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Problems of concluding an expert opinion based on the results of a forensic veterinary examination of a live animal and ways to solve them

Ivan Yatsenko*

Full Doctor in Veterinary Medicine, Professor
National Scientific Center "Institute of Forensic Expertise named after Ex. Prof. M.S. Bokarius"
61177, 8a Zolochivska Str., Kharkiv, Ukraine
<https://orcid.org/0000-0001-8903-2129>

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Abstract

Forensic veterinary examination is a new type of forensic examination that is actively developing in the forensic examination institutions of the Ministry of Justice of Ukraine. Since its theory and methodology are yet forming, there is a need to develop its terminology, methods, and means of conducting and formalizing research results. The purpose of this study was to single out the problematic issues of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal and to outline ways to solve them. The study employed various scientific methods, namely dialectical, methods of logic (formal legal, system-structural analysis, modelling, analysis, synthesis, induction, deduction), general cognitive methods (description, observation), special methods, the functions of which are performed by methods of lifetime clinical forensic veterinary diagnostics of animals. The present paper focuses on the fact that the specific feature of the introductory part of the conclusion of a forensic expert is that it indicates the object of examination – a live animal. A list of issues to be resolved by the authorized body or person who appointed the forensic veterinary examination was developed in this study. The structure of the investigative part of the forensic expert's opinion was covered and substantiated for the first time, which is based on a forensic veterinary examination of the subject animal based on the principle of analysing the state of individual body systems, including blood circulation, breathing, urination, sexual, nervous, and sensory. The description in the expert opinion of the results of the analysis of individual veterinary documents concerning the subject of proof was substantiated. It was shown that based on the results of the clinical forensic-veterinary examination of a live animal under expert examination, the forensic expert outlines the forensic-veterinary diagnosis, and in the section of the examination part of the opinion, which synthesizes the results, summarizes the obtained data. It is stated that the final part of the forensic expert opinion contains comprehensive, scientifically sound, consistently laid out, clear, specific, expressive, understandable answers to the questions raised, the list of which is indicated in the introductory part of the opinion. The present paper outlined the structure of appendices to the opinion of a forensic expert, which is most often photo illustrations of injuries found in an animal under examination. The solutions developed in this paper concerning the drafting of an expert's opinion based on the results of a forensic veterinary examination of a live animal are guaranteed to be reflected in the conduct and drafting of the results of forensic veterinary research

Keywords: forensic veterinary examination, forensic veterinary expert, subject animal, forensic expert activity, registration of the results of forensic veterinary examination

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*Corresponding author

Introduction

Forensic veterinary examination as a scientific field and an applied branch is a relatively new class of forensic examination not only in Ukraine (Kliuiev, 2019), but in many foreign countries (de Siqueira *et al.*, 2016; Rebollada-Merino *et al.*, 2020; Smith-Blackmore & Bethard, 2020) and occupies a prominent place in the system of expert research (Babinska *et al.*, 2018).

One of the objects of this class of forensic examinations is a live vertebrate (Barington & Jensen, 2013). The provision of Article 299 of the Criminal Code of Ukraine (Criminal Code of Ukraine, 2021) prescribes criminal liability for intentionally causing bodily harm to an animal as a result of its cruel treatment, which was once investigated by Sims *et al.* (2007) and which can lead to maiming (Yatsenko & Parilovsky, 2022a) or death (Finnie, 2014). Thus, when investigating offences related to establishing the cause of death of an animal, as well as determining the degree of severity and nature of bodily injuries, special veterinary knowledge is required, which is usually applied during forensic veterinary examination that is based on scientific and practical achievements of veterinary medicine (Stroud, 1998; Byard & Boardman, 2011; de Siqueira *et al.*, 2016) and is a source of evidence in legal proceedings (Mills, 2013; McDonough & McEwen, 2016).

Forensic veterinary examination was introduced into the system of state expert institutions relatively recently (in 2019, at the initiative of the National Scientific Centre "Ex. Prof. M.S. Bokarius Institute of Forensic Examinations"). However, the development of methods of forensic veterinary examination of various objects, methodological recommendations, rules for conducting the said forensic examination considering the specifics of the objects and active implementation of the specified developments into forensic activity (Yatsenko *et al.*, 2021a; Yatsenko *et al.*, 2021b). However, many issues are still unresolved, including the compilation of procedural expert documents, specifically an expert's opinion based on the results of a forensic veterinary examination of a live animal, considering the specific features of the algorithm for compiling the results obtained during its clinical forensic veterinary examination (Parry & Stoll, 2020).

Therefore, the analysis of the problems of concluding an expert opinion based on the results of a forensic veterinary examination of a live animal is an urgent issue from the standpoint of legal science and expert practice.

Drafting an expert's opinion on the results of a forensic examination based on special knowledge is an integral part of the legal principles of forensic expert activity in Ukraine. In part, the concept of a forensic expert opinion was investigated by Ukrainian scientists, namely: M.H. Shcherbakovskiy (2021) formulated a standard for the reliability of an expert opinion in criminal proceedings; O.M. Kliuiev and E.B. Simakova-Yefremian

(2021) developed doctrinal approaches to forensic examination in Ukraine; A.R. Vorobchak (2019) detailed and justified the concept of a forensic expert's opinion in a criminal trial, and also characterized the evolution of this procedural document as a source of evidence, covered the essence and provided the author's definition of the very term "expert opinion", characterized the structure and investigated the requirements for its content, singled out criteria for the classification of expert conclusions and characterized their types, established a system of procedural properties and provided their characteristics; H.M. Pylypenko (2013), H.S. Bidniak (2014); D.V. Davydova and O.O. Volobuieva (2015), G.V. Muliar and O.S. Hovpun (2018) covered the legal nature and argued the evidentiary value of the expert's opinion; Yu. Piliukov (2018) substantiated the procedural requirements for the expert opinion in criminal proceedings; I.P. Osypenko and V.V. Prorochenko (2020) showed the importance of the expert opinion in the pre-trial investigation; E.B. Simakova-Yefremian (2021) and O. Mieshkov (2021) identified problematic issues of using the expert opinion in criminal proceedings; M.P. Klymchuk and S.I. Marko (2011) proved the informational value of the expert opinion as a source of evidence in a criminal case; M. Hetmantsev (2018) covered the legal nature of the expert opinion; Yu.Yu. Yaroslav (2019) and V.Yu. Shepitko (2018) substantiated the evaluation of the expert opinion; B.V. Shabarovskiy (2019) argued ways to verify the expert opinion in the criminal procedure of Ukraine. This indicates the relevance of a comprehensive investigation of the issues concerning the conclusion of an expert opinion.

However, despite the multi-vector nature of scientific research on theoretical, methodological, and praxeological foundations, as well as the legal status of an expert's opinion, the scientific papers of these and other researchers do not solve the issue of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal and do not outline its solutions. Such a situation in legal science and forensic practice can lead to the presentation of the results of a forensic veterinary examination in the forensic expert's opinion in an incomplete, limited, and rather generalized manner. As a result, it can adversely affect the formation of a true picture of the facts and circumstances of an offence against animals among the investigation and court workers, as well as the establishment of the truth in the case, because the expert's opinion is a source of evidence in court proceedings.

Consequently, problematic and controversial issues, inconsistencies, and gaps in legislation that arise upon drafting an expert opinion, especially based on the results of a forensic veterinary examination, require their identification and integration into the theory and practice of forensic expert activity.

The purpose of this study was to single out the problematic issues of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal and to outline ways to solve them.

General provisions of the conclusion of a forensic expert opinion

The main sub-legislative regulatory document governing the conclusion of an expert opinion based on the results of forensic examinations of any kind, including forensic veterinary, is the "Instruction on the Appointment and Conduct of Forensic Examinations and Expert Investigations" (the Departmental Instruction) (Order of the Ministry of Justice of Ukraine, 1998), namely its section IV "Organization of examinations (investigations) and registration of their results", which contains requirements for the conclusion of an expert's opinion and describes the method of its implementation in Items 4.12-4.18.

The basis for conducting a forensic veterinary examination is a procedural document (a decision of an investigator or inquirer or a decision of an investigating judge or court, an appeal by a party to the case), drafted by an authorized person (body), or an agreement with a forensic veterinary expert or an expert institution concluded under a written request of an authorized person, pursuant to Item 1.8 of the Departmental Instruction. However, this Departmental instruction regulates the structure of the expert opinion for all types of forensic examinations, without considering the features inherent in each particular type of forensic examination, including forensic veterinary.

