Partners HealthCare System
Research Consent Form

Subject Identification

General Template - Drug Clinical Trial
Version Date: January 2019

Protocol Title: Ustekinumab for the treatment of Giant Cell Arteritis

Principal Investigator: Dr. Sebastian Unizony

Site Principal Investigator:

Description of Subject Population: Adults with Giant Cell Arteritis (GCA)

About this consent form

Please read this form carefully. It tells you important information about a research study. A member of our research team will also talk to you about taking part in this research study. People who agree to take part in research studies are called "subjects." This term will be used throughout this consent form.

Partners HealthCare System is made up of Partners hospitals, health care providers, and researchers. In the rest of this consent form, we refer to the Partners system simply as "Partners."

If you decide to take part in this research study, you must sign this form to show that you want to take part. We will give you a signed copy of this form to keep.

Key Information

Taking part in this research study is up to you. You can decide not to take part. If you decide to take part now, you can change your mind and drop out later. Your decision won't change the medical care you get within Partners now or in the future.

The following key information is to help you decide whether or not to take part in this research study. We have included more details about the research in the Detailed Information section that follows the key information.

Why is this research study being done?

In this research study we want to learn whether ustekinumab can help people with giant cell arteritis (GCA).

How long will you take part in this research study?

If you decide to join this research study, it will take you about 15 months to complete the study. During this time, we will ask you to make 10 visits to MGH Rheumatology Boston or Waltham location.

What will happen if you take part in this research study?

If you decide to join this research study, the following things will happen: blood sample collection, physical exams, Chest X-ray, and ECG.

Why might you choose to take part in this study?

It is possible that your GCA will improve while you are taking ustekinumab. You may require less or even come off prednisone while receiving ustekinumab.

Other patients with GCA may benefit from knowledge gained about the use of ustekinumab to treat GCA

Why might you choose NOT to take part in this study?

Taking part in this research study has some risks and requirements that you should consider carefully.

Important risks and possible discomforts to know about include

- Infection of the throat or airways or sinus
- Headache
- Sore throat
- Dizziness
- Feeling tired
- Diarrhea
- Redness and pain at drug injection site
- Nausea
- back, joint or muscle pain
- itchiness
- Vomiting

.

A detailed description of side effects, risks, and possible discomforts can be found later in this consent form in the section called “What are the risks and possible discomforts from being in this research study?”.

What other treatments or procedures are available for your condition?

Other treatments or procedures that are available to treat GCA include Actemra and prednisone.

If you have questions or concerns about this research study, whom can you call?

You can call us with your questions or concerns. Our telephone numbers are listed below. Ask questions as often as you want.

Dr. Sebastian Unizony is the person in charge of this research study. You can call him at 617-726-7938 24/7. You can also call Ana D Fernandes, M-F 9-5 with questions about this research study.If you have questions about the scheduling of appointments or study visits, call the study coordinator at 617-724-2792.

If you want to speak with someone **not** directly involved in this research study, please contact the Partners Human Research Committee office. You can call them at 857-282-1900.

You can talk to them about:

- Your rights as a research subject
- Your concerns about the research
- A complaint about the research
- Any pressure to take part in, or to continue in the research study

Detailed Information

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

Why is this research study being done?

We are doing this research study to find out if ustekinumab can help people with giant cell arteritis (GCA). We also want to find out if ustekinumab, the study drug, is safe to take without causing too many side effects.

The purpose of this study is to test how well ustekinumab keeps GCA from returning (keeps you in remission) once steroids have been stopped.

The U.S. Food and Drug Administration (FDA) has approved ustekinumab to treat psoriasis. To our knowledge, ustekinumab has been used to treat only a few patients with GCA. However, ustekinumab is not yet approved for doctors to treat patients with GCA. An investigational use is a use that is being tested and is not approved for the treatment of GCA in the United States by the U.S. Food and Drug Administration (FDA).

This study will be used to determine if ustekinumab may be useful in treating patients with GCA. ustekinumab acts by blocking chemicals in the body that may cause GCA. This study will also look to see if the drug has any important side effects.

The time interval between ustekinumab administrations used in this study is shorter than the one approved for the treatment of psoriasis. The dose of ustekinumab used in this study may be in some cases larger than the dose approved for the treatment of psoriasis.

Who will take part in this research?

You have been asked to take part in the study because you have GCA.

GCA is a disease that causes inflammation of the body's largest blood arteries, the aorta and its main branches, including the arteries that supply blood to the head and neck regions. "Inflammation" is the body's response to irritation or injury. As these arteries become inflamed, symptoms may include headache, fatigue (extreme tiredness), jaw pain and body aches. GCA can also result in more serious conditions such as blindness and strokes.

GCA is usually treated with medications called steroids. These steroids are usually effective but may need to be taken at high doses and for a long time. This can sometimes result in side effects such as diabetes, high blood pressure, thinning of the bones (osteoporosis), and weight gain. Sometimes, reducing the steroids leads to a flare (relapse) of the GCA.

This is a pilot study. Pilot studies are done on a small group of subjects to learn if a larger study would be useful. We are asking you to take part in this research study because you have GCA. About 20 subjects will take part in this research study. All of the subjects will be enrolled at the Massachusetts General Hospital (MGH).

This study was created and is sponsored by the study doctors at MGH. Janssen Scientific Affairs, LLC, is the company providing the study drug and funding for this research study to be done.

What will happen in this research study?

If you choose to take part in this study, we will ask you to sign this consent form before we do any study procedures. We encourage you to tell your primary care doctor, as well as your other doctors, that you are taking part in this study. We also suggest that you talk about this study with your family.

