- 2.1. Eyes _____ Retro-orbital sinuses _____
- 2.2. Nasal cavities _____ Mouth _____
- 2.3. Skin _____
Muscles _____

3. Respiratory and Circulatory System

- 3.1. Thoracic cavity _____
- 3.2. Nostrils, Larynx and Trachea _____
- 3.3. Lungs and Air sacs _____
- 3.4. Heart _____

4. Digestive System and Accessory Glands

- 4.1. Abdominal cavity / or peritoneal cavity _____
- 4.2. Esophagus _____
- 4.3. Crop, proventriculus and gizzard _____



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4.4. Intestine _____

4.5. Ceca _____ Cloaca _____

4.6. Liver and Pancreas _____

5. Urinary and Reproductive System

5.1. Kidneys and Ureters _____

5.2. Ovary and Oviduct/Testes _____

6. Nervous System

6.1. Brain _____

6.2. Spinal cord _____

6.3. Brachial nerve _____ Sciatic Nerve _____

7. **Bones and Joints** _____

8. Lymphoid organs

8.1. Bursa _____

8.2. Thymus _____

8.3. Spleen _____

8.4. GALT _____

8.5. BALM _____

8.6. Caecal tonsils _____

8.7. Harderian gland _____

9. **Any other specific lesion** _____

10. Specimens collected for laboratory investigations

Summary of observations

PRESUMPTIVE DIAGNOSIS _____

Report of special test if any _____

DIAGNOSIS: _____

Impression/Recommendation/Advice (if any): _____

Signature of the Veterinary Pathologist _____

Date/ Time _____

Name _____

ICVP Registration No. _____



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ICVP-TC Form-6

ICVP Trainee's diary

Name of the Trainee _____ (Registration No. _____)

Month: _____ Year : 20__

Date*	Activity**	Identification No. of the supporting document	Remarks
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			



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15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			

*Score off the date, if not applicable. **Please enter the activity id (sequence number as per the listed Training component) or please name the activity (if it is not already listed)



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Remarks by the trainer (or the ICVP supervisor)		Name/signature/date and Registration number of the supervisor	
---	--	--	--



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ICVP-TC Form-7

ICVP-Trainee's Log-book

Training Log Book of Dr _____ (Reg. No. _____)

(Please enter the date on which you performed the activity)

List of skills and activities	Date on which the activity was performed as entered in the daily diary				
Core Activities and skills (CAS)	875				
CAS 1 Conducting a post-mortem examination		135			
CAS 1.1. Farm animals			35		
CAS 1.1.1. Bovine					
CAS 1.1.2. Ovine/caprine					
CAS 1.1.3. Swine					
CAS 1.1.4. Rabbit					
CAS 1.1.5. Equine					
CAS 1.1.6. Others					
CAS 1.2. Companion animals			25		
CAS 1.2.1. Canine and Feline					
CAS 1.2.2. Others					



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CAS 1.3. Avian			50		
CAS 1.3.1. Chicken (layers)					
CAS 1.3.2. Chicken (broiler)					
CAS 1.3.3. Duck and/or quail					
CAS 1.3.4. Others					
CAS 1.4. Non-domestic animals			25		
CAS 1.4.1. Laboratory animals					
CAS 1.4.2. Laboratory animals (Rat and mouse)					
CAS 1.4.3. Laboratory animals (Rabbit, Guinea pig and hamster)					
CAS 1.4.4. Laboratory animals (Non-human primates and large animal species used in research)					
CAS 1.4.5 Wild animals					
CAS 1.4.6. Aquatic animals & invertebrates					



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CAS 2. Descriptive pathology of gross lesions		250-260			
CAS 2.1. On various parts/regions of the body			130-140		
CAS 2.1.1. Head and neck					
CAS 2.1.2. Thorax					
CAS 2.1.3. Abdomen					
CAS 2.1.4. Pelvis					
CAS 2.1.5. Fore limbs					



