



The ONS Foundation Lab at Work . . .

The ONS Foundation Arthroscopy, Surgical Skills and Biomechanical Research Laboratory which opened in spring 2012 has become an extremely active facility. Research interns are fervently working on surgical technique videos and making sure that our studies and databases are maintained.

On Tuesday and Friday mornings, we host orthopedic conferences in the Lab's Conference Room. Equipped with the latest technology, the Lab enables streaming of Grand Rounds from Yale New Haven making it convenient for ONS physicians to participate in the discussions. This type of physician interaction and discussion of challenging cases enhances patient care and outcome and is a forum for developing innovative research projects.

The Shoulder Service recently evaluated a new technique and new plate used to repair humerus (shoulder) fractures. Six surgeons, along with a visiting surgeon from Miami, collaborated and discussed the subtle details and techniques of enhancing outcomes for patients. Afterwards, each of the surgeons expressed their gratitude in being able to work and study in such a stimulating environment. Dr Katie Vadasdi commented that "humerus fractures are such a

challenging problem with a wide variation in outcome, hopefully these types of think-tanks



L to R – John Crowe, MD; Kasema Osmanaj, Lab Assistant; and Dr. Eduardo Gonzalez from Miami, FL

will help to improve what we do...the Lab is definitely a much more amazing resource than could have been anticipated."

Dr. Mark Vitale, who recently joined us from the Mayo Clinic, brought new ideas regarding elbow arthroscopy. In order to develop cutting edge arthroscopic techniques, he will be studying the safety of certain approaches and will measure the proximity to specific nerves. Dr. Vitale will also continue some of his studies from The Mayo Clinic in our Lab.

Continued on Page 7

FEATURED ARTICLES -

4 *Meet our 2012 Summer Interns*

5 *Dupuytren's Disease Advances in Treatment*

7 *Tips for Cold Weather Injury Prevention*

IN THIS ISSUE

On the Cover - Laboratory in Use	1
President's Message	2
Fund Development Update	2
4th Annual Medical Education Conference	3
2012 Summer Interns	4
What's New in Hand Surgery— Mark Vitale, MD	5
Meet our Board	6
Upcoming Seminars	6
Avoid Cold Weather Injuries	7
Research Projects	7

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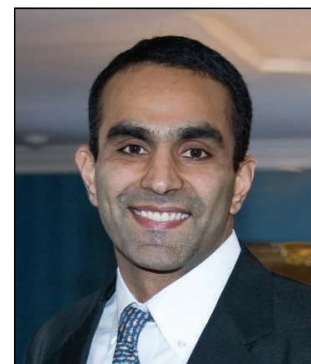
Seth Miller, MD
Emeritus

Message from the President . . .

Dear Friends,

It has become increasingly difficult to balance a review of the ONS Foundation's success and the very exciting future prospects. Like a proud parent, I can not resist not mentioning a few highlights of each.

Our 4th Annual Medical Education Conference co-chaired by Drs. Gloria Cohen and Frank Ennis was spectacular. Despite Hurricane Sandy, we were oversubscribed and the reviews from attendees were glowing. I have often written about our summer interns and this issue highlights their achievements and experiences. In addition, we now have full year interns who will spend time at the Foundation between college graduation and starting medical school. The 5th Annual Golf Tournament is scheduled for Monday, June 10, 2013 at The Stanwich Club, and to round out 2013, Nat Barnum and Dr. Katie Vadasdi are well underway toward planning our first walk/run in the fall of 2013. Finally, I am thrilled that Rich Granoff has joined our Board. He will bring a new dimension to our exciting progress.



Paul M. Sethi, MD

In the next few months, we hope to partner with the Yale Department of Orthopedic Surgery and become part of its shoulder fellowship training program. This means we will help to further train an already licensed orthopedic surgeon in the sub specialty nuances of shoulder and elbow surgery so that (s)he can go to a prospective community and offer the highest level of expert care. Our participation in this fellowship reflects the recognition of the scientific and surgical contributions that we are making to the field.

Just when I believed that our alliance with Greenwich Hospital couldn't be any stronger, we are developing collaborative studies in order to better understand both the microscopic and biological implications of surgical site healing.

With the ONS Foundation Arthroscopy, Surgical Skills and Biomechanical Research Lab in full swing, we hope to employ a biomechanical engineer to work on testing of surgical materials and constructs. This will truly close the circuit on the study of nuances in perfecting surgical outcomes.

