

Categorization of Injury on Admission

(aka Diagnosis or what CAUSED the clinical signs??)

LIST OF TERMINOLOGY

- **Clinically healthy**
- **Degenerative**
- **Developmental/congenital/inherited**
- **Autoimmune/allergy/immune-mediated**
- **Metabolic**
- **Physical injury**
 - Trauma
 - Burns
 - Radiation
 - Foreign substance
 - Ischemic
 - Constriction
 - Frostbite
- **Mental**
 - Abnormal imprint
 - Human habituation
- **Neoplastic (tumor related)**
 - Benign
 - Malignant
 - Metastatic
 - Non-metastatic
- **Nutritional**
 - Starvation
 - Obesity
 - Inappropriate diet
 - Metabolic bone disease
- **Inflammatory**
- **Infectious**
 - Bacterial
 - Mycoplasma
 - Rickettsial
 - Chlamydiaophilia
 - Viral
 - Pox virus
 - Rabies
 - West Nile virus
 - Distemper virus
 - Fungal
 - Aspergillosis
 - Parasitic
 - External
 - Fleas
 - Mites
 - Ticks
 - Lice
 - Internal
 - Protozoa
 - Trichomoniasis
 - Hemoparasites
 - Giardiasis
 - Toxoplasmosis
 - Nematodes (roundworms)
 - Cestodes (tapeworms)
 - Trematodes (flukes and flatworms)
- **Non-infectious**
- **Iatrogenic**
- **Idiopathic**
- **Toxicity**
 - Hydrocarbon
 - Heavy metal
 - lead
 - mercury
 - zinc
 - Cholinesterase inhibitors
 - Rodenticides
 - Algal blooms
 - Envenomation
 - Botulism
- **Undetermined**
- **Pending**

DEFINITIONS

- 1) **Degenerative** – Pertaining to the deterioration of a healthy tissue to an unhealthy state without the influence of other factors such as an inflammatory agent, infection, traumatic injury, etc. This pathology is most often caused by repetitive use, aging, or genetic predisposition. Disease examples may include degenerative joint disease and arthritis.
- 2) **Developmental/Congenital/Inherited** – Pertaining to the absence, deformity or excess of body parts as a result of faulty development of the embryo (developmental), abnormalities in structure or function which are present at birth and may or may not be inherited (congenital), or conditions caused by genes which condition the structure or function of an organ or tissue (inherited). Developmental and congenital diseases may or may not be associated with inherited defects.
- 3) **Autoimmune/Allergy/Immune-mediated** – A disease state that is characterized by an immune response (either antibody or cell-mediated) against the body's own tissues (autoimmune) or a reaction following second or subsequent exposure to a substance (allergen) causing an allergic reaction (allergy or immune-mediated response). Examples may include bee stings, pollen reactions, molds, certain drugs, etc.
- 4) **Metabolic** – A disease in which normal metabolic processes are disturbed and a resulting absence or shortfall or a normal metabolite (substance produced during metabolism) causes disease. Examples may include diabetes, hormone imbalance, enzyme deficiency, etc.
- 5) **Physical Injury** – An injury caused by i) trauma from an external force, ii) pressure or rubbing, iii) any kind of burn, or iv) exposure to a foreign substance.
 - a. Trauma – Pertaining to a wound or injury, usually caused by an external force that may occur anywhere on the body.
 - i. External – Pertaining to a wound or injury on the outer surface including limbs or superficial organs including eyes, ears, nose, etc of an animal.
 - ii. Internal – Pertaining to a wound or injury to an organ normally found within a body cavity.
 - b. Burns – Damage to tissues caused by contact with dry heat (fire), moist heat (steam or liquid), chemicals, electricity, or lightning.
 - c. Radiation – An injury caused by high-energy radiation such as x-rays and gamma-rays.
 - d. Foreign substance – External contamination with a chemical or material that may or may not be irritating but usually results in diminished or loss of function. This may include glue traps, oil on the fur or feathers, non-water proofed feathers, etc.
 - e. Ischemic – A deficiency of blood supply to some part of the body due to a constriction or an obstruction of the blood vessel(s).
 - i. Frostbite – A condition in which blood vessels constrict due to exposure to cold temperatures resulting in limited or no blood supply to the extremities. This usually results in non-inflammatory tissue death.
- 6) **Mental** – Pertaining to injuries or conditions causing an altered mental state that may include alterations in

behavior, aimless wandering, headpressing, aggression, etc.

a. **Abnormal behavior** - Any behavior considered uncharacteristic for that species with consideration to internal factors (health status, normal physiology, etc.) and external factors (season, environmental conditions, etc.)

i. **Abnormal imprint** – A condition in very young animals when parental attachment and learned basic behavioral patterns are incorrectly established on a human, other life form, or object rather than a member of its own species.