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CAS 2.1.6. Hind limbs					
CAS 2.1.7. Others (e.g.: tail)					
CAS 2.1.8. Skin & adnexa					
CAS 2.2. Systemic Pathology			130		
CAS 2.2.1. Respiratory system					
CAS 2.2.2 Cardiovascular system					
CAS 2.2.3. Gastro intestinal System					
CAS 2.2.4. Hepato biliary system					
CAS 2.2.5. Excretory system					
CAS 2.2.6. Endocrine system					
CAS 2.2.7. Musculoskeletal systems					
CAS 2.2.8. Male reproductive system					
CAS 2.2.9. Female reproductive system					



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CAS 2.2.10. Nervous system					
CAS 2.2.11. Organs of special senses (eye, ear)					
CAS 2.2.12. Hematopoietic system					
CAS 2.2.13. Skin & integuments					
CAS 3. Histotechnology		60			
CAS 3.1. Tissue processing					
CAS 3.2. Block making					
CAS 3.3. Microtomy including cryotomy					
CAS 3.4. Haematoxylin and eosin staining					
CAS 3.5. Special stains for infectious agents (Bacteria, fungi, parasites & viral inclusions)					
CAS 3.6. Special stains for non-infectious agents (muscle, fibrous tissue, glycogen, amyloid, minerals and crystals)					
CAS3.7. Immunohistochemistry					
CAS 3.8. <i>In situ</i> hybridisation					



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CAS 3.9. Others or any of the above					
CAS 4. Descriptive pathology of histomorphology, based on haematoxylin and eosin stain (s)		150-200			
CAS 4.1. Respiratory system: nasal passage, nasopharynx, larynx, trachea, bronchi, alveoli					
CAS 4.2. Cardiovascular system: Atria, ventricles, blood vessels, lymphatics					
CAS 4.3. Gastro intestinal system: buccal cavity, teeth, salivary glands, oropharynx, esophagus, forestomachs, true stomach, duodenum, jejunum, ileum, caecum, colon and rectum and associated glands					
CAS 4.4. Hepatobiliary system: liver, bile duct and gall bladder, exocrine pancreas					
CAS 4.5. Excretory system: kidneys, ureters and urinary bladder					
CAS 4.6. Endocrine system: hypothalamus, pituitary, thyroid., endocrine pancreas, adrenal, testis, ovary					



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CAS 4.7. Musculoskeletal systems: skeletal muscles, bones, cartilage, joints tendons and ligaments					
CAS 4.8. Male reproductive system: testis, epididymis, spermatic cord, penis, prostate, bulbourethral and seminal vesicles					
CAS 4.9. Female reproductive system: vulva, vagina, cervix, uterus, fallopian tube, ovary and mammary glands					
CAS 4.10. Nervous system: Brain (meninges, cerebrum, hypothalamus, thalamus, medulla oblongata, pons and cerebellum), spinal cord, cranial and spinal nerves, ganglia					
CAS 4.11 Organs of special senses (eye, ear)					
CAS 4.12. Skin and adnexa					
CAS 4.13. Haemopoietic System: bone marrow, spleen, thymus and lymph nodes					
CAS 5. Descriptive pathology of cytology and blood smears		155-205			
CAS 5.1 Haematology			40-60		
CAS 5.1.1 Preparation of blood					



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smears					
CAS 5.1.2 Staining of blood smears (Giemsa, Leishman, Wright's, Giemsa-Leishman & Supra vital stains)					
CAS 5.1.3 Interpretation of differential leucocyte count					
CAS 5.1.4 Interpretation of erythrocytic abnormalities					
CAS 5.1.5 Interpretation of leucocytic abnormalities					
CAS 5.1.6 Interpretation of platelets abnormalities					
CAS 5.1.7 Haemoprotozoa and other infectious agents					
CAS 5.2 Cytology			20-45		
CAS 5.2.1 Collection of materials for cytology – FNAC, impression smear, swabs, scrapings and body fluids)					
CAS 5.2.2 Preparation of cytological smears					
CAS 5.2.3 Staining of cytological smears					
CAS 5.2.4 Cytopathological interpretation of neoplastic lesions					