We believe that the next wave of quality healthcare will demand doctors to demonstrate that our interventions are actually improving patients' lives. With the extraordinary generosity of friends and donors like you, we will continue to strive toward improving the quality of life for our children, parents and spouses.

On behalf of the ONS Foundation, I extend Season's Greetings and best wishes for a Happy, Healthy 2013!

Fund Development Update

Preparations are underway for the **5th Annual Golf Outing** scheduled to take place on Monday, June 10, 2013, at The Stanwich Club in Greenwich, CT. In addition, a new and exciting fund-raising event is being planned for the fall of 2013 — **a 5K Walk/Run!**

We gratefully acknowledge the support of individuals and organizations whose generous contributions helped build the ONS Foundation Lab. **Annual Funding** for Lab operations 2011 - 2016 is made possible by Foundation friend and Board Member, **Milton Sender**. Our success is a result of your philanthropy and commitment to our mission and goals. Your support, interest and generosity are greatly appreciated. If you are interested in making a gift, you may donate at www.ons-foundation.org or complete the attached form.

4th Annual Medical Education Conference Huge Success Despite Hurricane Sandy!



On Saturday, November 3rd, the ONS Foundation welcomed over 100 medical professionals to the **4th Annual Medical Education Conference “Replacement Parts” – Innovations in Joint Replacement**. The event was held at the Noble Auditorium at Greenwich Hospital and was an overwhelming success despite the devastating effects of Hurricane Sandy.

Co-chaired by orthopedic surgeon Frank Ennis, MD and primary care sports medicine physician Gloria Cohen, MD, the seminar further enhanced the education of physicians, nurses, physical and occupational therapists, physician assistants, athletic trainers and coaches and chiropractors.

Twelve physicians and a physical therapist from ONS delivered informative, compelling presentations. Conference objectives included reviewing the pathophysiology of the

Besides knee, hip and shoulder replacements, there has been tremendous progress in developing effective wrist, elbow and ankle replacements. The ONS Foundation is excited to be involved in this state-of-the-art research.

generative joint, appropriate non-operative and operative management of the arthritic or dysfunctional joint and understanding the techniques of joint replacement. The pre-op preparation and recovery processes associated with physical therapy were also addressed.

Attendees enjoyed a continental breakfast and working luncheon. Special guest, comedian Jane Condon, delivered a “Post-Operative Performance” that evoked welcome laughter from the audience.

Plans are underway for our 5th Annual Medical Education Conference scheduled in October, 2013!



Photos at top: Alicia Hirscht, DPT presenting
Photos at bottom clockwise from top left:

Dr. Frank Ennis and Dr. Gloria Cohen, conference co-chairs; attendees checking in; Dr. Tamar Kessel presenting with Dr. John Crowe and audience looking on; Dr. Mark Vitale and Dr. Jeffrey Heftler, conference presenters; conference audience; attendees visiting vendor exhibits.

Our 2012 Summer Interns

The strategic plan of the ONS Foundation for Clinical Research and Education emphasized establishing an internship program for exceptional local students who demonstrate an interest in science, research and medicine. By exposing students to various aspects of the medical profession, we help them gain an appreciation of the commitment dedicated physicians make to their chosen fields and to their patients.

During the summer, several interns took part in the ONS Foundation program. Not only did they benefit greatly from



Chrissy Conroy, Taylor Dunstan and Jackie Fox

participating in their assigned projects, but the physicians and staff also benefitted from mentoring them. Projects were designed to complement the students' ages, level of education and experience.

At first, student **Abhishek Hinduja** was concerned that he would be faced with challenges he would be unable to meet. This insecurity was short lived and with the support of Dr. Sethi, Abhishek stayed for five weeks. He wrote, "In the time working here I have learned that a doctor is required to have certain skills ...they have to be quick physically and mentally...they must (be) a people person...kind and caring."

Chrissy Conroy, a college student at Villanova, considered her five week ONS Foundation internship "...an amazing experience and an opportunity to get firsthand experience in the field of orthopedics." She was extremely impressed with the program and expects it will flourish affording this opportunity to many other worthy students.

With this in mind, Chrissy wrote a summary for future ONS Foundation interns. Her words are encouraging, informative and revealing. Going to "...a conference or lab is...by far the best experience." Here, she saw "...the decision making process of surgeons." She shadowed the physicians, observed research procedures and had

numerous opportunities to ask questions. Under the guidance of Drs. Sethi, Cohen and Heftler, Chrissy expanded her own knowledge and took the initiative to learn about all aspects of patient care. She suggests to others that "...observing physical therapy...radiology...and most important asking questions..." results in a productive internship.

