# Regulation of Artificial Intelligence in Veterinary Medicine

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**KEYWORDS**

• Artificial intelligence (AI) • Veterinary regulation • FDA CVM • EU AI act • GDPR
• Machine learning • Professional liability • Veterinary informatics

**KEY POINTS**

- Veterinary Artificial Intelligence (AI) tools are being marketed and deployed without premarket regulatory approval, unlike their human medicine counterparts.
- Multiple veterinary professional organizations (American College of Veterinary Radiology/ European College of Veterinary Diagnostic Imaging, American Association of Veterinary State Boards, American Veterinary Medical Association) have issued position statements, white papers, or established task forces addressing AI, converging on the principle that AI should augment rather than replace veterinary judgment.
- The European Union AI Act, UK pro-innovation framework, and US regulatory approaches represent 3 distinct philosophies toward AI governance, each with unclear applicability to veterinary-specific tools.
- Veterinarians remain solely responsible for clinical decisions and medical record accuracy when using AI tools, creating professional liability even when vendor performance claims are unvalidated.
- Practitioners should perform due diligence when adopting AI tools, demanding transparency around training data, validation studies, performance metrics and data ownership and security before integrating AI into clinical workflows.

## INTRODUCTION

The integration of artificial intelligence (AI) into veterinary medicine has accelerated dramatically over the past 5 years. From automated radiographic interpretation to AI-powered cytology screening to AI-generated medical records, these tools are increasingly embedded in clinical workflows across specialty and general practice settings. According to a 2024 survey conducted by the American Animal Hospital Association and Digitail of nearly 4000 veterinary professionals, approximately 83%

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Vet Clin Small Anim 56 (2026) 1053–1067
https://doi.org/10.1016/j.cvsm.2026.04.002 **vetsmall.theclinics.com**
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| Abbreviations | |
|---|---|
| ACVR | American College of Veterinary Radiology |
| AI | Artificial Intelligence |
| AAVSB | American Association of Veterinary State Boards |
| AVMA | American Veterinary Medical Association |
| BVA | British Veterinary Association |
| CE | Conformité Européenne |
| CLAIM | Checklist for Artificial Intelligence in Medical Imaging |
| CVM | Center for Veterinary Medicine |
| ECVDI | European College of Veterinary Diagnostic Imaging |
| EU | European Union |
| FDA | Food and Drug Administration |
| GDPR | General Data Protection Regulation |
| GMLP | Good Machine Learning Practice |
| JAVMA | Journal of the American Veterinary Medical Association |
| PMA | pre-market approval |
| RCVS | Royal College of Veterinary Surgeons |
| SaMD | Software as a Medical Device |
| SAVY | Symposium on Artificial Intelligence in Veterinary Medicine |
| VMD | Veterinary Medicines Directorate |

reported familiarity with AI and nearly 30% indicated they already incorporate AI into their practices on a daily or weekly basis.[1] Veterinarians of all generations have shown particular enthusiasm for AI voice-to-text tools that transcribe client conversations and incorporate information into patient medical records.[1]

This rapid adoption has outpaced the development of comprehensive regulatory frameworks specific to veterinary medicine, creating a landscape characterized by uncertainty, variable standards, and reliance on professional self-regulation. Unlike human medicine, where the Food and Drug Administration (FDA) has developed extensive guidance for medical AI devices through its Software as a Medical Device (SaMD) framework, veterinary medicine operates with minimal direct regulatory oversight of AI applications. The FDA's Center for Veterinary Medicine (CVM) has traditionally focused on drugs, biologics, and physical devices rather than software-based diagnostic tools,[2] leaving a regulatory vacuum that raises important questions about validation, safety, liability, and standard of care.

Given that clinical decisions can lead to euthanasia, and given financial constraints that affect treatment decisions, the stakes of unvalidated AI-assisted diagnoses are arguably higher in veterinary medicine than in some areas of human medicine—yet regulatory oversight is essentially nonexistent.[3] This article examines the current regulatory environment for AI in veterinary medicine, covering the United States, European Union (EU), and United Kingdom. It explores the roles of professional organizations, industry self-regulation, and legal precedent in shaping how AI tools are validated and deployed. It also examines 3 rapidly expanding areas of veterinary AI—medical record keeping, diagnostic imaging interpretation, and cytologic diagnosis—as case studies illustrating where regulatory gaps are most acutely felt. Finally, it provides practical guidance for veterinary professionals navigating this evolving landscape and proposes directions for future regulatory development.