The opinion of the forensic expert(s), if a commission or complex forensic examination was conducted, is drafted on the form of the expert institution, pursuant to Item 4.15 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998).

According to Item 4.12 of the Departmental Instructions, the opinion of the court expert is drafted pursuant to paragraph 6 of Item 4.12 of the Departmental Instructions with the mandatory indication as follows:

- details (document name, date and number of drafting the conclusion, category of forensic veterinary examination (additional, repeated, commission, comprehensive);
- type of forensic examination (by branch of knowledge, in a particular case – it is forensic veterinary, pursuant to Item 1.2.10 of the Departmental Instruction);
- the case to which it is assigned (criminal, administrative offence case, civil, economic, administrative, etc., case number);
- an article of the law that prescribes the provision of a forensic expert opinion (if any).

E.g.: "EXPERT OPINION No. __ based on the results of the forensic veterinary examination, based on the materials of the pre-trial investigation, entered in the

Unified Register of Pre-Trial Investigations under No. __ dated __(*date*). Drafted __(*date*)."

The forensic expert's opinion based on the results of a forensic veterinary examination consists of three parts: an introductory one, which is marked "Introduction" in the expert's opinion, an investigative one – marked in the conclusion as "Investigation" and a final, or closing one, which is marked in the expert's opinion as "Conclusions".

Structure of the introductory part of the expert opinion

The first part of the expert's opinion is the "**Introduction**", which contains a formal statement of information, the source of which is a document on the appointment of a forensic veterinary examination or the involvement of a forensic expert, and a list of regulations and literature sources that were used by the forensic expert to substantiate their conclusion. However, this part should not contain any subjective judgments of a forensic expert.

The introductory part of the conclusion of a forensic veterinary expert reflects the following points:

- 1) the date of receipt of a document on the appointment of a forensic veterinary examination or the involvement of a forensic veterinary expert at the state expert institution;
- 2) the name of the expert institution and/or the name, surname, patronymic of the forensic veterinary expert;
- 3) the name and date of drafting the document on the appointment of a forensic veterinary examination, the name of the body and/or the position and surname of the person who appointed this examination or involved a forensic veterinary expert;

E.g.: "On __(*date*), the National Scientific Centre "Ex. Prof. M.S. Bocarius Institute of Forensic Examinations" of the Ministry of Justice of Ukraine received from the Investigative Department of the B... District Police Department of the Head Department of the National Police in P... Oblast with the cover letter No. __ dated __(*date*) a decision on the appointment of a forensic veterinary examination dated __(*date*), issued by senior investigator of the Investigative Department of the B... District Police Department of the Head Department of the National Police in P... Oblast __(*title, name and surname of the investigator*)."

- 4) the list of objects subject to examination and samples (if received). As a rule, this item of the expert opinion indicates information about the subject animal;

E.g.: "To conduct a forensic veterinary examination, the expert was provided with a dog named Barsyk."

- 5) the information about the provided materials, indicating their type, name, number of sheets in each individual provided document;

E.g.: "For the forensic veterinary examination, a special package No. __, and copies of documents were

provided: an illustrative table for the report of the inspection of the scene of the incident dated __(*date*) (on 2 sheets), a report of the N... District State Hospital of Veterinary Medicine (*address of the institution*) dated __(*date*) (on 1 sheet), report of inspection of the scene of the incident (on 1 sheet), X-ray images (on 4 X-ray films). Special package No. __ is made of polymer material, blue and white colours with a drawing of the emblem of the National Police of Ukraine. Sealed, the integrity of the packaging is intact. The special package has a printed and handwritten explanatory inscription."

6) the method of delivery and the state of packaging of the researched objects, indicating, when necessary, information about whether the method of packaging affected their preservation;

E.g.: "To conduct a forensic veterinary examination, the expert was provided with a dog named Barsyk; It was taken to the expert institution by road by police officers."

7) a record of the compliance of the materials and objects received by the expert institution (expert) with the materials specified in the procedural document on the appointment of a forensic expert (involvement of a forensic expert);

E.g.: "The objects provided for examination correspond to the list of objects specified in the investigator's decision dated __(*date*)."

8) the list of questions put to the decision of the forensic veterinary expert is quoted verbatim in the wording of the procedural document on the appointment of a forensic veterinary examination, putting them in quotation marks;

E.g. (non-exhaustive):

" - To what species and class does the animal provided for examination belong? Does it belong to vertebrates?

- What is the nature of injuries from a veterinary standpoint, and what is their localization?

- What is the mechanism of occurrence of bodily injuries in the animal provided for examination?

- What is the order and sequence of causing injuries detected in the animal?

- What is the statute of limitations for the occurrence of bodily injuries in an animal?

- What is the severity of each of the injuries found in the animal's body?"

The most comprehensive list of questions that can be asked by an authorized person in a decision on the appointment of a forensic veterinary examination of an animal is presented in another paper of the author of this study (Yatsenko, 2022).

If the question is not clearly formulated, but its meaning is clear to the forensic veterinary expert, then after citing the question in the wording in which it is stated in the procedural document on the appointment of a forensic veterinary examination or the involvement of a forensic veterinary expert, he or she can provide

relevant clarifications and restate the question in the wording that corresponds to the "Scientific and Methodological Recommendations on the Preparation and Appointment of Forensic Examinations and Expert Studies" (Order of the Ministry of Justice of Ukraine, 1998), pursuant to the requirements of paragraph 11 of Item 4.12. of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998). At the same time, the issues of forensic veterinary examination of a live animal in these documents require substantial amendments and systematization.

The forensic veterinary expert is entitled to group several questions for resolution and put them in a sequence that ensures the most appropriate order of investigation. If some of these issues were resolved during forensic examinations of diverse types, then information about these forensic examinations (expert institution, number and date of opinion) must be specified. Questions submitted to the forensic veterinary expert, which are beyond the expert's competence, must not be resolved, with a mandatory reasoning provided, which meets the requirements of paragraph 5, Item 2.2 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998).

9) the issues to be resolved by a forensic veterinary expert in the order of expert initiative, if such was considered;

E.g.: "Since the examination revealed facts that may be of importance for the objective investigation of criminal proceedings and are a logical continuation of the questions raised in the investigator's decision on the appointment of a forensic veterinary examination dated __(*date*), then pursuant to Item 4 of Art. 69 of the Criminal Procedural Code of Ukraine (Criminal Procedural Code of Ukraine, 2012) and paragraph 6 of Item 2.1 and paragraph 1 of Item 4.14 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998), as well as at the initiative of the forensic veterinary expert, the following questions were resolved additionally: 1) To which species and class does the animal provided for examination belong? Does it belong to vertebrates? 2) What injuries were found on the body of the subject animal?"

10) data on the forensic veterinary expert(s): the surname, first name, and patronymic, position, class of the forensic expert, scientific degree and academic title, education, educational degree, expert speciality, seniority of expert work, certificate of qualification of a forensic expert with date and issue number indicated, issued by whom and validity period;

E.g.: "The forensic veterinary examination is entrusted to a forensic expert of the 2nd qualification class, a leading researcher of the physical, chemical, biological, and veterinary research sector of the laboratory of physical, chemical, biological, and molecular genetic research at the National Research Centre "Ex. Prof.

M.S. Bokarius Institute of Forensic Examinations”, doctor of veterinary sciences, professor I.V. Yatsenko, who has a higher veterinary and legal education, the qualification of a forensic expert in speciality 18.1 “Veterinary research” (certificate No. __, issued by the Expert Qualification Commission of the Kharkiv Scientific Research Institute of Forensic Examinations of the Ministry of Justice of Ukraine __(date), valid until __(date). Seniority of expert work – since 2017.”

11) a record of a warning (awareness) of a forensic veterinary expert about criminal liability, according to the requirements of Article 70 and Part 2 of Article 102 of the Criminal Procedural Code of Ukraine (Criminal Procedural Code of Ukraine, 2012) for providing a knowingly false conclusion under Article 384 of the Criminal Code of Ukraine (Criminal Code of Ukraine, 2012) or for refusing to provide a conclusion under Article 385 of the same code;

E.g.: “Pursuant to the requirements of Article 70 and Part 2 of Article 102 of the Criminal Procedural Code of Ukraine, the expert is warned of responsibility for a knowingly false conclusion and refusal without valid reasons to fulfil the duties assigned to them under Article 384 and Article 385 of the Criminal Code of Ukraine __(signature) __(initials and surname).”

