

Updated 1/1/2012



# **SAFE, EFFECTIVE and INEXPENSIVE TREATMENT of HEARTWORM in DOGS**





# Heartworms

- **Heartworms are transmitted by mosquitoes that have bitten heartworm-infected animals.**
- **Heartworms spend their adult life in the right side of the heart and the large blood vessels connecting the heart to the lungs.**



# The Dangers of Heartworm

- **Adult heartworms and their offspring (microfilaria) can obstruct chambers of the heart and large blood vessels leading from the heart to the lungs.**
- **As worms die they can cause pulmonary embolisms.**
- **In severe infections, the worms can block the large vein, causing blood to back up, and consequently damaging the liver.**



# Did You Know?

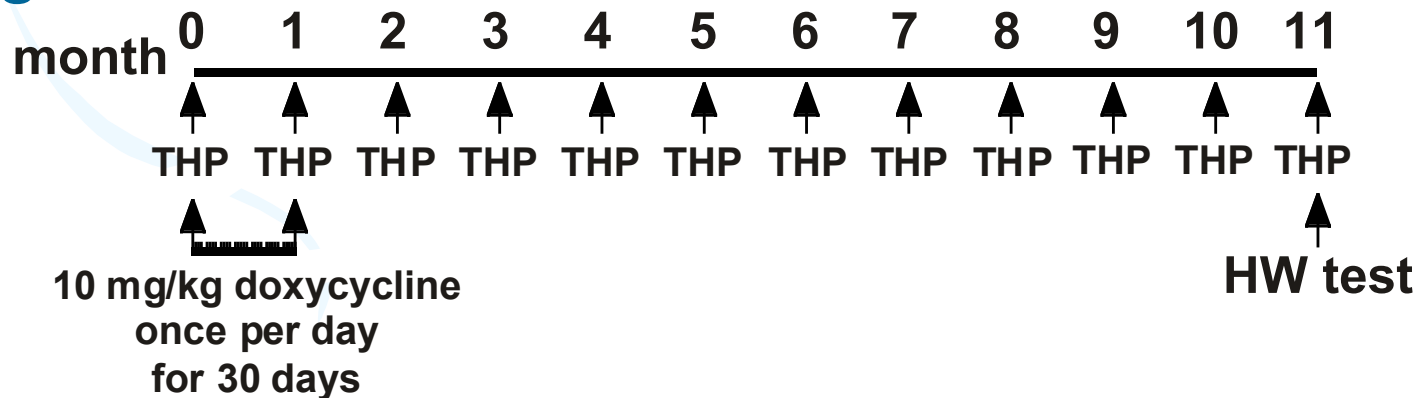
- **Thousands of dogs die each year from complications of heartworm (HW) disease.**
- **HW is a disease that EVERY dog can contract, in ALL 50 states.**
- **Dogs living in the Gulf Coast and FL are at greatest risk.**
- **One bite from an infected mosquito is all it takes for a dog to become infected with heartworms.**
- **Many shelters euthanize dogs that test HW+.**
- **HW disease is virtually 100% preventable!**

# Traditional Treatment for HW disease: Immiticide (IM)

- IM is an organic arsenical chemotherapeutic agent.
- IM is contraindicated in dogs with very severe HW disease.
- IM has a LOW margin of safety.
- All dogs with HW disease are at risk for post-IM-treatment pulmonary thromboembolism (death of worms which may result in fever, weakness, and coughing).
- After treatment, the patient must be strictly confined for one month. No walks, no running around. The dog must live the indoor life. The reason for this is that embolism to some degree is inevitable and it is important to minimize embolism-related problems.
- IM treatment is **EXPENSIVE!**
- IM is the **ONLY** recognized method of treatment by the veterinary community at large and by the FDA.

# Gentle (Slow-Kill) HW Treatment

- HW preventative (ivermectin) is given once per month for 12 months to kill microfilaria (we use Tri-Heart Plus, Heartgard Plus and Iverhart Plus) .
- Doxycycline (10 mg/kg, 5 mg/lb) is given for 30 days to weaken the adult heartworm.
- HW test is repeated after one year.
- Dog continues on HW preventative for life to prevent against reinfection.



