The term *eosinophilic granuloma complex* (EGC) refers to a group of skin diseases that share clinical similarities and respond to similar treatments.

EGC is thought to have a genetic link in some cats, but in other cases, underlying allergies tend to be involved.

The condition generally responds to medication but can recur if the underlying cause is not managed effectively.

### What Is Eosinophilic Granuloma Complex?

The term *eosinophilic granuloma complex* (EGC) refers to a group of skin diseases that share clinical similarities and respond to similar treatments.

Eosinophils (pronounced *ee-oh-sin-oh-fills*) are a type of white blood cell. When the body is responding to a parasitic condition, such as a flea or mosquito bite, or develops an allergy to something, the number of eosinophils in the blood tends to increase. The most common allergies in cats are flea allergy, food allergy, and inhalant allergy (also called *atopy*). Underlying allergies and the resulting increase in eosinophils are thought to play a role in the development of EGC, possibly through a problem in the body’s ability to control the levels and activity of eosinophils. EGC may have a genetic link in some cats, but in some cases, the precise cause is unknown. Cats of any age can be affected, but most are young to middle-aged. The condition is rare in dogs.

There are three generally accepted forms of EGC: (1) eosinophilic granulomas, (2) eosinophilic plaques, and (3) indolent ulcers.

- **Eosinophilic granulomas** are areas of skin inflammation that can take three forms:
  - *Linear granulomas* are long, thin, raised, hairless areas of inflammation usually found on the abdomen or on the backs of the rear legs. This type of EGC is not generally linked to underlying allergies; the exact cause is unknown.
  - *Nodular pharyngeal granulomas* can appear as firm, raised lesions in the mouth (usually on the palate, back of the throat, or tongue).
  - *Chin form*: appears as a swelling of the chin or lower lip.

- **Eosinophilic plaques** are irritated, yellow-red, moist, hairless lesions usually found in the groin or abdominal area; they can also occur in the armpits or inner/outer thighs. Several of these lesions may be present and cover large areas of the body. This type of EGC is thought to be secondary to an underlying allergy.

- **Indolent ulcers** are sometimes called “rodent ulcers” and usually appear as hairless areas of inflammation on the upper lip. They can occur less commonly on other areas of skin. This type of EGC can be associated with an allergy, but not in all cases. It can also (in rare cases) transform to become cancerous, so if treatment does not resolve it, your veterinarian may recommend further testing to check for evidence of this transformation.

Some dermatologists have included *miliary dermatitis* (a skin condition characterized by generalized itching and scabs that can involve large areas of the body) and *mosquito hypersensitivity* among the conditions considered to be part of EGC. The various types of EGC can occur simultaneously in the same cat, so discerning the lesions can become complicated. Also, locations can vary—for example, one type of eosinophilic granuloma can affect the footpads.
What Are the Clinical Signs of Eosinophilic Granuloma Complex?
For many cats with EGC, the only clinical signs are the skin lesions themselves. The lesions are not always painful or itchy. However, when multiple forms of the disease occur simultaneously in the same cat, clinical signs will likely reflect that. Depending on which forms of the disease are present, clinical signs may include the following:

- Itching (sometimes severe) or pain
- Drooling, bad breath, and difficulty eating (if the lesions are in the mouth)
- Breathing difficulty (if a lesion in the mouth or throat is obstructing airflow)
- Lameness (if the lesions are on the footpads)

How Is Eosinophilic Granuloma Complex Diagnosed?
Most cases of EGC are diagnosed based on medical history and the physical appearance of the skin lesions. For some lesions, your veterinarian may want to take an impression smear. This involves gently touching the surface of a lesion with a clean, dry microscope slide to collect cells lying on the surface. Examining this slide under a microscope and identifying a large number of eosinophils can increase the suspicion for EGC.

In some cases, your veterinarian may recommend a skin biopsy to confirm the diagnosis or rule out other conditions (like skin cancer) that can look similar.

If allergies are suspected to be the underlying cause, your veterinarian may recommend allergy testing or, if food allergy is suspected, a “hypoallergenic” diet trial.

Additional blood work may also be recommended, such as a complete blood cell count (CBC); this test may show an increase in the number of eosinophils for cats with some forms of EGC. Because other conditions such as fungal infections, immune-mediated diseases, feline leukemia, feline AIDS, and other viral infections can cause lesions similar to those of EGC, your veterinarian may advise specific testing to rule out these conditions.

Treatment and Outcome
In most cases, EGC responds to treatment with corticosteroids. Because secondary infection is sometimes a factor, antibiotics may also be prescribed. In some cats, the problem may resolve without treatment, or come and go until an underlying problem can be identified and managed.

For cats that don’t respond to corticosteroids and antibiotics, other medications may be successful. However, if the condition does not respond to repeated treatment, your veterinarian may recommend additional diagnostic testing (such as biopsy, viral testing, screening for immune-mediated disease) to investigate the possibility that another condition is causing the skin lesions. In some cases, if no other cause can be found, isolated lesions that are causing discomfort may be treated with alternative therapies, such as radiation therapy, surgical excision, laser therapy, or cryosurgery, but the efficacy of these treatments has not been determined.

For cats with flea allergy or mosquito hypersensitivity, safe and effective long-term control of these parasites is required to help prevent the recurrence of EGC. Your veterinarian can recommend an appropriate product for your cat.

If an underlying cause for EGC can be identified and managed successfully, the condition can resolve and not recur. For cases that are resistant to treatment, or for cats in which an underlying problem can’t be identified, recurrence is possible.