

My patients, My life

Veterinary medicine and surgery from a personal perspective.

Partnering Science With a Panther

Posted on [November 2, 2011](#) | [8 Comments](#)

My association with the Tallahassee Museum of Natural History has, once again, afforded me the chance to get cozy with an incredibly awesome member of the animal kingdom. Meet Buddah, a King Kong sized kitty better known as a Florida Panther.



Buddah on my exam table

Buddah is the newest feline resident at the zoo-like museum that features numerous indigenous creatures that prowl and fly the woods and skies of Florida, the state I now call home. Because I have a deep personal interest in the welfare of all creatures, I have happily extended a warm offer of assistance to all animals in the museum's collection. Mike Jones, the curator, is a great friend and has asked for our help numerous times since I opened my practice. We have shared some great adventures, some of which I have written about, in our efforts to better the quality of the lives of his "kids" at the museum.

Mike first told me about his expected new kitty when I was at the museum to see an otter, a skunk, or maybe it was the red wolf, I cannot remember but I was really happy to hear about a new panther to provide company for the one that was there. I asked him to let me know when the new kitty arrived and I would plan to come up and do a wellness exam and baseline labs and such.

It wasn't Mike but Suzie, the keeper for the cats, who told Maria, my tech, that Buddah had just arrived in his new home. We were all excited about the news and looked forward to introducing ourselves the lucky new cat. Mike called a day or two later and before I could share my excitement about his new cat, I realized the tone in his voice was not one of joy. I shut up and began listen.

Apparently the 18 month old panther had suffered a previous injury to his elbow or shoulder months before, but seemed to have recovered when he was transferred to his new home at the museum. But now, once in his wonderful new enclosure, he had begun to limp on his right front leg. Details were very sketchy about his previous life so we were unable to get answers to our questions about his previous injury and the treatment he received. Mike and I made plans to move forward with the evaluation of Buddah and to include radiographs in an effort to gather as much information as possible about his lameness.

As you could guess, “hands on” time with a panther involves a mediator called “Mr. Anesthetic”. I have often said that a determined house cat would whip a room full of people and not even get winded. Buddah weights 88 pounds. He is solid muscle and I don’t even want to think about meeting him on his terms. Mike is really skilled with his blow-gun (except for the times I have seen him shoot the fence) and has safely delivered every animal to my care in a tranquil state of mind and body.

My first meeting with Buddah was under such terms. Mike and his prize keepers, Suzie and Shelby, captured Buddah and had him comfortably resting in the museum’s surgery when Maria, Melody and I arrived. It was my first time to run my hands down his course coat from head to the tip of that very long tail. For one time, I was really short of words. This beautifully exquisite example of North America’s largest cat was beyond any words that I could place on a page. My wish is that each of you who love creatures like I do could have been there to share that moment.

Firm, well-developed muscle ripped his body, scant amounts of body fat and enormous bones to enable those powerful muscles to transfer their power to pure acceleration and speed. This young male cat was a consumant athlete in every respect. Were he in his world he would survive on his primary prey species – the White Tailed Deer. He has to have all of his physical attributes as well as the hard-wired ability of all cats – the stalk. More on that later, I have an exam to finish, he cannot sleep much longer.

Mike had some concerns about a limp in Buddah’s right front leg. We only had sketchy details about his previous life that included some sort of injury to that leg, possibly a “green stick fracture”. Those are usually fractures of the bones of young animals that often bend and break but the ends stay reasonably opposed, like a green tree limb bent over your knee. When I examined his elbow I was immediately concerned over the lack of a normal range of motion in the joint. His elbow could extend about 90% of the normal distance but when I flexed it or bent it toward his body, he was only able to move it a little over half the distance it was supposed to move. We had taken the portable X-Ray equipment from the clinic and immediately began a series of investigative images of the elbow.

Mike appeared very anxious as I returned from the computer that displayed the images of the elbow. I regretted to tell him of the extent of damage to the elbow, but he had to know. Apparently, at some point in his adolescent ramblings, Buddah had sustained an injury to the joint surface of the radius, the main bone in the foreleg. Of all the joints in the body, the elbow has the tightest tolerances and is the least able to function without a perfectly congruent joint surface. Small injuries to elbows have devastating consequences in any species, it is as simple as that. My heart went to a bad place contemplating how this inspiring creature could ever have a normal life. I was a little short on ideas, I wanted an answer, a fix, and there was none. I tried to hide as much of my anxiety as possible as we recovered Buddah and returned him to his enclosure.