7) **Neoplastic (Tumor - related)** – Any new and abnormal growth where the cell multiplication is uncontrolled and progressive.

a. **Benign** – Any tumor whose typical presentation includes slow growth, rare or no metastasis, and is usually non-reoccurring after removal.

b. **Malignant** – Any tumor whose typical presentation includes irreversible loss of differentiation in adult cell types and a fast and invasive growth rate with the potential to spread to other tissue types in the body.

i. *Metastatic* – A malignant tumor with the ability to transfer from one tissue type or part to another not directly connected with it.

ii. *Non-metastatic* – A malignant tumor without the ability to transfer from one tissue type or part to another not directly connected with it.

8) **Nutritional** – Pertaining to any disease or injury resulting from an alteration in the processes involved in taking nutrients into the body and assimilating and utilizing them or from deficiencies or excesses of specific feed nutrients.

a. **Starvation** – A long continued deprivation of food accompanied by associated clinical signs which may include: hunger, loss of body weight, decreased muscle power and endurance, reduced urination and defecation which may cease, emaciation, weakness, slow-heart rate and hypothermia.

b. **Obesity** – An excessive accumulation of fat in the body considered “normal” for that species under present conditions.

c. **Inappropriate diet** – Injuries or illness resulting from an unsuitable diet for that species. This may lead to related issues such as food allergies, gastrointestinal illness, or metabolic deficiencies.

i. *Metabolic Bone Disease* – A range of bone diseases associated with metabolic disease. In wildlife, this mainly refers to a condition known as secondary hyperparathyroidism caused by an imbalance in the calcium and phosphorus ratio in the body usually resulting from a dietary deficiency in calcium.

9) **Inflammatory** – Pertaining to a localized protective response from the body brought on by injury or destruction of tissues which serves to destroy, dilute or wall off both the injurious agent and the injured tissue. Classic signs of inflammation include heat, redness, swelling, pain, and loss of function.

10) **Infectious** – Pertaining to invasion and multiplication of microorganisms in the body tissues often resulting in cellular injury due to the pathogen’s competitive metabolism within the body, production of

harmful toxins, replication within host cells, or through damage by the host's own immune response.

- i. Bacterial – Diseases in which bacteria play a significant but not necessarily an exclusive role.
 - i) *Mycoplasma* – A bacterial infection caused by a member of the genera *Mycoplasma*.
 - ii) *Rickettsia* - A bacterial infection caused by a member of the family Rickettsiaceae.
 - iii) *Chlamydia* - A bacterial infection in birds caused by a *Chlamydia psittaci*.
- ii. Viral - Diseases in which viruses play a significant but not necessarily an exclusive role.
 - i) *Pox virus* – A viral infection caused by a member of the family Poxviridae.
 - ii) *Rabies* – A viral infection caused by Rabies Virus, a specific member of the genus *Lyssavirus* and family Rhabdoviridae.
 - iii) *West Nile Virus* - A viral infection caused by West Nile virus, a specific member of the genus *Flavivirus*.
 - iv) *Canine Distemper* - A viral infection caused by Canine Distemper Virus, a specific member of the genus *Morbillivirus*.
- iii. Fungal - Diseases in which fungi play a significant but not necessarily an exclusive role.
 - i) Aspergillosis – A fungal infection caused by any member of the genus *Aspergillus*.
- iv. Parasitic - Diseases in which parasites play a significant but not necessarily an exclusive role.
 - i) *External* – Infestation with any one of a number of parasites that use the outer surface of the body to complete part of its life cycle. External parasites may infect the animal's skin, feathers, fur, or surface of the respiratory tract.
 - a. Fleas – An external parasitic infestation with fleas.
 - b. Flies - An external parasitic infestation with flies or maggots.
 - c. Lice - An external parasitic infestation with lice.
 - d. Mites - An external parasitic infestation with mites. This includes sarcoptic mange, nodular mange, demodectic mange, feather mites, chiggers, ear mites, etc.
 - e. Ticks - An external parasitic infestation with any of the variety of tick species.
 - ii) *Internal* - Infestation with any one of a number of parasites that require an internal body compartment to complete its life cycle.
 - a. Protozoa - Diseases in which Protozoa (a single-celled parasite) plays a significant but not necessarily an exclusive role

