



(Updated January 2023)

Small Animal Internal Medicine Knowledge List

- I. Urinary Tract Conditions
 - A. Acute kidney injury
 - B. Chronic kidney disease
 - C. International Renal Interest Society [IRIS] staging
 - D. Glomerulonephritis
 - E. Pyelonephritis
 - F. Amyloidosis
 - G. Polycystic kidney disease
 - H. Protein losing nephropathy
 - I. Renal dysplasia
 - J. Ectopic ureters
 - K. Urolithiasis
 - L. Ureterolithiasis
 - M. Cystitis
 - 1. Feline idiopathic cystitis
 - 2. Bacterial
 - 3. Polypoidal
 - N. Incontinence
 - O. Lower urinary tract infections
 - P. Urothelial carcinoma
 - Q. Renin-Angiotensin-Aldosterone-System (RAAS)

II. Hepatobiliary Conditions

- A. Hepatitis
 - 1. Primary
 - 2. Secondary
- B. Hepatic lipidosis
- C. Hepatic encephalopathy
- D. Hepatic vascular anomalies
- E. Cholecystitis
- F. Cholelithiasis
- G. Biliary duct obstruction
- H. Biliary carcinoma
- I. Gallbladder mucocele
- J. Cholangitis
- K. Cholangiohepatitis
- L. Copper storage disease

III. Esophageal and Gastrointestinal Conditions

- A. Vomiting
- B. Regurgitation
- C. Diarrhea
 - 1. Small bowel
 - 2. Large bowel
 - 3. Mixed bowel
 - 4. Acute hemorrhagic diarrhea syndrome (aka hemorrhagic gastroenteritis [HGE])
- D. Constipation/obstipation
- E. Weight loss or gain
- F. Appetite modulation
- G. Enteritis (all forms)
- H. Alimentary lymphoma
- I. Adenocarcinoma
- J. Parasitic diseases
- K. Dysmotility

- L. Dysbiosis
 - M. Protein losing enteropathy
 - 1. Lymphangiectasia (primary, secondary)
 - N. Colitis
 - O. Rectal prolapse
 - P. Strictures (e.g., esophageal, rectal, urethral)
 - Q. Gastritis
 - R. Pyloric outflow obstruction
 - S. Gastric wall hypertrophy
 - T. Gastroesophageal reflux disease
 - U. Esophagitis
 - V. Megaesophagus
 - W. Ulceration
- IV. Endocrinopathies
- A. Hypothyroidism
 - B. Hyperthyroidism
 - C. Pancreatitis
 - 1. Acute
 - 2. Chronic
 - D. Exocrine pancreatic insufficiency
 - E. Hypoadrenocorticism
 - F. Hyperadrenocorticism
 - G. Pheochromocytoma
 - H. Hyperparathyroidism
 - 1. Primary
 - 2. Secondary
 - I. Hypoparathyroidism

- J. Diabetes mellitus
- K. Central diabetes insipidus
- L. Insulinoma
- M. Hypersomatotropism
- N. Hyperaldosteronism

- V. Immunological Conditions
 - A. Immune mediated hematological conditions
 - 1. Immune mediated hemolytic anemia
 - 2. Immune mediated thrombocytopenia purpura
 - B. Pemphigus
 - C. Systemic lupus erythematosus
 - D. Immune mediated polyarthritis
 - E. Systemic inflammatory response syndrome
 - F. Myasthenia gravis
 - 1. Congenital
 - 2. Acquired
 - G. Hypersensitivity reactions
 - 1. Vaccine
 - 2. Transfusion

- VI. Respiratory Conditions
 - A. Canine Infectious Respiratory Disease Complex (CIRDC)
 - B. Upper respiratory tract
 - 1. Nasal neoplasia
 - 2. Inflammatory
 - 3. Polyps
 - 4. Obstructive
 - 5. Brachycephalic obstructive airway syndrome
 - 6. Epistaxis
 - 7. Stridor/stertor
 - 8. Laryngeal paralysis
 - 9. Nasopharyngeal stenosis

- C. Pneumonia
 - 1. Viral
 - 2. Bacterial
 - 3. Fungal
 - 4. Aspiration
- D. Pulmonary thromboembolism
- E. Asthma
- F. Pulmonary edema
 - 1. Cardiogenic
 - 2. Non-cardiogenic
- G. Eosinophilic bronchopneumopathy
- H. Bronchitis
- I. Tracheal collapse, stenosis
- J. Pleural effusions
- K. Pulmonary hypertension