My conversations with Mike and Suzie over the next few days centered around pain management and medications to slow the progress of the devastating arthritis that was consuming his elbow. To help this cat, I knew we would need to climb out of the proverbial “box”.

Follow



Buddah's posture with his elbow pain

Buddah helped us all by putting his best foot forward over the next few weeks. He seemed to be doing OK on his meds and enjoyed his play time as well as expected. I knew in my heart it could not last for long. Then it happened. Mike called me on a Saturday night. He doesn't do that without serious need. I hoped it was not about Buddah, but it was. It seems that Buddah was having a "good" day and ran to the fence in a mock attack, as he loves to do, and when he bounced off the fence he became severely lame in that same leg. He refused to put any weight on it and they feared that the leg was fractured.

Mike had him put on lock down in his small pen and had given him some medication to ease his pain. It seemed apparent that if the leg was indeed fractured, it would be a surgical case. Casts, splints and other such devices simply don't work under these circumstances. Buddah would shred the device in 2 minutes and may further injure himself in so doing. We would first need to do a thorough orthopedic exam then some radiographs to define the cause of the new lameness and develop a plan of action. If surgery was needed we would go straight to the O.R. and get it done. For these reasons, Buddah would have to leave the Museum sedated and make the half hour trip to our hospital.

That plan sounds simple but things can get tricky in a hurry. A 90 pound panther in a drug induced stupor bouncing down the highway in the back of Mike's little station wagon has about a half a dozen ways to go bad in a hurry. Mike and Suzie keep excellent records of all anesthetic and tranquilizer procedures they use on animals in their care. They are really good at it and knowing they already had a proven anesthetic protocol for Buddah gave me great comfort. The darting, the loading and the trip to Shepherd Spring Animal Hospital went off without a hitch. It was quite a site to see big Mike carrying that panther through our front door. I wish I had that picture.

In an orthopedic evaluation, I use patient feedback to glean the information I need to define a lameness. Most animals will wince or whine when I find the source of pain. For that reason, we want them to be awake. But... well I don't need to finish that thought. Buddah arrived sound asleep. We did our evaluation and X-Ray

Follow

him out, and we had both Maria and Suzie dedicated to the task of keeping him that way. Mike and I talked and evaluated changes in his X-Rays and talked some more. It was determined that Buddah did not have a new fracture, that was the good news.

Buddah, while having one of his good days, had further damaged the already marginally functional elbow. I changed his medication orders, and requested he stay strictly confined while we monitored his progress over the next couple of weeks. Inside, my guts were in a knot over the prospects for Buddah ever having a life without pain.

Back in the Spring, for reasons I cannot remember, I became interested in the topic of regenerative medicine. Regenerative medicine basically involves using the body's own healing potential and cellular growth mechanisms to focus their full potential on a particular tissue or injury. In so doing, it brings special cells, called stem cells, to deliver a level of healing that has never been known. The mechanisms of this process is still under intense international study. It is a fascinating science and one that many feel will be the future of medicine in many innovative ways.

My interest in regenerative medicine led me to a company called Vet-Stem. They are the world leader in research in the veterinary applications of regenerative medicine. Vet-Stem requires a veterinarian to understand and become certified in the field to use their services. I completed the credentialing course, got my certification and remained intrigued at the prospect of some day using this technology in one of my patients.

Buddah showed some improvement over the next two weeks but I could tell that Suzie, Buddah's mother hen, was not very happy when we had our briefs. It was after one of our conversations that I closed my eyes and leaned back in my chair to, once again, come up with some idea that held some promise for this wonderful cat. The way I saw it, Buddah would progressively become more lame over the next year or so and his profound lameness would not reflect well on the museum or its mission. I could only see more dark clouds on the horizon for him and his leg. I needed something good and I needed it now. I looked across my desk and saw my certificate from Vet-Stem. A panther sized epiphany scrambled through my tired old brain. What if... My God, what if!? I began to smile, and think, and smile some more. This is the answer!

I knew I had a some talking to do. First, not many people have heard of stem cell transplant technology and the benefits it can provide. The first thing I had to do was start selling the idea of a stem cell transplant in a panther, a place no other had tread. I called Mike. After a significant amount of babble mixed with a lot of enthusiasm he blessed the idea and said I should continue to work on some of the other obstacles – namely the one that the procedure had never been done in a panther.