Georgetown University student, **Jacqueline Fox**, also wrote about her ONS Foundation intern experience saying "...it was one of hands-on learning not only in the office but also through lab research and operating room participation." Research is a major part of the ONS Foundation internship program. Dr. Sethi encouraged Jackie and the others to use their time to read. In fact, she wrote that they read "...scores of journal articles to compile an academic paper that hopefully will be used in a scholarly publication."

Every aspect of the intern experience is designed to encourage students to pursue careers in medicine and to help the profession thrive. Jackie exemplifies this and wrote, "Time in the OR and cadaveric labs were invaluable in my decision to pursue medicine professionally."

Another intern, **Alex Jonokuchi**, is pre-med at Columbia College, Columbia University. He was grateful for the opportunity to be an ONS Foundation intern and said..."I had a truly awesome experience this summer and will



Alex Jonokuchi

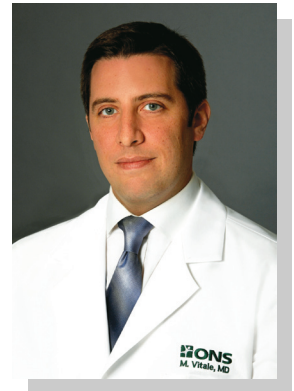
definitely look to explore more opportunities in orthopedics and sports medicine." Alex and others were involved primarily in research studies that not only sparked their interest but also helped Dr. Sethi to develop a shoulder recovery program and Dr. Camel in a spondylolysis study.

In addition to research and lab work, interns like Alex witnessed doctor-patient relations and understand the importance of "...treating every case individually."

The ONS Foundation strives to make our lab, research program and patient care experiences a part of the intern learning process. We will continue to expand the program and to include a cross section of qualified high school, college and post graduate students.

What's New in Hand Surgery – Advances in the Nonsurgical Treatment of Dupuytren's Disease

by Mark A. Vitale, MD, MPH



What is Dupuytren's disease?

Dupuytren's disease, also called Dupuytren's contracture, is a disorder that affects the tissue below the skin on the palm side of the hands and fingers producing dense and firm cords or nodules. It is not a cancer, is rarely painful and is not dangerous in itself. With time, however, these cords and nodules cause the fingers, primarily the ring and pinky fingers, to bend into the palm, making it difficult for affected individuals to put their hands in their pockets, shake hands, and perform other daily activities. Patients may report that the development of severe contractures is unsightly. The progression of this problem is highly unpredictable. In some patients it does not progress for years whereas in others it is rapid, causing the fingers to contract in a short period of time.

Who gets Dupuytren's disease?

Dupuytren's disease is more common in men over the age of 40 in people of Scandinavian, British, Irish or eastern European descent. Because of this preponderance in people of Northern European ancestry, it has traditionally been called "Viking's disease", as the path of Viking conquests appears to correlate with the distribution of this problem.

Is there a way to prevent this condition?

This is a disorder determined largely by peoples' genetics and is, therefore, an inherited disease. There are no known ways to prevent the development of Dupuytren's disease from occurring. Avoiding certain occupations, diets, or other environmental factors does not prevent the development of the disease.

When should you seek the advice of a physician?

When contractures in the fingers from Dupuytren's disease interfere with your daily activities, it is time to consult a physician who treats this condition. An easy test to determine whether Dupuytren's contracture warrants treatment is the "table top test" that is considered abnormal when a person cannot place the palm of the affected hand completely flat on a hard surface. This is a simple test that can be done at home testing for the progression of contractures. An abnormal result means that you are a candidate for treatment.

What are the treatments?

There are two main types of treatments. The first is surgical excision of the nodules and cords. Surgical excision is an excellent way to remove the abnormal growth below the skin to allow the fingers to straighten. It is performed on an outpatient basis and is extremely effective to straighten the contracted finger joints, improving the function and appearance of affected fingers. For people not interested in surgical treatment, a nonsurgical treatment now exist,

which is the use of a compound called Xiaflex®. This compound is an enzyme that is injected directly into the cords and specifically breaks up the abnormal tissue. This is done in the doctor's office rather than the operating room. Patients are typically seen the following day in the office where the physician gently straightens out the previously injected finger and the results are seen immediately. The results have also been excellent with this treatment and Xiaflex® now offers an exciting nonsurgical alternative. To determine if you may be a better candidate for surgical excision versus nonsurgical Xiaflex® injections you should consult your doctor.

