You are being invited to take part in a research study. This study is a multi-site study, meaning that subjects will be recruited from several different locations. Because this is a multi-site study this consent form includes two parts. Part 1 of this consent form is the Master Consent and includes information that applies to all study sites. Part 2 of the consent form is the Study Site Information and includes information specific to the study site where you are being asked to enroll. Both parts together are the legal consent form and must be provided to you.

If you are the legally authorized representative of a person who is being invited to participate in this study, the word “you” in this document refers to the person you represent. As the legally authorized representative, you will be asked to read and sign this document to give permission for the person you represent to participate in this research study.

This consent form describes the research study and helps you decide if you want to participate. It provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research participant. By signing this form, you are agreeing to participate in this study.

You will be asked to review information for each study treatment to learn more about its risks and benefits. The current list of possible study treatments is below in Table 1, and more detailed information about these treatments is included at the end of this consent form. Precise will begin with one treatment but we expect to add more as the study continues. If new treatments are added to the study later on, you will be asked to review information about the new treatments and consent to those, separately. **If you choose not to consent to the new treatments when they are added to the study, your participation with the current treatments will not be affected.** Before signing this master consent form:

- You should read this entire consent form carefully.
- Only sign this form if you are willing to participate in all possible treatments and procedures.
- You will not be able to choose which treatment you are assigned to or which procedures you want to do; you should review the information for each study treatment and procedure before signing this consent form. You will have the opportunity to review information on any new treatments and procedures that might be added to the study once they are available.
- If you have any questions about anything in this form, you should ask the research team for more information.
• You may also wish to talk to your health care provider, family or friends about your participation in this study.
• Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

KEY INFORMATION ABOUT THIS STUDY

PrecISE is a multi-site study, sponsored by the National Heart, Lung, and Blood Institute. We are inviting people to participate in PrecISE who: 1) are age 12 or older, 2) meet guideline criteria for severe asthma, 3) currently have uncontrolled asthma, or continue to have exacerbations (attacks), and 4) are on a stable regimen of asthma medications (controller/daily medication). We will find out if you qualify for the study after you finish the screening tests.

This study is designed to investigate new treatments for asthma that are thought to work better in some patients than in others. The data from this research study will be used to determine which treatments work and what kind of patient benefits the most from that treatment.

If you choose to take part in the study, you can receive several different treatments depending on when you begin the study. You will take each treatment for about 4 months, and then take a break for 2 to 4 months, before starting another treatment. The study will run for about 3 ½ years, and most of the people participating in the study will go through 2-3 different treatments before finishing the study.

As part of your study participation, you will be randomly assigned (by chance like rolling dice) to a treatment (also called an intervention) at different times during the study; this is referred to as ‘randomized’. You will not be able to select the treatment, and you may be excluded from certain treatments due to safety concerns and other considerations. Some of the periods will involve a placebo instead of the active therapy. Once you have been randomized, the treatment assignment cannot be changed until the treatment period ends and you are randomized again.

The current drugs under study are listed below. There may be more added in the future.

Table 1. List of possible treatments

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Chain Triglycerides (MCT)</td>
<td>Food Supplement, powder, similar to protein powder, that can be mixed with food or water</td>
</tr>
</tbody>
</table>

* A biologic drug is a product that is produced from living organisms or contains components of living organisms.

Participation in this study will involve various procedures including a physical exam, blood draws, different lung function measurements, surveys and an optional CT scan or x-ray.
Possible risks or discomforts from these procedures may include, but are not limited to: bruising or other reactions from blood draws, dizziness, shortness of breath and coughing during lung function tests, and radiation exposure during the optional CT scan or chest x-ray.

Good effects on this study include possible direct benefits to you from one or more of the study treatments and benefits to science and humankind.

There are alternatives to participating in this study, including getting standard treatment from your doctor, participating in other studies, and/or electing to take one of the recently approved drugs for asthma, instead of the treatments being offered on this study.

You do not have to be in this research study. You may choose not to be in this study and get other treatments without changing your healthcare, services or other rights. You can stop being in this study at any time. If we learn something new that may affect the risks or benefits of this study, you will be told so that you can decide whether or not you still want to be in this study.

**WHAT IS THE PURPOSE OF THIS STUDY?**
The purpose of PrecISE is to find new treatments for severe asthma by using a novel approach in medicine called precision medicine. Precision medicine is a method that tailors, or customizes, medicines to patients based on their biomarkers. Biomarkers are bits of information about you, based on the results of different tests, including blood tests, analyses of your breath, and genetic tests. By using your biomarkers and testing different treatments in the study, we hope to learn more about treatments that are tailored to individuals and their needs.

This document uses words such as treatment and medication. Please remember this is a research study and the use of these words does not mean that the treatments have been found to be effective for asthma.

**WHAT WILL HAPPEN IN THE STUDY?**
During your first two months in the study you will be assessed to see if you qualify for randomization to be assigned to a treatment. If you are eligible, you will be randomly assigned to a treatment and will begin your first treatment period. As noted above, some of the periods will involve a placebo instead of the active therapy. A placebo looks like the active treatment but doesn’t contain active ingredients. You will receive placebo in at least one of your treatment periods. You might receive placebo in one more treatment periods after that, but you will never have more than two placebo periods total.

If you agree to be in the study, you will participate in at least 2 treatment periods, each followed by an 8 week washout period, for a total of 12 – 14 months. A washout period is the time between treatment periods. Instead of immediately stopping and then starting the new treatment, there will be a period of
time where the treatment from the previous period is washed out of your system. You will not take any study treatment during the washout. The total number of treatments you will be eligible to receive will depend on when you enroll in the study.

Study visits are described in more detail below and a detailed Schedule of Study Visits is provided at the end of this document. The possible risks of each study procedure are described in a section below entitled “WHAT ARE THE RISKS OF THIS STUDY?”

**Screening Visit(s) - (Can be completed over multiple visits if necessary)**

Before any study information is collected, a member of the study team will review this master consent with you and will make sure to answer any questions that you have about participation in this study. Consent review may take 1 to 2 hours, depending on the questions you have about the study. If you agree to participate in the study and sign this master consent form, you will complete a screening visit to determine if you continue to be eligible for the study. In some cases, the screening visit may be split over two or three study visits.

**The screening visit(s) will include the following:**

**Consent:** You will review and sign this master consent, if you agree to participate.

**Physical Exam:** Medical personnel will perform a physical exam on you, and an assessment of your general health, skin, eyes, ear/nose/throat, heart, chest, abdomen, and extremities. Your blood pressure, heart rate, respiratory rate, and temperature will be measured.

**Questionnaires:** You will complete several questionnaires where you will be asked to provide basic information about yourself and your past and current medical and surgical history, past and current medications, asthma symptoms and past exacerbations.

**Pulmonary Function Testing:**

- **Medication Withholds:** Before you come in for the baseline spirometry test, you will be asked to withhold some of the medications you currently take to treat your asthma, however, you should take your medications if you feel you cannot withhold, and tell us that when you are at the visit.

- **Spirometry:** You will be asked to take a deep breath in and blow your breath out as hard and fast as you can into a machine for at least 6 seconds. The machine measures the amount of air you can blow out and how fast you can blow it out. We have you do this 3 or more times so we can get an accurate measure of your lung function.