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CAS 5.2.5 Cytopathological interpretation of non-neoplastic lesions					
CAS 5.3 Urine sediment evaluation			10-20		
CAS 5.3.1 Preparation of urine sediment					
CAS 5.3.2 Smear preparation from urine sediment					
CAS 5.3.3 Staining and interpretation of urine sediment smears					
CAS 5.3.4 Interpretation of nasal washing/smears					
CAS 5.4 Cytopathology of body fluids (Pericardial, peritoneal, thoracic, CSF and synovial fluids)			40		
CAS 5.4.1 Collection of Sample					
CAS 5.4.2 Smear preparation					
CAS 5.4.3 Staining of body fluid smears					
CAS 5.4.4 Interpretation of neoplastic and non-neoplastic changes					
CAS 5.5 Vaginal exfoliative cytology					
CAS 5.5.1 Preparation of vaginal cytology smears					
CAS 5.5.2 Staining of vaginal cytology smears					



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CAS 5.5.3 Interpretation of estrous cycle					
CAS 5.6 Milk sample cell count and cytology			10		
CAS 5.6.1 Collection of milk samples					
CAS 5.6.2 Preparation of milk smears					
CAS 5.6.3 Interpretation of milk smears					
CAS 5.7 Nasal washings and transtracheal washing			15		
CAS 5.7.1 Collection of nasal and transtracheal washings					
CAS 5.7.2 Preparation of nasal smears					
CAS 5.7.3 Interpretation of nasal washings for parasites and tumours					
CAS 5.7.4 Interpretation of transtracheal washings for neoplastic and non-neoplastic conditions					
CAS 5.8 Microbiology			15		
CAS 5.8.1 Preparation of sample smears					
CAS 5.8.2 Staining: Gram's , Ziehl- Neelsen stain, PAS and Lactophenol cotton blue					



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CAS 5.8.3 Interpretation of bacterial morphology					
CAS 5.8.4 Interpretation of fungal morphology					
CAS 6. Descriptive Ultrastructural pathology		10-15			
CAS 6.1. Transmission electron microscopy					
CAS 6.2. Scanning electron microscopy					
CAS 6.3. Advanced light microscopy					
CAS 7. Interpretation of molecular pathology		5-10			
CAS 7.1. Blotting techniques					
CAS 7.2. Genomics					
CAS 7.3. Microarray					
CAS 7.4. Proteomics					
CAS 7.5. Flow cytometry					
CAS 8. Interpretation of Serum biochemistry and organ function tests		50			
CAS 8.1 Clinical haematology					



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CAS 8.2. Clinical biochemistry					
CAS 8.3. Body fluids: urine					
CAS 8.4. Body fluids: milk					
CAS 8.5. Analytical chemistry of body fluids: synovial fluid, rumen fluid & CSF)					
Additional Core Skills (ACS)	50				
ACS 1. Pre post-mortem examination procedures		25			
ACS1.1. Assessment of common documentry requirements					
ACS 1.2. Assessment of legal requirements					
ACS 1.3. Assessment of availability of instrumentation requirements for different kinds of necropsy					
ACS 1.4. Assessment of availability of infrastructure requirements for different kinds of necropsy					



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ACS 2. Gross/Micro photography					
Specialised Professional Skills (SPS)	75				
SPS 1. Report preparation and development of communication skills with professional (e.g.: doctors, policy makers, legal establishments) and social clients (farmers, pet owners).		70	70		
SPS 1.1. Preparation of technical reports: post mortem examination					
SPS 1.2. Preparation of technical reports : histopathology and clinical pathology					
SPS 1.3. Preparation of technical reports: ultrastructural and molecular pathology					
SPS 1.4. Preparation of scientific reports for indexed scientific journals					
SPS 1.5. Preparation of case reports for ICVP competitions					



