

*Veterinary Oral Treatments*

# 20 DENTAL AND ORAL CAVITY CONDITIONS TREATED WITH LASERS

*Improve surgical proficiency and outcomes.*

e B o o k



**CUTTING  
EDGE**  
LASER TECHNOLOGIES

JAN BELLOWS DVM, DIPL.  
*All Pets Dental, Weston, Florida*

04

## **BACKGROUND**

WHO IS JAN BELLOWS?

06

## **TECHNOLOGIES**

LASER TECHNOLOGY AND BENEFITS

09

## **CONDITIONS & TREATMENTS**

20 CONDITIONS & LASER TREATMENTS

15

## **CONCLUSIONS**

WHAT CAN LASERS BE USED FOR



B A C K G R O U N D

W H O I S J A N B E L L O W S

companion animal medicine, surgery and dentistry at ALL PETS DENTAL, in Weston Florida. He is certified by the Board of Veterinary Practitioners (canine and feline) since 1986 and by the College of Veterinary Dentistry since 1990.

Jan is the previous president of the American Veterinary Dental College, the Veterinary Dental Forum, and the Foundation for Veterinary Dentistry.

Dr. Bellows has authored three dental texts- The Practice of Veterinary Dentistry .... A team effort (1999), Small Animal Dental Equipment, Materials, and Techniques (2005) and Feline Dentistry ( 2010).

As well, he is a frequent contributor the veterinary dental literature and a charter consultant of Veterinary Information Network's (VIN) dental board since 1993. He was also chosen as one of the dental experts to formulate AAHA's Small Animal Dental Guidelines published in 2005 and updated in 2013.

**-Dr. Bellows practices at All Pets Dental,  
17100 Royal Palm Blvd, Weston, Florida  
954-349-5800**

# JAN BELLOWS

Dr. Bellows received his undergraduate training at the University of Florida and Doctorate in Veterinary Medicine from Auburn University in 1975.

After completing a small animal internship at The Animal Medical Center in New York City, he returned to south Florida where he still practices

A detailed, grayscale microscopic image of a printed circuit board (PCB) showing intricate patterns of conductive traces and numerous circular vias. The image is oriented vertically, with the traces and vias running from top to bottom. The background is a light gray, and the traces and vias are dark gray or black.

T E C H N O L O G Y

L A S E R T E C H N O L O G Y  
& B E N E F I T S

## TECHNOLOGY

So what are the different types of lasers that veterinarians have been finding useful in dental surgeries and treatments?

What are the benefits of using lasers and how can they be applied in your practice to successfully treat patients?

How can lasers increase clinical outcomes and reduce healing time and get your furry friends up and running again?

Let's take a look! How about we start with the benefits of MLS® Laser Technology...

Surgical lasers, such as the CO2 and Diode lasers, benefit the patient by providing reduced pain, swelling, and risk of infection. They also allow coagulation of the tissue as the incision is made, so there is much less bleeding versus using a knife.

All of the benefits are topped off with the lasers extreme surgical precision and easy learning curve. Bellows says, "It's almost like a scalpel blade, but as we're cutting it coagulates the tissue", in regards to Cutting Edge's Diode laser.

MLS Laser Therapy after surgeries or procedures to reduce the patients pain, swelling, and over all healing process time frame.

In dentistry specifically, lasers are used surgically and therapeutically allowing difficult conditions to be treated more efficiently, providing patients with a smoother recovery.

### 40W CO2 SURGICAL LASER

The Cutting Edge 40 watt CO2 Laser System sets a new standard by combining the advanced features of previous models with a new metal CO2 canister, improved user interface, and unprecedented 25 watt peak power SmartPulse™ technology.



### 30W DIODE SURGICAL LASER

The Diode laser is a minimally invasive surgical laser. Because it is minimally invasive, it reduces or eliminates the need for anesthesia, reduces pain and chance of infection, which leads to a shorter recovery time. The Diode laser seals vessels while cutting or ablating, so blood loss is minimal.



