

#### **Research • Education • Community Outreach**

### Spring 2018

Hoag Orthopedics is a non-profit corporation founded by Hoag Orthopedic Institute physicians.
The nonprofit exists to advance the field of orthopedics through research, education and community outreach. Funded by the generosity of the philanthropic community, the Hoag Orthopedics team supports the development of innovative research studies and the implementation of educational courses for medical professionals and for the local community.



### **Our Mission.**

The mission of Hoag Orthopedics is to support meaningful research and education in health care with an emphasis in orthopedics, in order to improve the quality of health care provided within our community.

#### **DONOR SPOTLIGHT**

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Meet the Team.



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# **RESEARCH SPOTLIGHT.**

# Simplify Disc Clinical Trial

Hoag Orthopedics is proud to continually be in the forefront of new technology, and was one of 16 medical centers in the United States, and only one of three in California, to lead the way in cervical disc replacement by participating in The Simplify Trial.

The Simplify Trial is a non-randomized (all patients enrolled received the Simplify® Disc) U.S. FDA approved study, that involves research into the safety and effectiveness of Simplify® Disc for patients who are undergoing a discectomy (removal of a cervical disc) at one level due to arm pain and/or neurological symptoms (such as weakness or numbness) with or without neck pain, and have specific findings on imaging studies such as X-ray, CT, or MRI.

Patients treated with the Simplify® Disc are followed for a period of at least two years (and potentially up to ten years) during which time their outcomes are monitored and recorded. The Simplify Trial compares outcomes after surgery with Simplify Disc to outcomes after ACDF (cervical fusion) surgery using a historical control group.



Simplify® Disc is a non-metallic cervical artificial disc which is designed to maintain motion. It is MR conditional as it is designed to be compatible with MR imaging which may eliminate the need for CT/Myelogram and CT imaging. It is made of two PEEK endplates and one mobile core made from surgical grade ceramic, and has the widest range of disc heights, closely matching average patient cervical disc height.

Enrollment for the one level Simplify Trial, which consists of 166 patients, recently closed in February 2018. However, Hoag Orthopedics is participating in the two-level Simplify Trial which is currently enrolling patients.





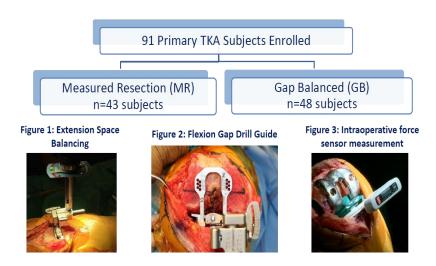
# TOTAL JOINT REPLACEMENT & RECONSTRUCTIVE SURGERY.

### **Manuscript Accepted**

The "Intraoperative Comparison of Measured Resection and Gap Balancing Using a Force Sensor: A Prospective, Randomized Controlled Trial" continues to be an exciting project! Under the oversight of Dr. Steven Barnett, Dr. Krishna Cidambi and Dr. Nicholas Robertson (2016-2017 Total Joint Fellows) were selected to present a poster at the American Association of Hip and Knee Surgeons (AAHKS) this past November. This project compares two surgical techniques for preparing femoral component position in Total Knee Arthroplasty: Measured Resection and Gap Balancing.

Coined the Balanced Vs. Measured Study, 91 subjects were randomized to each technique and surgical data were assessed. Final femoral component external rotation, posterior condylar resection thickness, and compartment forces were compared between the two groups.

The study found that Gap Balanced resulted, on average, in a thicker posterior condylar cut and thus, an increased flexion space relative to Measured Resection. Inter-compartmental Force Difference, although not statistically significant, trended toward a more uniform distribution between full extension and full flexion in the Balanced group compared to Measured group.



It is currently unclear what clinical ramifications result from the noted differences between these two techniques. Future functional outcomes will be monitored in this patient population.

We are pleased to announce that a manuscript for this project has been accepted for print in the Journal of Arthroplasty. Further, we are excited to track these patients through long-term clinical follow-up to further compare outcomes in surgical technique.