Screening Visit (Visit 1): This visit will take about an hour. You will need to have the following check-ups or tests as part of the screening visit to find out if you can be in the study. These tests may be done even if you do not join the study. It may take up to 6 weeks or as little as 2 weeks before the study doctor has all of the information that he/she needs to determine whether the state of your health and your GCA allows you to be in the study. The study doctor will review the results of these tests with you. If you don't qualify for the study, the study doctor will tell you why.

This visit will include:

- Medical history: You will be asked about your health and any illnesses you may have or had in the past including your giant cell arteritis. You will be asked about the medicines you are taking including over the counter medicines, vitamins, and herbal treatments.
- Physical examination: You will receive a complete physical examination.
- Vital signs: Your weight, height, blood pressure, temperature and hear rate will be checked.
- Determination of the activity of your GCA by the study doctors
- Electrocardiogram (ECG): This test will record the electrical activity of your heart.
- Blood draw: About 13 teaspoons (about 65 ml) of blood will be drawn from a vein for lab tests. Some of this blood will be used to determine if you have other diseases, such as hepatitis or tuberculosis.
- A skin test to evaluate prior exposure to tuberculosis may be performed

- Urine analysis
- Chest X-ray: This test will be done to see if you have any sign of infection such as tuberculosis.
- Pregnancy test: If you are a woman and can have children, a blood or urine test will be done to see if you are pregnant.
- Blood samples for optional GCA research studies

Vaccines

Vaccines are made to help protect people from certain illnesses. Some vaccines are made from live bacteria or live viruses. You cannot receive most kinds of live vaccines (for example, FluMist™, varicella) within 3 months of starting this study, during the study, or for 3 months after the last study injection. Another kind of live vaccine is BCG, which is a vaccine against tuberculosis. You cannot receive a BCG vaccine during this study or for 12 months after the last study injection. You could get sick from these kinds of vaccines while on ustekinumab. If you do get a live vaccination during this study, you must tell your study doctor immediately.

Tell your study doctor if anyone living in your home needs a live vaccine. Some viruses used in live vaccines can spread from a close contact (someone living in your home) to people with a weakened immune system.

Other kinds of vaccines, like tetanus and flu shots, are allowed. It is not known if ustekinumab may interfere with them from working. Tell your study doctor before getting any vaccine while you are in this study.

If you do get a live vaccination during this study, you should tell your study doctor, as you may no longer be allowed to receive any more study medication.

Interactions with other medications that you may be taking

Ustekinumab may interact with other medicines. Be sure to tell your study doctor about all the medicines and remedies that you take. The medications that are not permitted are:

- Methotrexate within 2 weeks of starting ustekinumab
- Azathioprine, mycophenolate mofetil, cyclophosphamide, chlorambucil, tacrolimus, leflunomide, anakinra, canakinumab, belimumab, abatacept, tocilizumab, infliximab, etanercept, adalimumab, golimumab, or certolizumab within 3 months of starting ustekinumab
- Rituximab within 9 months of starting ustekinumab

- Any investigational medication within 1 month prior to starting ustekinumab or within 5 half-lives (the amount of the drug in the body will be half of the initial starting dose) of the investigational medication, whichever is longer. If you have been on an investigational medication tell your study doctor about it.

Treatment phase visits (Visits 2-9): These visits will take about half an hour each. Visit 2 will take place within 6 weeks of the screening visit. Visits 2 and 3 will take place 4 weeks apart. Visits 3 to 9 will take place every 8 weeks.

At these visits we will:

- Give you a physical examination
- Ask you about side effects or health problems since your last visit
- Ask you about all the medications you are taking
- Determine whether your GCA is active or in remission
- Draw a blood sample to monitor your health during the study
- Administer you the study drug ustekinumab
- Prescribe you the prednisone tablets and explain you how to reduce the amount of prednisone that you take
- Draw extra blood samples for optional GCA research studies

Taking the study drug ustekinumab

- In this research study, the study drug ustekinumab will be given by injection under the skin of your abdomen (stomach, belly area) or your thigh, using an already filled (pre-filled) syringe.
- You will receive subcutaneous injections of ustekinumab 90 mg at visits 2, 3, 4, 5, 6, 7, and 8.
- The injections will be done by your study doctors or other qualified personnel of the study.

Taking prednisone

- During the study you will also take prednisone. Prednisone is a steroid drug medication that suppresses the immune system and is the usual treatment for giant cell arteritis.
- The prednisone dose will be gradually reduced until the dose is zero. This gradual reduction of the prednisone dose is called “taper” or “tapering”
- You will start the tapering at a dose required to control your GCA symptoms. The starting dose of prednisone will be one that your study doctor decides is most appropriate for you and your GCA. The starting dose will be 60 mg, 40 mg, or 20 mg
- You will take the prednisone by mouth with a full glass of water and at a meal to prevent stomach upset. You should try and take your doses at the same time every day, taking care not to miss any. If you skip a dose, take it as soon as you remember. Never take a

double dose. Do not stop taking prednisone without letting the study doctor know. If you stop taking your prednisone abruptly, you could develop symptoms of adrenal insufficiency such as abdominal pain, nausea, vomiting, body aches, fatigue and low blood pressure.

- If at any time your GCA worsens, the study doctor will stop the taper and give you a higher dose of prednisone
- If your GCA is well controlled during the study, you will take prednisone for 6 months
- If your GCA is not well controlled during the study, your study doctor may decide to give you prednisone for a longer period of time
- If your GCA is not well controlled during the study, your study doctor may decide to increase your dose of prednisone
- In case you need higher doses of prednisone or prednisone for a longer period of time, your study doctor will tell you why

Concomitant Medications

Your study doctor will require that you also take a medication to prevent a lung infection called "PCP" pnemonia. There are few options to prevent this infection including a combination of sulfamethoxazole and trimethoprim (also called bactrim) or dapsone.