- **Maximum Bronchodilator Response Test:** After you perform the baseline spirometry you will take 4 puffs of albuterol to open your airways. You will then repeat spirometry 10-15 minutes later. The test will continue by having you take 2 more puffs of albuterol and then repeat spirometry 10-15 minutes later to see if your airways have opened as much as possible. You may be given 2 more puffs of albuterol and repeat spirometry again. You will receive at least 6, but no more than 8, total puffs of albuterol.
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- **Methacholine Challenge (if necessary):** The methacholine challenge will be used to determine your asthma status if your breathing does not change enough during the maximum bronchodilator response test. Methacholine is a chemical that can cause the airway tubes to tighten and can bring on asthma symptoms. People who have asthma have airways that are sensitive to smaller amounts of methacholine than people without asthma. This test measures how sensitive your airway tubes are to the methacholine. We will measure your lung function before methacholine and after each dose of methacholine. You will be asked to breathe methacholine aerosol for 60 seconds, given through a nebulizer, starting at a very low dose. Your lung function will be measured 30 seconds and 90 seconds after each dose of methacholine, if your lung function has not decreased by 20% the amount of the next dose is increased. The challenge will be stopped when your lung function measurements have decreased 20% from your baseline or you receive the highest dose we are using in the methacholine challenge. This test takes approximately one hour.

- **Lung Diffusion Capacity Testing (DLCO):** If needed, based on smoking history, you will do Lung Diffusion Capacity Testing (DLCO). The DLCO measures how well your lungs transfer oxygen to your blood. You will blow into a tube that is connected to a machine that measures air volumes. You will be asked to take a breath in, to exhale gently until your lungs are empty; to take as deep a breath in as you can, to hold your breath for 8-10 seconds, and to exhale gently.

**Safety Labs:**

- **Urine:** If you are a female who can become pregnant, you will provide a small amount of urine on all visits to make sure you are not pregnant before taking any study treatment or doing specific study procedures. You will not be enrolled if you are pregnant or breastfeeding. If you become pregnant during the study, we will ask that you let us know. If you are a woman who can get pregnant you will need to use regular and highly effective birth control while in this study. Your study team will tell you what birth control methods are acceptable.

**Peak Flow Meter and sensors to attach to your controller medication and a rescue inhaler:** You will be given a device called a peak flow meter and sensors to attach to your controller medication and rescue inhaler and asked to use them at home throughout your participation in the study. You will use the peak flow meter to perform home spirometry twice a day. The sensors will be used to monitor your day-to-day medication use. We will show you how to use these devices. The data will be transmitted daily to a secure server at the University of North Carolina at Chapel Hill. Your compliance with these devices is very important and will be a factor in determining your eligibility to continue in the study. The sensors on your inhalers will collect the time, date, and approximate location of inhaler medication use. Location is determined using latitude/longitude data collected from your smartphone should those smartphone permissions be enabled. This device is monitored by Propeller Health, the company that developed the sensors. Propeller Health is interested in better understanding the management and impact of respiratory disease. Propeller may use your personal identifiable information (PHI) to create aggregated health information and de-identified data to improve our services and for public health.
DISCLOSURE OF IDENTIFIABLE INFORMATION IN THE EVENT OF AN ISSUE WITH YOUR PROPELLER HEALTH DEVICE.
Propeller Health has a legal obligation to maintain records regarding complaints and incidents related to their device which includes both the sensor and the application. In the event that a patient has a complaint or there is an incident related to the device, Propeller Health may collect identifiable information regarding the complaint or incident for their records. This information can include the patient’s name, contact information, device ID, and information related to the complaint or incident.

Controller and Rescue Medication: As part of this study, you can receive controller and rescue medication, if you choose to do so, free of cost, and if available at the time of your enrollment. The study will provide the Advair Diskus as controller medication and a rescue (albuterol sulfate) inhaler. You can choose to stay on your current controller medication as long as it is approved by our study coordinator. In this case you will be responsible for purchasing it. The study coordinator will review medication administration and answer any questions you have. During subsequent visits, you will be asked to bring back your controller and rescue medication (study provided medication and non-study provided medication) to each visit, even if empty. The sensors mentioned above will be used to monitor your daily controller medication and rescue inhaler use. Please remember that continuing maintenance therapy (controller medications) is very important. If you choose not to take the study supplied medication, we will confirm that you are taking another approved controller medication throughout your time on the study.

Application (App) Installation on Smart Phone (e-Diary): During the Screening Visit, study staff will help you install an app onto your electronic device (e.g. iPhone or smart phone). This app will be used as a diary to answer some questions about your symptoms. This will be done twice a day, in the morning and evening. In order to participate in the study, you must own a device such as an iPhone, iPad or iPod, or a smartphone or tablet that will allow you to download and use this app. Please note that data charges may apply by using your device to record information in the diary. If your smartphone or tablet is unable to record your answers, we will provide you with paper forms to use as backup until your device is back up and running.

Lifestyle Considerations: In order to be eligible for the study, you must comply with the following lifestyle considerations, throughout the duration of the study:

- Do not use tobacco products and nicotine containing products (including e-cigarettes, patches).
- Do not use inhaled marijuana.
- Do not use any illegal drugs including abuse of prescription drugs.
- For females who can become pregnant: you must use a highly effective form of birth control. This is described in more detail under the Risks section, below.
- Males, who are sexually active with a female who can get pregnant, must agree to use a medically acceptable form of birth control, such as barrier protection, as determined by the study doctor.
- Contraception should be used for at least 1 month prior to screening, throughout study participation and for an additional 16 weeks after the end of the final test treatment.
Run-in Visit
The run-in visit will occur 4-6 weeks after the Screening Visit and will confirm your final eligibility for the study. It will be the last visit before you are randomized into the first treatment period. The run-in visit will take approximately 4 to 5 hours and can be completed on more than one study visit.

The run-in visit will include the following:

Eligibility: Your eligibility will be re-assessed and confirmed.

Peak Flow Meter and e-diary Compliance: The study coordinator will review and discuss your compliance with the e-diaries and peak flow meters.

Controller Medication: The study coordinator will review and discuss your compliance with your controller medication. You will receive more controller and rescue medication, if applicable.

Physical Exam: You will receive a brief physical exam.

Questionnaires: You will be asked to update information about current medications and asthma symptoms and to provide us with information on any exacerbations that occurred between visits. You will also be asked about current medical conditions and any new symptoms.

Safety Labs: Blood, Urine and EKGs

- Blood and urine will be taken to establish and monitor your health and to potentially exclude you from certain treatments if we feel they would be unsafe for you.
  - The total amount of blood we draw for this will be approximately 2 tablespoons.
  - With these labs, we will be looking at your blood cells, evaluating your liver function, and looking for any signs of abnormal test results. In addition, because some of the treatments alter the normal function of the immune system, it is important to rule out certain viruses, such as hepatitis, HIV, and other infections, such as tuberculosis.
  - Blood will be shipped to the study’s Central Lab, Pharmaceutical Product Development (PPD), for analyses. After analysis is complete, any remaining blood will be destroyed.
  - Urine will be tested directly by dipstick at the clinical sites.
  - You will be informed of abnormal test results so that you can follow-up with your primary healthcare provider.

- Urine will be taken to assess pregnancy status on women who can become pregnant.

- An EKG is a tracing of the heart’s electrical activity and it is used to look at the pattern of your heartbeat. It requires small wires being attached to your skin using small adhesive patches on several locations on your body. The EKG takes about 15 minutes.

- Exhaled nitric oxide (FeNO): You will gently blow air out into a nitric oxide machine for 10 seconds. The nitric oxide machine will measure the amount of nitric oxide in your breath. Nitric oxide is a gas that is released from inflammatory cells in the lung.
Biospecimens: Four biospecimens will be collected in the PrecISE study - blood, urine, induced sputum, and a nasal swab.