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SPS 1.6. Preparation of popular articles					
SPS 2. Capability to articulate the concepts in animal health for advancing livestock economy, maintaining ecological balance and promoting the concept of 'One-health'		2			
SPS 2.1. Participation in IAVP award competitions					
SPS 2.2. Participation in annual conferences of non-Veterinary Pathology organisations					
SPS 3. Awareness and use of opportunities for continued professional advancement and quality control in respective areas		3			
SPS 3.1. Participation in veterinary continuing education programmes					
SPS 3.2. Participation in non-pathology continuing education programmes					
SPS 3.3. Conducting/ organising continuing education programmes for farmers and / or professionals					
SPS 3.4. Documentary evidence of awareness of personal accreditation systems					
SPS 3.5. Documentary evidence of awareness of quality system platforms: ISO, GLP, OECD, NABL					



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SPS 3.6 Any other relevant activity

Any other activity not listed above

SI No	Activity	Date of the performance			

Please add more sheets if required.

No. additional sheets added _____

Name/date/signature and Registration number of the trainee	Remarks by the trainer (or the ICVP supervisor)	Name/date/signature and Registration number of the trainer	Page 97 of 106

(Please submit a copy of this document at the end of the training to the Chair of the Training Committee or the Registrar as per the direction of the President, ICVP)



12. MODEL LESION REPORTS



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ICVP-TC Form-1

ICVP-Format for recording descriptive morphology of a lesion
(Please use separate form for describing lesions in every specimen evaluate)

1. Record of specimen details				
1.1. Source of the specimen	1.2. Identification number given by the client	For office use of the veterinary pathologist		
Dr. Aparna Sandeep	ST 6	Id: G-001-2020		
1.3. Species	1.4. Breed/strain	1.5. Age/weight	1.6. Sex	1.7. Organ
Indian Star Tortoise <i>(Geochelone elegance)</i>		4.5yrs/ 196g	Male	carapace
1.8. Case history				
Reported that animal was found dead in captivity in a terrarium of a zoo.				
		1.9. Please select the appropriate row for each of the following 3 column		
		1	2	3
*Neutral buffered formalin	** Haematoxylin and eosin	Description of the specimen received	Description of the processing performed by the veterinary pathologist on the specimen (if any, if not, say 'Nil')	Nature of the specimen evaluated
1.9.1. Gross specimen				
Unpreserved	✓		Gross evaluation	Gross specimen
Preserved in 10 % NBF*				
Other preservative (please specify)				
1.9.2. Light microscopy slide				
** H&E stain				



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Others			
1.9.3 Blood film/sediments			
Unstained			
Stained with.....			
1.9.4. Photograph			
Electron micrograph			
1.9.5. Others (Please specify)			
<p>2. Description of the lesion (Please use page No. 2 for reporting the lesion to the ICVP) Moderate to severe bumpiness characterised by elevated appearance of most of the scutes on the dorsum of carapace. The texture of the scutes was soft to feel.</p>			
<p>3. Name of the lesion: Pyramiding of carapace</p>			
4.1 Name, signature, date and registration number of the trainee	4.2 Remarks by the trainer (or the ICVP supervisor)	4.3 Signature, date and registration number of the supervisor	
Dr. Purnima C.	Satisfactory	TV Anilkumar	

ICVP-TC Form-2

Format for reporting photographic illustration of morphologic description of lesions to ICVP

Type of sample evaluated: (✓) gross () histopathology () blood smear () Others.....

Pyramiding of carapace in an Indian star tortoise (<i>Geochelone elegans</i>)
Purnima C. purnima.ckm08@gmail.com
Brief Clinical history: Chelonian- <i>Geochelone elegans</i> , male, 4.5 yrs, 196g, Carapace



Description of the lesion

Moderate to severe bumpiness characterised by elevated appearance of most of the scutes on the dorsum of carapace. The texture of the scutes was soft to feel.