### MLS THERAPY LASER - EVO

EVO produces an even faster analgesic response and allows the operator to safely treat more indications with the same precision dosing. In this model, MLS sources have a peak power of 75 W and an average power of up to 1.2 W delivered with the synchronization of emissions (continuous/chopped and pulsed), which enables the user to reach desired tissue depth, while ensuring complete safety against collateral tissue (heat) damage.





C O N D I T I O N S &

T R E A T M E N T S

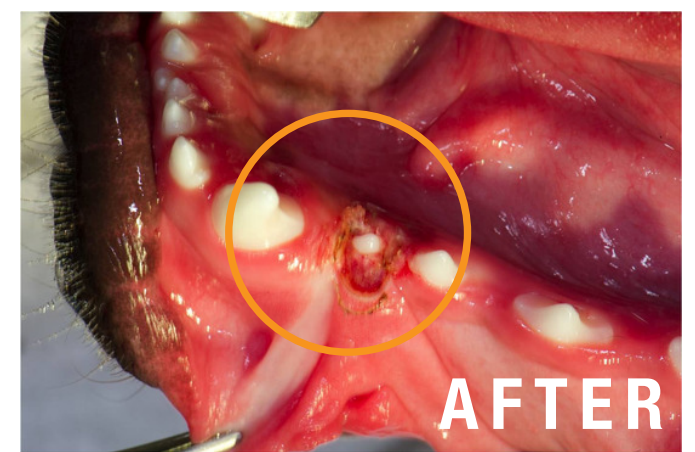
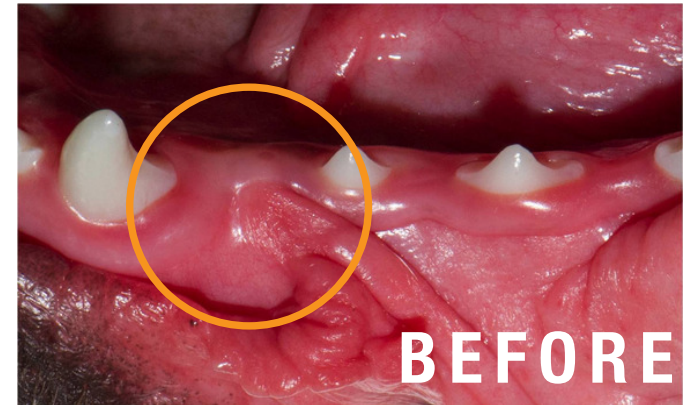
20 C O N D I T I O N S &  
L A S E R T R E A T M E N T S



# 20 + DENTAL AND ORAL CAVITY CONDITIONS TREATED WITH LASERS

## 1 • OPERCULECTOMY

Operculectomy is the surgical procedure of removing the operculum, or the flap of gum that partially covers a tooth. If a canine is younger than 8-9 months of age, it can most likely be successfully treated. Jan Bellows shows us how the Diode Laser is used here to extract gingival tissue so the embedded tooth can emerge and relieve patient of pain, discomfort, and inflammation.



## 2 • GINGIVECTOMY

Gingivectomy is a dental procedure in which an oral surgeon cuts away part of the gums in the mouth and one of the most common conditions treated with Diode laser. If this condition is left untreated, it can collect food and debris in the pocket and cause further damage to tooth. Bellows shows us how he used the Cutting Edge Diode Laser to remove the tissue, lessening the pocket and allowing the tooth to be pain free and remain in the mouth.



## 3 • STOMATITIS - INITIAL CARE

Feline stomatitis is a severe, painful inflammation of a cat's mouth and gums. In most cases, the condition causes ulcers to form in the mouth; these ulcers can involve the lips, tongue, gums, and back of the throat.