Your study doctor may recommend that you also take a baby aspirin to prevent GCA complications

Your study doctor may recommend that you also take additional medications to prevent or treat prednisone related adverse events. This medication may include calcium and vitamin D supplements to treat or prevent osteoporosis ("weak bones"), fosamax or similar medications to treat or prevent osteoporosis, and omeprazole or similar medication to treat or prevent acid reflux or gastritis.

Safety follow up visits (Visit 10): Eight weeks after visit 9, you will come for the last visit. We call this visit safety follow up visit or visit 10.

At these visits we will:

- Give you a physical examination
- Ask you about side effects or health problems since your last visit
- Ask you about all the medications you are taking
- Determine whether your GCA is active or in remission
- Draw a blood sample to monitor your health during the study

After you complete the study we will refer you back to your own doctor for ongoing medical care.

We will not provide you with ustekinumab:

- After the study is over, or
- If the study has been stopped, or
- After your part in the study has ended

Stopping the Study Early

Your participation in the study is voluntary. You may choose to stop taking part of the study at any time, without giving a reason. Tell the study staff if you want to stop being in the study. Your decision will not affect your medical care now or in the future. It will not affect other benefits you receive outside the study

If you decide to stop taking part in the study for any reason, we will ask you to make a final study visit 8 weeks after your last visit.

At this visit, we will:

- Give you a physical examination
- Ask you about side effects or health problems since your last visit
- Ask you about all the medications you are taking
- Determine whether your GCA is active or in remission
- Draw a blood sample to monitor your health during the study

You may need to leave the study if:

- The results of certain tests show that you are not right for this study or for the study drug.
- You do not follow study instructions for treatment or follow-up visits.
- You get new health problems during the study that might not work well with the study set-up.
- You get pregnant or decide that you want to become pregnant.
- The study doctor thinks it is best for you to stop taking the study drug

New information may become available or known that might affect your choice to stay in the study. Such information will be shared and discussed with you.

This new information might include:

- Safety issues with the study drug
- Evidence that the study drug may not work
- Another treatment becomes available that may help treat your GCA better.

Janssen Scientific Affairs, LLC (the company providing study drug and funding), the regulatory authority, or the study doctor may choose to stop the study at any time. We will give you the reason at that time.

If your participation in the study is stopped early, you may be asked to complete end of study procedures (such as a final medical examination and laboratory tests) for your own safety.

At this visit, we will:

- Give you a physical examination
- Ask about any side effects or health problems since your last visit
- Draw a blood sample

Leaving the Study

If you decide to leave the study and withdraw your consent, it means you decide that no more information about your health can be collected. You and the study doctor will discuss the best way to do this. You or others (your Caregiver/Legally authorised representative) may be contacted to learn about your well-being. This will be done by visits to the clinic**.** Any information that can be found in the public may be used for the study, even after you withdraw consent.

All the data and samples collected before you left the study will still be used for the study. You may ask that your samples be destroyed but any data already collected about your samples will be used for the study.

Review of Medical Records from Hospital Admissions or Emergency Department Visits

MGH has an electronic system that lets your study doctors know if you are admitted to a Partners Hospital, or if you visit a Partners Hospital Emergency Department for any reason. This alert will let the study doctors know why you are there. We want to make sure the study doctors know about any possible problems or side affects you experience while you are taking part in the study.

Study Information Included in Your Electronic Medical Record

A notation that you are taking part in this research study may be made in your electronic medical record. Information from the research that relates to your general medical care may be included in the record (for example, list of allergies, results of standard blood tests done at the hospital labs).

Please ask your study doctor if you have any questions about what information will be included in your electronic medical record.

What are the risks and possible discomforts from being in this research study?

All medications may have side effects. Side effects can be mild to serious and may be different from person to person. Everyone taking part in the study will be watched carefully for any side effects. In the case those happen, your study doctors may give you drugs to help lessen the side effects.

Many side effects go away soon after you stop what is causing them. In some cases, side effects can be serious and may be long lasting or may never go away. There is also the rare risk of death. You should talk to your study doctor as soon as possible about any side affects you may experience while taking part in the study.

The risks, side effects and discomforts that have been reported from clinical studies with ustekinumab are explained below. The possible discomforts, side effects, and risks related to ustekinumab treatment are not all known.

Potential discomforts, side effects, and risks associated with Ustekinumab

The possible discomforts, side effects and risks related to ustekinumab treatment are not all known. Most side effects are not serious. Some may be serious and may require treatment or additional testing. This section describes how frequently side effects occurred in subjects who were treated with Ustekinumab. In this section, the following terms are used:

- Very common: affects more than 1 user in 10
- Common: affects 1 to10 users in 100
- Uncommon: affects 1 to 10 users in 1,000
- Rare: affects 1 to 10 users in 10,000

Very Common:

- None

Common:

- Infection of the throat or airways or sinus
- Headache
- Sore throat
- Redness and pain at drug injection site
- Nausea
- back, joint or muscle pain
- itchiness

- Dizziness
- Feeling tired
- Diarrhea
- Vomiting

Uncommon:

- Swelling, itching, hardness, bleeding, bruising and irritation where the injection is given.
- Shingles (a painful rash)
- Depression
- Inflammation of tissue under the skin. Signs include warmth, swelling, redness and pain
- Nasal congestion
- Allergic reactions including rash or raised, itchy bumps
- Tooth infections
- Acne
- Feeling weak
- Vaginal yeast infection
- Chest infection

Rare:

- Serious allergic reactions, which could be life-threatening (including low blood pressure, trouble breathing, swollen face, lips, mouth and/or throat)
- A form of psoriasis with redness and scaling of a much larger area of your skin or your entire body (erythrodermic psoriasis)
- In rare cases, symptoms such as cough, shortness of breath, and fever may also be a sign of an allergic lung reaction to Ustekinumab

Infections

Ustekinumab is a drug that may change how your body fights infections. Serious infections requiring hospitalization for medical observation and /or treatment have been seen in ustekinumab studies. Some of these infections have also been life threatening.