Pre-treatment appearance of a 70 year-old patient with Dupuytren's contracture of the right ring and pinky finger and left middle and ring finger.



This patient experienced an excellent result allowing full straightening of the four affected fingers and he has maintained this result as seen at his 2 year follow-up visit at right.



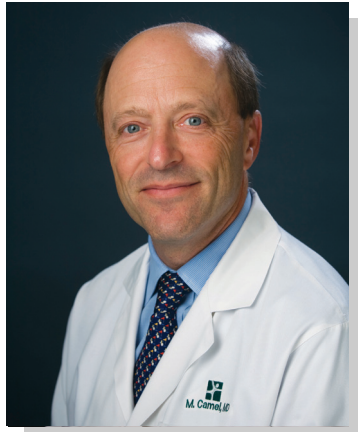
(Figures above from Badalamente and Hurst. Efficacy and safety of injectable mixed collagenase subtypes in the treatment of Dupuytren's contracture. J Hand Surg 2007;32A:767-774).

What is recovery like?

With both surgical excision and Xiaflex, typically a splint is worn for a period, often just at nighttime. While the most severe and longstanding contractures will not be completely straight, in many cases patients are able to achieve the ability to completely straighten their fingers. It is important to realize that while recurrence rates for both surgery and Xiaflex® injections is low, neither treatment prevents the possibility that Dupuytren's disease may recur some years down the line.

Meet our Board

Dr. Mark Camel, a neurosurgeon specializing in spine surgery, is the section head of neurosurgery at Greenwich Hospital. He is also Clinical Assistant Professor of Neurological Surgery at Weill Cornell Medical College in New York City.



Mark Camel, MD

Dr. Camel received his undergraduate degree from University of Rochester in New York and medical degree from Washington University School of Medicine in St. Louis, Missouri. After finishing his role as Chief Resident in the Department of Neurological Surgery at Barnes Hospital, he studied the molecular biology of pituitary tumors and astrocytoma during his research fellowship in the Departments of Neurological Surgery and Pharmacology at the Washington University School of Medicine. He served on the Executive Committee of the Congress of Neurological Surgeons for nine years in many roles including Vice President and several committee chairmanships.

Currently, Dr. Camel is a member of the New York Regional Cabinet for Washington University and serves on the Board of Trustees of Brunswick School.

In October, 2012, we welcomed Greenwich resident, Rich Granoff, to the Board and we look forward to working closely with him on the many worthwhile programs and initiatives that the Foundation supports.



Rich Granoff

Rich is the Founder and President of Granoff Architects, a well-known Greenwich firm that specializes in residential, commercial, landscape and interior design. A Cum Laude graduate of the Syracuse University School of Architecture, he recently established the Richard S. Granoff Endowed Scholarship Fund at his alma mater. Rich has been recognized frequently in various media including *Greenwich Magazine*, *Veranda*, and *The New York Times*.

A distinguished community leader, Rich currently serves on the Boards of the Greenwich Chapter of the American Red Cross, Kids in Crisis, Chabad Center, Greenwich Business Club and Arch Street Teen Center. He has been an ONS Foundation Golf Captain and a loyal supporter of our programs. When the dream of an ONS Foundation Research Lab became a reality, it was Rich and his team of expert architects and engineers who helped bring it to fruition. An avid golfer and skier, Rich lives in Greenwich with his wife, Jill, and their two sons.

Upcoming Seminars & Events

ONS Foundation to Host Women in Medicine Program

December 10, 2012— 17 students from the Greenwich Academy Women in Medicine program will visit the ONS Foundation Lab and gain insight into physical therapy, ultrasound and MRI.

Ski and Snowboarding Injury Prevention Seminars

Orthopedic surgeons Steve Hindman, MD, Tim Greene, MD and a physical therapist discuss safe skiing tips, causes and prevention of common skiing injuries and treatments for injuries, such as ruptured ACL. Conditioning/strengthening exercises are also addressed.

December 19, 2012— Mogul Meister Ski Club , 8:00 PM, Italian American Club of Elmsford, NY

January 16, 2013— North Castle Public Library, Armonk, NY. In association with Hickory & Tweed, 7:00PM

Pitching/Throwing Injury Prevention Seminar

Sports Medicine and Shoulder Specialist, Paul Sethi, MD and Alicia Hirscht, DPT, present a seminar on preventing arm injuries associated with throwing sports. Common overuse injuries are discussed as well as strength training and conditioning techniques.

April 3, 2013 - Old Greenwich Riverside Community Center, Old Greenwich, CT, 6:30PM.

