



# Seward County Kennel Club

A CLUB FOR PERSONS INTERESTED IN DOGS AND THE SPORT OF DOGS.

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Information for the newsletter, including brags, needs to be submitted by the first week of the month to be included in the next newsletter. Please email submissions to the editor.

## BREED SNAPSHOT: THE BORDER TERRIER



Admirers of the upbeat and agile Border Terrier cherish their breed's reputation as a tough, no-frills working terrier. These plucky, happy, and affectionate dogs are popular pets in town and country. The wiry coat is an easy keeper. Border Terriers, standing from 11 to 16 inches at the shoulder, are easy to recognize among other small terriers by their unique head shape—the breed has an 'otter head,' as fanciers say. Another distinguishing trait is that they are longer in leg than other small terriers. The wire coat can be grizzle and tan, blue and tan, wheaten, or red. Borders are described as 'hard as

nails' when working, but at home they're good-tempered, affectionate, and trainable. Borders love exploring outdoors and make fine childhood playmates. Bred to be country dogs, Borders adapt well to city life as long as they get plenty of exercise. Borders tend to get along with other dogs, but their hunting instincts can be aroused when cats or squirrels cross their path.

#### History

In the hilly countryside near the Scottish-English border, old-time farmers and shepherds developed quick, agile terriers to help pursue and dispatch a clever, sheep-stealing predator: the large, powerful hill fox. This required game terriers with legs

## NEXT MEETING June 20, 2024

DOG LOVER'S DAY @ Independence Landing, Seward Fairground  
General Meeting 6:30pm - Bring a dog, a chair & dish to share

# MEETING MINUTES

Seward County Kennel Club  
 April 18, 2024  
 Pizza Kitchen

Members Present: Mary Bristol, Troy and Tabitha Dvorak, Linda Soukup, Diane and Gerold Nitz, Shelene and Maurice Costello, Kayla Thomas, Diane Jackson, Tanya Williams and Morgan Ehlers.

Meeting called to order by 7:30pm by Tabitha.

March minutes read. Tanya motioned to approve March minutes as read. 2nd by Shelene

Report of President: None

Report of Treasure: 1st quarter report. Tanya made motion to approve upon audit. Maurice 2nd motion. Passed.

Award and trophies: Tanya reported money is all collected, and Cindy has the trophies.

Chief Ring Steward: Troy reported will have Girl scouts this year helping ring side. Troy passed around sign-up sheet for stewards.

Fun Match: Tabitha reports she got the judges. Tabitha asked if the club to sponsor prizes for fun match. Tanya made motion for the club to sponsor \$150 for the prizes. Maurice 2nd motion. Motion passed.

Membership: 1st reading Rachael Pickering she has labs interested breed and obedience. Diane made a motion to wait to meet her in person 2nd by Tanya.

Show: Tabitha reported that Foy Trent called said up by 20 entries. One judge on Sunday over drew by 18. Foy moved those extra entries to a different judge.

Judge John Cole rented a car without the club's approval first. To make it right he will pick up the Kincaids and bring to Seward. Tabitha will be pick up the other judges.

Raffle – Morgan agreed to oversee setting up the Raffle table and man the tables. Tricia and Tabitha have gotten lots of different items for raffle.

Raffle Tickets: \$1-1 \$5-6 \$10- 15 \$20 -40

50/50 Raffle: each day draw before best in show must be

present to win. \$1 per ticket

Poop raffle \$25 for each day

Hospitality: Linda reported that we will have lasagna and casseroles on Saturday, and Sunday will be pulled pork and hot dogs. Passed sign-up sheet for salads and desserts.

Performance: Diane not going to renew her CGC certification.

New Business: Bottle Brewery is interested in setting up a bar at the show. Discussion.

Maurice made motion to adjourn meeting. Diane 2nd motion.

Meeting adjourned at 8:30pm

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Seward County Kennel Club  
 May 16, 2024  
 Pizza Kitchen, Milford, NE  
 Members present:  
 Gerold and Diane Nitz, Kathy Jackson, Linda Soukup, Mary Bristol, Tabitha and Troy Dvorak, Tanya Williams and Morgan Ehlers.

Meeting called to order by Tabitha at 7:34pm

April minutes: Read. Motion made by Troy to approve minutes as read. 2nd by Kathy. Motion approved.

Report President: None.

Treasures report: Motion to approve balance made by Tanya and 2nd by Diane. Motion passed.

Dog Lovers Day will be held on June 20, 2024, at Independence landing, Seward at 6:30pm. Covered dishes to share. 4 legged friends are welcome.

Membership- 2nd reading Racheal Pickering application for membership. It is noted that she was a big help at the show.