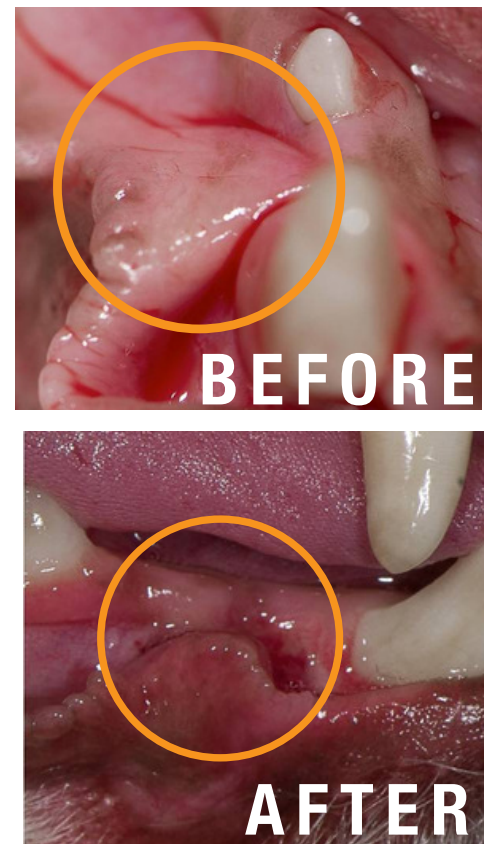
This condition can be associated with the animal's reaction to plaque buildup within the mouth. The most common procedure to treat this condition is the removal of all or most of the teeth. Jan explains how he uses the Diode laser during the removal surgery to reduce inflammation and the EVO laser afterwards to decrease bacterial load leading to a faster recovery.



### 4• FRENECTOMY

Frenectomy is an oral surgical procedure that eliminates the presence of a frenum in the mouth.

When the frenum is too close it creates it's very own large pocket where food and debris will collect and can get badly inflamed. It can also cause gingival recession. Using the Diode laser to gently cut the frenum, Bellows succeeds in eliminating the pocket allowing the tooth to self clean.



### 5• HAIRY TONGUE

Hairy Tongue is a condition that occurs when the animal has been licking licking itself and hair embeds itself into the tongue causing severe inflammation and irritation.

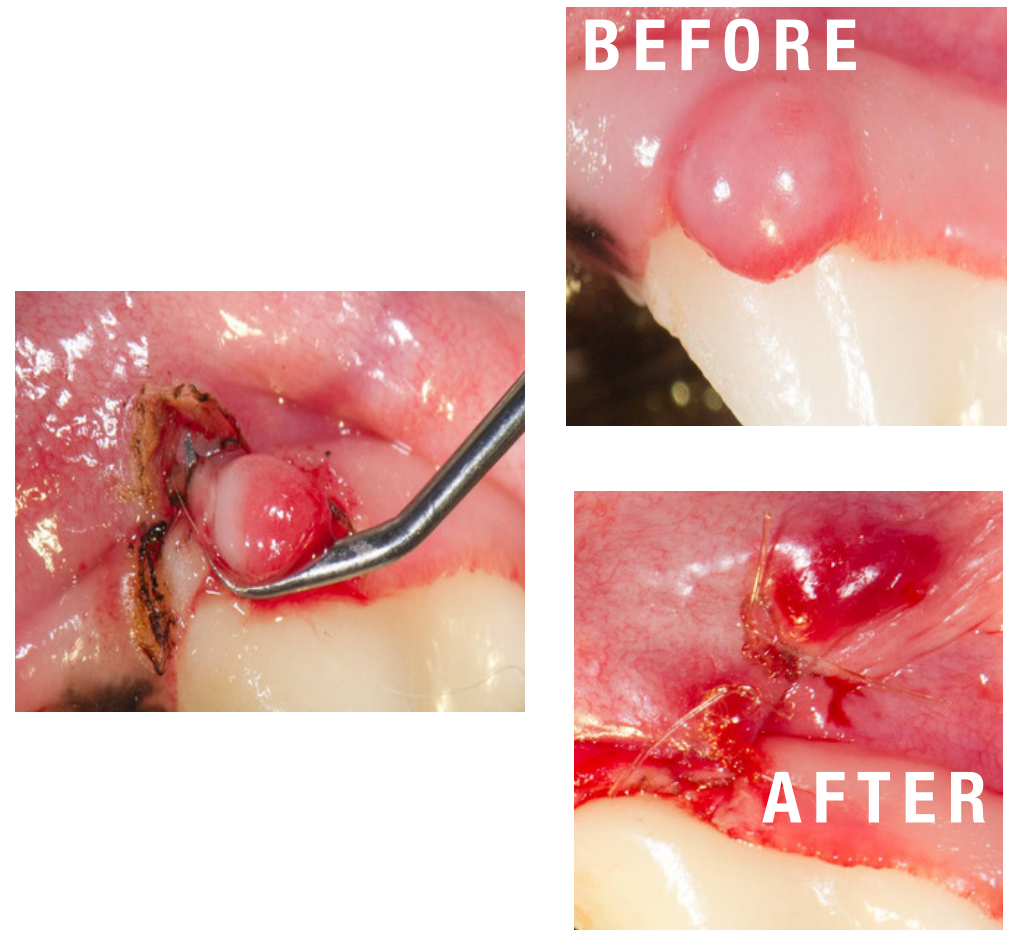
After removing all hairs, the Diode laser on the area to decrease surface bacteria load and sterilize the area.



