

## UNDERSTANDING YOUR PET'S BLOOD TESTS

Blood tests help doctors determine the causes of illness, and identify surgical risk factors accurately, safely, and quickly. We can also monitor the progress of medical treatments. To help you understand your pet's results this guide explains common tests. If you have question, ask any staff member. We want you to understand our recommendations and be a participant in your pet's health care.

### COMPLETE BLOOD COUNT (CBC)

This gives information on hydration status, anemia, infection, clotting ability, and the ability of the immune system to respond. This is an essential test for pets with fevers, vomiting, diarrhea, weakness, pale gums, or loss of appetite. If your pet needs surgery, a CBC can detect bleeding disorders or other unseen abnormalities.

- HCT** (hematocrit) measures the % of red blood cells to detect anemia and dehydration.
- HGB** and **MCHC** (hemoglobin and mean corpuscular hemoglobin concentration) are the oxygen-carrying pigments of red blood cells.
- WBC** (white blood cells) measures the body's immune cells. Increases or decreases indicate certain diseases or infections.
- GRANS** and **L/M** (granulocytes and lymphocytes/monocytes) are specific types of white blood cells.
- EOS** (eosinophils) are a specific type of white blood cells that can indicate allergic or parasitic conditions.
- PLT** (platelet count) measures the cells that form blood clots.
- RETICS** (reticulocytes) are immature red blood cells. High levels indicate regenerative anemia.

### BLOOD CHEMISTRIES

These common blood serum tests evaluate organ function, electrolyte status, hormone levels, and more. They are important in evaluating your pet's health status before anesthesia, especially your pet's ability to process and excrete anesthetics. These tests are also important for older pets, pets with vomiting and diarrhea or toxin exposure and pets receiving long-term medications.

- BUN** (blood urea nitrogen) indicates kidney function. An increased blood waste product level is called azotemia and can be caused by kidney, liver and heart disease, urethral obstruction, shock and dehydration.
- CREA** (creatinine) reveals kidney function. This test helps distinguish between kidney and non-kidney causes of elevated BUN.
- PHOS** (phosphorus) is often associated with kidney disease, hyperthyroidism, and bleeding disorders.
- CA** (calcium) deviations can indicate a variety of diseases such as tumors, kidney disease, and hyperparathyroidism.

- ALB** (albumin) is a serum protein that helps evaluate hydration, hemorrhage, and intestinal, liver and kidney disease.
- ALKP** (Alkaline phosphatase) elevations may indicate liver damage, Cushing's disease and active bone growth in young pets.
- ALT** (alanine aminotransferase) is a sensitive indicator of liver damage but does not indicate the cause.
- AST** (aspartate transferase) increases may indicate liver, heart or skeletal muscle damage.
- TBIL** (total bilirubin) elevations may indicate liver or hemolytic disease. This test helps identify bile duct problems and certain types of anemia.
- GGT** (gamma glutamyl transferase) is an enzyme that indicates liver disease or corticosteroid excess.
- TP** (total protein) indicates hydration status and provides additional information about liver, kidneys and infectious diseases.
- GLU** (glucose) is a blood sugar. Elevated glucose may indicate diabetes mellitus. Low levels may cause collapse, seizures, or coma.
- AMYL** (amylase) elevations may indicate pancreatitis or kidney disease.
- LIP** (lipase) is an enzyme that may indicate pancreatitis.
- CHOL** (cholesterol) is used to supplement diagnosis of hypothyroidism, liver disease, Cushing's disease, and diabetes mellitus.
- GLOB** (globulin) is a blood protein that often increases with chronic inflammation and certain disease states.
- T<sub>4</sub>** (serum tetraiodothyronine) is a thyroid hormone. Increased levels often signal hyperthyroidism in cats, and decreased levels may show hypothyroidism in dogs.
- Cortisol** is a hormone that is measured in tests of Cushing's disease and Addison's disease.
- CL** (chloride) is often lost with vomiting and Addison's disease. Elevations may indicate dehydration.
- NA** (sodium) is often lost with vomiting, diarrhea, kidney disease and Addison's disease. This test helps indicate hydration status.
- K** (potassium) is often lost with vomiting, diarrhea, or excessive urination. Increased levels may indicate kidney failure, Addison's disease, dehydration, and urethral obstruction. High levels can lead to cardiac arrest.

### OTHER TESTS

- Heartworm** – this tests for deadly parasites that can live in the heart or lungs, that are spread by mosquitoes.
- FELV/FIV** – this tests for the leukemia virus and feline immunodeficiency virus, that can be easily transmitted throughout the cat population.