VetOmics

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VetOmics Podcast:

Genomic Diagnostics and Precision Medicine in Veterinary Oncology.

Episode Outline

Introduction

00:00:00 – Intro to the VetOmics Podcast
Welcome and overview of the podcast's focus on the role of genomic testing in veterinary cancer care.

00:01:56 – Meet Dr. Ondrej Skor
Introduction to Dr. Skor, veterinary medical oncologist.

00:03:35 – Meet Dr. Heike Aupperle-Lellbach
Introduction to Dr. Aupperle-Lellbach, veterinary pathologist.

Genomic Testing: When, Why, and How?

00:06:15 – Question:
When and why do you recommend genomic testing in veterinary oncology? What factors influence the decision? Which cancer types are best suited for early testing? Is it used primarily for therapy, diagnosis, or prognostication or others?

00:06:15 – Dr. Ondrej Skor

- Key decision factors: client motivation and expectations, cancer type and stage, risk profile, and whether a standard of care (SOC) exists and is effective.
- Cancers most often recommended for early genomic testing:
    - Splenic hemangiosarcoma
    - Appendicular osteosarcoma
    - Oral melanoma
    - Histiocytic sarcoma
    - Anal sac adenocarcinoma
    - Urothelial carcinoma
    - Dr. Skor also noted, in follow-up communication after the podcast, that he would consider early genomic testing for aggressive mammary gland carcinoma, as well as colonic, pulmonary, and oral carcinomas.

00:11:20 – Utility of Genomic Testing (Dr. Skor)

- Primarily for identifying treatment options
- Also supports diagnosis and prognostication in certain cases

Pathology and Genomics: A Diagnostic Partnership

00:15:12 – Question:
As a pathologist, how do you see genomic testing fitting into routine cancer diagnostics for pets?

00:15:45 – Dr. Aupperle-Lellbach

- Genomics complements, not replaces, pathology
- Increasingly valuable in diagnostically challenging cases

00:17:15 – Fun Moment
Jessy the cat briefly steals the spotlight 🐱

00:18:25 – Dr. Wang

- Shares perspective from human medicine on how genomics and pathology work together
- Highlights how genomic profiling can clarify ambiguous or difficult diagnoses

Treatment Strategies and Prioritization

00:22:20 – Question:
How do you prioritize treatment, standard of care versus genomics-guided therapies?

00:23:00 – Dr. Skor

- Shares his experience of treatment prioritization
- Emphasizes a growing role for combination approaches: SOC + targeted therapy

00:31:00 – Discussion:
Are genomic profiles different between primary and metastatic disease?

00:34:50 – Rational Drug Combinations

- Dr. Wang shares principles in combining therapies "on paper" based on metabolizing pathways and mechanism of action

Access, Regulation, and Prioritization

00:38:40 – Question:
Does the EU cascade drug use system restrict genomics-guided treatments that involve human drugs?

Group Response (Drs. Aupperle-Lellbach, Skor and Wang):

- This is not a limitation, as there are very few standard-of-care therapies available for dogs before transitioning to human drugs.
- May present an opportunity to explore and repurpose new therapies for dogs' use

00:47:30 – Question:
How are the mutations and genomics-guided treatment prioritized in VetOmics report?

- Driver status
- Evidence level
- Drug availability and route

Safety, Adoption, and Barriers

00:58:45 – Question:
Are oral targeted therapies safe for pet owners?

- Discussion on precautions and safety considerations

01:01:50 – Question:
What are the barriers to adopting genomic testing in practice?

01:01:50 – Dr. Skor:

- Cost
- Emotional barriers
- Education, knowledge and awareness gaps

01:07:46 – Dr. Aupperle-Lellbach:

- Agrees on cost as a hurdle
- Suggests cancer-type-specific panels may help
- Emphasizes the need for oncologist training
- Points out sample limitations (e.g., osteosarcoma)
- Advocates for standardized collection and processing protocols

Case Insights and Cost Discussion

01:16:12 – Dr. Skor:

- Shares a case with a negative result and how it actually informed care

01:23:46 – Dr. Wang:

- Discusses cost of genomic testing and importance of good sample quality

The Future of Genomics in Vet Oncology

01:34:25 – Final Question:
What does the future of genomics-guided therapy look like?

Dr. Aupperle-Lellbach:

- Tumor-specific approaches
- Published clinical data
- Multidisciplinary collaboration
- Development of molecular tumor boards

Dr. Skor:

- Sees future in combining SOC with genomics-guided targeted and immunotherapies
- Supports integrated, team-based decision-making

Dr. Wang:

What an information (and fun)-packed 90 minutes! It's incredible to see how interdisciplinary discussions like this can drive progress and innovation. We're all here with a shared goal, to work together and deliver the best possible solutions for our pets.