12) the information that the opinion has been prepared for submission to the court or attachment to the materials of criminal proceedings (in case of conducting a forensic veterinary examination based on a written request of a person that contains such information);

E.g.: “The opinion of the expert No. __ dated __(date) based on the results of the forensic veterinary examination was prepared for attachment to the materials of the criminal proceedings No. __.”

13) the date of sending the request of the forensic veterinary expert for the provision of additional materials, the date of receipt of additional materials or information on the consequences of the consideration of the request; circumstances that are essential for providing an expert’s opinion, with a mandatory indication of the source of their receipt;

E.g.: “__(date) __(full name of the institution, title, surname, and initials of the authorized person to whom the forensic veterinary examination was assigned) a request was sent for the provision of additional materials, namely: a dog named Barsyk.

On __(date), the National Scientific Centre ‘Ex. Prof. M.S. Bokarius Institute of Forensic Expertise’ received from __(full name of the police agency, title, initials and surname of the person who appointed the forensic veterinary examination): a dog named Barsyk.”

14) if an additional or repeated forensic veterinary examination was conducted, information about the primary (preliminary) forensic veterinary examination(s): name of the forensic veterinary expert; name of the expert institution or the place of work of the forensic veterinary expert; number and date of the expert’s opinion;

the content of the final conclusions of the primary forensic veterinary examination or previous forensic veterinary examinations; the content of the questions that were put before the forensic veterinary expert for additional or repeated decision, as well as the reasons for the appointment of additional or repeated forensic veterinary examination, indicated in the document on its appointment (if such reasons are not included in it, a corresponding record is made);

15) information about the grounds and individuals who were present during forensic veterinary examinations (initials, surname, status);

E.g.: “On __(date), during the forensic veterinary examination of a cat named Murzyk, according to the decision of the investigator __(name of the police agency and title of the investigator) dated __(date), the following were present: investigator __(name of the police agency; investigator’s title, initials, and surname), the owner of the animal __(initials and surname).”

16) regulations, methods, recommended scientific-technical and reference literature from the “List of recommended scientific-technical and reference literature used during forensic examinations” (Order of the Ministry of Justice of Ukraine, 2010), other information sources, which were used by the forensic veterinary expert during the resolution of the questions, according to the rules of the bibliographic description, with an indication of the registration codes of forensic examination methods from the “Register of forensic examination methods”, which is maintained pursuant to the “Procedure for maintaining the Register of forensic examination methods” (Order of the Ministry of Justice of Ukraine, 2008).

Structure of the examination part of the expert opinion

The second part of the expert’s opinion based on the results of the forensic veterinary examination of the subject animal is the “**Examination**”. The structure of this part of the expert opinion is regulated by Item 4.13 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998). According to the tasks of the examination, the forensic veterinary expert determines the algorithm for the presentation of the stages of the forensic veterinary examination of the subject animal.

In his personal forensic veterinary activity, the author of the present study first developed and proposed for practical use the algorithm for describing the results of the examination of a subject animal according to the systemic principle of the structure of the organism in the examination part of the expert’s opinion, as well as the description of individual veterinary documents contained in the proceedings or case materials and relating to subject of proof. At the final stage of concluding the examination part of the opinion, the forensic expert formulates a forensic veterinary diagnosis and drafts a synthesizing section (Fig. 1).

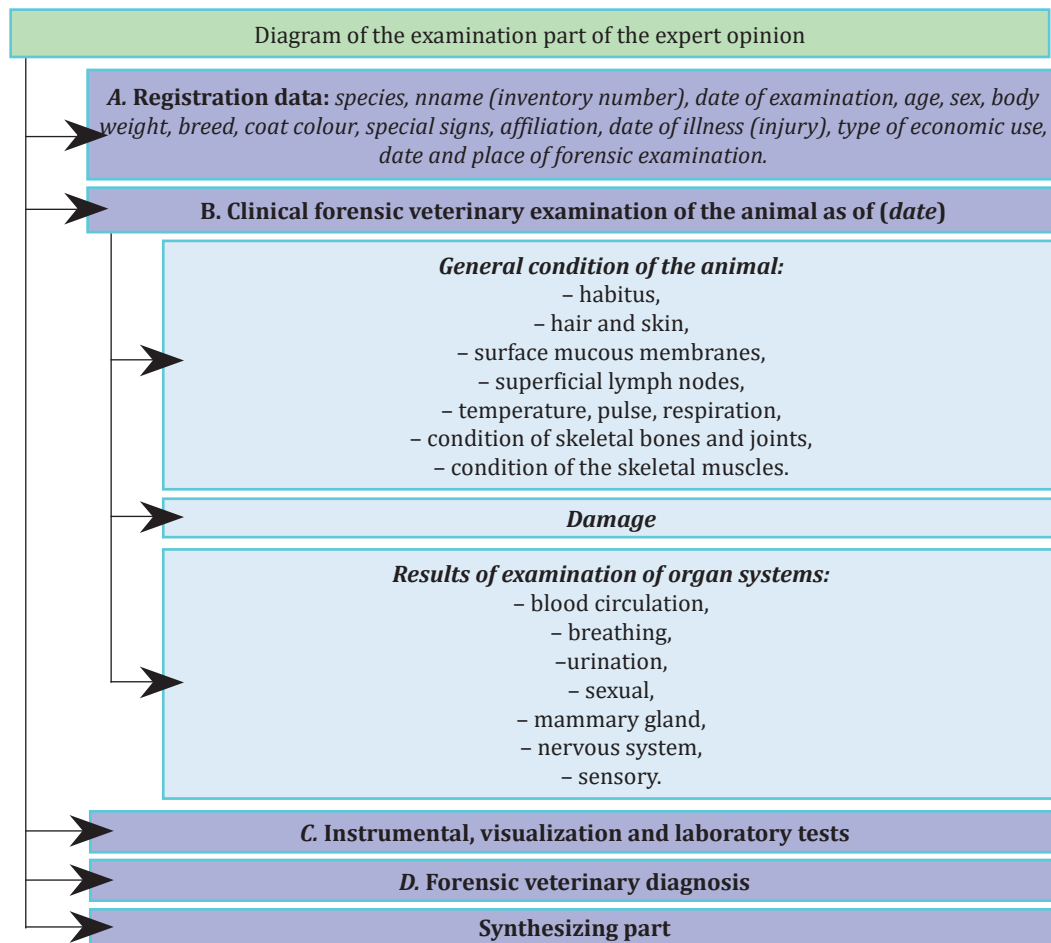


Figure 1. Scheme of the examination part of the expert's opinion based on the results of the forensic veterinary examination of the subject animal

Source: developed by the author of this study

In the examination part, the following subsections are distinguished:

1) medical history (injury), information about which the forensic veterinary expert receives from the procedural document on the appointment of a forensic veterinary examination or from veterinary documents (excerpts from the medical history of a subject animal, cards of an outpatient sick animal, etc.). From the same documents, the forensic veterinary expert finds out the circumstances under which the animal's health was harmed;

E.g.: "From the decision on the appointment of a forensic veterinary examination dated *__(date)* issued by the senior investigator of the Investigative Department of the B*** District Police Department of the Head Department of the National Police of the P*** Region *__(title, name and surname of the investigator)*, it is known that on *__(date)*, at about 3:30 p.m., *__(full name)* was at the residence address of his mother *__(full name)*, located on the 6 Shch*** street, P*** village, K*** district, R*** Region, where the day before a dog named Barsyk

inflicted bites on his mother. Fulfilling his criminal intent, aimed at abusing an animal, violating generally accepted norms of behaviour, principles of morality and decency, in violation of Articles 4, 18 of the Law of Ukraine "On the Protection of Animals from Cruel Treatment", *__(full name)*, using a car of the brand *__(name)*, licence plate *__(licence plate No.)*, tied the specified dog to the back of the car using a metal chain and set the car in motion. Later, *__(full name)* chose such a speed that the dog was unable to keep up with the car and fell and dragged along the asphalt road behind the car, which caused it pain, torment, and suffering, which was expressed in bodily injuries. Continuing the movement at the chosen speed, which did not allow the animal to stand in a natural anatomical position, i.e., on all four limbs, *__(full name)* continued his criminal actions aimed at cruel treatment of the animal, and, realizing that his actions are observed by citizens, continued to move until he was stopped by a police inspector."