Discussion notes on corroborative evidence

Tortoise had a change in feeding schedule from cactus based fibre-rich diet to a long yard beans-based protein-rich diet. The animal also had impacted intestines, chronic pancreatitis, urolithiasis.

Interpretation/Impression/Diagnosis

Pyramiding of Carapace

Pathogenesis: change in feed schedule from fibre rich diet to protein rich diet> Renal failure>metabolic disturbances along with Vitamin D deficiency>osteoclastic bone resorption>pyramiding

Published references: one or two lines (if any)

Mader D. Calculi Urinary: In: Divers S, Mader D (Eds.). Reptile Medicine and Surgery. 2nd ed. St. Louis (MO): Elsevier; 2006. P: 763-771.

Name, signature, date and registration number of the trainee	Remarks by the trainer (or the ICVP supervisor)	Signature, date & registration number of the supervisor
Dr. Purnima C.	Satisfactory	TV Anilkumar



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ICVP-TC Form-1

ICVP-Format for recording descriptive morphology of a lesion
(Please use separate form for describing lesions in every specimen evaluate)

1. Record of specimen details				
1.1. Source of the specimen		1.2. Identification number given by the client		For office use of the veterinary pathologist
Dr. Aparna Sandeep		ST 3		Id: HP-001-2020
1.3. Species	1.4. Breed/strain	1.5. Age/weight	1.6. Sex	1.7. Organ
Indian star tortoise (<i>Geochelone elegance</i>)		4yrs/ 254g	Male	Pancreas
1.8. Case history				
Reported that animal was found dead in captivity in a terrarium of a zoo.				
1.9. Please select the appropriate row for each of the following 3 column				
	1	2	3	
*Neutral buffered formalin ** Haematoxylin and eosin	Description of the specimen received	Description of the processing performed by the veterinary pathologist on the specimen (if any, if not, say 'Nil')	Nature of the specimen evaluated	
1.9.1. Gross specimen				
Unpreserved				
Preserved in 10 % NBF*	✓	Tissue was processed, paraffin embedded, sectioned & stained with H&E	Microscopic evaluation	
Other preservative (please specify)				
1.9.2. Light microscopy slide				
** H&E stain				
Others				



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1.9.3 Blood film/sediments			
Unstained			
Stained with.....			
1.9.4. Photograph			
Electron micrograph			
1.9.5. Others (Please specify)			
<p>2. Description of the lesion (Please use page No. 2 for reporting the lesion to the ICVP) Moderate to severe Infiltration of mononuclear inflammatory cells with acinar cell atrophy and ductular hyperplasia.</p>			
<p>3. Name of the lesion: Chronic Pancreatitis</p>			
4.1 Name, signature, date and registration number of the trainee	4.2 Remarks by the trainer (or the ICVP supervisor)	4.3 Signature, date and registration number of the supervisor	
Dr. Purnima C.	Good	TV Anilkumar	

ICVP-TC Form-2

Format for reporting photographic illustration of morphologic description of lesions to ICVP