### 6• ORAL MASS

The cause of an oral mass can be a multitude of different factors and can be painful for the patient if not removed.

The CO2 laser is used by Jan Bellows to show us how the deepness of the incision is adjusted by laser wattage and used to remove the mass. He explains that the procedure is easily done with a laser verses blade due to the minimized bleeding and rapid healing afterwards.



### 7• ORTHODONTIC- INCLINED PLANE

Sometimes dogs and cats are born with an improper bite or jaw alignment causing teeth to improperly strike tissues in mouth. This can cause immense pain and infection for animal.

Bellows uses the Diode laser here to create an incline plane for the tooth. Forcing the tooth to push off tissue instead of penetrating it. "Lasers really help to sculpt the tissue, where as a blade could be messy", Jan says.



**8• DRUG INDUCED GINGIVAL HYPERPLASIA**

This occurs as a result of the animal being placed on a blood pressure or anti-inflammatory drug.

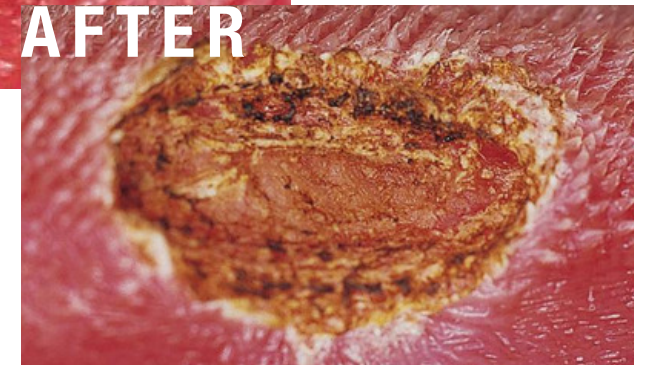
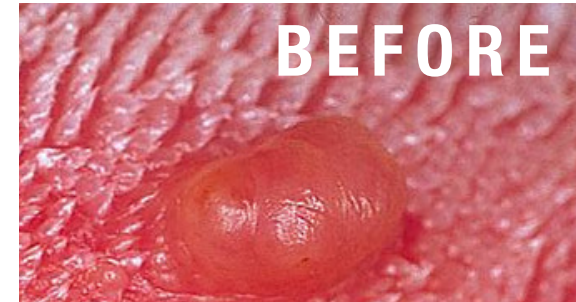
In order to sooth the condition for the animal, the EVO therapy laser was used for treatment. As you can see in the photos, after the treatments and removing the animal from medication the swelling has immensely decreased.



**9• TONGUE MASSES**

While not all masses are cancerous, oral tumors can become malignant if they are not treated early.