2) examination of veterinary documents contained in the materials of a criminal proceeding or case (civil,

economic, administrative), e.g., examination of the protocol of an animal examination by veterinary medicine specialists (name of the hospital or clinic of veterinary medicine, its legal address, full name of the veterinary medicine specialist who examined the animal), protocol of ultrasound or X-ray examination, results of haematological or microbiological examination, etc.;

3) forensic-veterinary examination of the subject animal, which contains the following sections: *A.* Registration data, *B.* clinical forensic veterinary examination of the animal as of *_(date)*, *C.* Instrumental, visualization, and laboratory examination of a subject animal, *D.* Forensic veterinary diagnosis.

Section *A* “**Registration data**” displays the identification features of the subject animal, indicating its species, name or individual number; the number and content of the animal’s passport; examination date, age, gender (male or female), body weight, breed, cross, line; coat colour, ownership (data about the owner of the animal), special signs, date of illness or injury of the animal; type of economic use of the animal (e.g., service dog, domestic cat, dairy cow, etc.); the date and place of the forensic veterinary examination.

E.g.: “The type of animal is a domestic dog. Name – Barsyk. Date of examination – *_(day, month, year)*. Age of the animal – no information available. Gender – male. Body weight – 11 kg. Breed – mongrel. Coat colour – white-red-black. Distinctive features – none. The animal belongs to *_(initials and surname, address of the owner or guardian)*. Date of illness (injury) – 15.05.2022 (according to the data presented in the investigator’s decision dated *_(date)*). Date and place of forensic veterinary examination – CE “Treatment of Animals” (358 Haharin Avenue, Kharkiv). *_(date)*.”

A special place in the expert’s opinion is given to the reactions of the animal during the removal or application of the bandage to the injured areas, what they were treated with, what treatment was applied to the subject animal, etc. This is also indicated in the “Registration data” section.

E.g.: “When removing the bandage, both from the thoracic and pelvic limbs, the animal shows a reaction to pain. All wounds on the limbs, as well as the neck, are treated with a purple liquid. The animal was treated with antibiotics, painkillers, and regeneration stimulants.”

Section *B.* “**Clinical forensic-veterinary examination of an animal as of *_(date)***”, records objective data obtained by a forensic veterinary expert during a direct objective examination of an animal subject to expert examination, which meets the requirements of paragraph 4 of Item 2.2 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998), as well as Item 5.1 “Rules for forensic veterinary determination of the degree of severity of damage caused to the health of an animal (methodical recommendations)” (Yatsenko &

Parilovsky, 2022b). Detected painful changes or the nature of injuries are noted, as well as the unchanged morphological and functional state of the organs is recorded by detailed description. It is not allowed to use the expressions “normal”, “without special features”, etc.

Methodical approaches to the presentation of the results of a forensic veterinary examination of a subject animal to expert examination in the expert’s opinion may vary depending on the specific features of the questions posed to the forensic veterinary expert, the circumstances, and specific features of harm to the animal’s health, its species, age, sex, physiological state, etc.

During the preparation of the results of a forensic veterinary examination of a subject animal, the objectivity of the presentation of data in the expert’s opinion is achieved through a correctly constructed examination algorithm with an emphasis on the damaged part of the body or organ (*Status localis*). In the expert’s opinion based on the results of the examination of the subject animal to determine the degree of damage caused to its health, the first and mandatory section of the examination part is a description of the general condition of the animal, its habitus, skin and hair, visible mucous membranes, superficially located lymph nodes, bones of the skeleton, as well as joints.

When describing *the animal’s appearance* (habitus), the forensic veterinary expert ascertains the specific features of behaviour (satisfactory, depressed, agitated), the position of the body in space (physiological, unnatural), movements (physiological, forced), notes the fatness (high, average, thin animal), the constitution (tender, dense, rough, loose) of the subject animal, as well as the animal’s reaction to manipulations.

E.g.: “The general condition of the subject animal is depressed. The pupils of the eyes are slightly dilated, the animal fearfully observes the surrounding environment. The body structure is correct, symmetrical; fatness is average; the constitution is dense; temper – good; coordination of movements is preserved. During the forensic veterinary examination, the animal is socialized, does not show aggression.”

When describing *the state of the hair coat* in the examination part of the expert’s opinion, the forensic veterinary expert notes its colour, density, cleanliness, shine, uniformity of development and degree of retention in the hair follicles of the skin, the degree of manifestation of shedding, the degree of severity of alopecia (apteriosis in birds), manifestation of congenital hypertrichosis (long hair) or, conversely, congenital hypotrichosis (complete absence of hair).

E.g.: “The hairline is thick, clean, shiny, evenly developed on all parts of the body, except for areas of injuries where the hair was easily pulled out, traumatic baldness is observed in the area of abrasions of the left

knee fold. In other parts of the body, the hair is well retained in the hair follicles. Shedding is moderate, hair loss and alopecia are absent (photo No. 1-2)."

When describing the condition of the *skin* of the subject animal, the forensic veterinary expert notes its colour (pigmented, pale, reddened, bluish, jaundiced, with the phenomena of melanosis), a violation of the natural pigmentation of the skin (albinism), the presence of pigmentless spots on the skin (vitiligo), elasticity (moderately elastic, reduced elasticity, complete loss of elasticity), humidity (moderately moist, dry, increased moisture), odour (moderately specific, sharply increased, acetone, putrid, smelly, etc.) and temperature (moderately warm, cold, hot, uniform, or uneven heat), its anatomical integrity or damage (sores, bruises, cracks, wounds, bedsores, gangrene, etc.), skin rashes (sores, cracks, wounds, bedsores, gangrene), increase in skin volume (oedema, emphysema, clubfoot, phlegmons, haematomas, lymph extravasates, neoplasms, dermatosparaxis), skin rashes (spots, roseolae, petechiae, ecchymoses, haemorrhages, papules (nodules), tubercles, vesicles (blisters), pustules, blisters, scales, crusts, erosions, ulcers, scars); indicates whether the animal has pronounced skin itching.

E.g.: "The skin is pigmented, light slate colour, elastic, moderately moist, with a characteristic "dog" smell, evenly warm. Wounds are found in the areas of the thoracic limbs and neck on the left. No skin rashes, oedema, or haematomas. Swelling is found in the area of the intermaxillary space, which is not painful upon palpation."

When noting the condition of *visible mucous membranes* of the subject animal in the expert's opinion (eyes, nasal and oral cavities, vagina), and, if necessary, also deeply located mucous membranes (throat, larynx, bronchi, stomach, and intestines), the forensic veterinary expert emphasizes their colour (pale pink, with a slight yellowish tint, with a jaundiced tint, red, pale, bluish, etc.), moisture (moderately moist, highly moist), integrity, the presence of layers and swelling (if applicable).

E.g.: "The mucous membranes of the eyes, nasal and oral cavities, vagina are pale pink with black pigmentation in some areas of the oral and nasal cavities. They are moderately moist, anatomically intact, with no signs of swelling."

When describing the condition of the *superficial lymph nodes* (mandibular, prescapular, knee fold, inguinal) in the subject animal, the forensic veterinary expert notes their size and shape (round, oval, oblong), mobility (mobile, sedentary, immobile), sensitivity (painful, painless), consistency (dense, soft), nature of the surface (smooth, bumpy), temperature of the skin in the projection of the lymph node (moderately warm, elevated).

E.g.: "Lymph nodes (mandibular, prescapular, knee fold, inguinal) are not enlarged, smooth, mobile,

painless, of a dense consistency, the temperature of the skin above them does not differ from the temperature of the adjacent area."

The description of the condition of *the bones of the skeleton, joints and skeletal muscles* in the subject animal lies in the fact that the forensic veterinary expert notes the degree of their development, shape, strength, detected unnatural mobility in the bones or joints, the elasticity of the skeletal muscles, ascertains whether the animal can independently lean on the thoracic and pelvic limbs while moving in space.

E.g.: "No fractures of the bones of the skeleton, including the limbs, were detected. The animal rests on the thoracic and pelvic limbs unassisted, lameness is observed during movement, and the natural position of the limbs is recorded. The animal's movements are somewhat constrained, its gait is shaky and cautious. No unnatural mobility is observed in the joints. Skeletal muscles are well-developed, according to the age of the animal. Upon palpation – no pain, moderately elastic."