Performance: Classes will start September 16, 2024, for 7-week class. With Canine Good Citizen testing on October 28, 2024.

# MEETING MINUTES

Show: Show went reasonably well. Our EMT on site John Montanelli was needed for 3 different occasions. Bill Lee (judge) got sick on Sunday, and 2 Exhibitors had hypoglycemic events. EMT is not a paid position, and he pays for all his supplies out of pocket. Tanya made motion to reimburse John in the amount of \$50.00 for supplies used for emergencies at the show. Motion was 2nd by Kathy. Discussion. Motion passed.

-Ken Kozad judged an obedience class that he wasn't scheduled to judge.

-There was a handler that got rough with her dog, but it was not reported. Until after the fact and nothing could be done.

-Club lost money due to 2 judges using Jack's travel service through Onofrio. Discussions. Tanya made motion that if a judge needs to make a travel arrangement that Tabitha will make the reservation for them. Instead of using a third-party service.

-Reviews from AKC Representative. Via email to Tabitha after the show. She suggested the following:  
 --The club use former breed ring lay out of 3 rings instead of 4. There was not adequate isle space near the photographer.  
 --Beware of rosette color choices.  
 --Supply the judges with Gatorade.

Judges who sent thank you cards to the club include- John Cole, The Kincaids, Bill Lee.

Discussion about having the Obedience and Rally Trials in the Harvest Hall for 2025. More space for rings, crating, also better lighting. 4-H building to be used as additional/free grooming.

Suggested that the Superintendent schedule obedience Novice A& B in the Rally ring to help run smoother.

Discussion on having a different prize for High combined and High in Trial something different than gift certificates to intown places. It is a big accomplishment. Just something to consider for next year. Prizes are listed in the premium list, and the exhibitor knows what to expect.

High in Trial ribbons are being sent to exhibitor.

Rent of the buildings increased in 2023. It didn't affect the club last year due to having signed contract before the rate increased. Rent is now \$5800, an increase of \$3000 from last year.

FastCAT, Raffle and the 50/50 raffles were big successes for the club.

New Business: Motion made by Tanya that club will pay for judges' meals. If a Judge(s) wants alcoholic beverage(s) it is at their cost not the club. Diane 2nd motion. Motion passed. Tabitha will add to Judges contracts.

Old Business: Tricia contacted Kathy Noles. She runs the "small dog club helpers" page on Facebook. She raffled off a collapsible wagon and pooper scooper for SCKC. There is no cost to the club. \$100 was profited from this raffle. Please Like and join the "Small dog club helpers" page on Facebook. It is a fundraiser raffle for different clubs. There are several different items each week. Our club has benefited from one of these raffles. So please consider helping some other clubs by participating.

Kathy made motion to adjourn meeting. Tanya 2nd motion. Motion passed.

Meeting adjourned at 8:45pm.



CANCER IN COMPANION ANIMALS

# ADVANCES IN IMMUNOTHERAPY

BY TAYLOR DOMINGUE AND ASHLEY KALINAUSKAS, TORIGEN PHARMACEUTICALS

In ancient Greece, circa 400 BC, people used the word *cancer* to refer to the crustaceous beach-dwelling animals we know as crabs. But when the ancient physician Hippocrates likened the shape of a crab to the leg-like tendrils protruding from tumors he saw growing in his patients, the term took on a whole new meaning.

Almost everyone knows someone who has gotten cancer at some point in their lifetime. It is especially prevalent in the animal health industry, where companion animals like dogs, cats and horses can develop spontaneous tumors just like humans. With cancer rates on the rise, the need for effective treatments is pressing.

Fortunately, we have learned a lot about cancer since 400 BC, especially about the role and importance of the immune system in both how the disease arises and how to treat it.

### What is the role of the immune system in the development of cancer?

Cancer begins with a single cell in the body, a cell that has developed mutations within its DNA. These mutations interfere with the cell's ability to control its division process, often leading to uncontrolled multiplication. A tumor develops, which

can further hijack the body by feeding itself with newly formed blood vessels and metastasizing.

You may be surprised to hear that the very mutations that could lead to cancer occur every day in the billions of cells making up our bodies. How then, do we not all develop the affliction?

Out of all the cells making up our body, our immune system is our systemic control that ensures only the cells that look like "self" have the ability to replicate in a healthy manner. Each individual cell has internal self-destruction processes that trigger in the event that oncogenic mutations occur and unregulated DNA replication proceeds. If that cell has developed enough mutations allowing it to break through those internal controls, our immune system is next in line to kill that cell.

Unfortunately, however, potentially cancerous cells can evolve the ability to fly under the radar of our immune system, or even block the immune system from doing its job. That cell can then start to divide and modulate its microenvironment to make a home and eventually create a tumor. Cancer, then, is truly a disease of the immune system and therein lies a way of treating it.

