

SESSION OVERVIEW

Chair: Karen Green
Panelists: Dr. Mary Blankevoort, Dr. Kelly Farrell, Dr. Ismail Thoya, Dr. Amber Valinski
Speaker: Dr. Raphaël Vanderstichel

**ZEUTERIN™/ESTERILSOL™:
INTRATESTICULAR INJECTABLE STERILANT FOR MALE DOGS**

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Zeuterin™, produced by Ark Sciences and comprised of zinc gluconate neutralized by arginine, is the first FDA-approved non-surgical sterilant for male dogs. EsterilSol™ is the product name outside the U.S. As of June 2013, Ark Sciences expected that Zeuterin would be available to certified veterinary professionals in October of this year.

At present, the product is approved for chemical sterilization in dogs aged 3-10 months and with testicles between 10mm and 27mm in size (it has additionally been approved for use in cats in Colombia). Upon commercial release, Zeuterin will be marketed in 3ml vials; Ark Sciences has found that this quantity will, on average, treat three dogs. A vial is currently expected to cost \$45 for non-profit organizations, not-for-profit high-volume spay/neuter clinics, and shelters. The cost to private practitioners is expected to be \$75 for a 3ml vial.

Many potential users of the product (including veterinary practitioners; animal shelters; high-volume, high-quality spay/neuter clinics; and pet owners) have questions about the first non-surgical sterilant approved for companion animals in the U.S. Among them, what are early adopters' experiences? What are the risks associated with zinc neutering? Does zinc neutering change a dog's testosterone production? Does it change his behavior?

This session sought to help answer these questions. It began with a panel of four veterinarians who use Zeuterin/EsterilSol for diverse client groups and in diverse circumstances. The second portion was devoted to a study comparing behavior of free-roaming dogs after zinc neutering and after surgical castration.

Veterinary panel: The veterinarians on this panel represented a broad scope of geographies and human and canine clients.

- Dr. Mary Blankevoort is Board Chair of the Portland Animal Welfare (PAW) Team, a nonprofit offering veterinary care to animals of Portland, Oregon's homeless and very low-income residents, with the goal of keeping pets and their human companions together. All male dogs who undergo sterilization at PAWTeam are now zinc neutered; females (and cats) are surgically sterilized.

- Dr. Kelly Farrell is Medical Director at First Coast No More Homeless Pets (FCNMHP). This Jacksonville, Florida high-volume, high-quality spay/neuter provider currently performs 24,000 surgeries per year. The organization began offering zinc neuters in Fall 2012. Dr. Farrell guided the audience through her experience of introducing Zeuterin, the challenges that FCNMHP has faced with the product (both medical and staff buy-in) and how they have been addressed, and the impact of “Zeutering” on the work of the organization.
- Dr. Ismail Thoya is a veterinarian with the Kenya Society for the Protection and Care of Animals (KSPCA) in Nairobi, Kenya. His use of EsterilSol followed a rise in cases of suspected rabid dogs attacking residents of one particularly poor Nairobi community, Dagoretti; the traditional response to such an event had been to reduce dog populations through strychnine poisoning. The KSPCA worked with the local hospital, government officials, area Chief, and community members to develop a plan to vaccinate dogs against rabies while conducting humane population control. EsterilSol was the sterilant of choice for male dogs. Dr. Thoya spoke about his experiences using the product in the field on free-roaming and loosely owned dogs.
- Dr. Amber Valinski is Medical Director of The Shot Spot, a McAllen, Texas-based mobile clinic that offers zinc neutering (as well as vaccines, microchips, and heartworm testing) in 20 locations. The rural region of south Texas in which she works has abundant free-roaming, semi-owned, and ranch dogs; it also has 100-mile stretches with neither veterinary care nor animal control services. Dr. Valinski spoke about her experience with Zeuterin: how she has developed a business model through its use; the rate of complications (and how she addresses them); and both the challenges and positive outcomes that have stemmed from using the product.

Behavior: Dr. Raphaël Vanderstichel presented the results of a field study evaluating canine behavior through direct video observation (versus owner feedback). The study included 118 male free-roaming dogs in Patagonia, Chile. It considered measures of activity, sexual behavior, and dog aggression before and after surgical castration and EsterilSol injection. One of the key project outcomes has been novel information about the effects of sterilization on behavior of male free-roaming canines. Inclusion of the presentation slides and narration in the Symposium online proceedings is pending publication of results.