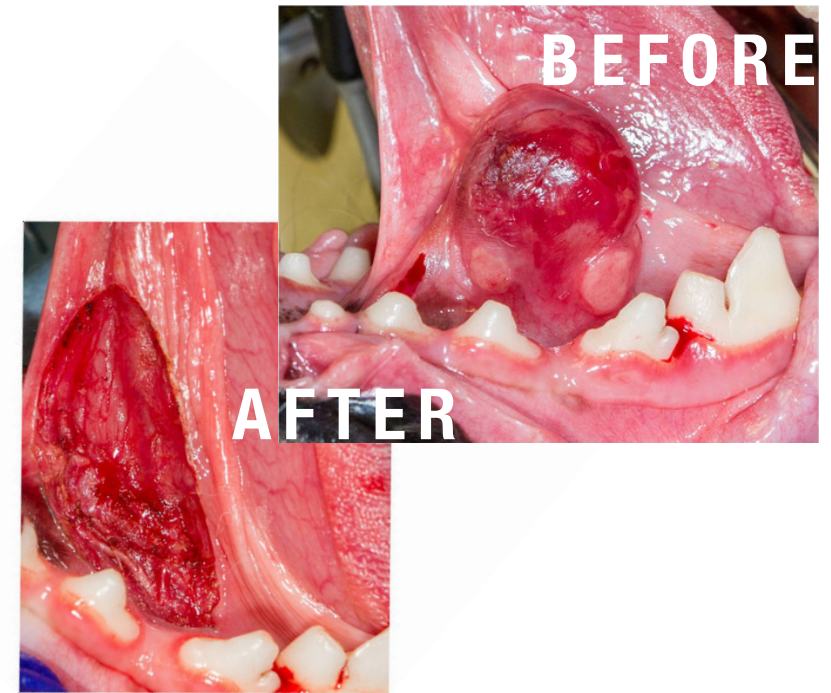
Using the C02 laser to help remove the mass, Bellows treats the surface area with the EVO therapy laser to ensure faster healing and less change of bacterial infection.



**10• SUBLINGUAL CYST EXCISION**

This is also known as a gum chewing lesion caused by the animal panting a lot and is very painful for patients.

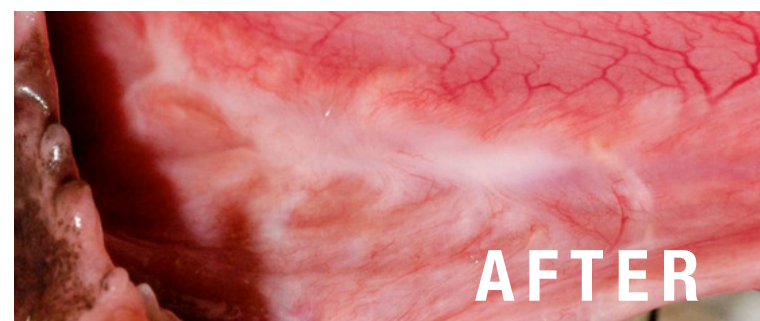
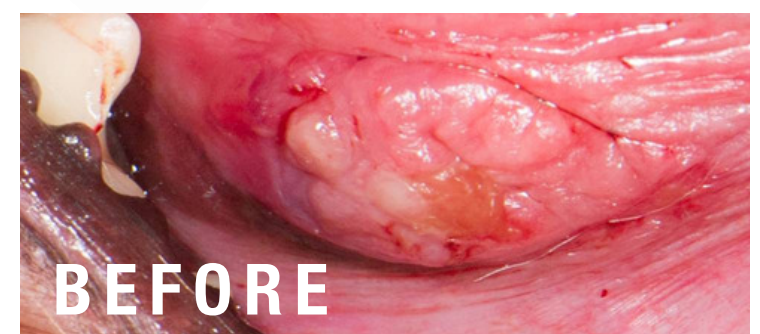
The cyst is cut of using the C02 laser, making it an almost bloodless surgery. It is then sutured shut and has a rapid healing rate providing relief for the patient.



**11• GUM CHEWERS LESIONS**

A less severe form of sublingual cysts, still causing pain for the animal and should be removed.

Bellows goes on to show how he does the same procedure here in a smaller form to relive these animals.



**12• OROPHARYNX MASS EXCISION**

While not all tumors are cancerous, oral tumors can become malignant if they are not treated early.

This tumor was obstructing the animals airway and needed to be removed. "Lasers are wonderfully situated for taking away tumors in the mouth", Jan Bellows says in the webinar, he uses a laser and scissors to remove most of the mass.



**13 • BLEEDING ON PROBING**

Bleeding on probing, often abbreviated BOP, is a sign of inflammation and indicates some sort of destruction and erosion to the lining of the sulcus or the ulceration of sulcular epithelium. Most commonly, lasers are not only used on animal patients, but on humans as well for this condition. Jan speaks about how the Diode laser and stringent home care after the procedure can lead to decreased swelling, inflammation, and bacteria.