THP = Tri-Heart Plus

# Mango, our first success!



- Mango, an outdoor dog for seven years, was picked up the fifth time by animal control in GA in March, 2008. The family did not want him back this time so his days were numbered. ERU rescued him and he went immediately to Colbert Animal Hospital where he was treated by Dr. Gloria Andrews. Mango was found to be HW+. Dr. Andrews explained the gentle HW treatment to us and that's the method we followed. Mango was adopted in April and HW free in January, 2009!



# Buddy & Apple

- **Buddy was an owner surrender to ERU - his owner of eight years could no longer afford to take care of him. He tested HW + in March, 2008 and after following the gentle HW treatment was HW free 12 months later! Buddy was adopted while HW+.**



- **Apple was an owner surrender to a shelter in LA, and after testing HW+ by the shelter was on death row. ERU rescued her, followed the gentle HW treatment, and she was HW free 13 months later! Apple was adopted while HW+.**





# Bunny & Nathan



- **Bunny and her pups were dropped off at a shelter in NC. ERU rescued the whole family. Bunny tested HW+ in May, 2008 and after following the gentle HW treatment was HW free 10 months later! Bunny was adopted while HW+.**
- **Nathan was a stray picked up by animal control in NC. ERU rescued him and found him to be HW+ in July, 2008. After following the gentle HW treatment, Nathan was HW free 13 months later! Nathan was adopted after he tested negative for HW.**

# Thumper & Max



- **Thumper was picked up by animal control in SC. ERU rescued him, found him to be HW+, and started the gentle HW treatment. Thumper tested HW free seven months later! Thumper was adopted while HW+.**



- **Max was rescued by ERU from a shelter in MO. After testing HW+ we started the gentle HW treatment. Max was HW free 12 months later! Max was adopted while HW+.**

# Angel & Snow White



- **Angel was found wondering around a country farm. ERU rescued her, found her to be HW+, and started the gentle HW treatment. Angel tested HW free 12 months later! Angel was adopted while HW+.**



- **Snow White was rescued by ERU from a shelter in West Monroe, LA. After testing HW+ we started the gentle HW treatment. Snow White was HW free 12 months later! Snow White was adopted while HW+.**



# Emily & Lacey

- Emily was rescued from a shelter in AL. The shelter told us she was HW+ and one of ERU's DVMs confirmed the test. She was adopted while HW+ and after only four months on the gentle HW treatment tested negative for HW! Emily's adopter's DVM did the test twice just to be sure.
- Miss Lady Lacey was rescued from a shelter in FL. Lacey tested positive for HW and was adopted while HW+. This lucky lady tested negative for HW only seven months after starting the gentle HW treatment.



# Baylor & Ginger

- **Baylor was our 1st eskie that tested *high* HW+. Baylor, a senior, had severe HW disease before ERU rescued her from a shelter in FL. After one year following the gentle HW treatment she was still HW+. We continued her treatment for another year. Baylor tested negative 24 months after we initiated her treatment! Baylor is still with her loving foster mom in permanent foster care.**
- **Ginger is our second *high* HW+ eskie. After 11 months of the gentle HW treatment she tested negative for HW! Ginger was adopted while HW+.**



# The Slow-HW Kill Method: Keeping Families Together!



- **Maria C adopted a neglected eskie, Henri, from a neighbor in Orlando, FL. Henri was found to be HW+. The bill for Immiticide treatment was > \$1000! Maria could not afford his treatment and was considering putting Henri down; she did not want to see him suffer from HW disease.**
- **We told Maria about the gentle HW treatment, sent her everything she needed to treat Henri, and Henri is well on his way to being HW-free!**