## REGULATORY FRAMEWORKS: HUMAN VERSUS VETERINARY MEDICINE

### *Human Medicine Regulatory Approach*

In the United States, the FDA has established a comprehensive framework for regulating AI and machine learning–based medical devices through its SaMD guidance.

This risk-based classification system categorizes AI tools according to the seriousness of the condition they address and the significance of the information they provide to health care decisions. High-risk AI devices require pre-market approval (PMA) or 510(k) clearance, including submission of clinical validation data demonstrating safety and effectiveness. The FDA has also developed pre-determined change control plans that allow adaptive AI/ML systems to be modified within pre-specified boundaries without requiring new regulatory submissions for each update[2]—acknowledging the rapid and iterative nature of machine learning algorithms and to avoid stifling rapid innovation in the AI space.

In collaboration with Health Canada and the United Kingdom's Medicines and Healthcare products Regulatory Agency, the FDA published guiding principles for Good Machine Learning Practice (GMLP) in 2021[4] and Transparency for Machine Learning-Enabled Medical Devices in 2024. These documents emphasize the importance of representative training data, clinical expert involvement throughout development, robust error reporting, and clear communication of device capabilities and limitations to end users.[5]

### *Veterinary Medicine Regulatory Reality*

In the United States, FDA's CVM has legal authority to regulate AI tools used in veterinary practice, but currently does not exercise this authority for diagnostic AI software. There is no formal approval pathway for veterinary diagnostic AI, no premarket screening requirement, and no mandatory post-market surveillance. This stands in stark contrast to the human medicine framework, where the FDA has cleared or approved over 1000 AI-enabled medical devices as of 2025.[2]

A comparison between the FDA's approach in human medicine versus veterinary medicine is summarized in **Table 1**. The CVM has begun to develop internal capabilities and awareness around AI, but formal regulation of veterinary AI products appears to be years away, if it comes at all. This regulatory vacuum means that veterinary AI tools can be marketed without independent validation, transparency requirements, performance standards, or post-market monitoring. The implications of this are significant. Practitioners must rely on vendor-provided performance claims that may not

**Table 1**
**Comparison of regulatory oversight—human versus veterinary artificial intelligence**

| Aspect | Human Medicine (FDA) | Veterinary Medicine (FDA-CVM) |
|---|---|---|
| Premarket Approval | Required for most AI/ML devices (510(k), PMA, or De Novo pathways) | Not required; no formal pathway exists |
| Clinical Validation | Mandatory; must demonstrate safety and effectiveness | Voluntary; relies on vendor self-reporting |
| Post-Market Surveillance | Required; adverse event reporting mandated | None required |
| Transparency Standards | GMLP and transparency guiding principles published | No veterinary-specific standards |
| Adaptive AI Updates | Pre-determined change control plans allow structured updates | No oversight of algorithm changes |
| Number of Cleared/ Approved Devices | Over 1000 AI-enabled devices as of 2025 | Zero formally regulated devices |

reflect real-world clinical accuracy, and there is no regulatory mechanism or third-party evaluative bodies to remove poorly performing products from the market.

## INTERNATIONAL REGULATORY LANDSCAPE

### *European Union*

The EU AI Act, which entered into force in August 2024 with staggered implementation through 2027, establishes the world's first comprehensive legal framework for AI governance. It employs a risk-based classification system in which AI systems are categorized as minimal risk, limited risk, high risk, or unacceptable risk, with corresponding regulatory obligations. High-risk AI systems—including medical devices and diagnostic tools—face the most stringent requirements, including conformity assessments, CE (*Conformité Européenne*, or "European Conformity") marking, technical documentation, human oversight provisions, and registration in an EU database.[6]