**14 • CALICI VIRUS TONGUE LESIONS**

The cause of an oral mass can be a multitude of different factors and can be painful for the patient if not removed.

The CO2 laser is used by Jan Bellows to show us how the deepness of the incision is adjusted by laser wattage and used to remove the mass. He explains that the procedure is easily done with a laser verses blade due to the minimized bleeding and rapid healing afterwards.



**15 • MULTIPLE ORAL PAPILLOMAS**

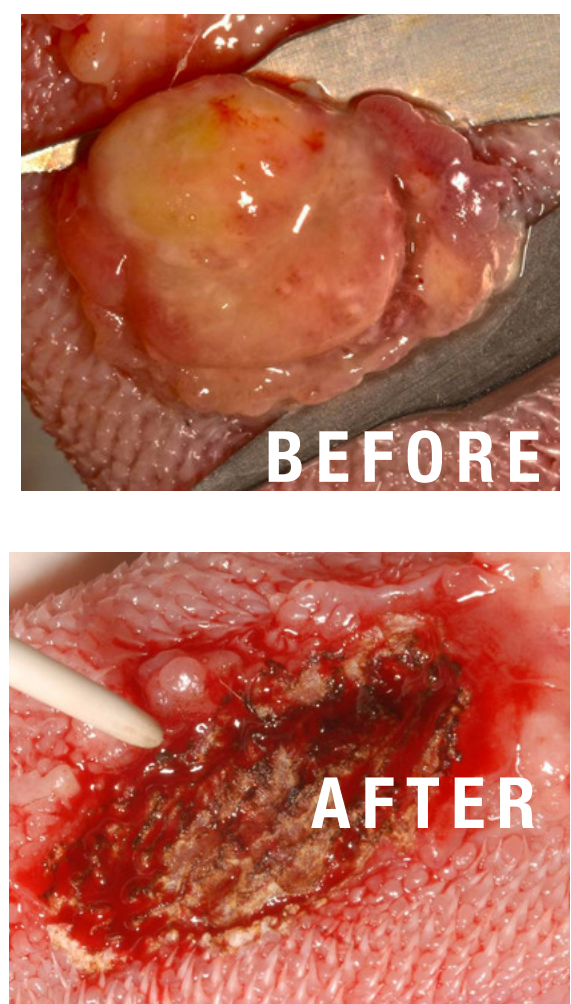
Canine oral papillomas, also known as oral warts, are small, benign tumors of the mouth caused by the papilloma virus. "This would have been a real bloody mess trying to take care of with cold steel", Bellows explains during the webinar. He goes on to say how easy it is to preform the procedure with the laser due to the coagulation it provides.



**16 • EXCISION OF EOSINOPHILIC GRANULOMAS**

Eosinophilic granuloma complex in cats often is a confusing term for three distinct syndromes that cause inflammation of the skin: Eosinophilic plaque - circumscribed, raised, round to oval lesions that frequently are ulcerated.