# The Slow-HW Kill Method: What If Shelters Knew?



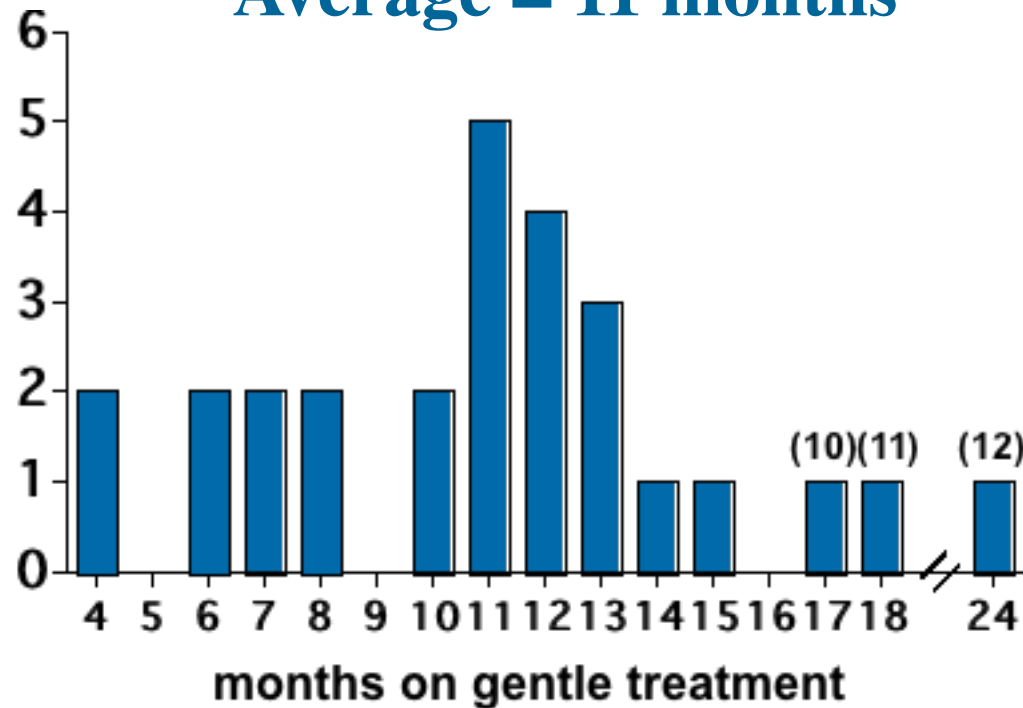
- Like many dogs that end up in shelters, Wilbur was found to be HW+. The shelter policy is to  *euthanize all HW+ dogs*. Thankfully the person that performed the test did not get this info to their supervisor in time, the supervisor released Wilbur to ERU and Wilbur's life was saved. Wilbur tested HW negative only six months after starting the gentle HW treatment! ERU, Wilbur and his new family are glad he slipped through the cracks!



# Twenty-seven dogs have seroconverted from positive to negative within four-24 months of gentle treatment

Average = 11 months

# of dogs that have tested negative



( ) = month first test (still positive) was performed

# Summary

**The gentle (slow-kill) method for treating heartworms is:**

- **SAFE:** No adverse effects in 27 ERU dogs treated with this method.
- **EFFECTIVE:** 27 out of 27 ERU dogs have tested negative using the gentle method (four-24 months; average = 11 months).
- **INEXPENSIVE:** Average cost is \$50 for the 12-month treatment.

**This picture is worth a thousand words.  
Congrats Eddie!**





# Acknowledgements

- **Heidi Ortmeyer, Ph.D., ERU Director (contact [Heidi@eskierescuers.org](mailto:Heidi@eskierescuers.org) for more information)**
- **Gloria Andrews, DVM, Colbert Animal Hospital, Colbert, GA**
- **Aaron Weissberg, DVM, Community Animal Hospital, Randallstown, MD**
- **ERU's wonderful foster homes and awesome adopters**



# References

- **Information on Immiticide (<http://www.drugs.com/vet/immiticide.html>)**
- **American Heartworm Society Canine Guidelines (<http://www.heartwormsociety.org/veterinary-resources/canine-guidelines.html>)**