The Act's applicability to veterinary AI is ambiguous. While the Medical Device Regulation explicitly covers devices intended for human use, the EU AI Act's broader scope potentially captures any AI system deployed in a professional context that could pose risks to health or safety. Veterinary diagnostic AI that influences treatment decisions—particularly euthanasia—could arguably fall within the high-risk category, though no formal guidance has addressed this question. The Veterinary Medicinal Products Regulation (EU) 2019/6 modernized the regulatory framework for veterinary drugs and biologics but does not specifically address AI-powered diagnostic tools.[7]

### *United Kingdom*

Following Brexit, the United Kingdom has pursued a distinct "pro-innovation" approach to AI regulation. Rather than creating a single, comprehensive AI law, the UK government has directed existing sector-specific regulators to apply AI principles within their domains. This framework, outlined in the 2023 AI Regulation White Paper, establishes 5 cross-cutting principles: safety, security, and robustness; appropriate transparency and explainability; fairness; accountability and governance; and contestability and redress.[8]

For veterinary medicine, the Veterinary Medicines Directorate (VMD) oversees pharmaceutical and some device regulations, while the Royal College of Veterinary Surgeons (RCVS) governs professional standards. Neither body has published formal guidance specific to AI in veterinary practice, although work is actively ongoing. The British Veterinary Association (BVA), which represents over 19,000 veterinary professionals in the United Kingdom, has not issued a formal AI position statement as of early 2026, despite the rapid adoption of AI tools in United Kingdom veterinary practices. This absence of specific regulatory or professional guidance means that United Kingdom veterinary practitioners face a similar regulatory vacuum to their US counterparts, despite operating under a philosophic framework that at least acknowledges AI's cross-sector implications.

### *Comparative Takeaways*

The United States, EU, and United Kingdom represent 3 philosophically distinct approaches to AI regulation: the United States with minimal veterinary-specific oversight despite robust human medicine frameworks; the EU with comprehensive legislation whose applicability to veterinary AI remains unclear; and the United Kingdom with principles-based guidance that has yet to be translated into

veterinary-specific standards. All 3 jurisdictions share a common reality: veterinary AI tools currently operate in a largely unregulated space. These approaches are summarized in Table 2.

## DATA PRIVACY AND SECURITY REGULATIONS

### *General Data Protection Regulation and Veterinary Artificial Intelligence*

The EU's General Data Protection Regulation (GDPR) has significant implications for veterinary AI, though its application requires careful analysis. While animal patient data are not considered personal data under GDPR, client information—including names, contact details, financial information, and increasingly, recorded examination room conversations captured by AI scribe tools—clearly falls within its scope. Veterinary practices using AI tools that process client data must comply with GDPR's core principles of lawfulness, fairness, transparency, purpose limitation, data minimization, accuracy, storage limitation, and integrity and confidentiality.

Key GDPR obligations relevant to veterinary AI include: establishing a lawful basis for processing (typically legitimate interest or consent); providing clear privacy notices explaining how AI tools process client data; respecting data subject rights including access, rectification, erasure, and portability; conducting Data Protection Impact Assessments for high-risk processing activities; and ensuring adequate safeguards for cross-border data transfers following the Schrems II decision. Practices must also consider the "right to explanation" under GDPR Article 22 if AI systems make automated decisions with legal or similarly significant effects.

**Table 2**
**International regulatory approaches to AI in veterinary medicine**

| Jurisdiction | Regulatory Body | Approach | Key Requirements | Veterinary Applicability |
|---|---|---|---|---|
| United States | FDA-CVM | Minimal oversight | No premarket approval; no post-market surveillance | Not currently exercised; CVM developing internal AI capabilities |
| European Union | EU AI Act + national bodies | Comprehensive risk-based | Conformity assessments, CE[a] marking, technical documentation for high-risk AI | Unclear; veterinary diagnostic AI could be classified as high-risk but no formal guidance |
| United Kingdom | VMD, RCVS (sector regulators) | Principles-based, pro-innovation | Five cross-cutting principles applied by existing regulators | No veterinary-specific guidance issued; BVA and RCVS have not published AI position statements |

[a] *Conformité Européenne*, or "European Conformity," is a mandatory administrative symbol used to indicate that a product meets the essential health, safety, and environmental protection standards of the European Economic Area (EEA).