- **Blood**: Blood will be drawn for measurement of biomarkers. Some of the blood drawn will be used for genetic testing.
  - The total amount of blood we draw for biomarker analysis will be approximately half a teaspoon.
  - In order to participate in this study, you must agree to a specific type of genetics test (S-nitrosothiol (GSNO) genotyping). GSNO genotyping will provide information on your biomarkers. Additional genetic testing is optional and will be described in more detail below.
- **Nasal swab**: We will use a small, sterile, disposable nasal swab, to collect cells and secretions from your nasal cavity to measure biomarkers of inflammation in your nose.
- **Urine**: Urine will be drawn for measurement of biomarkers.
- **Induced Sputum**: You will be asked to breathe in a salty mist for up to 12 minutes and to cough deeply and vigorously every two minutes in order to bring up a sample of sputum (mucus) from your lungs. Before the procedure you will be given 4 or more puffs of an albuterol inhaler to protect against the bronchospasm (tightening of the bronchial tubes) that can occur from breathing in a salty mist.

Storage and Future Use of Biospecimens: Blood, urine, nasal swabs and induced sputum will be collected and stored for important biomarker analyses needed for the PrecISE study, as follows:

- **Blood**: Blood will be shipped to the Cleveland Clinic Biorepository where it will be stored.
  - Regarding the GSNO genotyping blood (above): this blood (equal to 1 tube) will first be sent to the study’s Central Lab, Pharmaceutical Product Development (PPD) and then will go on to the Cleveland Clinic Laboratories for genotyping. Any leftover genetic material will be sent to the Cleveland Clinic Biorepository for storage.
- **Nasal swab**: The nasal swabs will be analyzed at the Mayo Clinic in Phoenix, Arizona. The nasal swab samples will be temporarily stored at the Cleveland Clinic Biorepository and then shipped periodically to the Mayo Clinic. After the nasal swab samples are analyzed at the Mayo Clinic, leftover specimens will be sent back to the Cleveland Clinic Biorepository.
- **Urine**: Urine will be shipped to the Cleveland Clinic Biorepository where it will be stored.
- **Induced sputum**: Sputum will be analyzed at the University of California, San Francisco (UCSF) Sputum Core. The types of cells in the sputum will be analyzed using a portion of the sputum sample that is processed on a slide. These slides will be shipped directly to UCSF. The remainder of the sputum biospecimen will be either stored at the Cleveland Clinic Biorepository, or temporarily stored at the Cleveland Clinic Biorepository until batch shipped periodically to the
UCSF Sputum Core. The UCSF core will then bank the sputum biospecimens and manage any future analyses of biomarkers in the sputum biospecimens.

During the course of the study, different biomarkers will be measured in the blood, urine, nasal swab and induced sputum biospecimens. These biomarkers will be measured at various times during the course of the study using a variety of different methods in a variety of different laboratories that specialize in these methods. To conduct these biomarker measurements, parts of samples already stored at the biorepository will be sent in batches to the specialized laboratories. If any sample is left over after the required testing is finished, the samples at the specialized laboratories will either be destroyed or returned to the biorepository.

At the end of the study, there is a high likelihood that we will not have used all of your biospecimens and that the Biorepository and Sputum Core will still have your samples frozen. With your permission, we would like to make the samples available for future use. We will discuss this in more detail below.

**Pulmonary Function Testing:**
- **Spirometry** (as described above)
- **Spirometry POST:** After you perform the baseline spirometry you will take 4 puffs of albuterol to open your airways. You will then repeat spirometry 10-15 minutes later.
- **Medication Withholds** (as described above)

**CT Scan:** The CT scan is a special type of x-ray examination. You will be asked to lie on a table with your arms resting above your head. You will need to remain still and hold your breath for about 10-20 seconds during each scan. You will then be asked to breathe out and hold your breath again and the scan will be repeated. If you are a woman who can become pregnant, you will have a pregnancy test to make sure that you are not pregnant before having the CT scan. Please note that the CT scan is optional. This will be discussed in more detail below.

**Chest x-ray:** If tuberculosis cannot be ruled out on the basis of a blood test, the results from either a CT scan or a chest x-ray will be needed. If you choose not to have a CT scan, you will have a chest x-ray. A chest x-ray creates pictures of your lungs.

After all screening and baseline visits have been completed and study eligibility criteria are reviewed by the study doctor (site investigator), you will be informed about whether or not you qualify for continued participation in the study. If you qualify, you will begin treatment visits.

**Treatment Visits**

**Treatment Periods:** A treatment period is 16 weeks long followed by 8 weeks of washout, during which you do not take the treatment.
On MCT, you will be required to have five monthly visits (during weeks 0, 4, 8, 12 and 16 beginning from the start of a treatment period). Visit 6 will occur during an 8-week washout.

The number of treatments you receive will depend upon when you enroll in the study and how many treatments you qualify for based on safety criteria. If you enroll at the beginning of the study you will be eligible for more treatments than participants who enroll at the end of the study.

**Monthly treatment visits:** Each treatment visit will take approximately 2-3 hours.

**Treatment visits will include the following:**

**Peak Flow Meter and e-diary Compliance:** The study coordinator will review and discuss your compliance with the e-diaries and peak flow meters.

**Controller Medication:** The study coordinator will review and discuss your compliance with your controller medication. You will receive more controller and rescue medication, if applicable.

**Physical Exam (all treatment visits):** You will receive a full physical exam during the first treatment visit and brief physical exams on the subsequent treatment visits.

**Questionnaires (all treatment visits):** You will be asked to update information about current medications and asthma symptoms and to provide us with information on any exacerbations that occurred between visits. You will also be asked about current medical conditions and any new symptoms.

**Randomization (first treatment visit):** During the first treatment visit of each treatment period you will be randomly assigned, based on your biomarkers, to one of the available treatment groups or to the matching placebo. You will not be able to choose which treatment group you are assigned to. Once randomized, the treatment group assignment cannot be changed. If you do not wish to participate in the study group to which you are randomized, you will not be able to participate in this study. You and the study staff will not know whether you are receiving active treatment or placebo. In case of an emergency, the study doctor will be able to find out whether you are receiving the active treatment or placebo.

**Safety Labs - Blood and Urine (all treatment visits):**

- Blood and urine will be collected *(as described above under Safety above)*
  - The total amount of blood we draw for this will be between 3-19 tablespoons depending on how many treatments you qualify for.

- Urine will be taken to assess pregnancy status on women who can become pregnant.

**Biomarkers (all treatment visits):** Biomarkers will be collected via blood and FeNO

- Blood, *as described above under Biomarkers (first five treatment visits).*
  - The total amount of blood we draw for this will be between 11 - 65 tablespoons depending on how many treatments you qualify for.

- FeNO, *as described above (first, third and fifth treatment visits)*

**Pulmonary Function Testing (first five treatment visits):**
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- Medication Withholds, as described above (first five treatment visits)
- Spirometry, as described above (first five treatment visits)
- Spirometry POST, as described above (first and fifth treatment visits)

Dispense Study Treatment (first four treatment visits): You will receive study treatment. Treatment will come either as pills, packets of powder, or will be administered subcutaneously (via an injection under the skin). Additional details of the drug administration are given in the treatment specific forms, below.

HOW MANY PEOPLE WILL PARTICIPATE?
Approximately 650 adults (ages 18 and older) and 150 adolescents (ages 12 to 17).

HOW LONG WILL I BE IN THIS STUDY?
The screening and run-in periods will last approximately eight to ten weeks. Each treatment period, will last 16 weeks and the washout will last 8 weeks. The length of time you are in the study will depend upon the number of treatments you receive, and the number of treatments you receive will depend upon when you enroll in the study. If you enroll early in the study, and qualify for each individual treatment, you could receive up to 3 treatments. The longest time you could be in the study is approximately 2 years and the shortest time is approximately 1 year.

SIDE EFFECTS AND RISKS THAT YOU CAN EXPECT IF YOU TAKE PART IN THIS STUDY
You may experience one or more of the risks indicated below from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study.