# SPORTS MEDICINE.

### New ACL Registry

An Anterior Cruciate Ligament (ACL) rupture or tear is a common injury, especially in the active or athletic population involved in sports with sudden, twisting motions of the knee. With the help of our current Sports Medicine Fellow, Dr. Andrew Nelson, Hoag Orthopedics has created an ACL reconstruction registry that will help further the surgical and clinical knowledge of the investigating surgeons from Orthopaedic Specialty Institute (OSI) and Newport Orthopedic Institute (NOI). This ACL registry will be able to further our scientific knowledge of ACL reconstruction procedures, graft types, graft sizes, graft fixation, possible revision procedures, any associated procedures, and help delineate patient specific factors.



From left to right: Drs. Shepard, Nelson, Gazzaniga, Prietto, and Petrie

Patients age 14 years or older undergoing arthroscopically aided ACL repair/augmentation or reconstruction will be included in the registry and followed prospectively. The registry consists of clinical and standard-of-care data collection and patient satisfaction questionnaires. Data will be obtained from clinic charts, as well as routine standard of care pre-operative and post-operative clinic visits. Additional patient satisfaction questionnaires including the VAS pain score, SANE, KOOS Jr., and Marx Activity will be administered.

This ACL Registry has been the aspiration of the Sports Medicine Faculty at Hoag Orthopedics for several years and we are excited to see the project come to fruition. We would like to thank those who have offered us guidance in creating our own registry, and for all of the time and effort poured into this project by our staff and faculty. The ACL registry will collect helpful data that could determine best practices and improve scientific knowledge behind this common orthopedic procedure.

We're excited to announce that the ACL registry received IRB approval February 2018 and we have begun enrolling patients.



# SURGICAL SPINE.

### The Peel Pack Study

In the Peel Pack Study (PI: Dr. Jeremy Smith), a retrospective review of 2000 plus patients who underwent spinal procedures between 2010 and 2017 is being researched. The purpose is to determine whether or not peel pouch packages for spine instrumentation leads to clinically important differences in the rate of infection.

Recently, peel packs have gained traction as a sterilization packaging technique for small, lightweight, low-profile implants. Traditionally, flat wraps and sterilization containers/trays have been used for the purpose of sterilization packaging systems. As of now 895 patients have been analyzed; 435 patients underwent instrumentation packaged in peel packs vs. 460 who underwent instrumentation packaged via traditional means. The difference in rate of infection was not statistically significant.

With the cost of peel pack instrumentation significantly higher, our data at the time being calls into question the benefit of peel pack instrumentation. Certainly, as hospitals and operating rooms generate a large portion of revenue and waste within the health-care system, cost-efficiency and waste reduction must be prioritized. Further investigation is being done in order to accurately describe the cost-efficiency of peel pack instrumentation.



Teddy Quilligan, Clinical Research Coordinator, discusses clinical trials with a patient.

Thank you Hoag Orthopedics Physicians and Fellows for your continued enthusiasm in the advancement of orthopedic research. We are very excited for the projects to come!

# EDUCATION.

# Meet Our Fellows.



Andrew Nelson, DO Ortho. Sports Medicine

*Residency* Good Samaritan Regional Medical Center Corvallis, Oregon



Joshua Schwind, MD Surgical Spine

*Residency* University of Toledo Medical Center Toledo, Ohio



Travis Scudday, MD Adult Reconstruction and Total Joint Replacement Hip & Knee

*Residency* Loma Linda University Loma Linda, California



Zachary Thielen, MD Adult Reconstruction and Total Joint Replacement Hip & Knee

*Residency* University of California, San Francisco San Francisco, California

# **Upcoming Grand Rounds.**

Post-Operative Pain Management and the Opioid Crisis: The Orthopaedic Surgeon's Dilemma

Dr. Vance Gardner, Medical Director—Hoag Orthopedics

### Friday, May 11th, 2018 at 7:00 AM

Hoag Orthopedic Institute Allan & Sandy Fainbarg Community Education Center 16250 Sand Canyon Avenue, Irvine, CA 92618



# COMMUNITY OUTREACH.

**Back to Play** 

Together, Hoag Orthopedics and Vital Link OC created a unique program to expose high school students to careers in orthopedic healthcare, with the hope of encouraging students to explore healthcare career options and inspiring students to pursue their dreams. Our event, "Back to Play" guides students through a step-by-step live action play of orthopedic care – from injury on the field, to consultation, surgery, and recovery. In 2017 we gave nearly 240 students from five local high schools, a behind the scenes look at 12 orthopedic careers and the opportunity to seek career guidance from our professionals.