### *US Data Privacy Landscape*

The United States lacks a comprehensive federal data privacy law equivalent to GDPR. Veterinary practices are not subject to the Health Insurance Portability and Accountability Act, which applies only to human health care. State-level regulations such as the California Consumer Privacy Act and similar laws in Colorado, Connecticut, Virginia, and other states may apply to veterinary practices depending on their size, data processing activities, and the states in which they operate. The patchwork nature of United States data privacy regulation creates compliance challenges for veterinary AI vendors operating across multiple states and for multi-location practice groups.

### *UK General Data Protection Regulation*

The United Kingdom retains its own version of GDPR post-Brexit (UK GDPR), which operates alongside the Data Protection Act 2018. The United Kingdom's data adequacy status with the EU, subject to periodic review, allows continued data flows between United Kingdom and EU veterinary practices and AI vendors. However, this adequacy decision is not permanent, and any divergence in UK data protection standards could complicate cross-border veterinary AI services.

## ARTIFICIAL INTELLIGENCE APPLICATIONS IN VETERINARY PRACTICE: EMERGING REGULATORY CHALLENGES

Three application areas illustrate the breadth of veterinary AI deployment and present distinct regulatory considerations: diagnostic imaging, medical record keeping, and cytologic diagnosis. These examples demonstrate how AI is already embedded in daily clinical workflows, often without practitioners fully appreciating the regulatory implications.

### *Artificial Intelligence in Diagnostic Imaging*

Diagnostic imaging represents the most commercially developed area of veterinary AI. As of this writing, multiple companies now offer AI-powered radiographic interpretation services, including SignalPET's SignalRAY platform, Vetology AI (distributed by Patterson Veterinary), and AIS RapidRead (through Antech/Mars Veterinary Health). These tools use deep learning algorithms to detect abnormalities across thoracic, abdominal, and musculoskeletal radiographic studies.

Perhaps related to the rapid commercial development, some research on veterinary diagnostic imaging AI has been published and shown promising but inconsistent results. Hespel *and colleagues* compared 4 pretrained DenseNet convolutional neural networks against 13 board-certified veterinary radiologists evaluating canine thoracic radiographs for 15 common primary thoracic abnormalities, finding comparable overall error rates, with radiologists outperforming AI in several categories.[9] Boissady *and colleagues* reported that AI had a lower overall error rate than veterinarians for primary thoracic lesion detection.[10] However, Ndiaye and colleagues found that while commercial AI software demonstrated high specificity for canine and feline radiographic studies, its sensitivity was lower than that of veterinary radiologists—a finding with significant clinical implications, as lower sensitivity typically means missed or poorly prioritized pathology.[11] Joslyn *and colleagues* subsequently published a commentary highlighting methodological concerns in AI validation studies and cautioning against overstating current AI readiness for independent clinical use.[12]

These diagnostic imaging products are deployed commercially without premarket regulatory approval, independent validation requirements, or post-market surveillance—despite providing diagnostic interpretations that directly influence clinical

decisions. The conclusions of many of these studies further support the need for a "human in the loop." In addition, while the publication of research is encouraging, it should follow CLAIM guidelines (Checklist for Artificial Intelligence in Medical Imaging) a list of 42 specific, evidence-based recommendations that are designed to ensure transparency, reproducibility, and rigorous reporting of AI studies, particularly in medical imaging. In the author's experience, CLAIM guidelines are frequently ignored or incompletely implemented, hampering accurate and useful scientific evaluation of these tools.

### *Artificial Intelligence in Medical Record Keeping*

AI-powered medical scribes represent one of the fastest-growing applications of AI in veterinary practice. Products such as Scribenote, ScribbleVet, HappyDoc, CoVet, PetDesk Scribe, and others use large language models to record examination room conversations and automatically generate structured Subjective, Objective, Assessment, and Plan notes. Unlike traditional dictation tools that require structured input, these AI scribes capture natural conversation between veterinarians and clients and translate it into formatted medical records—filtering out off-topic discussion and converting colloquial language into medical terminology.

