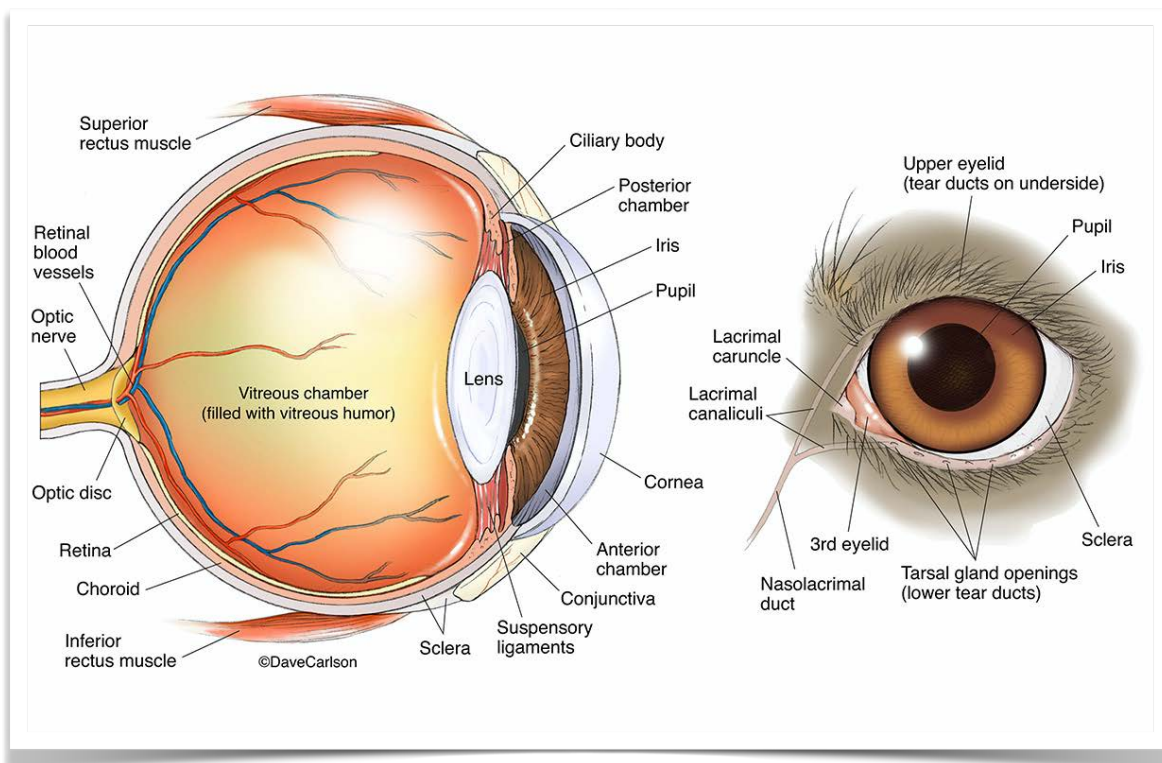


# NON-HEALING ULCERS

## Spontaneous Chronic Corneal Epithelial Defects (SCCEDs)



## What is a corneal ulcer?

The cornea is the clear surface of the front of the eye that allows light rays to enter the eye. The surface of the cornea is covered by a thin layer of cells called the epithelium. This surface layer protects the cornea and prevents substances from penetrating the eye.

A corneal ulcer develops when there is damage to the surface layer of the cornea (epithelium) exposing the underlying tissue (corneal stroma). Damage to this surface layer exposes the corneal nerves resulting in **pain (squinting), corneal edema (cloudiness), redness, and inflammation.**