The forensic veterinary expert notes the parameters of *the temperature, pulse rate, and breathing* of the subject animal, and indicates whether it has clinical signs of infectious diseases.

E.g.: "Body temperature (rectal) – 38.5°C (physiological norm – 37.5...39.0°C). Pulse on a. femoralis: 80 bpm (physiological norm – 70-120 bpm). The frequency of breathing is 18 breaths/min (physiological norm – 15-20 breaths/min). No clinical signs of infectious diseases were established."

The second subsection of the examination part of the expert's opinion is the subsection "**Damage**", where the forensic veterinary expert must concisely but consistently describe all violations of the anatomical integrity of tissues and organs of the body and their functions in the subject animal, which were formed as a result of external damaging factors.

E.g.: "Left thoracic extremity: – the wound in the area of the dorsal surface of the left wrist is an open, bruised, not deep, non-penetrating wound, measuring 1×1.5 cm. The bottom of the wound canal is the bones of the wrist, the edges of the wound and the walls of the wound canal are saturated with blood, swollen, the wound is painful to the touch, hot, the wound lumen is gaping. The wound is not contaminated, contains a small amount of serous-purulent exudate;

– the wound located on the dorsal surface of the carpal joint is open, bruised, not deep, not penetrating, measuring 1.8×1.5 cm. The bottom of the wound canal is the bones of the wrist, the edges of the wound and the walls of the wound canal are saturated with blood, swollen, the wound is painful to the touch, hot, the wound lumen is gaping. The wound is not contaminated, contains a small amount of serous-purulent exudate;

– the wound located on the dorsal surface in the proximal part of the forearm is an open, clogged, shallow,

non-penetrating wound, measuring 0.5×1.0 cm. The bottom of the wound canal is the skeletal muscles, the edges of the wound and the walls of the wound canal are saturated with blood, swollen, the wound is painful to the touch, hot, the wound lumen is gaping. The wound is not contaminated, contains a small amount of serous-purulent exudate. Traumatic baldness with a diameter of 1.5-2 cm is observed around this wound.

In the area of the neck, a round wound is registered in the area of the left lower third of the neck; it is not deep, not penetrating, open, measuring 2×1.5 cm. Fragments of skeletal muscles are visible on the wound bottom. The edges of the wound do not close; the edges of the wound and the walls of the wound canal are soaked with blood, swollen, the wound is painful to the touch, hot, the wound lumen is gaping. The wound is not contaminated, contains a small amount of serous-purulent exudate.

Mandibular space and ventral chest wall: bruising of soft tissues of mandibular space and lower chest wall; moderate soreness and moderate swelling. The wool in these areas is contaminated with blood, stuck together with dried blood."

Next, the forensic veterinary expert describes the condition of the animal according to clinical signs: severe, moderate, mild; indicates whether it is life-threatening or not; whether the detected injuries are lethal.

E.g.: "At the time of conducting the forensic veterinary examination on __ (date), the condition of the animal according to clinical signs is of medium severity, not life-threatening, the injuries inflicted on the dog named Barsyk are non-lethal."

Estimation of the state of the organ systems of the cardiovascular system, breathing, digestion, urination, reproduction, nervous system, sensory systems: vision, hearing, tactile, pain and temperature sensitivity of the skin, deep (proprioceptive) sensitivity in the expert's opinion is necessary to identify complications, accompanying and background pathologies. The forensic veterinary expert describes in detail the morphological features of the examined organs, noting their position, size, mobility, consistency, asymmetry, and describing the functional changes of these organs under painful factors or injuries, emphasizing specific syndromes, features of organ sensitivity (painful or painless), etc.

The description of the condition of *the heart and blood vessels* in the expert's opinion is reduced to the fact that the forensic veterinary expert indicates the nature of the field of percussion dullness (changed or not changed), substantiates the animal's pain reaction during percussion of the heart area (pronounced or absent), details the nature of heart sounds, indicates the presence or absence of extraneous sounds and extracardiac murmurs; the elasticity of the wall of blood vessels, the nature of the venous pulse (positive or negative).

E.g.: "The field of percussion blunting of the heart is unchanged. There is no pain reaction of the dog during

percussion of the heart area. The heart tones are moderately sonorous and clear. There are no extraneous sounds in the heart, as well as extra-cardiac noises. The pulse is rhythmic, medium in size, medium in filling, moderate in the shape of the pulse wave. The arterial wall is elastic. Venous pulse is negative."

When describing *the respiratory organs* of the subject animal in the expert's opinion, the forensic veterinary expert notes the state of the contours of the nostrils, their patency, as well as the patency of the nasal passages, the condition of the nasolabial (nasal) mirror, the presence or absence of foreign objects in them, the presence or absence of swelling in the nasal cavity and wounds; anatomical position of the larynx and trachea, their sensitivity during palpation; skin temperature in the area where these organs are located; nature of noise during auscultation of the larynx; the shape of the chest, its symmetry, tenderness, skin temperature in this area; the presence or absence of oedema and emphysema, as well as the nature of the percussion sound and breathing noises in the chest area; presence or absence of pathological breathing noises; rhythmicity, symmetry, and activity of respiratory movements; type of breathing; presence or absence of cough, wheezing, runny nose.

E.g.: "The contours of the nostrils are clear, even, unchanged. Nostrils and nasal passages are free. The nasolabial mirror is moderately moist. There are no foreign contents, swellings, swellings, or wounds in the nasal cavity. The anatomical position of the larynx and trachea is unchanged, they are painless upon palpation, the skin, in the projection of these organs, is moderately warm. Auscultation of the larynx established stenotic noise (laryngeal respiration). The chest is round, symmetrical, painless, the skin in its projection is moderately warm, there are no oedemas and emphysema in the subcutaneous tissue. During percussion, a clear pulmonary (atympanic) sound is observed in the projection of the lungs. The most intense percussion sound is recorded in the middle third of the chest. During chest auscultation, only the main bronchopulmonary respiratory noises were detected in the lung projection. There are no pathological respiratory noises. Breathing movements are rhythmic, symmetrical, and calm. The type of breathing is thoracic. There is no coughing, wheezing, or nasal discharge."

When noting the condition of *the digestive organs* in the expert's opinion, the forensic veterinary expert states the possibility and activity of the act of swallowing (unimpaired or impaired), the number and state of development of the teeth, the colour of the tooth crowns (white or white with yellow layering, white with brown spots, etc.), their integrity, bite defects; the colour of the gums, their moisture, sensitivity (painful or painless); the condition of the tongue (colour, mobility, moisture, visible layers, whether it fits in the oral cavity

itself, whether it is not increased in size, its anatomical integrity, etc.); pharynx and esophagus (patency, the presence of foreign objects in the lumen, the temperature of the skin in the projection of these organs, the colour of the mucous membrane, its anatomical integrity), the condition of the stomach and intestines (soreness, bloating), the condition of the side abdominal walls (elasticity, soreness, symmetry), are defecation disorders observed (according to the anamnesis); the state of the liver (topography, whether its edges extend beyond the right costal arch; the nature of the area of hepatic dullness: displacement, features of sensitivity).

E.g.: "The act of swallowing is unimpaired. The teeth are developed according to the age of the animal, the crowns are white. However, the crowns of the second and third incisors on the left on the upper dental arch are broken, to a greater extent on the second incisor (fracture in the lower third of the crown) (Photo No. 1). The gums are pink, moderately moist, painless, and anatomically complete. The tongue is mobile, pink, with a white layer on the back; moist, fits freely in the oral cavity itself, not enlarged in size, undamaged. The teeth are developed according to the age of the animal, the crowns are white. However, the crowns of the second (22) and third (23) incisors on the left on the upper dental arch are broken, to a greater extent on the second incisor (22) (fracture in the lower third of the crown). The pharynx and esophagus are free-flowing, without extraneous contents, the skin in the projection of these organs is moderately warm. The pharyngeal mucosa is light pink, anatomically complete. The stomach and intestines in the projection of their location are not painful upon palpation. The lateral abdominal walls are moderately elastic, not painful, and symmetrical. No defecation disorders were observed (according to the medical history). The liver is located in the area of the right hypochondrium, occupies a natural anatomical position, does not go beyond the right costal arch. The area of hepatic blunting is unchanged, painless."

When describing *the urinary organs* in the expert's opinion, the forensic veterinary expert notes the anatomical position of the kidneys, their possible displacement, sensitivity (painful or painless), size (enlarged or not), the nature of the surface (smooth or grooved); the presence or absence of swelling in the area of the chest, intermaxillary space, abdomen, external genitalia, and other parts of the body.