Tell your study doctor if you have a new infection, if an infection keeps coming back, or if you have any signs of infection such as:

- Fever
- Chills
- Vomiting
- Diarrhea

- Headache
- Coughing
- Congestion
- Chest tightness
- Shortness of breath
- Flu-like symptoms
- Nausea
- Frequency or burning while passing urine
- Redness warmth, tenderness or swelling of skin or joint
- Cold sores
- New or worsening of pain in any location
- Weight loss
- Tiredness
- Night sweats

It is unknown if ustekinumab may stop you from developing a fever if you do have an infection, and therefore hide that you have one.

Fungal infections have been reported in subjects taking ustekinumab. Some of these fungal infections can be serious and involve internal organs. You should find out from your study doctor which fungal infections are common where you live or travel and what symptoms they cause. Tell your study doctor and family physician right away if you develop symptoms of such illnesses.

Subjects who receive ustekinumab may also be at a greater risk for certain serious infections such as tuberculosis. Tell your study doctor if you have ever had tuberculosis or anybody in your family has ever had tuberculosis or if you come in contact with someone who has tuberculosis. Tell your study doctor if you develop:

- A cough that does not go away
- Coughing up blood
- Shortness of breath
- Fever
- Night sweats
- Weight loss

You should tell your study doctor if you have a new infection, if an infection keeps coming back, or if you have any signs of infection. You will not be eligible for this study if you have a history of chronic or recurrent infections or ongoing infections such as recurrent kidney infections, lung infections, or an open, draining skin wound or sore.

Your study doctor will test you for hepatitis B, hepatitis C, and tuberculosis (TB). Tell your study doctor if you have had any of these conditions. You will not be eligible for this study if you are infected with hepatitis B, hepatitis C, or TB either now or in the past. For subjects who are not eligible for this study due to hepatitis B, hepatitis C, or TB test results, consultation with a physician with expertise in the treatment of those infections is recommended.

Injection site reactions

Ustekinumab will be given as an injection under your skin. After the injection, temporary and common reactions seen at the injection site could include:

- Redness
- Pain
- Itching
- Swelling

Allergic reactions

Ustekinumab may cause an allergic reaction in some people. These reactions are usually mild to moderate. The following can be symptoms of an allergic reaction:

- Fever
- Chills
- Hives
- Rash
- Headache
- Nausea
- Flushing
- Light-headedness
- Shakiness
- Irregular heartbeats
- Chest tightness
- Shortness of breath
- Wheezing
- Difficulty in swallowing or breathing
- Low blood pressure
- Anaphylaxis (life threatening allergic reaction)

Serious allergic reactions have been reported in subjects taking ustekinumab and can be life threatening. Signs of a serious allergic reaction include skin rash, swollen face, mouth, lips, and/or throat, and trouble breathing. Tell your doctor or get emergency medical help right away if you have an allergic reaction. If you are having trouble breathing, call 911 immediately. If you experience a serious reaction to an injection, you will not receive any more study treatments.

If you have an allergic reaction at the doctor's office, additional necessary treatment will be provided immediately. Your study doctor may give you an antihistamine (medication used to treat allergic symptoms such as hay fever) or other medications used for treating an allergy. Antihistamines can make you sleepy, so please use caution when driving a car or operating machinery.

Another type of allergic reaction has occurred in some subjects 1-14 days after receiving similar medications. The symptoms of this type of allergic reaction may include fever, rash, muscle aches and joint pain

Antibodies to ustekinumab

Sometimes the body can make special antibodies that may increase the risk of an allergic reaction to either ustekinumab or other antibody medicines. If you have an allergic reaction, you may not be able to have these types of medications in the future. You should always tell your doctors that you have been treated with human antibodies in this study.

Cancer

Cancers have been reported in subjects who have received ustekinumab, but it is unknown whether taking ustekinumab has increased their risk for developing cancer. Because ustekinumab may suppress your immune system, it is possible that it may increase your risk of developing cancer, including skin cancers. It is known that people who have had inflammatory diseases (such as, Crohn's disease, Rheumatoid Arthritis, Ulcerative Colitis etc.) for a long time and who use immunosuppressive therapies (such as, azathioprine, methotrexate etc.) for a long time have a higher risk of developing cancer. These people get cancer of the lymph nodes more often than other people.

Latex allergy

The needle cover for the prefilled syringe that contains study drug contains dry natural rubber (a form of latex). This may cause allergic reactions in people who are sensitive to latex. Please tell your study doctor if you have ever had an allergic reaction to latex.

Cardiac and vascular

Heart attacks and strokes have been reported in subjects who have received ustekinumab. These events have rarely resulted in death. It is unknown whether taking ustekinumab increases your risk for developing these events.