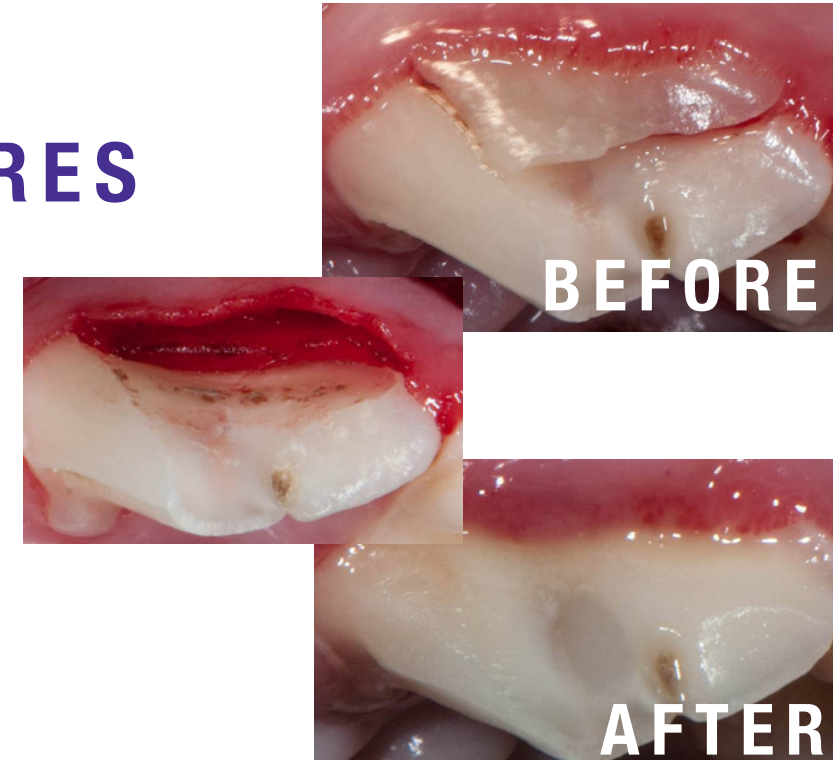
This case shows how using lasers alongside of cutting with steel can be a successful process in treating these cases. Steel was used to remove the granulomas and afterwards the laser was used to help "char" the surface area, preventing bacteria and speeding up the healing process.



**17 • SLAB DEFECT IN CROWN/ROOT FRACTURES**

A root fracture is defined as a dentin and cementum fracture involving the pulp.

When the fracture in these procedures is removed, it takes care of the tooth however, the support of the tooth is not taken into account. This can cause pockets and lasers can be used to help decrease this pocket and let gineva heal.



**18 • CROWN ELONGATION AFTER FRACTURE**

Crown lengthening is done when a tooth needs to be fixed. Sometimes, not enough of the tooth sticks out above the gum to support a filling or crown. This can happen when a tooth breaks off at the gum line. The CO2 laser to remove the tissue and expose the the remaining tooth. It would have been difficult to preform this using cold steel due to space and bleeding. a post was inserted to secure the crown.



