



Small



Madara

SPOTLIGHT ON CLINICAL RESEARCH

Nephrology, Cardiology, Radiology, Neurology

Roy S. Small, M.D.

Medical Director of Clinical Research

Heather Madara

Administrative Research Assistant

Penn Medicine Lancaster General Health Research Institute

Editor's note: *In the last issue of JLGH, we noted that the tradition of clinical research at Lancaster General Hospital has been strengthened further by the merger of LGH into the Penn Medicine system. In keeping with our mission to encourage and support the search for new medical knowledge, we initiated a new section to draw attention to ongoing studies at LGH, with a focus on those that are actively enrolling patients.*

Physicians who wish to refer patients for any of the studies mentioned below are encouraged to contact the Penn Medicine Lancaster General Health Research Institute at 717-544-1777.

Other members of the Penn Medicine LGH staff who are conducting research and wish to have their studies described here, are encouraged to contact the offices of JLGH at 717-544-8004.

RENAL DISEASE

ASCEND-ND

Principal Investigator: David Somerman, D.O.

Daprodustat (GSK1278863) is currently being investigated as a treatment for anemia of chronic kidney disease (CKD) in both dialysis and non-dialysis (ND) subjects.

It is a hypoxia-inducible factor prolyl hydroxylase inhibitor (HIF-PHI) in a Phase 3 study to evaluate its safety and efficacy in the treatment of anemia associated with CKD in ND subjects, compared with darbepoetin alfa, a recombinant human erythropoietin (rhEPO).

HEART FAILURE

HEART FID

Principal Investigator: Lindsay Castle, D.O.

Iron-deficiency anemia is the leading cause of anemia worldwide. In 2013, the FDA approved ferric carboxymaltose (FCM) for the treatment of iron-deficiency anemia in adult patients who are intolerant of oral iron or have had an unsatisfactory response to it; or who have non-dialysis-dependent chronic kidney disease.

This is a double-blind, multicenter, prospective, randomized, placebo-controlled study to assess the effects of IV FCM compared to placebo on the 12-month rate of death and hospitalization for worsening heart failure, and change in 6MWT (6-minute walk test) at six months for patients in heart failure with reduced ejection fraction

and with iron deficiency. The primary objective of this study is to determine the efficacy and safety of iron therapy using intravenous (IV) FCM, relative to placebo, in the treatment of patients in heart failure with reduced ejection fraction and with iron deficiency.

GUIDE-HF

Principal Investigator: Tarek Nossuli, M.D.

Remote pulmonary artery (PA) pressure monitoring provides clinicians with actionable data to guide individualized adjustment of medication doses, with the goal of preventing heart failure hospitalizations (HFHs) or other decompensation events. The CardioMEMS™ HF System is currently the only FDA approved system indicated for previously hospitalized NYHA Class III HF patients, regardless of left ventricular ejection fraction (LVEF), with the goal of reducing HFHs. The system is comprised of a lead-less, battery-less pressure sensor permanently implanted in the PA, which remotely transmits PA pressure measurements from the patient's home to a secure website.

This study was designed to provide an innovative approach to HF treatment, that would – by decreasing decompensation events – not only improve patients' quality of life and survival, but also reduce the overall cost of their health care.

The GUIDE-HF trial seeks to discover whether hemodynamic-guided HF management is applicable to a larger group of at-risk HF patients, and whether maintaining hemodynamic stability improves overall survival and quality of life in such HF patients.

RADIOLOGY

CT-FFR & CTP

Principal Investigator: Ron Jacob, M.D.

Computed Tomographic Perfusion (CTP), and Computed Tomography-Derived Fractional Flow Reserve (CT-FFR), have emerged as promising ways to identify ischemia when coronary disease is identified by coronary artery tomographic angiography (CCTA). The two tests provide different and perhaps

complementary information.

