

AN INTRODUCTION TO GASTROINTESTINAL STROMAL TUMOR

What is gastrointestinal stromal tumor?

Gastrointestinal stromal tumor, or GIST, is a rare cancer that affects the gastrointestinal (GI) tract. In most cases, GIST arises in the stomach or small intestine, but it can form anywhere along the digestive tract and spread to other parts of the body, like the lungs and, in rare cases, bones. Progression depends on the size, location, and aggressiveness of the tumor. GIST is most often caused by genetic mutations in the *KIT* tyrosine kinase receptor gene.

TYPES OF GIST

There are several types of GIST, but *KIT* mutant GIST is the most common mutation, making up roughly 70%-80% of all cases of GIST. It occurs anywhere in the GI tract and is mostly found in older adults.

Aside from *KIT* mutant GIST, there are several other types of GIST:

- **PDGFRA mutant GIST:** accounts for approximately 10%-15% of cases of GIST. It is mostly located in the stomach but can be found in the small intestine in some cases
- **SDH-Deficient GIST:** makes up approximately 10% of all cases of GIST. It occurs almost exclusively in the stomach and presents predominantly in females
- **Familial GIST:** a very rare form of GIST that is inherited from a parent and passed down genetically. It presents in patients at earlier ages than other forms of GIST. Many cases of familial GIST are caused by a genetic mutation

Other types of GIST include quadruple wild-type (WT), extragastrointestinal GIST (eGIST), and GIST driven by mutations in *NF1* and *BRAF*. While these are rare types of GIST, you should be aware of them for conversations with your doctor or other healthcare professional.

IDENTIFYING GIST

Over 80% of people with GIST are diagnosed with a single tumor, whereas approximately 11%-15% of people with GIST have metastatic disease at the time of diagnosis. If you are experiencing symptoms, your doctor may recommend imaging, which is typically the first step in identifying GIST. There are a few different imaging methods available:



Imaging using contrast-enhanced computed tomography (CT): the most common testing method, it allows a doctor to obtain more detailed information about the tumor, measure its size, and see how much it has grown (if at all)

- Magnetic resonance imaging (MRI) or endoscopy can be used for people who can't have CT scans



Endoscopic ultrasound (EUS): measures how deep the tumor has invaded the tissue



Positron emission tomography (PET): reveals small growths and helps distinguish active tumors from inactive scar tissues

- PET can also help a doctor determine whether tissue is malignant or benign and clarify unclear findings on CT scans

DIAGNOSTIC PATH OF A PATIENT WITH GIST

While imaging tests are helpful in identifying masses and suspicious areas, they cannot diagnose GIST. A diagnosis of GIST can only be confirmed by taking a biopsy of the mass. After the biopsy is taken, mutational testing may be performed to identify the type of GIST mutation.



TREATING AND MANAGING GIST

There are several treatment methods for GIST. Please connect with your doctor to discuss which treatment plan is best for you.



Resection: surgical removal of the tumor from the body. Depending on your individual circumstances, your doctor may recommend surgery to remove the tumor



Tyrosine kinase inhibitor (TKI) therapy: medication that blocks the overactive enzymes that cause cancer cells to grow and spread



Clinical trials: studies that test new potential treatments for GIST in eligible patients. Visit clinicaltrials.gov or clinicaltrialsregister.eu or talk to your doctor or other healthcare professional to learn more

Both the diagnosis and treatment of GIST call for a multidisciplinary team of specialists, including (but not limited to):

- **GIST specialists:** a healthcare professional with specialized knowledge and training in GIST. Visit liferaftgroup.org to find a GIST specialist in your area
- **Gastroenterologists:** specialize in the treatment of the GI tract and liver
- **Oncologists:** specialize in the diagnosis and medical treatment of cancer
- **Surgeons:** diagnose patients, perform surgical operations, and provide post-operative care
- **Histopathologists:** examine tissue samples microscopically to help reach a diagnosis
- **Radiologists:** diagnose and treat diseases using medical imaging technology (MRI, x-ray, CT scans, etc)
- **Medical psychologists or social workers:** examine and help address the psychological impact of diseases and treatment
- **Oncology dietitians:** work with cancer patients to develop nutrition plans that promote optimal patient health during and after treatment

TALK TO YOUR DOCTOR ABOUT GIST

If you are diagnosed with GIST, here are some questions to ask your doctor or specialist to help advance your understanding of your disease:

- Have you managed GIST previously?
- How many other GIST patients do you treat?
- Has my diagnosis of GIST been confirmed with a biopsy?
- Do you know my mutation? If not, will you run a mutational analysis on my tumor?
- What role does my mutation play in my treatment?
 - If the doctor knows the type of mutation, it can help them predict the tumor's response to a specific treatment. Some tumor mutations will respond to higher dosages of treatment, while others may not respond to treatment at all
- What is the chance of my tumor coming back?
- What other specialists should I see to help manage my GIST?
- What treatment options are available for my GIST?

Cogent Biosciences is here to support you

Visit gistpathways.com or scan the QR code to sign up for updates about our clinical programs, access GIST educational resources, and more.



The Life Raft Group is an organization committed to enhancing the survival and quality of life for people living with GIST and other rare diseases through patient-powered research, education, and global advocacy efforts. Their vision is to empower a future fueled by data and to guide our journey toward cures for rare diseases. The Life Raft Group strives to ensure each patient has support, access to treatment, and the knowledge that they are not alone.