*Cancer is truly a disease of the immune system and therein lies a way of treating it.*

### How does immunotherapy compare to traditional treatment methods?

Surgery, chemotherapy and radiation therapy are all traditional methods of cancer treatment, all coming with distinct pros and cons:

- Physical resection of the mass can disrupt the cancer's microenvironment to stop or slow down its growth, but just one cell left behind can leave the ability for the cancer to come back.
- Cytotoxic chemotherapy agents can be utilized to stop cellular proliferation and kill the cancerous cells. However, if 99.9% of the tumor cells are killed with a chemotherapeutic agent, 0.01% of those cells that survive can reseed and regrow resistant to that agent.
- Direct beam radiation therapy is a targeted approach to killing the



majority of tumor cells in an area, but radiation alone is often not enough to kill the cancer completely.

Immunotherapy is a relatively recent development compared to traditional methods of treating cancer. Various immunotherapeutic technologies have been developed in order to reverse what is stopping the immune system from doing its job in the first place and finally allow the body's immune system to kill the mutated, cancerous cells and learn from its mistake. They are highly specific therapies that harness the body's natural mechanism to fight disease and target its power against the cancer cells.

There are several benefits of immunotherapy over traditional

methods. One is the specificity of immunotherapeutic agents to their cancer cell targets. This specificity relies on the presence of cancer antigens. *Antigens* are proteins on the surface of foreign bodies, such as viruses or bacterial cells, that our immune system would normally recognize as "non-self" to then attack and destroy the foreign body. As a result of mutations, cancer cells also contain "non-self" looking antigens on their surfaces that we can utilize to target synthetic therapies at.

Another benefit of immunotherapy is the lack of adverse side effects associated with drug administration. Chemotherapy, radiation and surgery are all very physically taxing on an organism. Side effects of immunotherapeutic drugs are often mild in comparison. Immunotherapy can also provide the body's immune system with a memory of what the cancer cells look like, giving more long-lasting effects than traditional treatment methods.

### What are some advancements in immunotherapy treatments?

#### ADOPTIVE CELL THERAPY

Adoptive cell therapy takes advantage of the functions of our own immune cells in order to fight cancer. One type of therapy that does this is CAR T cell therapy.

Circulating in our bloodstream is a type of immune cell called a T cell. T cells are responsible for the downstream actions of the immune system, such as cytokine release and destruction of foreign cells.

CAR T cell therapy tags a patient's own T cells with a receptor called a chimeric antigen receptor (CAR). A patient's T cells are extracted, tagged with CARs, then readministered via infusion. These CARs can then bind to cancer cells by recognizing the antigens naturally expressed on their surface, instigating the cascade of events that ends with the T cell killing the cancer cell.

CAR T cell therapy is currently being used to treat different types of blood cancers in humans, but its application for a wider variety of cancers is currently being studied.

#### MONOCLONAL ANTIBODIES

Antibodies are proteins that are naturally produced by B cells, a type of immune cell that protects us against infections from viruses and bacteria. Antibodies work by binding to antigens, triggering a cascade of events that allows the immune system to rid the body of infection.

While our immune system can naturally produce trillions of different kinds of antibodies to fight off a myriad of different diseases, they can also be synthesized in a lab. Scientists can engineer antibodies to be specific to a certain antigen, such as those found on the surface of cancer cells.

*Continued*

*The world is moving toward an era of immunotherapy in the treatment of cancer.*

Therapeutic monoclonal antibodies (mAbs) are synthetic targeted therapies that block interactions between cells. Monoclonal antibodies work by binding to cancer antigens, which flags the cancer cells for recognition by immune cells called antigen presenting cells (APCs). These APCs then display the cancer antigen to T cells in the bloodstream, which then recognize the antigen and instigate a "killing" function in which they destroy the cancer cell. Other mAbs work by blocking oncogenic signals that cancers use to thrive or by delivering cytotoxic agents directly to the tumor.

On the human side, mAbs are frequently used to help treat cancers like melanoma, non-small-cell lung cancer and renal cell carcinoma through immune checkpoint inhibitors (ICIs).

In certain cancers, a specific ICI mutation called PD-L1 (programmed death ligand 1) is a commonly upregulated protein that when expressed on the tumor cell, renders cytotoxic T cells functionally inert. These cytotoxic cells should be killing that tumor cell. Instead, the tumor cell evolved a pathway that essentially turns off the immune system. An ICI mAb that blocks PD-L1 ensures that the T cells are not going to sleep, allowing the T cells to do their job and kill the tumor cells.

