



Tumor Specific Electroporation (TSE)

What to expect from your pet's treatment

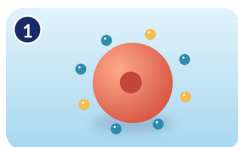
Your pet has been diagnosed with a tumor, and your veterinary team has discussed treatment options with you. This handout explains how TSE works and what to expect before, during and after treatment.

WHAT IS TSE?

TSE is a form of electrochemotherapy. During treatment, needles are used to apply a brief electric field to the tumor area. The electric field creates temporary openings in the tumor cells, which increases how much of the chemotherapy drug the cells take up. The drug used is **bleomycin**, which is very well tolerated and does not cause whole-body (systemic) side effects.

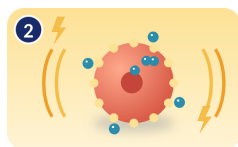
TSE may be an option for tumors that have shown little or no response to conventional chemotherapy. Because treatment is focused on the tumor, effects on surrounding healthy tissue are generally limited. In one published study of dogs with mast cell tumors that could not be fully removed by surgery, **85%** responded to electrochemotherapy. (*Spugnini et al., 2006*)

HOW IT WORKS: FOUR STEPS



1 Chemotherapy is given

The chemotherapy drug is given to your pet.



2 Pores open

The electric field forms temporary pores in the tumor cell membranes so the drug can enter.



3 Pores close

The pores close after treatment, keeping the drug inside the tumor cells.



4 Tumor cells are targeted

The drug breaks down tumor cell DNA, small blood vessels feeding the tumor clot off, and the immune system is activated.

TREATMENT DAY AND RECOVERY

On the day of treatment

- Your pet is **sedated** (no general anesthesia), and the area is shaved and cleaned.
- The drug is given **into the bloodstream (IV)** or **directly into the tumor**.
- The procedure is quick, usually **30 minutes or less**.
- Your pet wakes in a calm area and can **go home the same day**.

How well do pets tolerate it?

- Most pets **tolerate treatment well**. In one veterinary specialist's experience, about 1 in 10 dogs had a day of stomach upset, and about 1 in 20 pets had soreness or swelling for 3–5 days.

After treatment

- The treated area may **swell, change color, turn black or crust**. Looking worse before it looks better is a normal part of healing.
- Once healed, the skin may be **slightly lighter or darker** than before.
- This is usually **not a painful procedure**, but we will send your pet home with **pain medication just in case**.

WILL MY PET NEED MORE THAN ONE TREATMENT?

The number of treatments depends on the type and size of the tumor. For most pets, we recommend **a minimum of 2 treatments**. Treatments are typically given **2–3 weeks apart**, with no rechecks needed in between. The schedule may vary based on your pet's tumor and healing progress.



Questions? We can help. If you have any questions about your pet's treatment, please contact your VSP care team.

Veterinary Specialist Partners | vetsp.com

Louisville, KY: 11600 Main St., Louisville, KY 40243 • (502) 901-7990

Evansville, IN: New hospital at 1120 Professional Blvd, Evansville, IN 47714, opening early December