E.g.: "The kidneys occupy a natural anatomical position, not displaced. Upon external palpation, they are painless, not enlarged, their surface is smooth. Urination is painless. There are no oedemas in the area of the chest, intermaxillary space, abdomen, and external genitalia."

When describing the state of *the bladder* of the subject animal in the expert's opinion, the forensic

veterinary expert indicates its size, sensitivity upon palpation (painful or not painful), degree of fullness.

E.g.: "The bladder is palpated as a dense pyriform body, it feels like a slightly strained bladder with fluid, moderately filled, with a physiological volume."

When describing the state of *the external genitalia* in the subject animal, the forensic veterinary expert notes their development in relation to the age of the animal, the correctness of their formation in relation to the sex of the animal, the colour and integrity of the mucous membrane of the urogenital sinus in females or the urogenital canal in males, the presence of two testicles in the scrotal cavity, their sensitivity and skin temperature in the projection of the testicles, the condition of the foreskin.

E.g.: "The external genitalia of a dog named Barsyk are developed according to age and formed correctly in relation to the sex of the animal. The left and right testicles with appendages occupy a natural anatomical position in the scrotal cavity, are anatomically intact, painless, the skin in their projection is moderately warm. The mucous membrane of the urogenital canal is pale pink, whole."

When describing the state of *the mammary gland*, the forensic veterinary expert notes its size (enlarged or not), the presence or absence of damage, the sensitivity of the skin (painful or painless) and its temperature in the projection of the gland, whether there is milk secretion, the presence of parenchymal compactations.

E.g.: "The mammary gland is not enlarged, anatomically intact, painless upon palpation, the skin in its projection is moderately warm. Milk release is not recorded. No parenchymal seals."

When describing the state of *the nervous system* in the expert's opinion, the forensic veterinary expert ascertains its type in the subject animal, the reaction of the subject animal to stimuli (depression or agitation). When describing *the skull*, the expert notes its volume, shape, the presence of deformations, the temperature of the skin in its projection, sensitivity (painful or not), the consistency of the bones (hard, soft), their integrity, the nature of the percussion sound. When describing the condition of *the spine*, the expert notes its sensitivity (painful or not), the temperature of the skin in its projection, the presence or absence of curvatures.

E.g.: "The type of nervous system of a dog named Barsyk is strong, balanced, mobile, there are no signs of depression or agitation. The skull is of normal volume, characteristic for a dog, the skin in the projection of the forehead is moderately warm, the bones are hard, the percussion sound in the area of the frontal and maxillary sinuses is boxy. The spine is painless upon palpation, the skin in its projection is moderately warm, no pathological curvatures."

When describing the *organs of vision*, the expert's opinion states the condition of the eye slits (open or

closed), eyelids (presence or absence of swelling, infiltration, neoplasms, their position, movements, sensitivity), the size of the eyeballs (usual size, enlarged, reduced), what anatomical position they occupy (natural, shifted, protruding, sunken), whether eye twitching (nystagmus) is detected, whether the animal has squint, how the animal reacts to artificial lighting, the condition of the pupils of the eyes (dilated, narrowed); condition of the conjunctiva (colour, moisture, anatomical integrity, presence or absence of secretion from the eyes, condition of the eyelids: presence or absence of swelling, anatomical position, integrity, sensitivity); the act of blinking (impaired or not), the condition of the iris (presence of pigmentation, opacity), the condition of the cornea (anatomical integrity, sensitivity), the colour of the iris, the state of lacrimation (moderate, absent, increased).

E.g.: "The eye slits are sufficiently open. The eyelids are intact, in their natural position, there are no swellings, infiltrations, or neoplasms. Eyeballs of the usual size, not enlarged, mobile, occupy a natural anatomical position. The animal reacts to artificial lighting by squinting. The pupils of the eyes are slightly dilated. The conjunctiva is pale pink, moderately moist. There is no secretion from the eyes. Eyelids are without oedemas, occupy a natural anatomical position, anatomical integrity is not violated, the act of blinking is not violated. The iris is pigmented and transparent. The cornea is anatomically intact, not painful. The iris is pigmented. Lacrimation is moderate."

When describing the condition of *the hearing organs* in the expert's opinion, the forensic veterinary expert notes how the animal responds to auditory stimuli of different intensity from different projections and distances, how the animal reacts to smelly dry food raised at 30-50 cm from the animal's face.

E.g.: "During the hearing test, by presenting auditory stimuli (calling the dog by its name with different intensity of the expert's voice and from different projections and distances from the animal), it was found that the animal responds adequately and quickly to them; during the smell test, by raising a smelly dry feed 30-50 cm from the animal's face, it was established that the dog reacts to the smell, which indicates that the animal has a moderate sense of smell."

When describing *the sensitivity of the skin* (tactile, pain, temperature), as well as *deep (proprioceptive)* sensitivity in the expert's opinion, the forensic veterinary expert specifies the degree of its preservation or absence, the degree of expression of skeletal muscle tone (well or moderately expressed, weakened or tense), the state of reflexes (skin, conjunctival and corneal reflexes, tendon, muscle and periosteum, knee and Achilles tendon reflexes): well or moderately expressed or weakened.

E.g.: "Tactile, pain, and temperature sensitivity of the skin is preserved in all parts of the body, including

in the areas of detected post-traumatic skin scars. Deep (proprioceptive) sensitivity is moderate. The general tone of the skeletal muscles is expressed well, they are moderately tense, offer some resistance to passive movements, and are capable of active coordinated movements. The eye-cardiac reflex is pronounced, normotonic."

In section **C. "Instrumental, visualization, and laboratory studies of a subject animal"** the results can be presented in the form of X-ray, ultrasonographic, tomographic, and other, as well as laboratory studies of biological body fluids (blood, urine, faeces, stomach contents, etc., cytological or histological analysis of biological material obtained from a subject animal), performed using the following methods: imaging, forensic toxicological, forensic histological, forensic immunological, microbiological, parasitological, etc., indicating the number and date of their execution.

It is advisable to describe the results of laboratory studies of the biological environments of the subject animal by systematizing the data in such a way that the indicators with deviations from the norm are first analysed, and then the investigated indicators that are recorded within the norm are listed. Among indicators with deviations from the norm, those that are deviated in the upward direction are first evaluated, and then those that are changed in the downward direction, substantiating such changes.

The description of the application of instrumental methods of forensic veterinary research may be limited to the argumentation of the final results. In these cases, graphs, diagrams, tables should be stored in supervisory expert proceedings and, at the request of the body (person) that appointed the forensic veterinary examination, can be provided to them for review.

E.g.: "X-ray of the corpse of a red-coloured cat dated (date). X-rays in the left lateral and dorsal positions reveal a multifragmentary diaphyseal-epiphyseal fracture of the right humerus; multifragmentary fracture of the upper epiphysis of the right radius and ulna; gross anatomical damage (traumatic destruction in the form of crushing) of the right elbow joint; multifragmentary fracture of the lower epiphysis of the left humerus; unifragmentary fracture of the body of the left ulna; gross anatomical damage (traumatic destruction in the form of crushing) of the left elbow joint. Foreign objects are detected in the form of an X-ray shadow with a diameter of 0.3-0.4 mm in the areas of the body and the xiphoid process of the sternum, the right and left shoulder, the right and left elbow joints, the right and left forearm, and the chest."

After describing in the expert's opinion the results of forensic veterinary, instrumental, imaging, and laboratory studies of the subject animal, the forensic veterinary expert drafts section **D. "Forensic veterinary diagnosis"** in the form of an opinion on the essence of the

disease or injury and the condition of the sick (injured) animal, formulated based on medical history data, results of clinical and laboratory studies, expressed in nosological terms provided by generally accepted classifications and nomenclature of diseases and reflects the cause, mechanism of development, pathological morphology signs and functional manifestations of the disease or injury. It is formulated precisely, fully, clearly, concisely, logically, without any explanations or substantiations.

The structure of the diagnosis makes provision for a consistent presentation of nosological forms: the underlying disease (damage), complications, concomitant and background pathology.

E.g.: "Forensic-veterinary diagnosis: multiple, mechanical, punctured, open, superficial, non-penetrating wounds of the thoracic and pelvic limbs, neck areas, chest contusion, wound in the area of the left knee fold."