## What is a non-healing ulcer or SCCEDs?

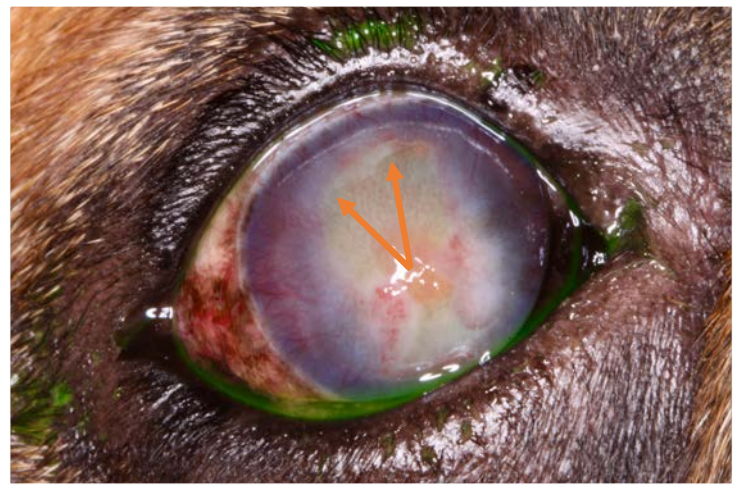
Non-healing ulcers, also known as Indolent ulcers, Boxer ulcers, or Spontaneous Chronic Corneal Epithelial Defects (SCCEDs), are a specific type of ulcer in which the surface layer of the cornea (epithelium) does not adhere to the underlying layer (stroma). This condition often occurs spontaneously in dogs over 6-7 years of age. Certain breeds of dogs (especially Boxers) are more commonly affected although any breed of dog can develop this type of ulcer. Non-healing ulcers are characterized by a very superficial ulcer with a loose edge (lip) of epithelium (**Figure 1**).



As the name implies, these ulcers do not usually heal on their own and can persist for months resulting in pain and scar tissue formation.

## How are Non-healing ulcers treated?

The goals of treatment is to remove the unhealthy surface layer of epithelium (debridement) followed by an abrasion procedure of the underlying stroma to encourage more normal healing. These treatments can often be performed during the initial examination with topical anesthetic eye drop.



**Figure 1:** Indolent ulcer with dense neovascularization and scarring.

Options include:

1

### DIAMOND BURR DEBRIDEMENT

This procedure uses a hand-held corneal polishing burr (**Figure 2**) to brush the corneal surface to stimulate the healing process. This procedure has a **90% chance of healing** within 2-3 weeks.

2

### GRID KERATOTOMY

This procedure uses a very small needle to make superficial scratches in the corneal surface to stimulate the healing process. Healing usually occurs in 2-3 weeks with an **80% chance of healing**.

3

### SUPERFICIAL KERATECTOMY

This procedure surgically removes the top layer of the cornea. This procedure has a 95%+ of healing in 2 weeks, but **this procedure requires general anesthesia**.



**Figure 2:** Corneal Polishing Burr

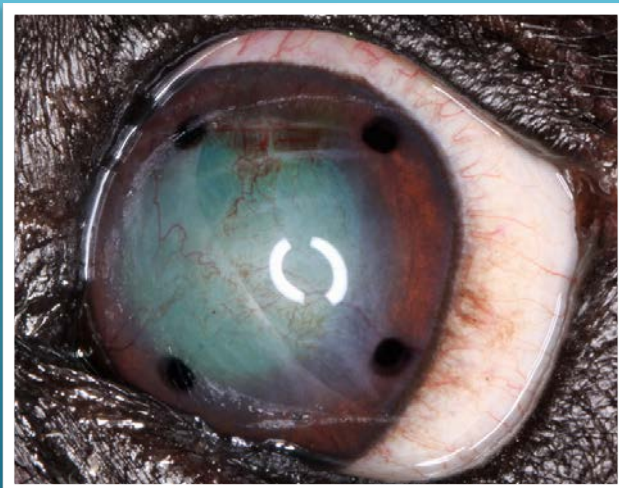
## What should I expect after the procedure?

Following the procedure, a bandage contact lens (**Figure 3**) may be placed over the cornea once the procedure is complete. The contact lens will help protect the cornea as it heals and helps to make your pet more comfortable during the healing process.

Topical antibiotic medication will be prescribed after the procedure to prevent infection during the healing process. Oral medication may be also prescribed following the procedure to help control pain and inflammation.

Following the debridement procedure, the eye may be somewhat more squinted and closed for the first 24-48 hours and then comfort should steadily improve. The surface of the eye may get more red and cloudy, temporarily, as part of the normal healing process.

We will recheck the eye to assess healing in 2-3 weeks. Once the ulcer has completely healed, topical anti-inflammatory drops may be prescribed to minimize scar tissue formation. There is a small chance that your pet may need an additional procedure if the eye has failed to heal completely.



**Figure 3:** Bandage Contact Lens

## What is the prognosis for my pet?

With appropriate treatment, the prognosis for your pet's vision and comfort is very good with 80%+ healing with just one procedure. It is quite unlikely that your pet will develop a non-healing ulcer in the affected eye after appropriate treatment. Pet's who develop an indolent ulcer often develop a similar ulcer in the other eye within 12-18 months.

Unfortunately, there is no known treatment or medication that is effective in preventing a non-healing ulcer from developing.