You will be informed of any findings of clear clinical significance that may be discovered during the imaging procedure. There may be benefits to learning such results (such as early detection and treatment of a medical condition), but there are risks as well (such as problems with getting insurance or a job, or feeling worried about a finding for which no treatment is required or appropriate). If there is a finding of clear clinical significance, you can choose to have your physician alerted.

Please note that additional site specific risk language will be included in Part 2 of the consent.

All Procedures
Rare: Breach of confidentiality.
Because this is a multi-site study and international in scope, data will be transmitted electronically. There is always the risk that a transmission could be intercepted and decoded. We will meet or exceed all standards of electronic security using only secure servers and encryption. We will protect your information, but there is a chance somebody might see it.
In-Person Questionnaires and Surveys

**Likely:** You may find the questions tiring, tedious, or embarrassing. You may choose not to answer a specific question or to decline a test at any time, however there are some questionnaires that are required for study participation.

**Blood Draw for Safety Labs, Genetic Research and Blood Biomarkers**

**Likely:** The blood draw may cause bleeding, bruising, or pain. Some people become dizzy or feel faint.

**Less Likely:** None known.

**Rare:** Infection.

To minimize these risks, experienced medical personnel will perform the blood draws using aseptic (clean) technique.

**Pulmonary Function Tests**

**Likely:** None known.

**Less Likely:** Dizziness during the tests, coughing, feeling short of breath

**Rare:** The test may trigger severe breathing problems

**Albuterol (for Pulmonary Function Tests)**

**Likely:** Common risks associated with albuterol include headache, increased pulse rate, shakiness of hands, lightheadedness or dizziness.

**Less Likely:** None known.

**Rare:** Rare side effects to albuterol include low blood potassium, irregular heartbeat or heart rhythm, hyperactivity and an immediate increase in wheeze after dosing.

**Medication withholds**

Withholding asthma medications can cause chest tightness and wheezing. Participants will be informed that if they cannot hold their medications and feel they need to take them, they should do so and call the study coordinator to let them know.

**Likely:** Chest tightness and wheezing, an increase in allergy or asthma symptoms may occur as a result.

**Less Likely:** None known.

**Rare:** None known.

**Methacholine Challenge**

**Likely:** None known.

**Less Likely:** Coughing, chest tightness, shortness of breath, and wheezing. You will be given albuterol for relief of symptoms. The symptoms are usually gone within a few minutes after using the albuterol medication for relief.

**Rare:** On rare occasion, severe bronchospasm can occur (this is when muscles that line the airways of the lungs constrict or tighten, reducing airflow).
**Induced sputum**

Likely: Salty aftertaste, coughing, a feeling of needing to swallow.
Less Likely: Sore throat, shortness of breath, wheezing, chest tightness, lightheadedness, nausea or headache.
Rare: Severe asthma attack or a reaction to the salty water that you breathe in. Albuterol treatment will be available if this occurs.

**Urine**

There are no foreseeable risks to its collection.

**Exhaled nitric oxide**

There are no known risks to its collection.

**CT Scan**

Likely: During the CT scan, you will be exposed to a small amount of radiation (3-9mSv). The maximum amount of radiation you will be exposed to during the procedure is approximately equal to 20% of the annual allowed dose for a medical radiation worker. Although there are no proven harmful effects from this amount of radiation, long term effects on your health such as cancer cannot be ruled out. This dose estimate takes into account only the exposure to research procedures in this project. If you have participated in other research studies involving radiation exposure, you should be aware that the risk of effects of radiation exposure is thought to add up across all your exposures, including procedures performed as part of your medical care.
Less Likely: None known.
Rare: None known.

**Chest X-ray:**

Likely: During the chest X-ray, you will be exposed to a small amount of radiation (0.1 mSv), which is equal to the amount of radiation the average person is exposed to in 10 days from the environment.
Less Likely: None known.
Rare: None known.

**EKG:**

Likely: None known.
Less Likely: Gel and patches that are applied to the skin may cause temporary redness and irritation. You may experience discomfort (pulling on the skin/hair) during removal of the sensors.
Rare: None known.

**Nasal swabs:**
Likely: None known.
Less Likely: There is a risk of mild discomfort and mild nasal stuffiness from the procedure.
Rare: A slight risk of nose bleeding.

**Lung Diffusion Capacity Testing (DLCO):**
Likely: None known.
Less Likely: You may feel short of breath during the exhalation part. If this occurs and does not go away on its own you may be given an albuterol treatment.
Rare: None known.

**RISKS THAT ARE NOT KNOWN:**
Because this treatment is investigational, meaning non-FDA approved, there may be risks that we do not know about at this time.

**PREGNANCY/CHILDBEARING POTENTIAL**
Because of the unknown risk of potential harm to an unborn baby from exposure to study medication and/or study procedures used in this study, you may not participate in this clinical trial if you are pregnant or plan to become pregnant during your study participation. Urine pregnancy tests will be conducted at all visits for all women of childbearing potential. Women who have undergone tubal ligation will still have pregnancy testing done at all visits as indicated for a woman of child bearing potential.

Some parts of this study might cause physical problems in an unborn baby. In addition, if you are or become pregnant, this study may involve risks to your embryo or fetus, which are currently unforeseeable. You must tell the doctor immediately if there is any chance you are pregnant. If your partner is not sterilized by vasectomy, you must agree to use effective contraceptive measures from screening until 16 weeks after the last dose of study treatment. If you are currently breastfeeding, you may not participate in the study.

If you have a positive pregnancy test you will be unable to continue to participate in the study. You must agree to use effective contraception while you are in the study. Once you have completed all the study visits, there are no known effects from participating in this study that would cause increased risk to future pregnancies.

A positive pregnancy test will be disclosed to you and your parent/guardian unless disclosure is prohibited by local regulations. It may not be possible to keep the results of pregnancy testing confidential.
For Female Patients
As mentioned above, we do not know if the study treatment has any effects on pregnancy, or an unborn or breastfed child. It is very important that you practice birth control to prevent pregnancy during this study. You must use a highly effective form of birth control from at least 1 month prior to screening through at least 16 weeks after receiving last dose of the study medication. How long after 16 weeks you continue to use the birth control should be discussed with the study doctor.

A highly effective method of birth control is defined as one that results in a low failure rate (i.e., less than 1% per year) when used consistently and correctly. Acceptable forms of highly effective birth control include: hysterectomy, bilateral salpingo oophorectomy, tubal ligation or bilateral tubal occlusion for females, male partner sterilization (vasectomy), hormonal (pill, patch, ring, implant, injection, hormonal IUD), or a copper IUD.

A male condom used in combination with a diaphragm (with spermicide) or cervical cap (with spermicide) is an acceptable form of birth control. Male condoms and female condoms used alone or in combination with each other are not acceptable methods of birth control, even if used with spermicide. Diaphragms and cervical caps with spermicide are also not acceptable when used without a male condom.

Your study doctor can discuss these options with you.

For Male Patients
If you are a male, who is sexually active with a female who can get pregnant, you must agree to use a medically acceptable form of birth control, such as barrier protection, as determined by the study doctor. You should inform your partner of the potential for harm to an unborn child. If your partner becomes pregnant while you are participating in the study, then you must notify the study doctor of your partner's pregnancy within 24 hours of receiving medical confirmation and she should promptly notify her doctor of your participation in this study. As per regulatory requirements, information will be collected about your partner's pregnancy until the outcome of the pregnancy is known.

Additional follow-up information may be requested about the baby until at least one month after the birth of the baby, due to potential risk of abnormalities not present at birth. Information will be collected according to local and data privacy regulations.

