As Peripheral Artery Disease Awareness Month Begins Patients Sought for Clinical Trials

As many of you are aware, September is Peripheral Artery Disease Awareness Month. Unfortunately, many patients do not report problems to their health care providers because they think it is a natural part of aging or due to some other cause. Podiatrists have an excellent vantage point for early detection of peripheral artery disease (PAD) and can partner with other specialists to oversee diagnosis, care and treatment.

Critical limb ischemia (CLI), a severe stage of peripheral artery disease, may be a cause of many signs and symptoms presenting to the Podiatrist. A diminished blood flow to the lower extremities can result in gangrene, slow healing ulcers, thickened toe nails, pain associated with walking or pain at rest. Emerging vascular interventions such as angioplasty and endovascular stent placement, bypass surgery, atherectomy and more continue to be the "gold standard" for treatment of arterial blockages. Unfortunately many patients may have other medical complications preventing them from receiving these accepted practices, or in some instances these patients show suboptimal improvement after vascular intervention.

We are striving for significant advances in our ability to regulate or manipulate the body's native adaptation to ischemia by growing new vascular networks. This is now possible by harnessing the body's own autologous adult stem cells found in adipose tissue or bone marrow. Stem cell therapies are being tested to treat a variety of conditions, in which they have the ability to "home" to the diseased tissue area, decrease inflammation, and promote vascularization as well as tissue healing. Human and animal trials report promising results that provide the basis for clinical trials underway in Indiana. Several of these trials are designed to investigate limb and tissue salvage options by using stem cells obtained from the patient. Cell delivery involves delivering the processed cells back to the patient by intramuscular injection, at location based on angiography and diagnostic information identifying areas for revascularization.

The Indiana Center for Vascular Biology and Medicine and the IUPUI Signature Vascular and Cardiac Center for Adult Stem Cell Therapy are currently recruiting patients for three clinical trials to address threatened amputation, intermittent claudication and difficult wound healing. These trials are sponsored by the National Institutes of Health (NIH) or industrial partners and may provide your patient with additional options.

The Patients with Intermittent Claudication Injected with ALDH Bright Cells (PACE) Trial is a Phase II multi-center study that is recruiting 80 patients with **claudication**. This study is sponsored by the Cardiovascular Cell Therapy Research Network and is funded by the National Heart, Lung and Blood Institute (NHLBI), a part of the NIH. Indiana University is one of seven selected participating centers in the U.S. Patients will be randomized in a 1:1 fashion to receive either placebo or aldehyde dehydrogenase-bright stem cells isolated from their bone marrow and injected into the calf muscle. The duration of the study is six months. The primary endpoints are peak walking time on the

treadmill and changes in blood flow as measured by magnetic resonance imaging. After completion of the study, patients will return to their referring vascular specialists to resume their care.

The treatment of critical limb ischemia in PAD study (MOBILE) is a Phase III multi-center, double-blind, placebo-controlled trial that is recruiting 152 patients with **critical limb ischemia** with unfavorable options for revascularization. Patients will be randomized 3:1 (bone marrow cells: placebo), with the primary endpoint of freedom from major amputation and survival at one year. IU is the lead center in this pivotal clinical trial and the results will help determine whether autologous bone marrow cells are an effective therapy to prevent major amputation. After completion of the trial, all patients will return to their referring physician for follow-up and treatment.

The Autologous Adipose-Derived Stromal Vascular Fraction Cells to Treat Critical Limb Ischemia Trial (TGAIT) is a Phase I, open label, single-center trial that will assess the safety of autologous adipose derived stem cells in preventing major amputation and survival in patients with critical limb ischemia. This is the **first study in the U.S. to use adipose derived stem cells in CLI** and all patients will receive treatment. After completion of the trial, patients will return to their referring physician for follow-up and treatment.

Our center is actively seeking patients to enroll in these trials. If you have patients with **critical limb ischemia** (rest pain and/or tissue loss) who has unfavorable options for revascularization, or patients with **intermittent claudication**, who may consider autologous cell therapy, please contact our study coordinators at 855-333-3260 or cvtrials@iupui.edu. THANK YOU FOR YOUR PARTNERSHIP.