What is the Treatment Process?

1. Please withhold food 12 hours prior to the scheduled arrival time. Water may be left out overnight.

2. Prior to your arrival your veterinarian should run a CBC/Chem panel, tick panel and an autoimmune panel on your pet. If they have not been done they will be collected on the day of the consultation.

3. During a consultation with our veterinarian we will go over the condition to be treated, prognosis and associated risks.

4. An intravenous catheter will be placed in a leg vein for the administration of anesthetizing agents. Note: Preparation for the catheter requires hair clipping at the site.

5. General anesthesia is administered, the pet is intubated and closely monitored with blood pressure, pulse oximetry, ECG and end-tidal CO₂.

6. Your pet will then be moved to the surgery suite and a sample of adipose (fat) tissue will be collected under sterile conditions.

7. The tissue is immediately prepared to harvest the stem cells and other regenerative cells needed for treatment. Cells are activated with platelet rich plasma and laser light. This process takes 1-2 hours.

8. The prepared cells are returned to the area of treatment and administered intravenously if appropriate.

9. The normal total time for a stem cell collection and treatment is 3 to 4 hours.
Stem Cell Therapy at AVCG

Stem cell therapy is fast becoming a common treatment option for osteoarthritis, auto-immune disease and a host of other conditions. As the therapy has evolved, treatment options have shifted from using an outside lab to procure stem cells from adipose tissue to on-site preparation. AVCG is now preparing adipose-derived mesenchymal stem cells in house and can return the live cells to the affected area within 1 to 2 hours of adipose collection. The process is simple, safe and effective for treating many difficult to treat conditions.

Stem cell therapy involves a minor surgical procedure to collect adipose tissue from the patient. This fat is then rendered into a sterile single cell slurry that is centrifuged and filtered to collect the stem cells and other regenerative cells. Within one hour of surgery, the cells are injected back into the patient where they can begin the process of repair. The advantage of on-site preparation is less cellular death due to time, transport and preparation at an outside lab. The patient does not have to return on a later day for follow up treatment and can benefit from the results of therapy immediately on the appointment day.

How Stem Cells Work

Stem cells and other regenerative cells can be obtained from adipose tissues. Adipose tissue is a preferred source in dogs over bone marrow for several reasons including ease of access, high-yielding mesenchymal stem cell count as compared to bone marrow, and the fact that fat is a renewable source. The stem cells, along with a mix of other regenerative cells within the adipose tissue, are isolated and then injected directly into the injured tissue, joint and/or intravenously. These cells are always obtained from the intended recipient (autograft), eliminating the risk of rejection and disease transmission.

Conditions Treated with Stem Cell Therapy

- Osteoarthritis
- Hip Dysplasia
- Non-Union
- Fractures
- Tendon and Ligament
- Injuries
- Chronic
- Hepatitis
- Autoimmune Polyarthritis

There are new disease processes under investigation at this time including kidney failure, systemic autoimmune disease and pancreatic disease such as diabetes.

You should know...

- Most patients will see improvement in 5-7 days from the IV injection.
- Full improvement can take 7-60 days.
- Ultimate long term results are unknown and it is not known if additional treatments might be necessary.
- Cells can be banked for use at a future date. This unfortunately requires using an outside lab for preparation and necessitates a second appointment for the treatment injections 48 hours after the collection.

Which dogs are good candidates?

- Dogs that have not responded well to non-steroidal anti-inflammatory drugs.
- Dogs that cannot tolerate non-steroidal anti-inflammatory drugs.
- Dogs that are likely to need long-term medications for pain.
- Dogs that are not good candidates for orthopedic surgery due to age or health.
- Dogs that have early arthritis.
- Dogs that have multiple joints afflicted with arthritis.

“Everything old is new again”