



### Thank you!

I want to begin by thanking you for your participation in and dedication to the Pitt Men's Study and the Multicenter AIDS Cohort Study (MACS). Your dedication and generosity have yielded a wealth of data and samples that have led to a number of landmark, life-altering discoveries. Together we have made great strides in understanding, controlling, and preventing HIV infection. This has allowed our men and many millions of others around the world to lead longer, healthier lives.

### Aging and HIV

Over the years, we have maintained our core study components (blood draw, health and behavioral questionnaires, physical exam, and neuropsychology), but we've also adopted a variety of additional tests and questionnaires to address the ever-evolving HIV epidemic. As HIV-infected people live longer we need to assess the long-term effects of the virus and the medications used to control it. You may have heard that those infected with HIV "age" faster than those without. Although this difference in "aging" appears to be small, there is evidence that it exists. By performing new studies that isolate various body systems (heart, lung, kidneys, etc.) in both our infected and uninfected men we can examine these differences. This may lead to ways to make people's lives longer and healthier, with or without HIV.

I know that these tests take extra time that may necessitate having you come back to Oakland for additional appointments. We will continue to do everything possible to accommodate your personal needs, and minimize this extra time necessary to complete all of the study components. Your generosity, patience, dedication, and good will are deeply appreciated.

### Funding Opportunities

Most recently we have received major funding from the National Heart, Lung, and Blood Institute (NHLBI), and in the future, we will likely receive funding from this and other agencies within the National Institutes of Health (NIH). It's an exciting time and a testament to how much the Pitt Men's Study and MACS are valued within the scientific community.

### New Challenges

When our study first opened its doors in 1984 it was thought that it would take 3-4 years to cure AIDS. That optimism turned to despair as the 1980s led into the 1990s, a time during which we watched many of our loved ones succumb to HIV infection in ever increasing numbers. The advent of HIV drug combination therapies in the mid-1990s turned the course of HIV. In 1995 alone we lost well over 50 study volunteers. When the new therapies became available in 1996 our death rate fell to less than 20, and it continued this downward trend into the 2000s. Today we lose more men to "natural causes" than HIV.

Our new challenge is to monitor our men to look for ways we can help circumvent heart, lung, and kidney disease, dementia, and other conditions. Additionally, we continue our "basic science," microbiological experiments that help us better understand how to control HIV without taking pills every day and that may, hopefully, lead us to a way to rid the body of HIV.

All of our men – infected and uninfected, young and old, healthy or ailing, local or far away – are important allies in this continued effort. I hope that you will stick with us, stay the course, and share in the knowledge that we are making a better future for everyone. I am sending you this letter to thank you for your participation and to let you know about several "state of the art" studies that have been or will be launched in the upcoming visits. As always, please contact our clinic staff at 412.624.2008 or 1.800.987.1963 if you have any questions, comments, or concerns.

Thank you,



Charles R. Rinaldo, PhD  
Principal Investigator  
Pittsburgh MACS

## CONTINUING STUDIES

October 2016 – April 2018

### ECG Study

Many of you have already had an electrocardiogram (ECG or EKG) administered in our PMS/MACS clinic. The test is non-invasive - small adhesive electrodes are placed on your chest, arms and legs to record the flow of electrical signals through your heart. By observing the progress of these signals, the cardiologist (heart doctor) can recognize various abnormalities in cardiac function, including variations in the rate and pattern of heartbeats, damage to the muscles of the heart (such as current or previous heart attacks), and the effects of various drugs and procedures (e.g., insertion of artificial pacemakers) on the heart.

You also may have had the wireless Ziopatch attached to your chest that you wore for an extended period to record the heart's electrical activity 24/7. This test is important because there are abnormalities that may be present but are not happening at the exact moment that an ECG is being recorded. Because you are participating in a longitudinal study over years of follow up, ECG and Ziopatch patterns may provide clues to factors that can result in subsequent development of cardiac abnormalities.

### Preliminary results

We conducted a total of 361 ECGs and administered 295 Ziopatches. Significant alerts were found on 4 ECG tests and on 12 Ziopatches. This study was to be completed by the end of Wave 66 (03.31.17) but ***we will continue to offer the protocol during Wave 67 (09.31.17) to any participants who did not receive the tests.***

### PFT Study – Lung Function Testing

You may have also had a pulmonary function test (PFT). This test requires that you blow into a tube as hard as possible in order to measure how much air is getting into your lungs. You will also be asked to do a breathing test to measure how well oxygen moves from your lungs to your blood.

A pulmonologist (lung doctor) can recognize abnormalities that may have been caused by smoking, persistent infection, acute and chronic impairments to airflow (such as asthma, chronic bronchitis, and emphysema), the results of chronic exposure to pollutants in the air, and the impact of allergens such as pollens on lung function.

The lungs have a tremendous reserve capacity which tends to make problems difficult to detect. Therefore, early changes in lung health and function may be occurring even though the person is unaware of any problem. Please keep in mind that because the lung function testing was done in a research setting, your doctor may repeat the testing in a standard clinical setting.

### Preliminary results

As of the end of July, 192 participants have completed the PFT study. Analysis of the results is pending.

## NEW STUDIES

October 2017 – April 2018

### ECHO Study

This study, which ***will be launched in Wave 68 (10/1/17 - 3/31/18)***, involves having an echocardiogram (ECHO) done at the UPMC Heart and Vascular Institute located at Presbyterian Hospital in Oakland. An ECHO uses sound waves to make moving pictures of your heart. Essentially, it's a sonogram of your heart. ECHOs measure blood flow and pressures, the size and shape of your heart, how well the heart valves control blood flow through your heart, and the location and extent of any tissue damage to your heart. This test, combined with the ECG, provides a detailed picture of the function of your heart and the nature of any abnormalities that may indicate or predict heart disease.

### What to expect

The ECHO takes approximately 45 minutes and no special preparations are required. You will lie on your left side and a small amount of gel will be applied to your chest over your heart. Three electrocardiogram (ECG) leads will be placed on your chest to measure your heart rate during the exam. Since the test will happen at Presby, the ECHO appointment will most likely be scheduled outside of your regular MACS visit.

### Potential benefits to you

We will send you (and your doctor, if you wish) the results from your ECHO test. The resulting images can be used to catch any heart conditions, hopefully during early stages, and you may benefit if cardiac function abnormalities are detected.

### SLEEP Study

Poor sleep has been associated with daytime sleepiness, and increased risk of elevated blood pressure, cardiovascular disease, metabolic diseases (e.g., diabetes), and neurocognitive dysfunction (e.g., mental alertness). Early studies have suggested that sleep patterns are more often altered in men with HIV infection, contributing to their higher risk of other health issues. Poor sleep quality and habitually short sleep duration result in stress that may influence the high prevalence of sleep apnea in our participants. For these reasons, we will be inviting you to participate in sleep studies in the near future.

### What to expect

You will be asked to take home and wear a small facial device for only one night of sleep. In addition, we will ask you to wear a light wrist band on your non-dominant hand for seven days. These tests will allow us to monitor the quality and pattern of your sleep including whether you are suffering from sleep apnea (ceasing to breath for short intervals, a serious disorder).

### Potential benefits to you

We will send you (and your doctor, if you wish) the results from your sleep monitoring. The results will be assessed by a sleep specialist to diagnose any sleep disorders.