GLOBAL MEDICAL RESEARCH INNOVATIONS — CLOSE TO HOME

words | RICH ELLIS

Cleveland Clinic. Mayo Clinic. Duke. Memorial Sloan. Johns Hopkins. When "groundbreaking medical research" is mentioned, these leading medical institutions often come to mind, and with good reason. They've established themselves as global healthcare leaders through both their medical research and best-in-class treatment. What many people probably don't realize, however, is that this type of game-changing medical research also happens a lot closer to home, and at healthcare organizations that might consist of just a handful of medical professionals. And despite their lack of mainstream media coverage or top-of-mind awareness among consumers, the research and treatment innovations these local healthcare leaders discover and deliver are just as important to patients worldwide as those delivered by larger and better-known organizations.

In our own backyard, one doesn't have to travel any further than Walnut Avenue to find just such an example of local medical research with global treatment implications. For example, there are less than a dozen surgeons in the world that have been trained and are using the latest Total Ankle Joint replacement technology with a unique lateral approach from the Zimmer Orthopedics. One of them is right here in Roanoke.

Dr. Charles Zelen, DPM is that surgeon. He practices at Foot and Ankle Associates of Southwest Virginia. Dr. Zelen has nearly 14 year of experience in total ankle replacement. In addition, he is medical director of The Professional Education and Research Institute (PERI) on Walnut Avenue in Roanoke.

The Professional Education and Research Institute has specialized treatment rooms for patients enrolled in the more complex clinical trials.

PERI is a private research organization that was established in 2005 to educate surgeons in lower extremity surgery and in performing clinical research in foot and ankle surgery and diabetic limb salvage. At the same time, PERI specializes in clinical trials on wound healing — specifically on healing diabetic wounds — and trials involving orthopedics.

"Our mission is to improve foot and ankle care through physician education and clinical research,'" Dr. Zelen says.

PERI's work on healing diabetic wounds —which are notoriously difficult to heal because of neurological and circulation issues that often afflict diabetics— usually involves skin grafting materials and wound dressings.

The Professional Education and Research Institute offers a multimedia classroom for group presentations and lectures.

"The advantage to patients and a benefit to the community [of the clinical trials] is that they get to try new treatment modalities at no cost to them," Dr. Zelen explains. "Over the past eight years, we have participated in FDA phase II, phase III and post-market trials involving wound gels, dressings and skin grafting products. In addition, we have participated in genetic research, looking at growth factors to help re-establish foot circulation in patients who can't undergo bypass or endovascular surgery. That participation has made an impact on developing new ways to help save diabetics' limbs."

A clinical trial presently underway at PERI studies the effectiveness of human amniotic membrane on diabetic ulcers. Dr. Zelen serves as the principal investigator.

"Human amniotic membrane has been used in wound care for many years," Dr. Zelen explains. "The product being studied is well known to have a number of growth factors imbedded in it that help diabetic wounds heal."

The Professional Education and Research Institute has a fully functioning seven station cadaveric and biomechanics lab. From simply extremity labs to complex total joint and spine labs, all are possible in the facility that can accommodate up to 20 surgeons and faculty.

This is the second trial PERI has conducted using amniotic membrane. The first trial met with great success and was presented at the Symposium on Wound Care's national wound healing conference last year, as well as later that year at the Clinical Symposium on Advances in Skin and Wound Care in Las Vegas.

In podiatry and in orthopedics for the foot and ankle, PERI participates in both retrospective and prospective studies. The retrospective studies look at clinical results in tendon repairs and bunion surgery, and examine ankle and rear-foot fusions.

PERI's medical professionals also perform cadaver studies in the Institute's cadaver and biomechanical lab. Presentations of their research and findings have been accepted at the American Orthopedic Foot and Ankle Society.

In 2011 their study examining cadaver skin in Achilles tendon repair was accepted for poster presentation, as was a 2012 study comparing the use of cadaver skin to porcine and bovine skin in Achilles tendon repair.

In addition to Dr. Zelen, PERI's clinical research staff includes Deborah Morrison, RN, Clinical Research Nurse, and Morgan Stepanek, BS, Clinical Study Coordinator.

"As far as current prospective clinical trials in orthopaedics, we are participating in a study examining the effectiveness of injectable human amniotic membrane in the treatment of plantar fasciitis—also known as heel spurs," Dr. Zelen explains. "Human amniotic membrane has been used in orthopedic applications too—just as it has in wound care—for many years with a bulk of the research in spine surgery."

Any patient with a history of plantar fasciitis for at least two months, who meets certain health criteria, and who hasn't had success with previous treatment may be a candidate to participate in the trial.

The clinical trials and medical research being performed at PERI hold the promise of improving and saving lives right here as well as around the world, with an added benefit for trial participants of receiving treatment close to home, where they're most comfortable.

Additional information about PERI, including about participation in clinical trials or for medical professionals or companies interested in renting the facility for training, can be obtained by contacting the lab coordinator at 540.797.2726.