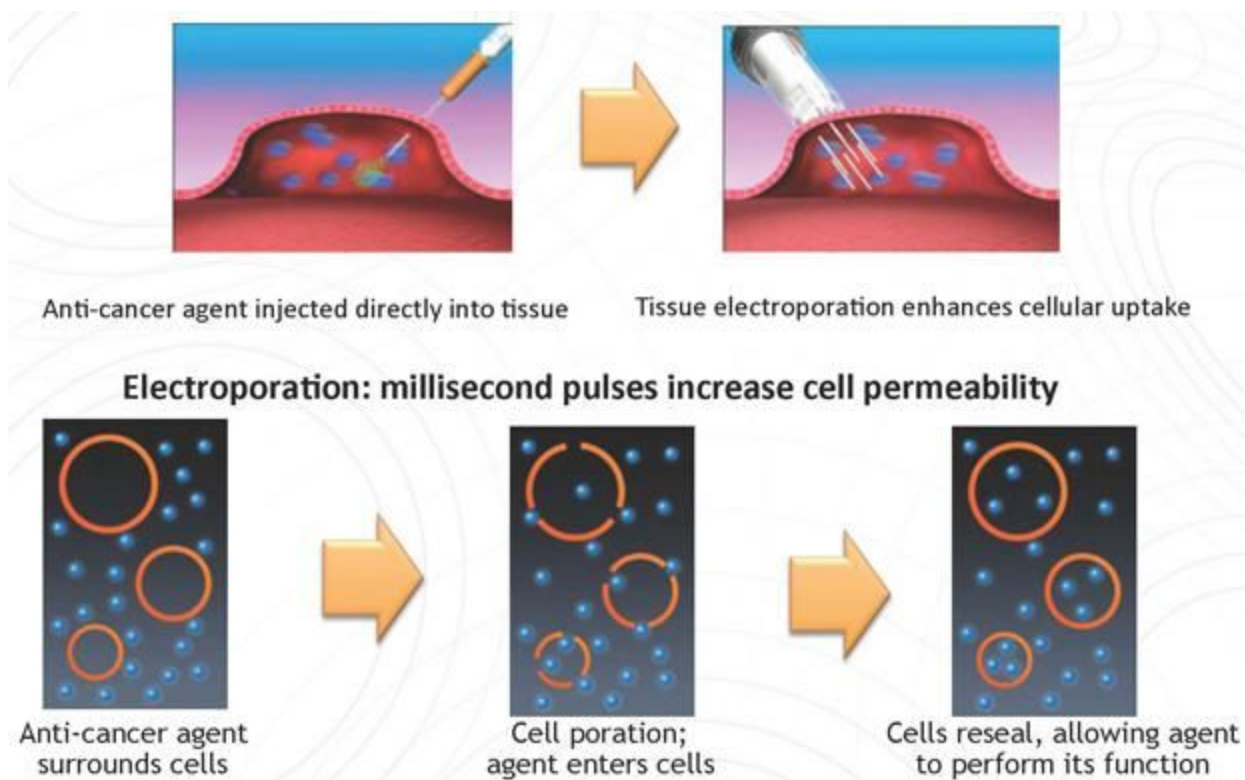


ELECTROCHEMOTHERAPY (ECT) VS. RADIATION THERAPY

In some cases, complete removal of a tumor is not possible due to the location or because of a locally aggressive growth pattern. Incompletely removed tumors can regrow and radiation is often recommended following surgery to prevent this from occurring. While effective, radiation therapy can be cost prohibitive for some owners and may require multiple anesthesia procedures with some protocols lasting several weeks. Radiation therapy is also not available in all geographic regions which can also be prohibitive.

Electrochemotherapy is one alternative treatment option. Electrochemotherapy is a type of treatment that enhances the delivery of traditional chemotherapy drugs to the interior of a cancer cell through the local application of short and intense electrical pulses. These pulses transiently permeabilize the cell membrane, thus allowing transport of chemotherapy. ECT can also increase absorption of the drug by up to a thousand-fold that would not otherwise be permitted by the cell membrane. Electrochemotherapy can also be beneficial in shrinking a tumor, thus making surgical removal more successful, if required.



The most common chemotherapeutics used with ECT are bleomycin and cisplatin. While individual protocols may vary, in general, patients are anesthetized so they do not feel any discomfort during treatment. The chemotherapy is dosed based on the patient's body weight. Each treatment is relatively short, unless another procedure is being performed at the same time. These treatments are performed on an outpatient basis. Treatments are repeated on an as needed basis. One benefit of electrochemotherapy is the possibility of repeated treatments in cases of local recurrence.

In veterinary medicine, electrochemotherapy is most commonly used for tumors located in the skin or just under the skin. This includes (but is not limited to) the following:

Melanoma	Perianal and rectal tumors
Squamous Cell Carcinoma	Equine Sarcoids
Soft Tissue Sarcomas	Feline injection-site sarcomas
Low to intermediate grade mast cell tumors	Tracheal or esophageal tumors

Side effects:

Patients may develop a local skin reaction including redness, edema (swelling), and necrosis (death) of tissue. Follow up visits are recommended to ensure the site is healing. Healthy scar tissue will gradually replace any damaged tissue, which can take up to several weeks.

If you or your veterinarian feel that your pet might be able to benefit from treatment with electrochemotherapy, please contact us for a consultation.

By Megan Padget December 2018