Next, I phoned Dr. Corry Orava who is the veterinarian at Vet-Stem who discusses treatment options and provides insight and direction to veterinarians, like me, to guide our patients down the road to recovery from chronic pain and lameness. I had some selling to do because Vet-Stem had only approved the procedure for use in dogs and horses. They had previously told me that they would consider "compassionate use" of their technology in other species if it met their parameters.

Dr. Orava was interested from the get-go. It must have been obvious that I had great passion for this big kitty and I believe Dr. Orava agreed, after my clinical brief of the case, that Buddah was a great candidate for regenerative medicine. He told me to keep my shirt on for a day or so while he discussed the matter with those up the chain of command. He sounded promising.

Follow

Next I had an electronic conversation with Dr. David Hale, another veterinarian that donates his time and services to the museum. Dr. Hale, a man whose opinion I greatly respect, needed to not only be in the loop, but I wanted him to hear all my reasons for pursuing the stem cell transplant. After reviewing my opinions he blessed the idea and advised me to charge ahead. I called Mike Jones back and told him and Suzie to start getting excited. Then I had to sit on my hands and wait on the approval from Vet-Stem. I was nervous but hopeful.

Two days later my receptionist interrupted me to advise me that Dr. Orava was on the phone. I took a deep breath and answered with my most hopeful voice. He immediately told me that he had good news and that Vet-Stem had blessed my use of stem cell therapy in the Florida Panther. I was thrilled and then he iced my happy cake with the news that Vet-Stem was going to donate a significant part of the cost of the processing fee! What a great gesture on the part of this organization. They, like all businesses, are struggling in this economy but they care enough about this lame young panther to subsidize his treatment. A stand-up bunch of folks, I must say.

How does all this stem cell stuff work? The best part, in my opinion, is that we don't entirely understand the entire process. Briefly, stem cells are the precursor cells of all cell types in an animal or person. All tissue types (skin, muscle, tendon, cartilage, blood) come from the same type of cell, a stem cell. In a process that is not completely understood, a stem cell can recognize damaged tissue that it comes into contact with, adhere to that tissue, and transform into the particular cell type of the damaged tissue and multiply. Those tissues include muscle, cartilage, bone, skin, blood vessels and a number of others. It is absolutely fascinating science. Regenerative medicine holds an unbelievable potential for healing in animals and people. I believe that the animals who benefit today will serve as convincing models to study the potential use of stem cell technology in the human race.

We know that fat tissue is a rich source of stem cells. My job is to harvest a couple of ounces of fat from my patient using sterile surgical protocols and FEDEX the sample to Vet-Stem in San Diego. They immediately process the tissue and extract, count and ready the purified stem cells for injection, and FEDEX them to me. In this case they would be injected into the joint space in the crippled right elbow. Buddah had to be sedated and brought to the clinic on Tuesday for the collection surgery and on Thursday I would need him sedated at the museum for the injection. There were concerns that something would go wrong but we tried to anticipate them all, be prepared, and hope for the best.

Buddah's capture went without difficulty and his 45 minute journey to our hospital was smooth and uneventful. After we got a catheter into his vein, established baseline numbers on his vitals, we began to prepare him for surgery.



Maria, me and Mike (facing us)

Maria was pretty tense about the number of people in and out of our surgery. Mike was on hand, Suzie was monitoring anesthesia, there was a photographer and an intern. It would be a minor surgery so I was not overly concerned about the traffic. I needed to make the incision under sterile conditions, collect the fat for transport to Vet-Stem, close him up and get him back to his habitat as soon and safely as possible.



The Collection Surgery (Suzie foreground)



We



A small amount of harvested fat into the vial

electe to harvest the fat from the inguinal fat pad. The inguinal area is basically on the belly all the way back between the rear legs. We electe this site because of the low incidence of problems from seromas (fluid accumulation in the area where the fat was removed) and there would be no scar to blemish this gorgeous animal. It went as smooth as clockwork. Anesthesia, surgery, recovery, a hug goodbye and a long sleepy ride home with Mike and Suzie. His recovery in his enclosure was uneventful.

Forty eight hours later, processed stem cells in hand, we arrived at the museum to find Mike and Suzie monitoring a very sleepy Buddah. Maria prepped the injection site on the elbow, and next I injected the purified stem cell transplant directly into the joint space in his elbow. After flexing and extending the elbow to distribute the cells, all that was left was to antagonize his anesthetic and wake him up. We cleared the enclosure except for me and I administered an IV dose of the drug to reverse the anesthetic so Buddah would wake up. He was already beginning to awaken as I searched for the vein in his rear leg. As I slid the needle into the vein he

Follow

his long tail across my hands covering the needle in his vein. That was a very sobering moment. Suzie said you better get out of there Dr. Griggs. I gave the injection and headed for the door which she opened and closed behind me. Buddah was up and looking around quickly, appearing no worse for the wear.