People, who have psoriasis, and certain other inflammatory diseases, have a higher risk of having heart attacks. These people have heart attacks more often than other people. Seek medical care immediately if you develop;

- Chest pain or discomfort,
- Trouble breathing,
- Irregular heartbeats,
- Dizziness,
- Loss of balance,
- New numbness or weakness,
- Visual or speech changes

Other therapies

Tell your doctor if you are receiving treatments that weaken the immune system while using ustekinumab. These treatment combinations have not each been studied with Ustekinumab, so it is unknown if they could possibly increase the risk of diseases related to a weakened immune system.

Allergy immunotherapy (Allergy Injections)

Tell your study doctor if you have ever had or are now getting allergy injections. Ustekinumab may affect your response to allergy injections.

Reversible posterior leukoencephalopathy syndrome

A single case of a very rare disease of the brain, known as RPLS (reversible posterior leukoencephalopathy syndrome), has been reported in a clinical study with ustekinumab. RPLS is generally reversible and is not caused by an infection. Symptoms of this condition are:

- Headache
- Seizures
- Confusion
- Loss of eyesight

Tell your study doctor if you experience any of these symptoms.

Other risks associated with ustekinumab

Any risks of ustekinumab that relate specifically to the treatment of GCA are unknown. Your doctor will closely monitor the activity of your GCA during the trial in order to change your treatment should any serious worsening of your condition occur. If you have any problems, you should let your study doctor know right away.

Risks of Prednisone

Common side effects:

- Nausea
- Vomiting
- Loss of appetite
- Heartburn

- Trouble sleeping
- Increased sweating
- Acne

Less common side effects:

- Muscle pain/cramps
- Irregular heartbeat
- Weakness
- Swelling of the hands/ankles/feet
- Unusual weight gain
- Signs of infection (such as fever or sore throat that doesn't go away)
- Vision problems (such as blurred vision)
- Vomit that looks like coffee grounds
- Black bloody stools
- Severe stomach/abdominal pain
- Mental/mood changes (such as depression and mood swings)
- Slow wound healing
- Thinning skin
- Menstrual period changes
- Puffy face
- Easy bruising/bleeding
- Decreased bone density ("weak bones") and increased risk of fracture

Another less common side effect is that your blood sugar level may rise, which can worsen/cause diabetes. Tell your study doctor if you experience symptoms such as increased thirst and increased urination.

If you experience any of the above, or have any questions or concerns, please discuss this with Dr. Unizony or the study staff.

Concomitant Medication Risks

The possible discomforts, side effects and risks related to sulfamethoxazole and trimethoprim may include nausea, vomiting, diarrhea, stomach upset, headache, reduction in your blood cell counts (red blood cells, white blood cells, platelets), dizziness, and allergic reactions including serious ones such as anaphylaxis (life threatening allergic reaction) and Steven's Johnson's syndrome.

The possible discomforts, side effects and risks related to dapsone may include nausea, vomiting, diarrhea, stomach upset, headache, reduction in your blood cell counts (red blood cells, white

blood cells, platelets), liver function test abnormalities, and allergic reactions including serious ones such as anaphylaxis (life threatening allergic reaction) and Steven's Johnson's syndrome.

The possible discomforts, side effects and risks related to baby aspirin may include stomach upset, stomach and intestinal ulcers, gastrointestinal bleeding, dizziness, kidney function problems, and allergic reactions including serious ones such as angioedema (throat swelling), asthma and anaphylaxis (life threatening allergic reaction)

The possible discomforts, side effects and risks related to calcium and vitamin D supplements may include stomach upset, nausea, constipation, and increase levels of calcium in your blood

The possible discomforts, side effects and risks related to fosamax or similar medications may include stomach upset, esophageal ulcers and perforations, diarrhea, joint pain, allergic reactions, osteonecrosis of the jaw (a lesion in the jaw bone), and with prolonged use fractures of the femur (the thigh bone).

The possible discomforts, side effects and risks related to omeprazole or similar medications include stomach upset, diarrhea, headache, vitamin B 12 deficiency (with prolonged use), inflammation of the pancreas, and allergic reactions including serious ones such as anaphylaxis (life threatening allergic reaction) and Steven's Johnson's syndrome.

Risks of Stopping Current Medications

When you stop taking certain medications that you were taking for GCA (e.g. prednisone), your symptoms or disease might get worse. If this happens, tell the study doctor.

Blood Draws: Drawing blood may cause pain where the needle is inserted. There is a small risk of bruising or infection at the place where the needle is inserted. Some people experience dizziness, upset stomach, or fainting when their blood is drawn.

Hepatitis testing: As part of this research study, we will test your blood for hepatitis. For most studies, this means that results will become part of your hospital medical record. If these tests show that you have hepatitis, you cannot be in the study. We will refer you for medical care if we find you have this infection. By law, healthcare providers must report positive test results for infectious diseases to public health authorities, including the Massachusetts Department of Public Health. These reports are required to identify you by name.

Tuberculosis (TB) testing: As part of this study, we will do a blood test or a skin test for past exposure to TB. For most studies, this means that test results will become part of your hospital medical record. If this test shows that you have been exposed in the past to TB, you cannot be in the study. If needed, we will refer you for medical care. By law, healthcare providers must report

positive test results for past exposure to TB to public health authorities, including the Massachusetts Department of Public Health. These reports are required to identify you by name

The skin test to assess prior exposure to TB is given under the skin with a small needle. You may have mild pain, bleeding, a change in skin color or bruising, and/or an infection where you were tested. You will need to return to the study center or visit a qualified medical professional 48 to 72 hours after the injection for proper evaluation of the test site. If you have a positive skin test, you may have mild pain, itching, redness and slight swelling at the site of the skin test."