The generalization and evaluation of the results of individual studies, which serve as the basis for formulating conclusions, is presented by the forensic veterinary expert in the *synthesizing section* of the examination part of the expert's opinion. This section should begin with the phrase (as an example): "Having examined the materials of the criminal proceedings entered in the Unified Register of Pre-Trial Investigations No. __ dated __(*date*) and summarizing and providing an expert opinion on the clinical condition of the dog named Barsyk, pursuant to the decision dated __(*date*), the forensic veterinary expert states as follows."

The main outline of the synthesizing section should be a consistent, clear, grouped analysis of the detected diseases or injuries of the subject animal with an emphasis on the local status – the damaged area of the body or organ (*Status localis*).

It is expedient to begin the synthesizing section with a statement of the fact that the subject animal belongs to vertebrates, with an indication of its species, which is an essential requirement of the disposition of Article 299 of the Criminal Code of Ukraine (Criminal Code of Ukraine, 2001) or Article 89 of the Code of Ukraine on Administrative Offences (Code of Ukraine on Administrative Offences, 2005). Next, the expert notes the animal's physiological features (pregnancy, immature age, etc.), which may be recognized by the court as a qualifying feature and influence the court's decision.

The data of objective studies of animal injuries, presented in the examination part of the expert's opinion, allow specifying the localization of each injury, substantiating the nature, mechanism, ascertaining the order and sequence of the injuries detected, and stating whether the injuries detected could have been formed without outside intervention; the expert argues the statute of limitations for the formation of injuries and substantiates their degree of severity, indicates the

danger of the injuries caused to the life of the subject animal and their consequences for health; ascertains the causality between the injuries inflicted on the animal, under the established circumstances, and its health disorder.

Special attention should be paid to summarizing the results of objective clinical forensic veterinary studies on the development of injuries in an animal due to injuries caused. The justification for animal mutilation is based on the definition of this concept in the author's wording (Yatsenko & Parilovsky, 2022a).

Furthermore, the expert notes whether there are traces on the body of the subject animal that indicate pain, and it is also argued whether actions related to prolonged deprivation of heat, food, drink, maintenance, etc. affected the health status of the subject animal.

The ultimate point of the synthesizing section of the expert's opinion based on the results of the conducted forensic veterinary examination is the substantiation of whether the identified injuries caused physical pain and suffering to the subject animal.

Structure of the final part of the expert opinion

The third part of the expert opinion is "**Conclusions**". According to Item 4.14 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998), they must be formulated based on the results of the examination as answers to the questions in the sequence indicated in the introductory part of the expert's opinion, or it is necessary to specify for what reasons it is impossible to solve, as well as answers to the questions that were solved by the forensic veterinary expert on their personal initiative, pursuant to the requirements of paragraph 6 of Item 2.2 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998).

The numbering of answers in the conclusions should correspond to the numbering of questions specified in the introductory part of the expert opinion, as well as the numbering of questions set out in the procedural document on the appointment of a forensic veterinary examination. Conclusions must be formulated in a way that is understandable to all participants in the process, fully, concisely, clearly, concretely, expressively, without repetitions, unambiguously, without overloading with special veterinary terminology, substantiated, based on objectively established data, without phrases and linguistic expressions that may imply their different interpretation, in categorical and, as an exception, in probable forms.

If the forensic veterinary expert submitted a request to provide them with additional materials, but did not receive a response within forty-five calendar days, they notify the authority (person) that appointed the examination (involved the expert) in written form

regarding the impossibility of providing an opinion that corresponds to Item 4.10 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998).

If there is a need to use special veterinary terms in the expert's opinion, they must be explained. Questions similar in content can be combined, and their sequence altered without altering the content of the task itself.

In the conclusions, the forensic-veterinary expert states the factual data or their absence, proceeding from the results that follow from the presented objective forensic veterinary examination, and shows the causality between the injury and the damage inflicted on the animal's health.

The scheme of drafting conclusions based on the results of the forensic veterinary examination depends on the nature and sequence of questions raised to solve it.

E.g.: "1. It is impossible to establish the severity of the injuries caused to the dog named Barsyk, since the clinical signs of the injuries are at the stage of acute inflammation and the healing process is ongoing at the time of the forensic veterinary examination. This will become possible after the injuries are completely healed, or due to other consequences of the post-traumatic process. At the time of the forensic veterinary examination, the injuries caused to the dog named Barsyk are non-lethal. The clinical condition of the subject animal is characterized by moderate severity.

2. The mechanism of causing the injuries found in the dog named Barsyk is friction, sliding, and stretching, which is morphologically manifested by traumatic baldness, skin abrasions, wounds of the thoracic and pelvic limbs, a wound in the neck area from overstretching the skin, tears and lacerations caused by tension tissues from direct, oblique, and tangential impact.

3. The statute of limitations for infliction of bodily injuries discovered in a dog named Barsyk at the time of the forensic veterinary examination is defined as four days.

4. It is impossible to answer the question about health complications arising from the effects of the injuries in full, as well as about the mutilation of the dog named Barsyk at the time of the forensic veterinary examination. This will be possible only after the completion of treatment of the animal and its complete recovery or in the aftermath of other consequences of the post-traumatic process, which must be confirmed by an extract from the medical history from the veterinary medicine institution where the animal was treated.

The nature of the injuries (traumas) inflicted on the dog named Barsyk, their localization (neck, limbs) and pathological morphology characteristics indicate that

they are non-lethal but inflicted with particular cruelty.

Upon the infliction of physical injuries on the dog named Barsyk, as well as in the post-traumatic period, the animal felt physical pain, experienced suffering and torment from the caused traumas (bodily injuries); the animal has a traumatic and pain-induced shock.

5. The damage caused to the dog named Barsyk could not have occurred independently during the life of the animal.

6. All the injuries found in the dog named Barsyk were caused by the action of a blunt instrument of trauma with an extensive, uneven, monolithic, rough surface, such that does not break down and does not change its shape. Such an instrument of injury could be an asphalt or dirt road. The movement of the body of the dog named Barsyk towards the blunt instrument of injury was at an angle of less than 90° both in the lower parts of the body and along the sides (left and right)."

At the stage of conducting an additional forensic veterinary examination in this criminal proceeding, the response of the forensic veterinary expert to the first question regarding the degree of severity of bodily injuries and the presence of signs of mutilation is as follows: "The identified bodily injuries after their complete healing in the dog named Barsyk belong to the medium degree of severity with a long-term health disorder, i.e., over 21 days. There are no signs of mutilation."

Conclusions in the final part are signed by a forensic veterinary expert(s), if a commission forensic veterinary examination was conducted, indicating their position, scientific degree, academic title, and their signatures, certified by the imprint of the seal of the state expert institution. Furthermore, the signatures of forensic veterinary experts and a seal impression are placed on each page of the text of the final opinion, pursuant to Item 4.15 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998).

The photo plates attached to the expert's opinion are signed by the forensic expert(s), and their signatures are certified by an impression of the seal of the expert institution, pursuant to Item 4.15 of the Departmental Instruction. A forensic veterinary expert, who works on a professional basis independently and is not an employee of a state expert institution, certifies the opinion provided by them with their signature and seal indicating the registration number of the taxpayer's registration card (identification number), pursuant to paragraph 4 of Item 14 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 2011). An example of a photo table is presented in Figure 2.






Photo table to the Expert opinion No. __ dated __(<i>date</i>)		
		
Photo No. 1. Appearance of a dog named Barsyk during a forensic veterinary study. As of __(<i>date</i>). Macro photo.		Photo No. 2. Traumatic chipping of the crown of the second and third incisors on the left on the upper dental arch in a dog named Barsyk. As of __(<i>date</i>). Macro photo.
		
Photo No. 3. General appearance of injuries to the left thoracic limb of a dog named Barsyk	Photo No. 4. General type of damage to the left pelvic limb of a dog named Barsyk	Photo No. 5. Wounds in the left foot of a dog named Barsyk
Macro photo. As of __(<i>date</i>)		
Forensic expert: leading researcher of the sector of biological, veterinary, and soil science research of the laboratory of physical, chemical, biological, and molecular genetic research, Doctor of Veterinary Sciences, professor	<i>signature</i>	I.V. Yatsenko

Figure 2. Example of a photo table for an expert opinion

Source: archive of the NSC “Ex. Prof. M.S. Bokarius Institute of Forensic Examinations”, 2020

The structure of expert opinions during a commission or comprehensive expert examination is stipulated in Item 4.18 of the Departmental Instruction (Order of the Ministry of Justice of Ukraine, 1998). Its features are that the introductory part additionally specifies data on the chairperson of the commission of forensic experts and information on forensic veterinary examinations, the results of which are set by the body or authorized person who appointed a forensic veterinary examination or involved an expert as initial data. Furthermore, the corresponding sections of the examination part contain the results of examination performed by individual forensic experts, signed by these experts with their surnames specified.