GOOD EFFECTS THAT MIGHT RESULT FROM THIS STUDY
There is no guaranteed benefit from participating in the study. There is also a possibility that study treatments or information obtained while participating in this study could benefit you directly. It is hoped that information obtained from your participation will help us learn more about severe asthma and its treatments.
WHAT OTHER CHOICES DO I HAVE IF I DO NOT TAKE PART IN THIS STUDY?
Your other choices include getting standard treatment for your condition without being in a study. There may also be other studies in which you could participate. If you have any questions concerning alternative treatments please see below. You and your doctor can decide on the best treatment for you.

Recently approved treatments for Asthma.
Several treatments for asthma (most for eosinophilic asthma) have been approved and are available (Table 2); see below for an explanation of eosinophilic asthma. These treatments have all been shown to improve asthma control. You should be aware of these treatment options and discuss them with your asthma doctor if you would like to learn more about them. If you decide to start on one of these drugs, you may still be a candidate for Precise in the future.

Table 2

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Brand Name</th>
<th>Year Approved (FDA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mepolizumab</td>
<td>Nucala</td>
<td>2015</td>
</tr>
<tr>
<td>Reslizumab</td>
<td>Cinqair</td>
<td>2016</td>
</tr>
<tr>
<td>Benralizumab</td>
<td>Fasenra</td>
<td>2017</td>
</tr>
<tr>
<td>Dupilumab</td>
<td>Dupixent</td>
<td>2018</td>
</tr>
<tr>
<td>Omalizumab (anti-IgE)</td>
<td>Xolair</td>
<td>2003</td>
</tr>
</tbody>
</table>

Eosinophils are a type of white blood cell, which normally are present in low numbers in human blood, people with high numbers of eosinophils in their blood have a subtype of asthma called “eosinophilic asthma”. A complete blood count (CBC) will be done as one of the baseline blood tests in this protocol, this test may show that you have high numbers of eosinophils in your blood. We will not know if you have high numbers of eosinophils in your blood until after the CBC results are sent back from the lab. If you want to know the results of this test, you can request this information from the study coordinator.

IS BEING IN THIS STUDY VOLUNTARY?
Taking part in this research study is completely voluntary. You may choose not to take part at all or stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you won’t be penalized or lose any benefits for which you otherwise qualify.

CAN I STOP BEING IN THE STUDY?
Yes. You can decide to stop at any time. Tell the study doctor if you are thinking about stopping or decide to stop. She or he will tell you how to stop your participation safely. Deciding not to be in the study or
leaving the study before it is done will not affect your relationship with the researcher or your health care provider.

If you decide to withdraw from the study you may: 1) decline to provide any more data or specimens to the study but allow use of previously collected data and/or specimens, 2) withdraw all your data from study databases and request that any stored samples be destroyed, or 3) withdraw some portion of the data collected (i.e., participants may withdraw specimens, but not test results or vice versa). If samples have already been tested and data has been shared and or published before a request is made, the information from these tests will be used and cannot be destroyed. If you wish to withdraw, we ask that you put this request in writing and send it to the site where you are participating. Please ask the site coordinator for more details.

A study coordinator will conduct an exit interview to ensure all appropriate steps have been taken to withdraw you from the study. You may decline to participate in the exit interview.

**PARTICIPATION IN OTHER STUDIES**

You **may not** participate in other studies where a drug or other treatment is given while you are enrolled in this study. Please inform the study coordinator if you are thinking about enrolling in another study.

**CLINICAL TRIALS REGISTRY**

A description of this clinical trial will be available on [www.clinicaltrials.gov](http://www.clinicaltrials.gov), as required by U.S. Law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this Web site at any time.

**HOW WILL PRIVACY AND PERSONAL INFORMATION BE PROTECTED?**

Protecting your privacy is a top priority for PrecISE. Any information we obtain about you during this study will be treated as strictly confidential to the full extent permitted by applicable law.

**Code numbers - not names:** To ensure confidentiality, a code number will be assigned to you and your medical information. Files with your name and other identifying information will be electronically saved separately from your medical information on a secure computer that cannot be accessed by an unauthorized person. If your information is printed, it will be kept locked and accessible only to certified PrecISE personnel at this PrecISE field center and the PrecISE data coordinating center. Only authorized PrecISE personnel at these two locations will have access to your name and identifying information. PrecISE will not share sensitive information with you via text message nor publish identifiable information on Internet sites.
What is the risk of being identified? While we believe that the risks of being identified are very low and the benefits to science and the health of the community are large, there may be risks that we are not aware of at this time. In particular, we will share safety and quality control data with companies who are donating study drugs and equipment. While we will take all precautions to protect your privacy, there is a small risk of being identified.

The protected data developed for this project will not contain information that is used to identify you (such as your name, address, telephone number, or social security number), but it is possible that in the future people may develop ways to link your genetic or medical information back to you.

To protect you, the Genetic Information Nondiscrimination Act (GINA) is a federal law passed in 2008 that makes it illegal to discriminate on matters of employment and health insurance in the U.S. based on genetic information. If you were identified by your genetic information however, this could potentially be used in ways that may cause you or your family distress, such as revealing that you (or a blood relative) carry a genetic disease, or by leading to the denial of employment or insurance for you or a relative.

Publishing study results: When study results are published, your name and any other potentially identifying information will not be revealed. Results from this study and from your records may be reviewed and photocopied by the Office of Human Research Protection (OHRP) of the U.S Government or the Institutional Review Board of _____________ University.

WILL ANY RESEARCH-RELATED PROCEDURES BE BILLED TO ME?
No. The sponsor has agreed to pay for all procedures associated with this research study; you or your insurer will not be billed. However, results from hospital procedures done during the research visit (such as the CT scan) may result in a need for additional testing. In the event additional testing is required, the study will not pay for these tests or procedures. As mentioned above, the study will provide the Advair Diskus as controller medication and albuterol sulfate as rescue medication. If you decide to use your own controller or rescue medication, you will need to pay for this.
Institutional Review Board
Informed Consent Document for Research

Study Title: PrecISE: Precision Interventions for Severe and/or Exacerbation-Prone Asthma Network
Version Date: 11/01/2019
Version: 1.0

OPTIONAL) STUDY QUESTIONS – PLEASE COMPLETE ALL QUESTIONS

Consent to share findings with personal doctor
I agree that PrecISE may share findings important to my health from PrecISE tests and examinations with my personal doctor.

Circle one: Yes No __________________
Participant’s Initials

Consent to be contacted about other studies
I agree to allow Precise staff and investigators to contact me about participating in additional assessment and procedures relating to the Precise study. I understand that I am not required to participate in these if contacted and that it will have no effect on my participation in the main Precise study.

Circle one: Yes No __________________
Participant’s Initials

Consent to types of research
The current plans for the Precise study are described in this consent. Additional research questions may arise while the study is ongoing. The below questions allow you to indicate whether you would be willing to have your data and specimens used in this additional research.

I give consent for my data and specimens that are collected as part of the Precise study to be used by Precise researchers for other research related to asthma.

Circle one: Yes No __________________
Participant’s Initials

I give consent for my data and specimens that are collected as part of the Precise study to be used by PrecISE researchers for any other type of research (e.g. lung diseases, heart disease, etc.).

Circle one: Yes No __________________
Participant’s Initials

I give consent for my data and specimens that are collected as part of the PrecISE study to be shared with non-PrecISE investigators who are working on non-profit research. Please note that neither the Precise study investigators, nor you, nor your family would benefit financially from sharing of data.

Circle one: Yes No __________________
Participant’s Initials

I give consent for my data and specimens that are collected as part of the PrecISE study to be shared with non-PrecISE investigators who are working on commercial research. Please note that neither the Precise study investigators, nor you, nor your family would benefit financially from sharing of data.