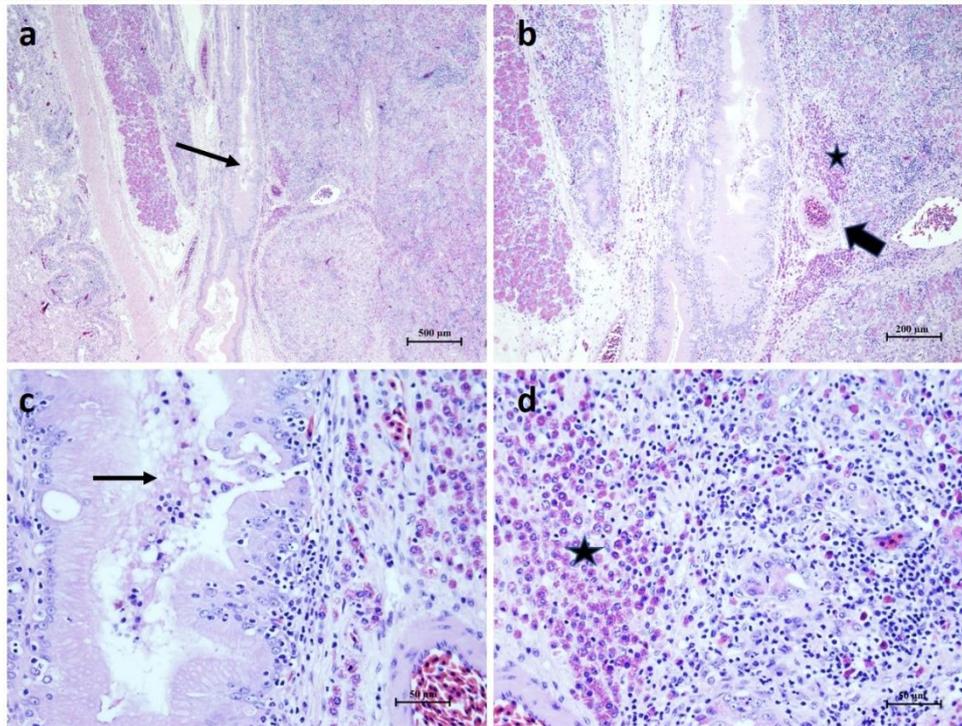
Type of sample evaluated: () gross (✓) histopathology () blood smears () Others.....

Chronic pancreatitis in an Indian star tortoise (<i>Geochelone elegans</i>)
Purnima C. (purnima.ckm08@gmail.com)
Brief Clinical history: Chelonian- <i>Geochelone elegans</i> , male, 4yrs, 254g, urolithiasis



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Description of the lesion: Moderate hyperplasia of epithelium of pancreatic ducts with denuded necrotic cell debris along with eosinophilic materials in lumen (thin arrow). There was moderate to severe diffuse infiltration of mononuclear cells with focal congestion (thick arrow) of blood vessels. Focal infiltration of macrophages (star) was seen occasionally.

Discussion notes on corroborative evidence: Tortoise had a change in feeding schedule from cactus based fibre-rich diet to a long yard beans-based protein-rich diet which might have caused intestinal obstruction leading to pancreatic ductular obstruction and acinar cell necrosis.

Interpretation/Impression/Diagnosis: Chronic pancreatitis

Pathogenesis: Change in feed schedule > slowing of gastric emptying > intestinal impaction > obstruction to the pancreatic ducts > accumulation of secretions > necrosis of exocrine glands > inflammation and adaptive hyperplasia of pancreatic duct.

Published references: one or two lines (if any)

Chen CH; Lin CL; Jeng LB. Association between chronic pancreatitis and urolithiasis: a population-based cohort study. *PLoS ONE*. 2018; 13:e0194019.

Name, signature, date and registration number of the trainee	Remarks by the trainer (or the ICVP supervisor)	Signature, date & registration number of the supervisor
Dr. Purnima C.	Very good	TV Anilkumar



ADDENDUM

Training Components points

1. Grossing techniques of different organ systems for sampling tissues in different orientations with ink margins to be included in the training components

Training components

1. Online centralized training and online weekly seminars to be changed
2. Online centralized training to be conducted either three months or six months interval
3. Online weekly seminar to be conducted initially at fortnight interval and followed by weekly interval

Formation of training committee

1. The National level training committee to be formed along with inclusion of all states as a member. The input from this committee will be decided and approved by ICVP executive council
2. Trainer to be included based on the individual credentials as well as expertise in their field and willingness to be received from individual by mail.
3. Then it will be decided by ICVP Executive council
4. No remuneration for the trainer
5. Trainer will get one credit point for each seminar to be presented.

Training records/components

1. Formation of uniform proforma for postmortem of animals and poultry is to be done - Collection of available formats from various colleges for the preparation of uniform proforma

Forensic pathology and one health topic to be included in the syllabus as well as training

1. Forensic pathology and one health topic to be included in the syllabus as well as training in latter period