VII. Cardiovascular Conditions

- A. Hypertension
- B. Hypotension
- C. Arterial thromboembolism
- D. Arrhythmias (those seen in Lead II EKGs)
- E. Congestive Heart Failure
 - 1. Right sided
 - 2. Left sided
- F. Pericardial effusion
- G. Cardiomyopathies
 - 1. Dilated cardiomyopathy
 - 2. Hypertrophic cardiomyopathy
 - 3. Mitral or tricuspid endocardiosis
 - 4. Arrhythmogenic right ventricular cardiomyopathy
 - 5. Hyperthyroid heart disease in cats

VIII. Neurogenic Conditions

- A. Fibrocartilaginous embolism
- B. Cervical spondylopathy
- C. Vestibular disease
- D. Horner syndrome
- E. Masticatory myositis
- F. Diabetic neuropathy
- G. Meningitis
- H. Granulomatous meningoencephalomyelitis

IX. Nutrition

- A. Weight loss, gain
- B. Obesity
- C. Nutritional requirement calculations
- D. Hyporexia, anorexia
- E. Nutritional deficiencies
 - 1. Vitamin D
 - 2. Cobalamin
 - 3. Folate
 - 4. Taurine
 - 5. Thiamine
- F. Hypertrophic osteodystrophy
- G. Nutritional management of conditions listed here

X. Fluid and Electrolyte Disorders

- A. Dehydration
- B. Hypovolemia
- C. Fluid overload
- D. Fluid resuscitation
- E. Acid-Base status
- F. Hyper/hypo-natremia
- G. Hyper/hypo-calcemia
- H. Hyper/hypo-kalemia

- I. Hyper/hypo-phosphatemia
- J. Hyper/hypo-chloremia
- K. Hyper/hypo-magnesemia

XI. Infectious Diseases

A. Viral

1. Adenovirus
2. Distemper
3. Herpes
4. Parvovirus
5. Canine Influenza Virus (CIV)
6. Parainfluenza
7. Rabies
8. Feline infectious peritonitis (FIP-coronavirus)
9. Feline immunodeficiency virus (FIV-lentivirus)
10. Feline leukemia virus (FeLV)
11. Coronavirus
12. Calicivirus

B. Protozoal

1. *Neospora* sp.
2. *Toxoplasma* sp.
3. *Babesia* spp.
4. *Giardia*
5. *Tritrichomonas foetus*
6. *Cryptosporidium*

C. Fungal

1. *Cryptococcus* sp.
2. *Aspergillus* sp.
3. *Blastomyces* sp.
4. *Coccidioides* sp.
5. *Histoplasmosis*

D. Bacterial

1. *Streptococcus* spp.
2. *Staphylococcus* spp.
3. *Pasteurella* spp.
4. *Pseudomonas* spp.
5. *Escherichia coli* spp.
6. *Brucella canis*
7. *Bordetella bronchiseptica*
8. *Clostridium* spp.
9. *Bartonella* spp.
10. *Mycoplasma* spp.
11. Rickettsial and spirochetes
 - a. *Anaplasma phagocytophilum*
 - b. *Ehrlichia canis*
 - c. *Borrelia burgdorferi* (Lyme Disease)
 - d. *Leptospirosis* spp.
 - e. *Rickettsia rickettsii* (Rocky Mountain Spotted Disease)

E. Other

1. *Pythium insidiosum*

XII. Diagnostic imaging

A. Thoracic radiography

1. Identify normal anatomical structures by location
2. Patient positioning, including restraint techniques
3. Variables that influence image quality
4. Contrast studies in thorax

5. Identification of:
 - i. Pleural effusion
 - ii. Pneumonia
 - iii. Pneumothorax
 - iv. Esophageal dilation
 - v. Appropriately placed feeding tubes (all sites)
 - vi. Appropriately placed central catheters
- B. Abdominal radiography
 1. Identify normal anatomical structures by location
 2. Patient positioning, including restraint techniques
 3. Variables that influence image quality
 4. Contrast studies in abdomen
 5. Identification of:
 - i. Abdominal effusion
 - ii. Gas, feces, and / or ingesta
 - iii. Urolithiasis (kidneys, ureters, bladder)
 - iv. Liver enlargement and/or cholelithiasis
 - v. GI dilation / obstruction
 - vi. Appropriately placed urinary catheters
 - vii. Appropriately placed stents (e.g., urethral, ureteral, etc.)
- C. Ultrasonography
 1. Identify normal anatomical structures on still images or loops
 2. Recognition of cavitary effusions on still images or loops
 3. Knowledge and appropriate use of terminology (e.g., hypoechoic, hyperechoic, anechoic)
 4. Identify urolithiasis, cholelithiasis