Circle one: Yes No __________________
Participant’s Initials
**OPTIONAL CT SCAN**

The CT scan is a special type of x-ray examination that will be done during the Run-in visit, if you agree. You will be asked to lie on a table with your arms resting above your head. You will need to remain still and hold your breath for about 10-20 seconds during each scan. You will then be asked to breathe out and hold your breath again and the scan will be repeated. If you are a woman who can become pregnant, you will have a pregnancy test to make sure that you are not pregnant before having the CT scan.

The reason for the CT scan is to detect latent tuberculosis and also to measure your airway structure. We will work with a group that is experienced in collecting and reading the scans at the University of Iowa to ensure the scans are collected properly. The images from the CT scans will be stored at the site where it was collected and then will be sent, electronically, to the University of Iowa using software that will remove identifying information and assure proper procedures are being followed.

During the CT scan, you will be exposed to a small amount of radiation (3-9mSv). The maximum amount of radiation you will be exposed to during the procedure is approximately equal to 20% of the annual allowed dose for a medical radiation worker. Although there are no proven harmful effects from this amount of radiation, long term effects on your health such as cancer cannot be ruled out. This dose estimate takes into account only the exposure to research procedures in this project. If you have participated in other research studies involving radiation exposure, you should be aware that the risk of effects of radiation exposure is thought to add up across all your exposures, including procedures performed as part of your medical care.

Please indicate your response below:

I agree to have a CT scan performed.

Circle one: Yes  No

________________________
Participant’s Initials

Date of IRB Approval: 11/14/2019
Date of Expiration: 10/29/2020
(OPTIONAL) FUTURE USE OF YOUR DATA/BIOLOGIC MATERIALS AND GENETIC SAMPLE COLLECTION

As mentioned above, blood, nasal swabs, urine, and induced sputum will be collected and stored for analysis of biomarkers needed for the PrecISE study. This storage will occur at the Cleveland Clinic Biorepository and at the UCSF Sputum Core, the study sample storage sites. Periodically, throughout the PrecISE study, new biomarkers will be measured from these stored samples. The results of these tests will help PrecISE investigators determine how well a treatment worked or to determine if biomarkers other than the ones that have already been measured would have been more useful to determine a treatment response. At the end of the study, there is a high likelihood that we will not have utilized all of your biospecimens and that the Biorepository and Sputum Core will still have your samples frozen. With your permission, we would like to make the samples available for future use in other studies related to asthma or related lung diseases, by deposition at the Biorepository for the National Heart Lung Blood Institute (NHLBI) (called BioLINCC). Your samples will be used for these types of future analyses only if you agree. The samples will be de-identified (not list your name).

The results of tests performed on stored samples or reports resulting from the analysis of your samples will not be given to you or your doctor and they will not be put in your medical record. They will not identify you and will not affect your routine medical care.

There is no benefit to you from the storage of samples and information. However, the use of your samples and information may help researchers learn more about your disease. The purpose of storage and sharing data is to make information available for use in health research and to share what is stored with other researchers. Collecting, storing, sharing information and making it available for other studies may help people in the future. Coded information put into databases together with other stored information from many studies conducted in different places allow researchers to study the combined information and learn even more about health and many different diseases.

There may be unknown risks associated with the storage of samples and information. For example, if the future research involves genetic testing it is possible that it could be traced back to you because your genes are specific to you. We will make every attempt to protect your confidentiality and to make sure that your personal identity does not become known.

You can change your mind at any time until the end of the study and ask that your samples not be used for future studies. This request should be made in writing to the study doctor. If you make this request, all samples remaining at the end of the study will be destroyed. Your decision regarding the use of samples in future studies will not affect your ability to participate in this study. The future use of your samples and information may contribute to learning more about disease or help to study the genetics related to a specific condition.
Please indicate your response below:

I agree to the storage and sharing of samples (urine, blood, nasal swabs and/or sputum) for genetic tests in future studies.

Circle one:  Yes   No

Participant’s Initials

I agree to the storage and sharing of samples (urine, blood, nasal swabs and/or sputum) for use in future studies.

Circle one:  Yes   No

Participant’s Initials
### Schedule of Study Visits

<table>
<thead>
<tr>
<th>Study Visit</th>
<th>Screen</th>
<th>Run-in</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>T5</th>
<th>T6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>-8 to</td>
<td>-4</td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
</tr>
</tbody>
</table>

**What happens / What you need to do:**

- Your study doctor or coordinator will check that you are suitable to take part in the study: X
- Your study doctor or coordinator will perform a physical exam: X
- Your study doctor or coordinator will dispense more controller medication to you, if you choose to receive it: X
- You will be randomized to a treatment or placebo: X
- You will get study drug: X
- You will fill out surveys on your medical, asthma and allergy history: X
- You will fill out surveys about how you are feeling, and about any other medicines you are taking: X
- You will fill out surveys about your household: X
- You will go through Pulmonary Function Testing: X
- Blood and Urine will be taken for Safety Tests: X
- Biospecimens (blood, urine, nasal swab) will be taken to determine your biomarkers and to assess your progress: X
- You will be asked to have a CT scan: X
- You will be asked to produce a sputum sample: X
TREATMENT INFORMATION DOCUMENT - MEDIUM CHAIN TRIGLYCERIDES (MCT)

Information about the treatment:
Medium chain triglycerides (MCT) is a food supplement thought to improve asthma control via a potential link between metabolism, obesity, and asthma.

How will the treatment be administered?
The treatment will come in packets of powder that can be mixed in a variety of foods and beverages. It is ideal to have at least a 2 hour interval between each consumption of the supplement. It is best to take the supplement before or with meals.

Participants will be assigned a dose based on the number of calories required to maintain their bodyweight. This will be about 15% of their diet and most participants will be assigned between 3-4 packets/day. Participants will gradually increase the number of packets consumed each day over the course of the first 2 weeks.

Are there treatment specific procedures?
During treatment visits, participants will report foods they have eaten, complete a GI side-effects questionnaire, and give urine and blood to monitor safety specific to the MCT intervention.

Are there treatment specific inclusion or exclusion criteria?
Exclusion Criteria:

1. Diabetes history
2. Milk intolerant
3. Lactose intolerant
4. Coconut allergy
5. BMI >40 kg/m², as above this, the amount of product to ingest based on weight/resting energy expenditure may not be accurate

What are the risks of this treatment?
MCT are well tolerated by most people.

Risks include:
Likely: Stomach discomfort
Less Likely: Gastrointestinal discomfort including diarrhea, vomiting, irritability, nausea and intestinal gas
Rare: Urgent need to pass a bowel movement, severe short-term diarrhea and dehydration
### What are possible benefits?

Studies suggest benefits of MCT for cardiovascular disease. MCT may increase the feeling of fullness and decrease in the amount of food eaten. A potential benefit may include a reduction in weight and waist size.

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<table>
<thead>
<tr>
<th>Study Title</th>
<th>PrecISE: Precision Interventions for Severe and/or Exacerbation-Prone Asthma Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version Date</td>
<td>11/01/2019</td>
</tr>
<tr>
<td>Version</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Date of IRB Approval: 11/14/2019  
Date of Expiration: 10/29/2020
Institut Internal Review Board
Informed Consent Document for Research

Study Title: PrecISE: Precision Interventions for Severe and/or Exacerbation-Prone Asthma Network
Version Date: 12/02/2019
Version: 1.0

Part 2 of 2: STUDY SITE INFORMATION

<table>
<thead>
<tr>
<th>Site Name:</th>
<th>University of Wisconsin-Madison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Principal Investigator:</td>
<td>Loren Denlinger, MD, PhD</td>
</tr>
<tr>
<td>Site Principal Investigator Contact:</td>
<td>608-261-1552</td>
</tr>
<tr>
<td>Site Study Coordinator (if applicable):</td>
<td>Julia Bach, RN</td>
</tr>
<tr>
<td></td>
<td>Danika Klaus, RN</td>
</tr>
<tr>
<td></td>
<td>Paige Lowell</td>
</tr>
<tr>
<td></td>
<td>Lori Wollet, RN</td>
</tr>
<tr>
<td>Site Study Coordinator Contact (if applicable):</td>
<td>608-263-0524</td>
</tr>
</tbody>
</table>

This part of the consent form includes information about the site that is asking you to participate in this study and is specific to participation at your site only. Before making your decision, both the site-specific information and the general study information should be reviewed with you.