**19 • CONTACT MUCOSITIS WITH ULCERATON**

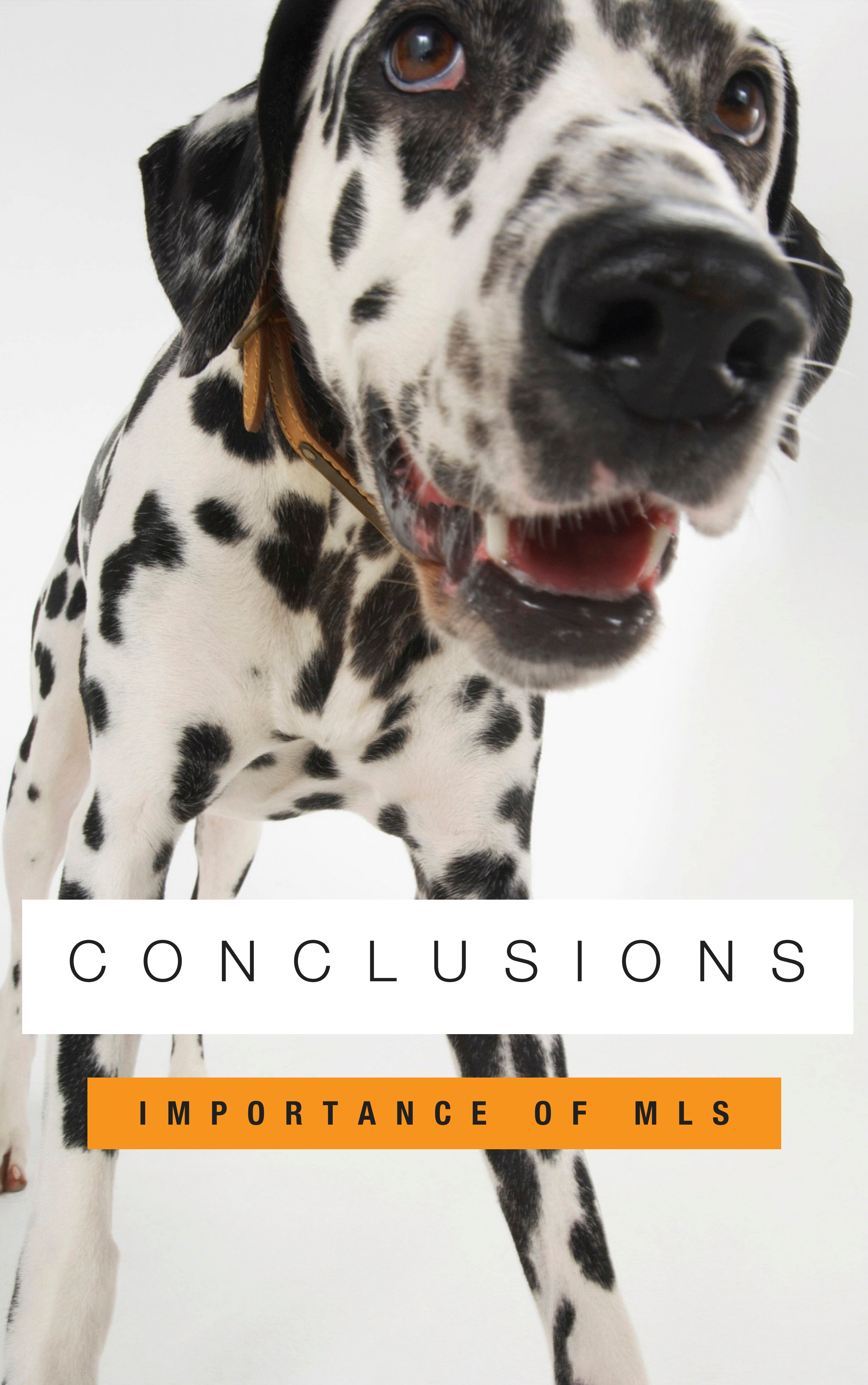
Sometimes dogs become hyper sensitive to their own plaque. Also known as "kissing lesions\*" or C.U.P.S. (Chronic Ulcerative Paradental Stomatitis). Usually occurs on upper inside lip and the usual treatment is removal of the tooth. Istead of removing the dogs tooth, Bellows explains how he has success in using the Diode laser to treat the ulcer accompanied with cleaning and polishing the tooth involved.



**20 • SOFT PALATE GRANULOMAS**

The pyogenic granuloma is a relatively common, tumor-like, exuberant tissue response to localized irritation or trauma. Laser is used ina a non-contact mode to decreased the size. Intime, commonly 1-3 months, the granulomas tend to shrink and dissappear.





C O N C L U S I O N S

I M P O R T A N C E O F M L S

# WHY IS LASER THERAPY IMPORTANT FOR YOUR PRACTICE?

Patients receive effective treatment for often difficult diagnoses and additional care post surgery using MLS laser therapy for the quickest healing times possible.

Using lasers in place of cold steel or scalpels during surgery can make procedures easier by decreasing bleeding, having more precision in a smaller area, and eliminating bacteria.

Lasers are an important tool used in not only dentistry, but general veterinarian practices nationwide. Providing patients with more advanced care and

giving veterinarians an easy tool to perform smooth surgeries and healing therapies.

Laser Therapy, the fastest growing modality within the veterinary market, will allow you to expand your service offerings while adding profit to your practice!

Position your practice for growth and give better care to your patients. Click on the link below to learn more about MLS laser therapy:

[REQUEST MORE INFORMATION](#)

## CUTTING EDGE LASER TECHNOLOGY

Since our founding in 2001, our mission has remained the same; to provide high value medical equipment to healthcare professionals that will improve the quality of medicine practiced while improving their bottom line. We serve over 4,500 medical professionals in niche markets including but not limited to Orthopedics, Podiatry, Chiropractic, Pain Management, Veterinary and Professional Sports Teams.

**BETTER MEDICINE.**  
**BETTER BUSINESS.**

eBook Provided Courtesy of



For more information about how MLS Laser Therapy can transform your practice, give us a call at 800-889-4184 to schedule your complimentary in-office laser demonstration.

[\*\*Request More Information\*\*](#)