Preventative Medicine for Tuberculosis Infection: Sometimes these medicines have side effects. Side effects may include nausea, vomiting, abdominal pain, hepatitis and possibly other events. Your study doctor will provide you with more information on tuberculosis preventative treatment.

Risk of X-Rays: As a result of your participation in this study you will be exposed to radiation from an x-ray of your chest. Please note that this radiation is not necessary for your medical care and is for research purposes only.

The total amount of radiation exposure you will receive from participation in this study is equal to a whole body exposure of approximately 0.06 milliSieverts (mSv). A milliSievert is a unit of radiation dose. This amount of radiation is about the same as you would normally receive in 1 week from natural background sources from the earth and the sky.

Scientists disagree on whether radiation doses at these low levels are harmful. A possible effect that could occur at doses associated with this study is a slight increase in the risk of developing cancer later in life.

ECG: The ECG test is a recording of the electrical activity of your heart. There are no risks associated with this test. The sticky pads used may cause slight irritation when they are removed. If the hair under the patches needs to be shaved, irritation from shaving also could occur.

Are there any reproductive risks?

The effect of ustekinumab on human sperm, pregnant women, and women making breast milk, unborn babies or breast feeding infants is not known. Pregnant women and women making breast milk to feed infants cannot participate in this study. Urine and/or blood pregnancy tests will be conducted for female participants who are capable of getting pregnant.

It is very important that women, while taking part in this study, do not become pregnant. Your study doctor will discuss effective birth control methods with you. It is very important that men taking part in this study do not get a woman pregnant while taking part in this study.

For women who could become pregnant or men who may father a child:

- During this study and for 4 months after the last dose of study drug, you must use proven birth control methods.
- If you are using a hormone birth control method (such as oral contraception ["the pill"], a patch, injections, etc.), you must also use a second method of birth control, such as a condom or diaphragm. It is not known if Ustekinumab affects the effectiveness of hormonal birth control methods. However, Ustekinumab may lower the concentration/amount of active ingredients of the hormonal birth control methods.
- If you are planning to donate eggs (ova, oocytes) during the study and for 4 months after your last dose of study drug, you must notify your study doctor or healthcare team and discuss the associated risks.
- If you think that you have become pregnant or may have fathered a child while taking part in the study, tell your study doctor immediately.
- You should also notify your childbirth doctor that the mother/father received an experimental drug (ustekinumab).
- If you are a female study subject and you become pregnant during your participation in this study, your treatment with study drug will be stopped and you may be withdrawn from some of the study procedures but not from follow-up by your study doctor. The study doctor will ask for your permission to stay in contact with you throughout the length of the pregnancy.
- If you are a male study subject, and you father a child during your participation in this study, the study doctor will ask for your partner's permission to stay in contact with her throughout the length of the pregnancy.

Optional (Not Required) Sub-Studies

The following 2 sub-studies are optional, which means they are not required. You can decide you don't want to take part in one or more of them and still be in the main study. Your decision will not affect you taking part in the main study or your medical care.

1. Genetic Testing on Your Samples
   This section describes the genetics part of the study. Joining this part of the study is optional. You can choose not to join the Genetic study and still take part in the main study.

The purpose of the genetics part of this study is to help scientists to understand GCA and related conditions and response to study medicines.

We get our genes (DNA) from our parents. Different genes may affect who gets GCA or how a body reacts to a drug. Scientists look for differences in people's genes (DNA) that might explain this. Genetic research may include the study of certain genes or all your genes also called your whole genome. This may include genes involved in the way the drug works (both good and bad) or how the drug is broken down in the body. It may also include genes linked to GCA or related conditions.

If you choose to take part in the genetics study, we will draw an additional 1½ teaspoons (about 6 ml) of your blood. If there is a problem looking at your blood sample, we may ask to take the sample again. The risks associated with giving a genetics blood sample are the same as the risks for giving any blood sample in this study.

Your sample may be used during the study or in the future to get genetic data. Your sample will be stored and used as described in the section "What happens to my blood sample?"

Your genetic data may be:

- Studied during the clinical study or in the future.
- Studied with the medical information and results from the main study.
- Stored and used as described in the section on "What happens to my personal and medical information?"

You can stop the main study and still participate in the genetic research study.

If you choose to stop the genetics part of the study after giving a sample, we will not conduct any new tests on the sample. We will destroy the sample. If we have gotten genetic data but we have not studied that data at the time you stop the genetics part of the study, your genetic data will not be used for any purpose in the future. The study doctors will use any results they have from studying the data before you stopped participating in the genetics study.

Please indicate below, by checking "Yes" or "No" and including your signature, whether you agree or disagree to allow genetic testing of your samples as described above.

_____YES _____NO _____ Signature

2. Biomarker Research

This section describes a type of research called biomarker research on GCA. Joining this part of the study is optional. You can choose not to join the biomarker research and still take part in the main study.

The purpose of the biomarker research is to better understand how GCA works and how changes in your body may relate to when your GCA is better or worse. We may also do additional genetic tests on these samples (similar to those described in the genetics part of the study) to further understand GCA.

If you choose to take part in the biomarker research portion of the study, we will collect additional blood samples from you 5 times during the study for a total of an additional 30 teaspoons of blood (150ml). The risks associated with giving a blood sample for the biomarker research are the same as the risks for giving any blood sample in this study.

If you withdraw from the biomarker part of the study you may ask that your Biomarker samples be destroyed. Any data already collected about your samples will be used for the study. The study doctors will use any results they have from studying the data before you stopped participating in the biomarker study.