Seminars are presented at no charge. Registration required. Email: contact@ons-foundation.org or call 203-869-3131.

Mini-Med School - Ask the Experts

Let's Talk About "Joints" - A seminar for the general public. Dr. Paul Sethi, Orthopedic Surgeon, delivers an overview of joints and related concerns followed by Q&A.

March 13, 2013 — Noble Auditorium, Greenwich Hospital, Greenwich, CT, 6:30 PM

Dr. Michael Clain has been utilizing the Lab to work on cartilage transplant techniques in the ankle - technical improvements that can translate directly into patient outcome improvements. During one of these sessions, our student interns observed first-hand a foot and ankle anatomy lesson directed by Dr. Clain, the regional foot and ankle expert.

In the next few weeks, Dr. Tim Greene will begin to study arthroscopic hamstring tendon repair and the sciatic nerve release. Dr. Greene has observed an increasing number of problems from chronic hamstring tears and tendonitis in his patients who are runners or triathletes. He is, therefore, working toward finding better solutions rather than to just give up the sport.

To date, we are proud of our achievements in cutting edge research and education. The existence of the Foundation's Lab is instrumental in enabling progress that will result in better outcomes for patients!

For more information about the Lab please email: contact@ons-foundation.org.

Avoid Cold Weather Injuries

The American College of Sports Medicine recommends that:¹

1. Coaches/athletes/medical personnel know the signs/symptoms and risk factors for hypothermia, frostbite, and nonfreezing cold injuries, identify individuals susceptible to cold injuries, and have the latest up-to-date information about current and future weather conditions before conducting training sessions or competitions.
2. Cold-weather clothing be chosen based on each individual's requirements and that standardized clothing ensembles not be mandated for entire groups.
3. The wind-chill temperature index be used to estimate the relative risk of frostbite and that heightened surveillance of exercisers be used at wind-chill temperatures below -27°C (-18°F).
4. Individuals with asthma and cardiovascular disease can exercise in cold environments, but should be monitored closely.

ONS Foundation Research Projects

Title	Purpose/ Study Goals	Status
Histology of: -Full Thickness Rotator Cuff Tear -Partial Thickness Completed Rotator Cuff Tears	Goals of this study include: - A gross appearance tendon scoring system will be developed and validated -The gross appearance of torn tendons will be compared with the histologic appearance of tendon - Rates of rotator cuff healing (by Ultrasound) are being correlated with histologic and gross appearance	We are finalizing data collection and have evaluated over 97 specimens with both gross and histologic studies.
Range of Motion Study [Multicenter Trial]	This study compares the accuracy of visual/video assisted vs. goniometric measures of shoulder range of motion and assesses accuracy. The outcomes of this study may result in more accurate measures for future patients.	The initial measurements have been recorded. We need to schedule the patients for their follow up examination (second round of measurements).
Lumbar Spine Stress Fracture	This study is a comprehensive review of adolescents with lumbar spine stress fractures.	This will be the largest series of these spine stress fractures; we will better understand treatments and outcomes as a result.
Correlation of Lumbar Fasciitis and Hamstring	The focus of this study is to find out if there is a correlation between plantar fasciitis diagnosis and presentation of hamstring tightness, BMI, and equinus of the foot.	Currently collecting study subjects
Shoulder Dislocation and Rotator Cuff Tear [Multicenter Trial]	The focus of this study is to examine rotator cuff tears after acute shoulder dislocations and to show how the timing of the surgery may affect patient outcomes including such factors as perception of pain, functionality of the shoulder and strength.	Currently collecting study subjects
Surgical Technique Videos -ACL/MCL Repair -Pectoralis -Distal Biceps -Scapulothoracic fusion	The goal of these projects is to create an instructional surgical video for each of the four surgical procedures and to submit them all for surgeon review.	-The ACL/MCL Repair video has been completed -The Pectoralis video has been recorded and is now in the editing process -The Distal Biceps video has been submitted
Results of -R-TSR in Community -R-TSR for Fracture	We are evaluating the role of reverse shoulder replacement as compared to partial replacement and fracture repair in shoulder fractures in the elderly population.	Active data collection and patient recruitment is underway.
Results of High Grade Partial Distal Biceps Tear	The focus of the study is to look into the role of the cortical button both on its own or along with the interference screw to intensify fixation.	Patients are coming in for their one year follow up evaluations. Half have been completed.

¹ Prevention of Cold Injuries during Exercise. *Medscape*. Nov 01, 2006.



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