

Gastrointestinal Graft vs. Host Disease

What is Gastrointestinal Graft vs. Host Disease?

Gastrointestinal Graft vs. Host Disease (GI GvHD) is a common occurrence in people who have had an allogeneic blood or bone marrow transplant (BMT). An allogeneic BMT uses donated blood or marrow cells.

GI GvHD can occur when the donor's blood or marrow cells (graft) identifies the cells in the recipient's (host) GI tract as "foreign". Inflammation occurs and the donor cells can attack the recipient's cells, causing symptoms. Symptoms can range from very mild to potentially life threatening.

Many things can affect the severity of GvHD: your age, the source of the donated bone marrow cells, and how closely the donor matches the recipient.

We have known about GvHD since bone marrow transplants began, in the 1950s and 60s. Today, we continue to refine its treatment and prevention.

GI GvHD symptoms may include:

- diarrhea
- abdominal cramps
- general disinterest in food
- aversion to particular food(s)
- nausea and/or vomiting
- the sensation of feeling full for too long

Your healthcare team grades this disease based on signs and symptoms - mild (Grade I), moderate (Grade II), or severe (Grade III-IV). This allows for a better description of the process and helps determine the best treatment for each patient.

How is Acute GI GvHD Clinically Graded?

- Grade I diarrhea > 30 mL/kg or > 500 mL per day
- Grade II diarrhea > 60 mL/kg or > 1000 mL per day
- Grade III diarrhea > 90 mL/kg or > 1500 mL per day
- Grade IV diarrhea > 90 mL/kg or > 2000 mL per day or severe abdominal pain or ileus (slow/inactive GI tract)

The overall stage of GvHD will also take into account whether the patient has GvHD involving the skin or liver. Acute GVHD usually happens within the first 3 months after a transplant.

How is Chronic GI GvHD Clinically Graded?

Chronic GvHD is graded as either limited or extensive. It is broken down further as mild, moderate, or severe. Grading/classification is determined by the amount and severity of symptoms, which treatments are needed, and the response to those treatments.

Always discuss your symptoms with your health care providers. Symptoms are important in diagnosing GI GvHD. The clinical team may ask you to have some tests to help confirm the diagnosis and rule out other problems, such as infection. These tests may include:

- stool culture
- abdominal x-ray
- CT scan
- wireless capsule endoscopy
- upper endoscopy
- colonoscopy

If you need any of these tests, the team will describe them to you in more detail before you proceed.

How Can I Prevent GvHD?

Prevention, or prophylaxis, of GvHD starts with the donor-selection process. To lessen the risk of the donated cells attacking the recipient's cells, we choose the best, most closely matched donor.

We can also give anti-rejection medications before the transplant, which may help the donor cells adjust to their new home after the transplant. The medical team will decide on the type, dose, and number of anti-rejection medications, based on each person's needs. These medications suppress the immune system, and we monitor drug levels very carefully.

Factors that affect the choice of medications:

- age
- whether the marrow donor is matched or mismatched, related or unrelated
- the source of the marrow cells
- the recipient's risk of relapse

Immune suppressant medications used to prevent GvHD: generic names (Brand name)

- tacrolimus (FK506 or Prograf®)
- cyclosporine (Neoral or Sandimmune®)
- methotrexate (Rheumatrex®)
- mycophenolate mofetil (MMF or Cellcept®)
- methylprednisolone (Medrol®) - steroid medication

What is the Treatment of GvHD?

Treatment depends on the severity of your symptoms. It may include changing your diet or not eating at all for a while, to allow the GI tract to heal. It may also include a variety of medications.

It is very important to report your symptoms so we can provide the best care for your specific needs. We may ask you to keep a food diary and work with the dietitian to ensure that your caloric needs are being met.

If the GI GvHD occurs while you are on anti-rejection medications, the team will make sure the doses are at the highest safe strength for you. If you are not on these medications, some may be added. In addition, there are several other medications used to treat GI GvHD. All suppress the immune system.

- Sirolimus (Rapamune®)
- Methylprednisolone (high doses—up to 2 mg/kg/day) (Medrol®): steroid medication
- Etanercept (Enbrel®): blocks tumor necrosis factor (TNF)
- Infliximab (Remicade®): binds to tumor necrosis factor α (TNF α)
- Lymphocyte immune globulin (ATG, Atgam® [equine form] Thymoglobulin® [rabbit form]): suppresses T lymphocyte cells
- Rituximab (Rituxan®): suppresses B lymphocyte cells
- Beclomethasone (Qvar®): steroid medication
- Budesonide (Enterocort®): steroid medication

Other medications used as supportive care:

- Antiemetics to prevent nausea
 - Ondansetron (Zofran®)
 - Prochlorperazine (Compazine®)
 - Lorazepam (Ativan®)
 - Scopolamine (Scopol®)
 - Diphenhydramine (Benadryl®)
 - Olanzapine (Zyprexa®)
- Promotility agents to reduce the feeling of fullness
 - Metoclopramide (Reglan®)
 - Erythromycin (Emycin®)
- Appetite stimulants to increase the desire to eat (when it is determined that you are ready to eat)
 - Dronabinol (Marinol)
 - Mirtazapine (Remeron®)

Questions?

Please call the TCT Center at **716-845-1444**. The Center is open 8 a.m. to 5 p.m. Monday to Friday. After hours, your call will be answered by our Call Center and the staff will assist you.

You can also reach Roswell Park 24/7 at **716-845-2300**.