Your sample may be used during the study or in the future to get biomarker data.

Please indicate below, by checking "Yes" or "No" and including your signature, whether you agree or disagree to allow the storage of your samples as described above.

_____YES _____NO _____ Signature

Genetic Testing

Genetics information that results from this study does not have medical or treatment importance at this time. However, there is a risk that information about taking part in a genetic study may influence insurance companies or employers regarding your health. To further safeguard your privacy, genetic information that we get in this study will not be placed in your medical record.

A federal law, called the Genetic Information Nondiscrimination Act (GINA), generally makes it illegal for health insurance companies, group health plans, and most employers to discriminate against you based on your genetic information. This law will protect you in the following ways:

• Health insurance companies and group health plans may not request your genetic information that we get from this research.

• Health insurance companies and group health plans may not use your genetic information that we get from this research when making decisions regarding your eligibility or premiums.

• Employers with 15 or more employees may not use your genetic information that we get from this research when making a decision to hire, promote, or fire you or when setting the terms of your employment.

Be aware that this federal law does not protect you against genetic discrimination by companies that sell life insurance, disability insurance, or long-term care insurance, nor does it protect you against genetic discrimination by all employers.

Taking part in a genetic study may also have a negative impact on family or other relationships. If you do not share information about taking part in this study, you will reduce this risk.

What happens to my data (personal and medical information)?

It is very important that your personal and medical information stay confidential and secure. The study personnel will protect your information in accordance with current law. When you sign this consent form you agree that the study doctors and other study personnel can use your personal and medical information as described here:

- Your study information will be labelled with a code number (for example, 1234782). It will not include your name or address. The study doctor will have the link between your name and the code number.
- The link between your name and the code number will not be shared.
- The study doctors will use your coded information for research only. This may include research looking at improving the quality and efficiency in conducting clinical research trials in general.

The study doctors may:

- Keep your coded information electronically and analyse it by computer to find out what the study is telling us.

- Share the coded information with regulatory agencies that approve new medicines,

- Share the coded information with people who check that the study is done properly (like the ethics committee or review boards),

- Combine the coded information with results from other studies to learn more about the medicine and other medicines, and GCA and other diseases and conditions. This may help us to assess the risks and benefits of ustekinumab, or to improve disease understanding,

- Publish study results for medical journals, meetings and on the internet for other researchers to use; your name will not appear in any publication

- Share coded safety information with Janssen Scientific Affairs, LLC (the company providing study drug and funding) so it may conduct additional reviews of the coded information in order to study the safety and effectiveness of the study drug, to develop a better understanding of disease, or to improve the efficiency of future clinical trials

What happens to my blood samples?

If you take part in this study, you will be asked to give blood samples to monitor your health during the study. These samples will be destroyed after the tests are done.

You will also be asked to give optional research blood samples if you choose to participate in the biomarker research part of the study and a single blood sample if you choose to participate in the genetics part of the study. Similar to information collected in the study, your optional researches samples may also be used by the study doctor to better understand GCA or to further develop the study drug. Your optional research blood samples will be given the same code as your other study information and kept in locked storage. Anyone who works with your samples will hold the information and results in confidence. Your study doctors may store your optional research blood samples for up to 15 years after the end of the study after which time your samples will be destroyed.

What are the possible benefits from being in this research study?

It is possible that your GCA will improve while you are taking ustekinumab. You may require less or even come off prednisone while receiving ustekinumab.

Other patients with GCA may benefit from knowledge gained about the use of ustekinumab to treat GCA

How may we use and share your samples and health information for other research?

The samples and information we collect in this study may help advance other research. If you join this study, we may remove all information that identifies you (for example your name,

medical record number, and date of birth) and use these de-identified samples and data in other research. It won't be possible to link the information or samples back to you. Information and/or samples may be shared with investigators at our hospitals, at other academic institutions or at for-profit, commercial entities. You will not be asked to provide additional informed consent for these uses.

Will you get the results of this research study?

No. The research study we are doing is only a stepping stone in understanding GCA. Therefore, no information about the results of this research study or the results of your individual participation in the research study will be given to you or your doctor. Tests done for the research using your samples will not be useful in directing your medical treatment. The results of the tests will not be placed in your medical record.

What other treatments or procedures are available for your condition?

You do not have to take part in this research study to be treated for your GCA. You may choose to continue to get regular care from your own doctor. Most people with this condition are treated with long courses of prednisone. If you currently take steroids for your GCA you may wish to continue to do so. There have been mixed results using other medications for treatment of these disorders (e.g., methotrexate). Alternately you might to decide to:

- Take part in another study
- Get no treatment at this time.

Talk with the study doctor, or your family doctor, about your treatment choices.

Can you still get medical care within Partners if you don't take part in this research study, or if you stop taking part?

Yes. Your decision won't change the medical care you get within Partners now or in the future. There will be no penalty, and you won't lose any benefits you receive now or have a right to receive.

We will tell you if we learn new information that could make you change your mind about taking part in this research study.

What should you do if you want to stop taking part in the study?

If you take part in this research study, and want to drop out, you should tell us. We will make sure that you stop the study safely. We will also talk to you about follow-up care, if needed.

Also, it is possible that we will have to ask you to drop out of the study before you finish it. If this happens, we will tell you why. We will also help arrange other care for you, if needed.

Will you be paid to take part in this research study?

We will reimburse you for the cost of travelling to your study visits. You may receive up to $50.00 per study visit. We will pay you $500.00 if you complete the study. You will only be reimbursed for the visits you complete.