The adoption of AI scribes has been remarkably rapid. Multiple veterinary teaching hospitals have begun integrating these tools into clinical education: the University of Florida College of Veterinary Medicine announced its collaboration with ScribbleVet in March 2025 for use across its facilities and classroom settings,[13] and UC Davis School of Veterinary Medicine followed suit later that year. This academic adoption is significant because it normalizes AI-generated medical records for the next generation of practitioners without established regulatory standards for accuracy, completeness, or liability. As Dr Michael Mison, associate dean at UC Davis, noted, integrating this technology into the teaching hospital ensures trainees develop familiarity with tools that will shape future clinical workflows.[14]

The regulatory implications of AI-generated medical records are substantial. First, the American Association of Veterinary State Boards (AAVSB)'s 2025 white paper explicitly states that "the veterinarian remains solely responsible for finalizing the medical record" regardless of whether AI generated it. This places the burden of accuracy verification squarely on the practitioner, yet no standards exist for how thoroughly a veterinarian must review AI-generated notes before signing off.[15] Second, AI scribes record examination room conversations that contain protected client information, raising data privacy concerns under GDPR, state privacy laws, and veterinary professional ethics standards regarding informed consent. Third, the accuracy of AI-generated medical terminology and clinical interpretations has not been independently validated through peer-reviewed studies—practitioners are relying on vendor performance claims without regulatory oversight. Finally, the legal implications of AI-generated medical records in malpractice proceedings remain untested: if an AI scribe misrepresents a clinical finding that a veterinarian signs off on, the distribution of liability between practitioner and vendor is unclear.

### *Artificial Intelligence in Cytologic Diagnosis*

Cytologic diagnosis represents the third major frontier for veterinary AI deployment. Cytology is an extremely useful and minimally invasive diagnostic tool, widely used in diagnosing inflammation, infection, hyperplasia, and neoplasia. However, accurate cytologic interpretation requires specialized expertise: studies have indicated that up to 48% of veterinarians historically send their cytology samples to reference laboratories rather than interpreting them in-house.[16] AI-powered cytology tools aim to bridge this gap by bringing point-of-care diagnostic capability to general practitioners.

Zoetis's Vetscan Imagyst platform is the most prominent commercial example, offering 7 AI-powered testing capabilities including blood smear analysis, fecal analysis, and—as of June 2025—AI Masses, which uses deep learning algorithms to identify and classify common skin and subcutaneous masses and lymph node lesions from cytology samples. The tool delivers results in minutes at the point of care, with Zoetis describing it as supporting veterinary professionals to make informed decisions and streamline diagnostic workflows.[17]

Research in AI-assisted cytology has expanded rapidly. A 2025 systematic review published in Frontiers in Veterinary Science found that cytology represents 33% of all deep learning research in veterinary diagnostics—tied with radiography as the most active area of investigation.[18] Specific research achievements include convolutional neural networks recognizing reticulocytes in feline blood smears with 98.7% accuracy, CNN models diagnosing and classifying abnormal cell growth in canine skin samples from cytologic images, and deep learning methods outperforming veterinary pathologists in grading prognostic elements of canine cutaneous mast cell tumors.[18]

A 2024 paper by Pacholec and colleagues underscores an important nuance: even when an AI system provides a lymphoma probability score of 0.9 (on a scale where 1 indicates 100% certainty of lymphoma), a pathologist must interpret that output in the context of patient signalment, history, and physical examination findings. The distinction between an AI's raw output and a clinical diagnosis requires not only understanding how the AI generates its score (explainability) but also the ability to contextualize that output within broader clinical information (interpretability).[19] As with AI scribes, these cytology tools are being marketed and deployed commercially without premarket regulatory approval—despite making diagnostic classifications that directly influence treatment decisions and potentially euthanasia.

These tools represent real technological advancements, and offer improvements in efficiency, reduction in burnout, and potentially improved patient outcomes. However, with the lack of any regulatory oversight and relatively meager scientific evaluation, the mantra of "Trust but Verify" continues to define the care with which veterinarians should implement these tools.