SITE SPECIFIC PROCEDURES AND RISKS

CT Scan
During the CT scan, you will be exposed to a small amount of radiation (3-9mSv). The maximum amount of radiation you will be exposed to during the procedure is approximately equal to 20% of the annual allowed dose for a medical radiation worker. Although there are no proven harmful effects from this amount of radiation, long term effects on your health such as cancer cannot be ruled out. This dose estimate takes into account only the exposure to research procedures in this project. If you have participated in other research studies involving radiation exposure, you should be aware that the risk of effects of radiation exposure is thought to add up across all your exposures, including procedures performed as part of your medical care.

If you need to contact us regarding research-related injury, please call: 608-263-0524.

COSTS TO YOU IF YOU TAKE PART IN THIS STUDY
There is no cost to you for taking part in this study.

PAYMENTS FOR YOUR TIME SPENT TAKING PART IN THIS STUDY OR EXPENSES
You will receive payments to help cover the costs of your participation in PrecISE. The amount you receive depends on which parts of the study you complete. We will pay you the amounts listed in the tables on the next page. If you complete all procedures in a visit, you will receive the full amount listed. If you only complete some of the procedures in a visit, you will be paid for the portion of the visit you completed. Payment will be provided at the end of each visit. If you choose to leave or we take you off study for any reason, you will receive payment for the visits you completed.
For the Screening and Run-in visits:

<table>
<thead>
<tr>
<th>Visit Description</th>
<th>Approximate Length</th>
<th>Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Visit A</td>
<td>5.0 hrs</td>
<td>$125</td>
</tr>
<tr>
<td>Screening Visit B (only if needed)</td>
<td>2.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Screening Visit C (only if needed)</td>
<td>0.5 hrs</td>
<td>$25</td>
</tr>
<tr>
<td>Run-in</td>
<td>4.0 hrs</td>
<td>$100</td>
</tr>
</tbody>
</table>

For each Treatment Period:

<table>
<thead>
<tr>
<th>Visit Description</th>
<th>Approximate Length</th>
<th>Reimbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Visit 1</td>
<td>3.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Treatment Visit 2</td>
<td>3.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Treatment Visit 3</td>
<td>3.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Treatment Visit 4</td>
<td>3.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Treatment Visit 5</td>
<td>3.0 hrs</td>
<td>$75</td>
</tr>
<tr>
<td>Washout Visit 5a (for Clazakizumab arm only)</td>
<td>2.0 hrs</td>
<td>$50</td>
</tr>
<tr>
<td>Washout Visit 5b (for Clazakizumab arm only)</td>
<td>2.0 hrs</td>
<td>$50</td>
</tr>
<tr>
<td>Washout Visit 6</td>
<td>3.0 hrs</td>
<td>$50</td>
</tr>
</tbody>
</table>

You will be paid an additional $150 each time you complete a Treatment Period (complete a Treatment Visit 6).

Additionally, for the Run-in visit and Treatment visits you will be paid up to $50/visit extra depending on how often you complete your daily study tasks (complete your e-diary and peak flows, and take your study medications). Payment will be based on how often you completed your at-home tasks.

Additional non-monetary compensation
You will be provided with free parking or other transportation arrangements as needed for each in-person study visit. In addition, for study visits that take longer than 4 hours, you will receive a meal voucher for the UWHC cafeteria.

PAYMENT IN CASE YOU ARE INJURED BECAUSE OF THIS RESEARCH STUDY
If you are injured or get sick because of this study, medical care is available to you through UW Health, your local provider, or emergency services, as it is to all sick or injured people.

- If it is an emergency, call 911 right away or go to the emergency room.
- For non-emergency medical problems, contact the study team for instructions.
- Call the Lead Researcher, Dr. Loren Denlinger, at 608-263-0524 to report your sickness or injury.
Here are some things you need to know if you get sick or are injured because of this research:

- If the sickness or injury requires medical care, the costs for the care will be billed to you or your insurance, just like any other medical costs.
- Your health insurance company may or may not pay for this care.
- No other compensation (such as lost wages or damages) is usually available.
- UW-Madison and UW Health do not have a program to pay you if you get sick or are injured because of this study.

By signing this consent form and taking part in this study, you are not giving up any legal rights you may have. You keep your legal rights to seek payment for care required because of a sickness or injury resulting from this study.

**WHAT IF I HAVE QUESTIONS?**

If you have questions about this research, please contact the Lead Researcher, Dr. Loren Denlinger, at (608) 261-1552. If you have any questions about your rights as a research subject or have complaints about the research study or study team, contact UW Health Patient Relations at (608) 263-8009. The Patient Relations Representatives work with research subjects to address concerns about research participation and assist in resolving problems.

For additional information about giving consent or your rights as a person in this study, to discuss problems, concerns, and questions, or to offer input, please feel free to call the Vanderbilt University Medical Center Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273.

**WILL I RECEIVE THE RESULTS OF RESEARCH TESTS?**

**Biospecimens**

We will tell you the results of the following tests or procedures that are part of the research study only if the results are confirmed to be abnormal and show clear clinical significance: blood chemistry, hemoglobin and hematocrit. Clear clinical significance means that the test results shows a problem that may be treatable and we generally know what the risks are of not treating the problem.

You can choose to receive results of the following tests or procedures: complete blood count tests but only at selected visits. Please indicate your choice below.

- [ ] Yes, please give me results from the tests/procedures listed above. (We will provide the results at the subsequent visit).
- [ ] Please also notify my health care provider of these results. My provider’s name and clinic are:

- [ ] No, DO NOT notify me or my provider of results from the tests/procedures listed above.
Communicable Diseases
This study requires testing that may show you have human immunodeficiency virus (HIV), hepatitis B, hepatitis C, or tuberculosis (latent or active). If the tests indicates you have HIV, Hepatitis B, Hepatitis C, or tuberculosis, we will inform you of the results of the test by phone within one week. The results will also be placed in your medical record and reported to state or federal health officials as required by law. We can provide you with a list of resources to assist you in understanding the results.

If you test positive for human immunodeficiency virus (HIV), the Wisconsin health department will be informed of the results. The health department may contact you to help with counseling, medical care and other services, if you need them and want them. You may be asked about sex and/or needle-sharing partners and you may be offered help notifying your partners about your positive HIV test. These are all common practices of the health department and apply to all individuals who test positive for HIV.

If you test positive for hepatitis, the Wisconsin health department will be informed of the results. The health department may contact you with resources for counseling and medical care, if you need them and want them. You may be asked about sex and/or needle-sharing partners. These are all common practices of the health department and apply to all individuals who test positive for hepatitis.

Pregnancy Testing
If you are a female and can become pregnant, you will have a urine pregnancy test at every visit, except Screening Visit C. The study doctor will inform you of a positive pregnancy test result.

Pregnancy testing in minors: Urine pregnancy testing will be performed on every female who has begun menstruation (has had at least one period). The first pregnancy test is done to find out if you are eligible for the study. If this first pregnancy test is positive, the study doctor will inform you of the positive pregnancy results and you will not be able to join the study. Results from pregnancy tests done during the study may be reported to you (the minor) and your parent/guardian.

