

Excellent
medicine
with heart
mind and soul



STEM CELL THERAPY IN CATS & DOGS

Stem cells are the building blocks of life. Embryonic stem cells are the cells upon which tissues grow and bodies are built. In adults, stem cells are present in many tissues and organs. They aid in the response to injury and help in the healing process.

Stem cell therapy involves the isolation of adult stem cells and the administration of these cells into areas of injury and chronic inflammation (joints, soft tissues, organs). After administration, the stem cells grow and proliferate. They produce substances that help to promote healing and modulate inflammation.

INDICATIONS

The predominant application for regenerative stem cell therapy is for the alleviation of pain secondary to osteoarthritis in dogs and cats

Other reported uses include: inflammatory bowel disease, chronic hepatitis or chronic pancreatitis, tendon and ligament injury, immune-mediated polyarthritis

IS MY PET A CANDIDATE?

Only a veterinarian can truly determine if your pet is a candidate for stem cell therapy. However, a good candidate will be a patient with one of the above conditions who:

- ▶ Cannot tolerate medical management
- ▶ Does not respond to medical management
- ▶ Is not a candidate for surgery

PROCEDURE

1} Client schedules appointment for patient consultation

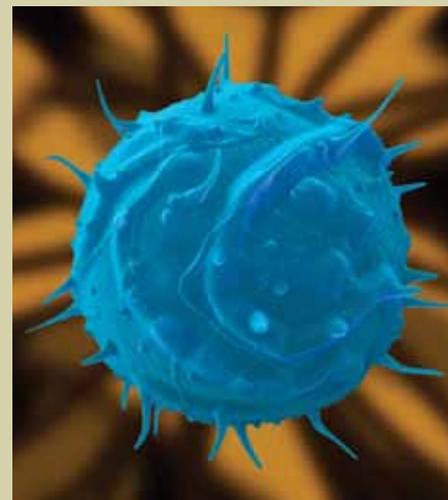
Pre-anesthetic work-up includes necessary blood work and radiographs (usually this is performed by the referring veterinarian)

2} At consultation we discuss and potentially schedule the procedure

3} On the day of the procedure:

- ✓ Patient is anesthetized and fat (thoracic, inguinal or falciform) is collected in a 15 minute surgical procedure
- ✓ Patient is recovered from anesthesia while fat is processed and stem cells are isolated and stimulated (3 - 3^{1/2} hours)
- ✓ If necessary, patient is sedated for administration of cells into the affected joints and intravenously
- ✓ Patient is discharged later that evening

4} Surplus cells are sent for long-term storage in liquid nitrogen



A detailed rendering of a Stem Cell

STEM CELL THERAPY IN CATS & DOGS

CONTRAINDICATIONS

- ▶ INFECTION
- ▶ CANCER
- ▶ CORTICOSTEROID ADMINISTRATION

FOLLOW-UP



We strongly recommend that patients undergoing regenerative stem cell therapy for arthritis care also be involved in our multi-modal approach to the long-term management of osteoarthritis.

This includes:

- ✓ Dietary and weight management
- ✓ Chondroprotective supplementation (oral and injectable)
- ✓ Pain management
- ✓ Exercise management
- ✓ Rehabilitation (underwater treadmill, cold laser therapy)

CONSULTATION

Sutures are removed 10-14 days after the procedure.

RESULTS

- Approximately 80% of patients will show a positive response to regenerative stem cell therapy
- Approximately 67% of patients will have such a dramatic response that medical management can be drastically reduced or discontinued (NSAIDs, narcotics, etc.)
- Onset of action can be 1-2 months with maximal effectiveness at about 3 months
- Duration of action is an average of 18 months - if necessary, stored cells can be defrosted and administered



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FOR MORE INFORMATION, PLEASE CONTACT:

Veterinary Specialty Center
Department of Surgery

1515 Busch Parkway
Buffalo Grove, IL 60089

(847) 459-7535 *phone*

(847) 808-8900 *fax*

surgery@vetspecialty.com

www.vetspecialty.com

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