"I got an inside view on each profession and discovered more medical careers" — Middle College High School

"We got to learn in depth about what each professional does and actually got to know them personally." — Canyon High School "[Back to Play] allowed me to see the purpose of each occupation, how they worked together & their work environment." — Portola High School

### University of California, Irvine Field Study Partnership



Keeping with our commitment to continuous education and community outreach, Hoag Orthopedics has partnered with the University of California, Irvine School of Social Ecology as a field study placement site. Undergraduates of the School of Social Ecology are required to complete 100 hours of field study through an internship at one of many prestigious locations in our community. The program provides students with the opportunity to examine social problems, evaluate the merit of ideas presented in the classroom, and conduct naturalistic scholarly observations and investigations. At Hoag Orthopedics, interns are active in our day-to-day operations, are encouraged to take on their own projects, participate in the research process, and receive mentoring from the team. We are proud to provide our enthusiastic interns with a broad and unique experience, guided by their own interests and to gain their fresh perspectives.

# DONOR SPOTLIGHT.

### Orthopedic Pioneer Supports Future Innovation

Dr. Earl Feiwell and wife Shirley were both knee replacement patients under the care of Robert S. Gorab, M.D., chief medical officer, Hoag Orthopedic Institute (HOI). But, their connection to Dr. Gorab and the clinicians at Hoag Orthopedic Institute is deeply rooted. An orthopedic surgeon and educator, Dr. Feiwell was an instructor during training for Dr. Gorab as well as Carlos Prietto, M.D., executive director of Hoag Orthopedics and Miguel Prietto, M.D., partner and brother to Dr. Carlos Prietto.

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Shirley taught elementary school before they welcomed their three children. While Shirley is modest about talking about her teaching career, Dr. Feiwell proudly shared how she took it upon herself to rewrite textbooks, mentor her fellow teachers and hold study sessions for her students during recess and after school. As she dedicated herself to raising their family, she volunteered in the schools and tutored children in their neighborhood.

#### **Grateful Benefactors**

While they were happy to be around so many old friends, the couple was profoundly affected by the entire experience at Hoag. "We were both impressed with how everything was arranged and worked efficiently," said Dr. Feiwell. "We never doubted that everything happened the way it should."

#### A Front Row Seat to Progress

In the early days of Dr. Feiwell's career, he entered orthopedics working with polio and spina bifida patients at his Long Beach practice and at Rancho Los Amigos Rehabilitation Center. The procedures and technology we take for granted today were mere ideas at that time.

Dr. Feiwell's practice was one of the first to offer total hip replacement and use clean rooms. "Ninety-five percent of the surgeries I was doing at the end of my career were not even possibilities when I was in training," he says. After their great patient experiences at Hoag, the Feiwell's went right back to tennis and traveling the world. They also became excited by new developments in treatment such as outpatient knee replacement and the research underway by fellows and orthopedic surgeons at Hoag Orthopedics. They became Hoag Benefactors with a gift that supports orthopedic research and education.

After attending the most recent Hoag Orthopedics Fellowship Research Day, during which fellows shared case presentations from the past academic year, Shirley was very impressed with the advancements happening right here at Hoag. "If you want to see progress, you must support it," she says.

To join Dr. and Mrs. Feiwell in support of education, research and innovation at Hoag Orthopedics, please contact C.C. Hafner, director of major gifts at CCHafner@hoag.org or (949) 557-0246.

# Hoag Orthopedics

Save The Date

3rd Annual Orthopedic Fellowship Research Day with Distinguished Visiting Professor



# Alexander Vaccaro, MD, PhD, MBA

Richard H. Rothman Professor and Chairman, Department of Orthopaedic Surgery President, Rothman Institute

Friday, June 29th, 2018

7:00 AM

Hoag Orthopedic Institute Allan & Sandy Fainbarg Community Education Center 16250 Sand Canyon Avenue Irvine, CA 92618