If the forensic veterinary expert can give an answer to certain questions raised in the document on conducting a forensic veterinary examination, and there are grounds for drafting a notice on the impossibility of providing an opinion concerning others, one document is drafted – the expert’s opinion. In this case, the expert specifies that they are warned (aware) of criminal liability under Articles 384 and 385 of the Criminal Code of Ukraine (Criminal Code of Ukraine, 2001).

Discussion of examination results

The proposed approach to formulating the content of the structural elements of a forensic expert’s opinion based on the results of a forensic veterinary examination

of a live animal, considering the specifics of the subject, tasks, object, and examination methods, allows optimizing the work of a forensic expert at the stage of formulating and directly drafting an opinion consistent with the results of the study by M.P. Klymchuk and S.I. Marko (2011), who proved the informative value of an expert's opinion as a source of evidence in a criminal case; M. Hetmantsev (2018), who covered the legal nature of the expert opinion; Yu.Yu. Yaroslav (2019) and V.Yu. Shepitko (2018), who substantiated the evaluation of the expert's opinion using special knowledge; B.V. Shabarovskyi (2019), who argued ways to verify the expert opinion in the criminal procedure of Ukraine. Despite the multi-vector nature of the scientific studies of these and other researchers, their findings do not solve the issue of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal and do not outline ways to solve it.

The sequence of the presentation of the results of the forensic veterinary examination of a subject animal is determined by the forensic veterinary expert considering the particular circumstances of the case, the condition of the subject animal and the content of the questions raised in the procedural document on the appointment of the forensic examination.

The issues of conducting forensic veterinary expert examination and processing their results were considered by scientists on the pages of foreign scientific publications, namely: A. Rebollada-Merino *et al.* (2020), who described the instances of dog and cat cruelty cases in Spain between 2014 and 2019, for which the source of evidence was the expert opinion; M. Smith-Blackmore and J.D. Bethard (2020) showed the possibility of cooperation between forensic veterinary experts and forensic medical anthropologists when solving common issues; I. Babinska *et al.* (2018) investigated the issue of trends in the development of forensic veterinary examination of live animals; K. Barington and H.E. Jensen (2013) showed the mechanism of the formation of bruises in pigs during their transportation and the importance of forensic veterinary diagnostics for formulating a well-founded and objective forensic expert's opinion and others. However, both the procedure for conducting and processing the results of a forensic veterinary examination varies in different countries of the world. At the same time, some effective methods of concluding an expert opinion based on the results of a forensic veterinary examination can be borrowed to improve Ukrainian legislation, and therefore the study of foreign practices in this area of forensic expert activity is a relevant issue.

The results of these studies can serve as the basis for amending the "Scientific and Methodological Recommendations on the Preparation and Appointment of Forensic Examinations", a list of issues regarding the appointment of a forensic veterinary expert of a live

animal by an authorized person, in the author's wording, set out in the scientific paper "Problems of drafting a resolution by an authorized person on the appointment of a forensic veterinary examination and ways to solve them" (Yatsenko, 2022).

Problematic and controversial issues, inconsistencies and gaps in the legislation that arise during the preparation of an expert's opinion, specifically those based on the results of a forensic veterinary examination, were resolved by the author of this paper and have been integrated into the forensic practice for the past few years. Within the scope of the present paper, the problematic issues of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal were highlighted, and their solutions were outlined and substantiated using particular examples from the author's personal long-term forensic veterinary practice.

Conclusions

The present study fulfilled its purpose: certain problematic issues of drafting an expert's opinion based on the results of a forensic veterinary examination of a live animal were identified, and their solutions were outlined, which will positively affect the conduct and registration of the results of forensic veterinary examination in particular and forensic expert activity in general.

The sequence of the presentation of the results of the forensic veterinary examination of an animal subject to expert examination is determined by the forensic veterinary expert, considering the specific features of the examination, the state of the object of examination and the questions put to the forensic expert for resolution by the authorized body or the person who appointed the forensic veterinary examination or involved the forensic expert, and indicate the specific object of examination, which in case under study is a living animal.

The introductory part of the forensic expert's opinion, along with other necessary elements stipulated by the Instruction on the Appointment and Conduct of Forensic Examinations and Expert Studies, reflects within the scope of the study a specific list of issues raised for resolution by the authorized body or person who appointed a forensic veterinary examination or involved a forensic expert, as well as a specific object of examination, which is a living animal.

The innovation of the examination part of the forensic expert's opinion is the algorithm proposed for the first time for describing the results of the examination of the subject animal according to the systemic principle of the organism structure, as well as the description of individual veterinary documents contained in the case materials and related to the subject of proof. These documents include extracts from the medical history, outpatient card of the sick animal, description of the results of individual clinical, instrumental,

imaging, or laboratory examinations of the animal, as well as a protocol for examining the scene of the accident. At the final stage of the examination, the forensic expert formulates a forensic veterinary diagnosis and makes a synthesizing section of the examination part of the expert opinion.

The final part of the forensic expert opinion contains answers to the questions raised in the sequence as they are set out in the introductory part of the expert opinion.

Appendices to the conclusion of the forensic expert based on the results of the conducted forensic veterinary examination usually contain photo tables compiled according to the rules of forensic photography, including photo illustrations of discovered bodily injuries, as well as other summarized results of the forensic veterinary examination, which make the conclusion of the forensic expert demonstrative.

The results of the forensic veterinary examination of a subject animal are drafted in a procedural document – an expert opinion. If for certain reasons it is impossible to conduct an examination, the forensic expert drafts another document – a notice on the impossibility of providing an expert opinion.

The proposed approach to formulating the content of the structural elements of a forensic expert's opinion based on the results of a forensic veterinary

examination of a live animal, considering the specifics of the subject, tasks, object, and examination methods, allows optimizing the forensic expert's work at the stage of formulating and directly drafting the opinion. The sequence of the presentation of the results of the forensic veterinary examination of a subject animal is determined by the forensic veterinary expert considering the particular circumstances of the case, the condition of the subject animal and the content of the questions raised in the procedural document on the appointment of the forensic examination.

Prospects for further research consist in the development of the methodology of forensic veterinary examination of a live subject animal and its implementation in practical forensic veterinary activity.

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Проблеми укладання висновку експерта за результатами проведеної судово-ветеринарної експертизи живої тварини та шляхи їх вирішення

Іван Володимирович Яценко

Доктор ветеринарних наук, професор

Національний науковий центр «Інститут судових експертиз ім. Засл. проф. М.С. Бокаріуса»
61177, вул. Золочівська, 8а, м. Харків, Україна
<https://orcid.org/0000-0001-8903-2129>

Анотація

Судово-ветеринарна експертиза – новий вид судової експертизи, що активно розвивається в установах судових експертиз Міністерства юстиції України. Оскільки її теорія та методологія перебуває на стадії становлення, то існує потреба в розробленні її категорійного апарату, методів, способів та засобів проведення і оформлення результатів дослідження. Мета роботи – виокремити проблемні питання укладання висновку експерта за результатами проведеної судово-ветеринарної експертизи живої тварини та окреслити шляхи їх вирішення. У роботі використані різні наукові методи, зокрема: діалектичний, методи логіки (формально-юридичний, системно-структурного аналізу, моделювання, аналіз, синтез, індукція, дедукція), загальнопізнавальні методи (описування, спостереження), спеціальні методи, функції яких виконують методи прижиттєвої клінічної судово-ветеринарної діагностики тварин. У статті акцентовано увагу на тому, що особливістю вступної частини висновку судового експерта є те, що в ній зазначається об'єкт дослідження – жива тварина. Розроблено перелік питань, які повинен вирішити уповноважений орган чи особа, що призначила судово-ветеринарну експертизу. Розкрито й уперше обґрунтовано структуру дослідницької частини висновку судового експерта, в основі якої – судово-ветеринарне дослідження підекспертної тварини за принципом аналізу стану окремих систем організму, зокрема кровообігу, дихання, сечовиділення, статевої, нервової, чуття. