Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

About Your T Cell Collection

This information will help you get ready for your T cell collection at MSK. It explains what to expect before, during, and after your procedure.

T cell collection is a procedure that collects T cells. T cells are a type of white blood cell. They will be sent to a lab to have a new gene added to them. This is called genetic modification. The new gene will help them find and kill cancer cells. To learn more, read *CAR T Cell Therapy: A Guide for Adult Patients & Caregivers* (www.mskcc.org/pe/car-t-guide).

T cell collection

Your T cell collection procedure will be at one of these locations or another approved location:

MSK Schwartz Building Lobby
1250 1st Ave. (between East 67th and East 68th streets)
New York, NY 10065
212-639-7643

Apheresis Unit on the 12th floor
David H. Koch Center for Cancer Care at Memorial Sloan Kettering
530 East 74th Street (between York Avenue and the East River)
New York, NY 10021
646-608-3142

Before your T cell collection

Blood donor room appointment

Your clinical nurse coordinator (CNC) will schedule you to see a blood donor room nurse. The nurse will check your veins to see the best way to collect your T cells.

The veins in most people's arms are not strong enough or are too small for T cell collection. For that reason, most people have their T cells collected using a tunneled chest catheter. This is a flexible catheter (thin tube) that goes into a vein in your chest. It's also called a leukapheresis (LOO-kuh-feh-REE-sis) catheter.

If you're getting a tunneled chest catheter, it will be placed before your T cell collection and taken out a few hours after. Your care team will give you more information and the resource *About Your Tunneled Catheter* (www.mskcc.org/pe/about-tunneled-catheter).

Eat high-calcium foods

As your T cells are collected, your blood calcium level (the amount of calcium in your blood) may drop. On the day before and the day of your procedure, have food or drinks high in calcium, such as dairy products. You should also bring a high-calcium snack to eat or drink during your procedure. This can help keep the level of calcium in your blood from getting too low during your procedure.

If you are between the ages of 19 and 50, you should aim to have 1,000 mg (milligrams) of calcium every day. After age 50, you should aim to have 1,200 mg of calcium every day.

Calcium per serving	Foods and liquids
300 mg	• 1 cup milk (fat free, low fat, chocolate, and buttermilk). • 1 cup nonfat or low-fat yogurt. • 1 cup soy milk or rice milk with calcium. • 1 cup orange juice with calcium. • 1½ ounces low-fat natural cheese (such as cheddar, mozzarella, or Swiss). • 2 ounces processed cheese (such as American). • 1 cup ready-to-eat pudding. • 1 cup macaroni and cheese.
200 mg	• 3 ounce canned salmon (with soft bones). • 3 ounce sardines (with soft bones) • 1 cup calcium-fortified cereal. • 1 ounce feta cheese.
150 mg	• 1 cup cottage cheese. • ½ cup tofu (made with calcium). • 1 slice calcium-fortified bread.
100 mg	• ½ cup frozen yogurt or ice cream. • ¼ cup almonds. • ½ cup cooked greens (beet greens, turnip greens, kale, collards, spinach). • 1 English muffin. • ½ cup soybeans.
50 mg	• 1 medium orange. • ½ cup cooked broccoli. • ½ cup canned white beans. • 1 medium baked sweet potato.

It's also important to drink enough liquids before your procedure. This will make it easier for your nurse to place the IV lines for your procedure. You can tell if you're drinking enough liquids by checking the color of your urine (pee). If it's pale yellow or lighter, you're drinking enough. If it's darker, you need to drink more.

During your T cell collection

Your procedure will be done while you're on a bed or in a recliner chair. You can watch TV, read, or use your smartphone or tablet during your procedure. A family member or friend may sit with you. If you feel cold, you can ask for blankets to keep you warm.

You will be connected to a machine by your IV line, leukapheresis catheter, or central venous catheter (CVC). The machine will take the T cells out of your blood then return the rest of your blood to your body. At the same time, you will get blood thinner medicine through your IV line or catheter. This will help prevent blood clots.

Your procedure will take about 3 to 5 hours. During this time, your donor room nurse will watch for side effects and give you medicine if you need it. If you get numbness or tingling in your fingertips or around your mouth, tell your donor room nurse. These are signs that your calcium level is low. Your donor room nurse can give you calcium tablets to help with this.

After your T cell collection

If you had IV lines in your arms, your donor room nurse will take them out. They will also put bandages to prevent bleeding. Leave the bandages on for at least 3 hours. Do not leave them on for longer than 5 hours. That can cut off your circulation (blood flow).

If there is bleeding when you remove the bandages, put gentle but firm pressure on the IV sites. Press firmly on the sites with a clean, dry gauze pad, towel, or cloth. Keep pressing for 3 to 5 minutes, applying pressure until the bleeding stops. If the bleeding does not stop, call your healthcare provider.

After your collection, you may have bruising at your IV sites. You may also feel tired. Ask your healthcare provider when you can go back to doing your regular activities. Most people can do so right away.

Use cold washcloths or icepacks to help reduce swelling or bruising at the needle site during the first 24 hours. If discomfort continues after 24 hours,

apply heat, such as a warm washcloth or a heating pad.

If you had a leukapheresis catheter, your donor room nurse will schedule an appointment to remove it soon after your collection.

When to call your healthcare provider

Call your healthcare provider if you have any of the following:

- A fever of 100.4 °F (38 °C) or higher.
- Flu-like symptoms.
- Any redness, bleeding, drainage, swelling, or pain around your catheter site or at the IV sites.
- Numbness or tingling in your lips, hands, or feet.
- A lot of pain on the left side of your body.
- A bad headache or any neurological (nerve) changes, such as:
    - Changes in vision.
    - Changes in short-term or long-term memory.
    - Changes in your ability to move.
    - A hard time speaking.
    - Any other concerning symptoms.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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