Fractional Flow Reserve (FFR) measures the effect of a coronary stenosis on flow by measuring the drop in pressure across the stenosis before and after administering a vasodilator. Coronary Flow Reserve (CFR) measures flow in a given arterial tree at rest and at maximum vasodilation.

This investigator-initiated study will evaluate the roles of dynamic CTRP and CT-FFR for each vessel assessed in subjects presenting with chest pain. Subjects in the study will include those who have had a clinically indicated CCTA for suspicion of coronary artery disease, and who are determined to have a coronary stenosis $\geq 50\%$ and $\leq 99\%$. (CCTA is a clinically indicated and standard of care procedure at Lancaster General Hospital.) However, subjects with left main disease greater than 50%, and occluded vessels, will be excluded from the study.

CATH LAB

INDICOR

Principal Investigator: Rahul Jhaveri, M.D.

The Indicor Validation Study is designed to compare a new investigational device, Indicor, a noninvasive tool for estimating left ventricular end diastolic pressure (LVEDP), to the gold standard, invasively measured LVEDP, via direct measurement with left heart catheterization. The Indicor indirectly measures LVEDP by calculating a value from finger photoplethysmography (PPG) waveforms that will be recorded while the patient performs a Valsalva maneuver. (The Valsalva maneuver has been recognized for over 60 years as an aid in diagnosing heart failure. Vixiar developed a handheld device that automatically guides a user in performing the Valsalva maneuver by telling the user when to start the expiratory effort, providing visual feedback for staying within the specified range of expiratory effort, displaying how many seconds have elapsed in the effort, and then instructing the user to stop the expiratory effort.)

Patients scheduled for left heart cardiac catheterization for direct measure of left ventricular end diastolic pressure (LVEDP) as part of routine care, are asked to participate. Investigators take non-invasive measures of LVEDP using the Indicor device, repeated at time points

before and after the left heart catheterization procedure. During the cardiac catheterization, while the pressure transducer used by the clinical team to measure LVEDP is in the aorta, the Valsalva testing is repeated. This allows investigators to determine how well the amplitude changes of the PPG signal during Valsalva maneuver reflect the amplitude changes of central arterial pressure during the Valsalva maneuver.

STROKE

ARTESIA

Principal Investigator: Sandeep Bansal, M.D.

Subclinical atrial fibrillation (SCAF) is a new disorder that has been recognized since implantable devices became available that are capable of long-term, continuous monitoring of heart rhythms. SCAF is characterized by one or more runs of device-detected rapid atrial arrhythmias that are not detected as clinical atrial fibrillation (AF) by the usual methods – electrocardiogram, Holter monitor, etc. Unlike clinical AF, SCAF is asymptomatic, of shorter duration, and often has a more regular rhythm in the right atrium where it is typically detected.

Apixaban is a Factor Xa inhibitor that is an effective and safe anticoagulant that has been shown to have an excellent risk/benefit profile for preventing stroke in clinical AF. It is highly suitable to study whether oral anticoagulation will reduce the risk of stroke or systemic embolism in SCAF.

Patients will be randomized in a double-blind manner to receive apixaban or aspirin. The ARTESIA study aims to determine if treatment with apixaban, compared with aspirin, will reduce the risk of ischemic stroke and systemic embolism in patients with device-detected subclinical atrial fibrillation, and additional risk factors for stroke.

Dr. Jeff Healey of Population Health Research Institute in Ontario, Canada, principal investigator for this global study, gave a CME lecture for LGH physicians, technicians, nurse practitioners, nurses, and research personnel on January 15, 2019, which provided greater understanding of subclinical AF and stroke to those treating it firsthand.

Roy S. Small, M.D.
The Heart Group of Lancaster General Health
217 Harrisburg Ave.
Lancaster, PA 17603
717-544-8300
rsmall@lancastergeneral.org

Heather Madara
Penn Medicine LG Health Research Institute
131 E. Frederick St.
Lancaster, PA 17602
717-544-1777
hmadara2@lghealth.org