In equine medicine, there has been work to understand overall expression of PD-L1 expressing tumors. For instance, equine melanoma has been shown to express PD-L1, and its blockade has been linked to enhanced production of helper T cell cytokines in equine immune cells, indicating a potential immunotherapeutic target for that cancer type in horses.<sup>1</sup>

When it comes to creating an mAb for horses, the antibody has to be individualized for that species. Utilizing

human, mouse or dog mAbs may have limited therapeutic efficacy in horses, and when used over time, can create an anti-drug antibody response that can be harmful or deadly.

To date, only expression levels of certain ICIs have been evaluated in horses; however, for melanoma patients in particular that express PD-L1, there may be a great potential to create an effective immunotherapy that allows the immune system to finally do its job.

#### PERSONALIZED CANCER VACCINES

Cancer vaccines are another type of immunotherapy aimed at educating the immune system on what the cancer cells "look like," based on the antigens displayed on the surface of the tumor cells. Under the umbrella of cancer vaccines are autologous cancer vaccines. Autologous essentially means that the therapy is personalized to an individual organism, i.e., the therapy is created from the patient's own tumor tissue.

With any cancer, the tumor micro-environment is extremely complex and can contain billions of different cancer antigens, many of which are universally expressed by that cancer type, but also some that are unique to an individual patient. Producing a vaccine directly from a patient's own tumor captures all of those unique antigens, essentially the "fingerprint" of that cancer, creating a truly personalized therapy.

First, the tumor is surgically excised from the patient. Then, a portion of that tumor is taken and the tumor cells are isolated and inactivated. An adjuvant may be added, after which the vaccine is administered to the patient, stimulating a T cell based immune response that targets cells bearing those specific antigens. In this way, the patient's immune response will

be directed at only the cancer cells, ignoring the patient's healthy cells.

Our team at Torigen Pharmaceuticals creates an autologous cancer vaccine that is available for commercial sale for many cancers affecting companion animals, including carcinomas, sarcomas and many other solid tumors.

Currently in the veterinary market, autologous cancer vaccines are experimentally labeled, yet available for sale as regulated by the USDA Center of Veterinary Biologics. With more time and additional studies, the goal is to have multiple approved autologous cancer vaccines on the market!

#### Conclusion

Cancer has traditionally been characterized as a disease of mutations, but at Torigen, we view it as a disease of the immune system. While the disease may start with mutations, it only rears its ugly head by hiding from the body's natural immune responses.

From 400 BC to now, cancer treatment has been revolutionized time and again, adapting to each new piece of knowledge we have gained about the disease. The world is moving toward an era of immunotherapy in the treatment of cancer. Especially in the last couple of decades, the myriad advancements in immuno-oncology and the sturdy clinical efficacy of different treatments highlight the potential capabilities of more targeted therapies.

What's more is that these advancements are trickling into the veterinary world. In time, veterinarians will have these therapies at their disposal for their patients, giving more options for animals with cancer. ■

#### References

1. Ganbaatar O, Konnai S, Okagawa T, Nojima Y, Maekawa N, Minato E, et al. PD-L1 expression in equine malignant melanoma and functional effects of PD-L1 blockade. *PLoS One*. 2020 Nov 20;15(11):e0234218.

long enough to run with foxhounds and huntsmen on horseback. But they also had to be small enough to dig into the fox's lair and force it into the open.

These dogs, the ancestors of today's Border Terrier, were energetic, strong, and tireless, with a wiry, weatherproof coat to protect them from the rain, mist, and notoriously tough terrain of the borderland. Here, a breed historian describes the Border's working ability: 'There is no wall he cannot get over or wire entanglement he cannot scramble through. Should the fox run to earth, he will bolt him every time, or stay the night in the earth until the matter is settled.' Early breed names included the Reedwater Terrier, Ullswater Terrier, and Coquetdale Terrier, all derived from place names in the north of England where these rugged little dogs plied their trade. It was, however, in Northumberland, England's northernmost county, where the breed earned its enduring reputation as a foxhunter adept at working in tandem with hounds. (And to this day, the Border is known as a terrier who gets on well with his fellow canines.) Foxhunting with Border Terriers in the north country was distinctly different from the pageantry of traditional British foxhunts staged on lavish country estates, where well-heeled horsemen in red coats and high hats rode with huge packs of foxhounds just for the sport of it.

Borderland foxhunts were working-class affairs with a practical purpose: to protect shepherds' flocks from predators. And to this day, the Border Terrier remains a popular option for just plain folks in the United Kingdom looking for a spirited, low-maintenance companion.

The Kennel Club (England) recognized the Border Terrier in 1920, and the AKC followed suit 10 years later.

*Front page photo provided by Shayna Janssen. Content and additional photo provided by akc.org.*



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