We may use your samples and information to develop a new product or medical test to be sold. The Sponsor, hospital, and researchers may benefit if this happens. There are no plans to pay you if your samples are used for this purpose.

What will you have to pay for if you take part in this research study?

Study funds will pay for certain study-related items and services. We may bill your health insurer for, among other things, routine items and services you would have received even if you did not take part in the research. You will be responsible for payment of any deductibles and co-payments required by your insurer for this routine care or other billed care. If you have any questions about costs to you that may result from taking part in the research, please speak with the study doctors and study staff. If necessary, we will arrange for you to speak with someone in Patient Financial Services about these costs.

What happens if you are injured as a result of taking part in this research study?

We will offer you the care needed to treat any injury that directly results from taking part in this research study. We reserve the right to bill your insurance company or other third parties, if appropriate, for the care you get for the injury. We will try to have these costs paid for, but you may be responsible for some of them. For example, if the care is billed to your insurer, you will be responsible for payment of any deductibles and co-payments required by your insurer.

Injuries sometimes happen in research even when no one is at fault. There are no plans to pay you or give you other compensation for an injury, should one occur. However, you are not giving up any of your legal rights by signing this form.

If you think you have been injured or have experienced a medical problem as a result of taking part in this research study, tell the person in charge of this study as soon as possible. The researcher's name and phone number are listed in the beginning of this consent form.

If you take part in this research study, how will we protect my privacy?

Federal law requires Partners to protect the privacy of health information and related information that identifies you. We refer to this information as "identifiable information."

In this study, we may collect identifiable information about you from:

- Past, present, and future medical records
- Research procedures, including research office visits, tests, interviews, and questionnaires

Who may see, use, and share your identifiable information and why they may need to do so:

- Partners researchers and staff involved in this study
- The sponsor(s) of this study, and people or groups it hires to help perform this research or to audit the research
- Other researchers and medical centers that are part of this study
- The Partners ethics board or an ethics board outside Partners that oversees this research
- A group that oversees the data (study information) and safety of the study
- Non-research staff within Partners who need identifiable information to do their jobs, such as for treatment, payment (billing), or hospital operations (such as assessing the quality of care or research)
- People or groups that we hire to do certain work for us, such as data storage companies, accreditors, insurers, and lawyers
- Federal agencies (such as the U.S. Department of Health and Human Services (DHHS) and agencies within DHHS like the Food and Drug Administration, the National Institutes of Health, and the Office for Human Research Protections), state agencies, and foreign government bodies that oversee, evaluate, and audit research, which may include inspection of your records

- Public health and safety authorities, if we learn information that could mean harm to you or others (such as to make required reports about communicable diseases or about child or elder abuse)
- Other:

Some people or groups who get your identifiable information might not have to follow the same privacy rules that we follow and might use or share your identifiable information without your permission in ways that are not described in this form. For example, we understand that the sponsor of this study may use your identifiable information to perform additional research on various products or conditions, to obtain regulatory approval of its products, to propose new products, and to oversee and improve its products' performance. We share your identifiable information only when we must, and we ask anyone who receives it from us to take measures to protect your privacy. The sponsor has agreed that it will not contact you without your permission and will not use or share your identifiable information for any mailing or marketing list. However, once your information is shared outside Partners, we cannot control all the ways that others use or share it and cannot promise that it will remain private.

Because research is an ongoing process, we cannot give you an exact date when we will either destroy or stop using or sharing your health information. Your permission to use and share your identifiable information does not expire.

The results of this research study may be published in a medical book or journal, or used to teach others. However, your name or other identifying information **will not** be used for these purposes without your specific permission.

Your Privacy Rights

You have the right **not** to sign this form that allows us to use and share your health information for research; however, if you don't sign it, you can't take part in this research study.

You have the right to withdraw your permission for us to use or share your health information for this research study. If you want to withdraw your permission, you must notify the person in charge of this research study in writing. Once permission is withdrawn, you cannot continue to take part in the study.

If you withdraw your permission, we will not be able to take back information that has already been used or shared with others, and such information may continue to be used for certain purposes, such as to comply with the law or maintain the reliability of the study.

You have the right to see and get a copy of your health information that is used or shared for treatment or for payment. To ask for this information, please contact the person in charge of this research study. You may only get such information after the research is finished.

Informed Consent and Authorization

Statement of Person Giving Informed Consent and Authorization

- I have read this consent form.
- This research study has been explained to me, including risks and possible benefits (if any), other possible treatments or procedures, and other important things about the study.
- I have had the opportunity to ask questions.
- I understand the information given to me.

Signature of Subject:

I give my consent to take part in this research study and agree to allow my health information to be used and shared as described above.

_____	_____	_____
Subject	Date	Time

Signature of Study Doctor or Person Obtaining Consent:

Statement of Study Doctor or Person Obtaining Consent

- I have explained the research to the study subject.
- I have answered all questions about this research study to the best of my ability.

_____	_____	_____
Study Doctor or Person Obtaining Consent	Date	Time

Consent of Non-English-Speaking Subjects Using the "Short Form" in the Subject's Spoken Language

Statement of Hospital Medical Interpreter

As someone who understands both English and the language spoken by the subject, I interpreted, in the subject's language, the researcher's presentation of the English consent form. The subject was given the opportunity to ask questions.

Hospital Medical Interpreter	Date	Time

OR
Statement of Other Individual (Non-Interpreter)

As someone who understands both English and the language spoken by the subject, I represent that the English version of the consent form was presented orally to the subject in the subject's own language, and that the subject was given the opportunity to ask questions.

Name	Date	Time

Consent Form Version: June 14, 2019