Questionnaires
The Hospital Anxiety and Depression Scale (HADS) questionnaire you will complete in this study may show that you are experiencing symptoms of emotional distress such as depression or anxiety. If the HADS show that you are experiencing depression or anxiety, one of the investigators on the study team will talk with you to find out more information and refer you to a primary care/other physician to work on getting proper diagnosis and treatment if necessary.

Possible Discovery of Findings Related to Medical Imaging
Whenever a CT or X-ray of the lungs is done, there is the chance of finding something unexpected. Unexpected findings can have clear clinical significance, or uncertain clinical significance. Clear clinical significance means that the CT or X-ray shows a problem that may be treatable and we generally know what the risks are of not treating the problem. Uncertain clinical significance means that the imaging shows something unusual in the brain, but we do not know if it might affect your health, and treatment...
may not be appropriate or possible. On this study, you will be informed of any findings of clear clinical significance that may be discovered during the imaging procedure, but you will not be informed if there are findings of uncertain clinical significance. In order to assist us in interpreting the results of your CT or X-ray, we are also seeking your permission to review your medical records if you are or have been a patient at this hospital.

There may be benefits to learning such results (such as early detection and treatment of a medical condition), but there are risks as well (such as problems with getting insurance or a job, or feeling worried about a finding for which no treatment is required or appropriate). The CT or X-ray we are using in this research study is not the same quality as a CT or X-ray that you may have as part of your health care. If you believe you are having symptoms that may require clinical imaging, you should contact your primary care physician.

You may also choose to have your physician informed of any findings of clear clinical significance that we report to you by checking the box below. Please note, however, that if you choose to have your physician informed of findings of clinical significance, that report will likely be placed in your medical record.

Please indicate your preference by initialing the appropriate box:

_____ Yes, please inform my doctor of findings of clinical significance
OR
_____ No, please do not inform my doctor of findings of clinical significance

Name of physician to contact
If you do wish us to report any findings to your physician, you must provide us with the name and location of your primary physician, prior to your CT or X-ray.

Name of primary physician____________________________________
City or clinic____________________________________

If you have additional questions about the test results or concerns about your health, contact your primary care provider. You (or your insurance company) will be responsible for costs related to any follow-up care.

The genetic tests that are part of this study are for research purposes only. Because of this, we will not tell you or your doctors the results of these research tests.

**AUTHORIZATION TO USE/DISCLOSE PROTECTED HEALTH INFORMATION**

Protected health information (PHI) used in this study
Protected health information, also called PHI, is information about your physical or mental health that includes your name or other information that can identify you, like your date of birth or medical record number. To do this study, we will use the following kinds of PHI:

- Results of tests or procedures done as part of the study
- Things you tell the researchers about your health
- Information currently in your medical records as well as information added to your medical records during the course of this study. This information could include information like your medical history, your diagnosis, and/or your medications. We will get this information from your health care providers such as UW Health.

**How will researchers keep my research information confidential?**

We have strict rules to protect your personal information and protected health information (PHI). We will limit who has access to your name, address, phone number, and other information that can identify you. We will also store this information securely. The study has a Certificate of Confidentiality from the National Institutes of Health. A Certificate of Confidentiality prohibits researchers from disclosing information or biospecimens that may identify you in a legal proceeding or in response to a legal request without your consent. We may publish and present what we learn from this study, but none of this information will identify you directly without your permission.

However, we cannot promise complete confidentiality. Federal or state laws may permit or require us to show information to university or government officials and to study sponsors responsible for monitoring this study. This includes access to your medical records so that study monitors, auditors, the Institutional Review Board and regulatory authorities can verify study procedures and/or data. These groups will maintain your confidentiality. By signing this consent form, you are authorizing this access to your records. We may also have to tell appropriate authorities, such as child protective services or health care providers, if we learn during the study that you or others are at risk of harm (for example, due to child or elder abuse, or suicidal thoughts).

Authorizing the research team to use your PHI means that we can release it to the people or groups listed below for the purposes described in this form. Once your health information is released outside UW-Madison or UW Health it may not be protected by privacy laws and might be shared with others. Also, with appropriate institutional permissions and confidentiality protections, we might use information and biospecimens that we collect during this study for other research or share with other researchers without additional consent or authorization from you or your legally authorized representative.

**Who at UW-Madison can use my information?**

- Members of the research team
- Offices and committees responsible for the oversight of research
Who outside the UW-Madison may receive my information?

- U.S. Office for Human Research Protections
- The U.S. Food and Drug Administration (FDA)
- The study sponsor, National Heart, Lung, and Blood Institute
- PrecISE Data, Modeling, and Coordinating Center, University of North Carolina – Chapel Hill, Chapel Hill, NC
- PrecISE Data and Safety Monitoring Board
- Other researchers within the PrecISE network
- Law enforcement or other agencies, when required by law
- Industry partners providing study interventions including: Vitaeris, Inc. located in Vancouver, British Columbia, and Vitaflo International Ltd. located in Liverpool, England
- Representatives of the PrecISE study that reviews and approves research studies, the Vanderbilt Human Research Protections Program (VHRPP)
- Other representatives of the University of North Carolina at Chapel Hill responsible for ethical, regulatory, or financial oversight of research
- Pharmaceutical Product Development (PPD), Highland Heights, KY (central laboratory for safety lab tests)
- Collaborating researchers outside UW-Madison, including researchers at:
  - University of California, San Francisco (UCSF) Sputum Core, San Francisco, CA (sputum laboratory)
  - Cleveland Clinic Biorepository, Cleveland, OH (biospecimen laboratory and biorepository)
  - Mayo Clinic, Phoenix, AZ (nasal swab laboratory)
  - Spirometry Overreading Core, University of Wisconsin-Madison, Madison, WI (assess quality of and grade breathing tests)
  - Advanced Pulmonary Physiomic Imaging Laboratory (APPIL), University of Iowa, Iowa City, IA (CT imaging data)
  - The PrecISE Network Radiology Reading Center—VIDA Diagnostics Inc., located in Coralville, IA
- Companies or groups performing services for the research study, such as:
  - Pennington Biomedical (ASA24 website oversight and MCT assistance)
  - Medical International Research Inc. (MIR), in Waukesha, WI and Rome, Italy (makers of the electronic peak flow meter)
  - Vyaire Medical (spirometry data)
  - Propeller Health, Madison, WI (daily diary and peak flow data)
Institutional Review Board
Informed Consent Document for Research

Study Title: PrecISE: Precision Interventions for Severe and/or Exacerbation-Prone Asthma Network
Version Date: 12/02/2019
Version: 1.0

- Other labs contracting with PrecISE for analysis of blood, urine, or biological specimens
- Other people or organizations assisting with PrecISE research efforts (this may include drug manufacturers, distributors and/or their designees)

Will information from this study go in my medical record?
A medical record will be created for you if you do not already have one. Some of the information we collect for this study will go in your medical record. This includes results of the CT scan and/or chest x-ray, as well as DLCO pulmonary function testing. Results of the HIV, hepatitis B, hepatitis C, and tuberculosis tests will only go in your medical record if they are positive. Both you and your UW Health providers will be able to see results that are placed in your medical record. The following information from research procedures will NOT go in your medical records: physical exams, questionnaires, pulmonary function testing (other than DLCO), and research lab tests.

Date of IRB Approval: 12/18/2019
Date of Expiration: 10/29/2020
Institut
Institutional Review Board
Informed Consent Document for Research

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This master consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by agreeing to participate in this study.

*Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you voluntarily agree to participate in this research study.*

**Participant Signature:**

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**Legally Authorized Representative’s Name and Relationship to Participant, if applicable:**

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**Statement of Person Who Obtained Consent**

The information in this document has been discussed with the participant or, where appropriate, with the participant’s legally authorized representative. The participant has indicated that he or she understands the risks, benefits, and procedures involved with participation in this research study.

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