- i. Trichomoniasis - A parasitic infestation by a member of the family Trichomonadidae. In wildlife, this mostly refers to *Trichomonas gallinae* found in doves and bird eating raptors.
 - ii. Hemoparasites – An infection by one of several species of parasites that may be found in the blood (within or outside of the blood cells).
 - iii. Giardiasis – An infection by a member of the genus *Giardia* resulting in a range of subclinical to severe gastrointestinal illness.
 - iv. Toxoplasmosis – A contagious disease of all species caused by the sporozoan parasite *Toxoplasma gondii* . The primary host is usually a member of the cat family.
- b. Nematodes (roundworms) – An infestation by roundworms found in the class Nematoda. This group is diverse and includes a significant proportion of the internal parasitic infestations in animals.
 - c. Cestodes (Tapeworms) – An infestation by a worm from the class Eucestoda.
 - d. Trematodes (Flukes & Flatworms) – An infestation by a parasitic worm/fluke from the class Trematoda.

11) **Non-infectious** – Pertaining to an injury that usually causes inflammation but does not originate from an infectious source. Examples may include vasculitis (inflammation of a vessel) or inflammation caused by irritation by a drug or foreign substance. Often caused by an allergic or auto-immune reaction.

12) **Iatrogenic** – Any adverse condition in a patient resulting from treatment by a medical professional or person responsible for the animal’s wellbeing.

13) **Idiopathic** – Pertaining to a disease or illness of unknown cause despite thorough testing. This may also apply to diseases for which there is currently no test.

14) **Toxicity** - The characteristic or quality of being poisonous.

a. Hydrocarbon – Toxicity from a compound that only contains hydrogen and carbon as a *result of internalization*. Typical compounds include products derived from crude oil such as gasoline, motor oil, natural gas, etc.

b. Heavy metal – Toxicity caused by a number of metals known to impact the health of living beings. These metals typically include lead, mercury, silver, zinc, copper, arsenic, cadmium, chromium, cobalt, tin, nickel, thallium, manganese, and iron.

- i. *Lead* – Toxicity caused by the internalization and systemic spread of lead. Typically caused when lead is absorbed into the body from the gastrointestinal tract, bone marrow, or joint spaces. The term does not apply to animals that have been shot with lead bullets/pellets not causing clinical signs of lead toxicosis.

- i) *Clinical*
- ii) *Sub-clinical*

ii. *Mercury* - Toxicity caused by the internalization and systemic spread of mercury.

i) *Clinical*

ii) *Sub-clinical*

c. Cholinesterase inhibitors – Pertaining to any chemical that prevents function of the enzyme cholinesterase. In wildlife medicine, this term mainly refers to insecticides used on a variety of animals and plants from the Carbamate and Organophosphate families.

d. Rodenticides – Pertaining to any pest control chemical destructive to rodents. These typically include *anticoagulants* (warfarin, brodifacoum, difethialone, etc.), *metal phosphides* (zinc phosphide), *chemicals causing hypercalcemia* (cholecalciferol) and *other poisons* such as “1080”, strychnine, and white phosphorus.

e. Harmful algal blooms – Pertaining to toxins released from *Cyanobacteria* that may cause sudden death due to neurotoxins or severe liver damage due to hepatotoxins (liver toxins).

f. Envenomation – The poisonous effects caused by bites or stings of insects/arthropods or the bites of snakes.

g. Botulism – A toxemia caused by the ingestion of the toxin of *Clostridium botulinum*. Often known as “limberneck” in effected waterfowl.

15) **Undetermined** – Pertaining to a disease or illness whose identity is unknown due to either lack of testing or inability to test.

16) **Pending** – Pertaining to the time before a diagnosis or case resolution is decided, confirmed, or finished.

17) **Clinically healthy** – Pertaining to any patient lacking signs of illness.