## PROFESSIONAL SELF-REGULATION AND POSITION STATEMENTS

### *The American College of Veterinary Radiology and European College of Veterinary Diagnostic Imaging Joint Position Statement*

The American College of Veterinary Radiology (ACVR) and European College of Veterinary Diagnostic Imaging (ECVDI) jointly published their position statement on AI in Journal of the American Veterinary Medical Association (JAVMA) in June 2025, representing the most authoritative guidance from veterinary imaging specialists. The statement establishes several non-negotiable principles for ethical AI deployment.[20]

First, AI systems must always be used with a qualified veterinary professional "in the loop." Board-certified radiologists are identified as best suited to evaluate computer-aided diagnostic tools, with board-certified radiation oncologists serving the same role for radiation therapy applications. The human-in-the-loop requirement reflects concern that fully automated AI systems without specialist oversight may produce errors that harm patients.

Second, the position statement establishes transparency standards: AI systems that do not ensure safe and secure handling of patient data, do not provide transparency of their underlying methodology and training/testing datasets, do not allow post-implementation monitoring, and do not permit transparency for machine learning-

enabled medical devices should not be used in veterinary practice. The statement notably acknowledges that no commercially available product currently meets all these standards, highlighting the gap between professional expectations and market reality.

Third, ACVR and ECVDI urge the need for unbiased, third-party evaluations of AI tools to establish trust and ensure clinical effectiveness. The colleges support ongoing research and encourage publication of both internal documentation and external validation in high-quality veterinary journals, including Veterinary Radiology and Ultrasound. The position statement also addresses liability directly, noting that legal responsibility for AI-assisted decisions remains undetermined but likely involves veterinarians themselves rather than developers alone.

### *American Association of Veterinary State Boards Regulatory Considerations*

The AAVSB published "Regulatory Considerations of the Use of Artificial Intelligence in Veterinary Medicine" in March 2025, providing guidance from the perspective of veterinary licensing regulators. The AAVSB's position is particularly significant because state veterinary boards are responsible for licensing, discipline, and defining standard of care—making their position directly relevant to malpractice and legal questions surrounding AI use.[15]

The white paper's central finding is unambiguous: the responsibility for appropriate use of AI rests entirely with the licensee. Any errors or issues arising from AI use fall solely on the veterinarian and the veterinary facility. The AAVSB stresses that veterinarians must maintain full professional responsibility and "never assume the accuracy of an AI output," must be able to justify medical decisions with their own professional judgment, and must treat AI as a tool that augments rather than replaces clinical expertise. The AAVSB uses the analogy that while a scalpel is not regulated, the person wielding it requires knowledge and skill to use it responsibly—while acknowledging that AI differs from passive tools by actively providing recommendations that could influence clinical decisions.

Specific to medical record keeping, the AAVSB states that "the Veterinarian remains solely responsible for finalizing the medical record" whether using AI for transcription, radiology analysis, or medical record generation. Even when using AI-powered robotic surgical systems, "the surgeon remains fully responsible for Patient safety and outcomes." The white paper also provides practical guidance on risk assessment, asking veterinarians to consider whether AI tools have been validated in relevant populations, whether training data represent appropriate diversity, and whether vendors provide adequate documentation of limitations.

### *American Veterinary Medical Association Task Force on Emerging Technologies and Innovation*

The American Veterinary Medical Association (AVMA) has not issued a formal standalone policy or position statement on AI as of early 2026. Instead, the AVMA established the Task Force on Emerging Technologies and Innovation in early 2024, representing an infrastructure-building approach rather than prescriptive regulation. The task force's objectives include environmental scanning to identify and build awareness around emerging technologies that may enhance the delivery of veterinary services, developing initial policy that encourages responsible development and use of these technologies, and suggesting a charge and composition for a future AVMA committee[21] that will develop related policy and create resources to support veterinary practitioners.

In March 2025, the JAVMA and the American Journal of Veterinary Research partnered with the task force and the organizers of the Cornell Symposium on Artificial Intelligence in Veterinary Medicine to publish a series of narrative review articles on AI in veterinary medicine. The AVMA has also created a virtual collection of scientific articles on AI and dedicated continuing education sessions at its annual conventions to the topic.[22] While the AVMA's approach is less prescriptive than the ACVR/ECVDI position statement or the AAVSB white paper, it reflects the reality that the organization is working to develop expertise and resources before issuing formal policy—a measured approach, but one that leaves a gap in comprehensive national guidance during a period of rapid AI adoption.