Now began the waiting game. Everyone was excited about the prospects for this beautiful animal. The technology is so new and promising, but everyone could only wait and observe Buddah each day and see if his limp would improve. I cautioned everyone that we would not expect to see much progress for at least 3 weeks.

As requested, Suzie called me at the one week mark and happily reported that she definitely saw improvement. She repeated that same report for the next three weeks. At the "one month" mark I visited Buddah for an evaluation. It was the first time I'd seen him since his injection. He was up and around and really full of himself in the lovely Fall weather. I visited with him and the staff for about 30 minutes. As he played with his ball I never saw a limp. Buddah acted exactly like a two-year old Panther should act. He played, romped around his enclosure and stalked me about 3 times, followed by a 75 foot mock charge at me ending with a friendly rub against the fence back and forth. So cat-like.

I was overjoyed. I still am! What a great time to be alive! Today, over 7 weeks out, Buddah has complete use of his elbow and has his life back, without pain. He is happy, healthy, sound and taking no medications. We continue to monitor him closely and gradually increase his exercise time. I optimistically see nothing but blue skies in his future.

I consider it to be a great honor and privilege to have been a part of this project. I continue to practice veterinary medicine because of the immense personal satisfaction that I get from feeling that I have "made a difference" in the lives of my patients. Caring for Buddah has been the pinnacle of my career. Technology that did not even exist when I became a veterinarian saved Buddah from a life of pain. This crusty old veterinarian now has a new tool in his tool box and a new friend in his heart. May Buddah live long, pain free, and continue to make us smile.

ADVERTISEMENT

Eco World Content From
Across The Internet.



FEATURED ON ECOPRESSED

[How to feed 7 billion of us without ruining the planet](#)

This entry was posted in [Uncategorized](#). Bookmark the [permalink](#).

8 RESPONSES TO PARTNERING SCIENCE WITH A PANTHER

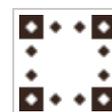
[Marjorie Raymond](#) | [November 2, 2011 at 2:31 am](#) | [Reply](#)

How exciting to see a miricale of science happen before your eyes! Think of all the ways stem cells can help both humans and animals.



[Linda Edwards](#) | [November 2, 2011 at 4:11 am](#) | [Reply](#)

What a great story. I am so proud that you were able to be a part of it...Once aagain Dr. Griggs...Way to go !!!!!



[Becky Jones](#) | [November 2, 2011 at 9:43 am](#) | [Reply](#)

[Follow](#)

Learning new skills provides a constant challenge. Using those skills to improve the quality of life is exhilarating. I'm glad Buddah benefited from your skills and the encouragement and support of all involved. I'm certain you'll have another opportunity. We'll all benefit.



Melissa Starbuck | [November 2, 2011 at 11:48 am](#) | [Reply](#)

This is an absolutely amazing story. SO happy that Buddah came to the Junior Museum (as we Tally natives still call it) so that he could end up under your care. You are The Man.



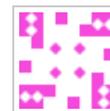
Jeanene Arrington-Fisher | [November 2, 2011 at 12:15 pm](#) | [Reply](#)

It is so wonderful that everyone came together for this wonderful creature! Just amazing what science is doing these days



Linda Price | [November 2, 2011 at 5:04 pm](#) | [Reply](#)

This story just amazed me! You made the right call when you said this is a great time to live in, Buddah is one of the lucky ones to benefit from it! We are so blessed to have you in our area, you continue to amaze everyone with your experience and compassion. I'm here to say, "Thanks again Dr. Griggs", Keep up the great work and continuing education!



shannon rhue | [November 3, 2011 at 12:10 am](#) | [Reply](#)

Buddah is a table full, and a handsome kitty. Chalk up one for science.



Barbara | [November 3, 2011 at 4:15 pm](#) | [Reply](#)

What a wonderful experience you had. Good for you – taking the initiative and becoming certified in this amazing new medicine. I truly hope that regenerative medicine will become available to all animals and humans as well. Thank you for taking the time to "pen" this experience. You need to compile a book. Take care. Barbara

