

# WHAT we test

## Cancer

The primary use of the Pre-Stem Cell Therapy Panel is to discern if cancer may be present in the animal. It's important the patient is cancer free prior to therapy.

## Hyaluronic Acid

Many cases of Stem Cell Therapy involve osteoarthritis or other joint damage. Testing Hyaluronic Acid sets a baseline for which to evaluate the effectiveness of therapy.

## Vitamin D

The mechanisms of stem cell integration match the same mechanisms of Vitamin D, making Vitamin D sufficiency an important part of the protocol. Those mechanisms:

- Anti-Inflammation
- Tissue Differentiation
- Immune System Modulation



## Don't Throw Fuel On The Fire

Stem Cell Therapy introduces new cells into the body to regenerate damaged tissues. These cells are undifferentiated, and can become tendon, ligament, bone, muscle, nerve, fat, heart, and liver tissues for example. However, if a tumor is present, this may just be adding fuel to the fire. This is why it's important that your dog or cat be cancer free prior to starting any stem cell therapy.

## Did You know?

Stem Cell Therapy is used for more than just arthritis in animals? Continual research has shown utility in tendon repair, fractures, autoimmune disorders, atopic dermatitis, and kidney disease.

# TEST TREAT MONITOR



# Testing Before STEM CELL THERAPY



## HOW IT WORKS

The Pre-Stem Cell Therapy Panel works by identifying two features of cancer: abnormal cell proliferation and inflammation. When both of these conditions exist, cancer is likely. For stem cell candidates, underlying inflammation usually exists, so more weight is placed on the proliferation marker. This unification results in the Neoplasia Index.

### Neoplasia Index®

The Neoplasia Index (NI) is the main indicator of cancer for the Pre-Stem Cell Therapy Panel. On a scale of 0 to 10, the NI rates how likely cancer is. 0 is a perfectly cancer free animal, and 10 is a perfect score for cancer.

A low NI score means we are clear to proceed with the therapy. Elevated NI will require further workup and may post-pone treatment.



## NEXT steps

Once we have the test results back, we'll decide whether to proceed with your pet's stem cell therapy.

Negative results gives us the green light to proceed. Positive results requires a bit more workup and possibly delaying the therapy.

In conjunction with the stem cell therapy, we'll correct vitamin D levels if needed to ensure your pet is reaching sufficiency.

## ROLE OF VITAMIN D

Vitamin D plays a number of valuable roles that can support stem cell therapy. Vitamin D sufficiency is:

- **Anti-inflammatory**  
managing the inflammatory response is important to therapy outcomes
- **Boosts innate immune system**  
modulating the immune response helps with cellular regeneration
- **Pro-differentiating**  
helps the new cells become what they're meant to become - that is, regenerate the target tissue

## MONITORING

The Pre-Stem Cell Therapy Panel is designed to establish baselines for monitoring. Monitoring with blood tests is simple and effective. We recommend monitoring with a slimmed-down version of the panel, monitoring on those parameters that require attention:

- Hyaluronic Acid, Inflammation, & Vitamin D
- See if the treatment protocol is effective or ineffective
- Retest intervals will be established based on patient status