### *Industry Self-Regulation*

Some veterinary companies have voluntarily adopted AI governance principles. VET.CT, a veterinary teleradiology company, published a position statement on AI in veterinary radiology in 2022, committing to disclosing when AI is used in report generation, validating AI tools before implementation, and maintaining radiologist oversight of AI-generated content. This voluntary commitment demonstrates that responsible companies recognize the value of self-regulation even absent mandatory requirements. However, reliance on individual vendor ethics creates inconsistency across the market, and the absence of enforcement mechanisms means that vendors face no consequences for inadequate validation or misleading performance claims.[23]

## LIABILITY AND MALPRACTICE CONSIDERATIONS

The intersection of AI and veterinary malpractice law presents unresolved questions that will likely require court decisions or legislation to clarify. Under current law, veterinarians owe a duty of care to their patients and may be held liable for deviations from the accepted standard of care. When AI tools are integrated into clinical decision-making, several liability scenarios emerge.[3]

If a veterinarian relies on an AI diagnostic tool that produces a false-positive result—for example, an AI cytology system that incorrectly classifies a benign mass as neoplastic, leading to unnecessary surgery or euthanasia—the question of liability distribution between the veterinarian and the AI vendor is legally untested in veterinary medicine. The AAVSB's position places responsibility squarely on the licensee, but product liability theories could potentially extend to vendors whose tools produce foreseeable errors. The absence of regulatory standards for veterinary AI means there is no baseline against which to measure whether a vendor's product met minimum performance requirements.

Conversely, a veterinarian who fails to adopt AI tools that have become part of the standard of care could potentially face liability for not using available technology. As AI-powered diagnostics become mainstream, the standard of care itself may evolve to include their use. Practitioners should document their use of AI tools, maintain records of vendor validation data, and clearly communicate to clients when AI is being used in diagnostic decision-making.

## FUTURE REGULATORY DIRECTIONS

The regulatory landscape for veterinary AI is likely to evolve significantly in the coming years, driven by continued rapid adoption, emerging liability questions, and growing professional consensus around the need for governance frameworks. Several developments merit attention.

In the United States, the Trump Administration's December 2025 executive order on AI established a national policy framework emphasizing removal of barriers to AI innovation and questioning the role of state-level AI regulation. While directed primarily at commercial AI applications, this pro-innovation federal posture may influence how aggressively the CVM pursues veterinary AI regulation.[24] The interplay between federal preemption and the more than 100 state AI laws enacted in recent years creates additional uncertainty for veterinary AI vendors and practitioners operating across multiple jurisdictions. This focus on deregulation may further emphasize the requirement for individual veterinary judgment and responsibility when implementing AI tools.

**Table 3**
**Questions to ask AI vendors before adoption**

| Category | Question | Why It Matters |
|---|---|---|
| Training Data | What species, breeds, and conditions were represented in your training dataset? What was the dataset size? | Models trained on limited populations may underperform in diverse clinical settings |
| Validation | Has your product been independently validated by a third party? Are results published in peer-reviewed literature? | Vendor-reported metrics may overestimate real-world performance |
| Performance Metrics | What are the sensitivity, specificity, positive predictive value, negative predictive value, and area under the curve for each diagnostic category? Does disease prevalence in testing or validation datasets reflect real world conditions? | Knowing error rates is essential for clinical interpretation of AI outputs. Datasets used to calculate performance metrics should reflect real world conditions. |
| Transparency | Can you provide documentation of your AI architecture, training methodology, and known limitations? | ACVR/ECVDI position statement requires transparency of underlying methodology |
| Data Privacy | How is client and patient data stored, processed, and protected? Where are servers located? Who has access? | GDPR and state privacy laws may impose obligations on data handling |
| Post-Market Monitoring | Do you conduct ongoing monitoring of AI performance in deployed settings? How are errors reported and addressed? | AI performance can degrade over time (model drift) without monitoring |
| Record Accuracy (for AI Scribes) | What is the measured accuracy of generated medical records? How are medical terminology and drug names validated? | Veterinarian is solely responsible for record accuracy per AAVSB guidance |
| Updates | How are algorithm updates handled? Will I be notified of changes that may affect diagnostic performance? | Unlike human medicine, no predetermined change control plans are required |

The AVMA Task Force on Emerging Technologies and Innovation represents the most likely near-term source of national veterinary AI guidance in the United States. Its work to develop policy recommendations and educational resources could establish de facto standards even without regulatory force of law. Similarly, the continued development of position statements from specialty colleges beyond ACVR and ECVDI—particularly from pathology (ACVP) and internal medicine (ACVIM)—would help establish discipline-specific expectations for AI use.

