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Valu\$ of Pathology


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Outline

- Who is a Board Certified Veterinary Pathology
- Training of Veterinary Pathologist
- Use of veterinary pathology in clinical cases in Southeast Asia
- Overview of Forensics Investigation into Animal Cruelty



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WHO IS THE BOARD CERTIFIED VETERINARY PATHOLOGIST

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Veterinary pathologists

- Sole veterinary medical specialist trained to bridge the gap between cellular changes and clinical disease
- Provide gross, microscopic, ultra structural and molecular analysis of tissue changes resulting from disease state, and thus are the keystone of biomedical research and animal medicine

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TRAINING OF A BOARD CERTIFIED VETERINARY PATHOLOGIST

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Veterinary Pathologists

- Types
 - Anatomic
 - Clinical
- Anatomic: 3 year Residency Diagnostic Lab, Research Institute, Zoo/ Wildlife Center
- Successful completion of a certifying exam
- **ACVP**: American College of Veterinary Pathology
- **ECVP**: European College of Veterinary Pathology
- **JCVF**: Japanese College of Veterinary Pathology

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General Pathology

- Cellular adaptations, Cell degeneration, Cell death
- Inflammation:
 - Acute
 - Chronic
- Tissue renewal and Repair:
 - regeneration
 - healing,
 - Fibrosis
- Hemodynamic disorders, Thromboembolic disease, Shock
- Genetic disorders
- Diseases of Immunity
- Neoplasia
- Infectious Diseases
- Environmental and Nutritional Pathology

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Systemic Pathology

- Large, Small, Livestock, Domestic,
- Zoo, Laboratory, Wildlife, Aquatic
- Bacterial
- Fungal
- Viral
- Parasitic
- Degenerate
- Toxic
- Experimental
- Neoplastic
- Metabolic
- Zoonotic
- Emerging

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Clinical Pathology

- Interpretation of
 - Complete Blood Count
 - Blood Chemistry
 - Urine analysis
 - Endocrine and Blood function/Evaluation test
- Cytology:
 - Smears (impression, blood, fluid, scrapings)
 - Fine needle aspirates
 - Centesis



Fundamentals

- Gross Anatomy Differences
- Postmortem Examination
- Histology (ultra structural)
- Microscopic Imaging
- Disease Investigation
- Pathogenesis /Pathophysiology
- Cause of Death



Veterinary Pathologist

- Member of Clinical veterinary team
- Help Bridge clinical signs, pathogenesis, pathology data to paint clinical picture
- Help selects appropriate tissues and diagnostic test
- Analyzes and interprets (“path data”) observations



Clinical support

- Consult with a veterinary pathologist
- Differential Diagnosis/ Rule - Outs
- Diagnostic test selection
- Ancillary diagnostic and imaging techniques
- Tissue/Lesion sampling
- Proper tissue preservation

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**VETERINARY PATHOLOGY IN
CLINICAL USE IN SOUTHEAST ASIA**

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FORENSICS PATHOLOGY FOR CRUELTY CASES

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Physical Signs

- **Tight Collars:** causes wounds or has become embedded in the pet's neck and head
- **Wounds:** Open wounds, signs of multiple healed wounds or an ongoing injury or illness that isn't being treated
- **Untreated skin conditions:** that have caused loss of hair, scaly skin, bumps or rashes
- **Body Condition Score:** Extreme thinness or emaciation—bones may be visible
- **Inadequate grooming:** Extreme matting of fur, overgrown nails and dirty coat
- **Locomotion:** Weakness, limping or the inability to stand or walk normally
- **Exudate:** extreme discharge from eyes, nose, skin, mouth, ears, vulva, anus
- An owner striking or otherwise physically abusing an animal
- **Mentation:** Visible signs of confusion or extreme drowsiness

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Physical Signs

- **Fur/Scales/Feather** :infested with fleas, ticks or other parasites , loss
- **Fur/Scales/Feather**: Patches of bumpy, scaly skin rashes, ulceration, sloughing, blisters
- **Exudate**: extreme discharge from eyes, nose, skin, mouth, ears, vulva, anus
- An owner striking or otherwise physically abusing an animal
- **Mentation**: Visible signs of confusion or extreme drowsiness

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Environmental Signs

- Housing , Food
- Tied up alone outside for long periods of time without accesses to adequate/sanitary food or water
- Housing during in inclement weather without access to adequate shelter
- Housing area littered with feces, garbage, broken glass or other objects that could harm them
- Housed in crowded kennels or cages
- Kennel/ Cages too small to allow standing, turning around and normal movements

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The image shows a light-colored, possibly pit bull or similar breed, dog sitting on a dirt ground. The dog is looking towards the camera. In the background, there are some trees and a blue barrel lying on its side. The entire image is framed within a blue banner that contains the Mahidol University logo and name at the top left, and the website address at the bottom right.

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The image shows a large number of dogs of various breeds, including pit bulls, in a kennel or shelter. The dogs are mostly lying down on a concrete floor. The kennel has metal bars and concrete walls. The entire image is framed within a blue banner that contains the Mahidol University logo and name at the top left, and the website address at the bottom right.





Animal hording

- Crowded environments
- More animals than housing space allows
- Improper feeding & sanitation
- Lack of veterinary appointments



Puppy mills

- Money\$\$ Money\$\$
- Inadequate housing
- Lack proper puppy care & maternal nutrition
- Puppy Health Certificates are not valid by when interpreted by a veterinarian



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Fighting/Racing

- Racing: Horses dog
 - Legal only in sanctioned arenas
- Fighting: Cock, dog
 - Illegal


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Questions



ANIMAL CRUELTY
Comes in many different forms...

Please note: no animals were harmed in the making of this poster. The above photo was shot using highly trained stunt cats.

DeliberateReceiving.com

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