Internationally, the EU AI Act's staggered implementation through 2027 will gradually clarify its applicability to veterinary AI tools, particularly those marketed within the EU. If veterinary diagnostic AI is classified as high-risk under the Act, the resulting conformity assessment and documentation requirements could effectively establish global standards that vendors comply with regardless of jurisdiction—much as GDPR has influenced data privacy practices worldwide.

## PRACTICAL GUIDANCE FOR VETERINARY PROFESSIONALS

In the absence of formal regulatory requirements, veterinary practitioners should exercise due diligence when evaluating and adopting AI tools. The following framework, informed by the ACVR/ECVDI position statement, AAVSB white paper, and CLAIM guidelines adapted for veterinary use, provides practical guidance for responsible AI adoption (**Table 3**).[25]

Beyond vendor evaluation, practitioners should establish internal protocols for AI use, including: reviewing and signing all AI-generated medical records before finalization; documenting when AI tools were used in reaching diagnostic conclusions; obtaining informed client consent before using AI in diagnostic decision-making, particularly for high-stakes decisions; maintaining familiarity with AI tool limitations and error patterns; and staying current with evolving professional standards and regulatory developments through continuing education.

## SUMMARY

The regulation of AI in veterinary medicine stands at a critical inflection point. AI tools are already embedded in clinical workflows—interpreting radiographs, screening cytology samples, and generating medical records—yet the regulatory and professional governance frameworks have not kept pace. The gap between the comprehensive oversight applied to human medical AI and the essentially nonexistent oversight of veterinary AI tools creates risks for patients, clients, and practitioners alike, and reflects the tension between regulation and innovation.

The professional veterinary community has begun to respond. Position statements from ACVR/ECVDI and AAVSB, the AVMA's Task Force on Emerging Technologies, and individual company commitments to self-regulation all point toward an emerging consensus: AI should augment rather than replace veterinary judgment; transparency and independent validation are essential; and practitioners bear ultimate responsibility for clinical decisions and data protection regardless of AI involvement. However, voluntary compliance and professional guidance are not substitutes for regulatory frameworks that ensure minimum standards of safety, effectiveness, and transparency.

As the veterinary profession continues to integrate AI into clinical practice, the development of veterinary-specific regulatory guidance—informed by the more mature frameworks in human medicine, the EU AI Act, and emerging international standards—will be essential to protect both animal patients and the practitioners who care for them. Veterinary-specific AI regulation is beginning to take shape. In

the interim, veterinary professionals must exercise critical judgment, accrue the critical skills necessary to evaluate AI tools, perform due diligence on AI vendors, and remain actively engaged in shaping the regulatory landscape that will govern these transformative technologies.

## CLINICS CARE POINTS

- Regulatory frameworks for AI in veterinary medicine are currently limited. Their continued evolution will no doubt be influenced by those guidelines already in place in North America, the United Kingdom, and Europe governing AI in human medicine.
- Trusted veterinary organizations and associations are working to provide guidance on AI adoption in veterinary medicine. Frequent review of published guidance from these groups will inform best practices and ensure patient safety.
- The ultimate accountability for the use of AI tools, their clinical accuracy and data security lies with the veterinarian.
- The philosophies of "Human in the Loop" and "Trust but Verify" remain critical tenets of AI adoption in veterinary clinical practice. Use the questions outlined in this article (see **Table 3**) to gather evaluative data for any AI tool employed in practice.

## DECLARATION OF AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the author used Claude Sonnet 4.5 to assist in topic organization; to edit for clarity, grammar, and conciseness; to generate tables; to generate an abstract; to summarize complex government policy; and to insert/format references. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

## DISCLOSURES

The author is employed by VET.CT, and currently serves as the Chief Veterinary Medical Officer.

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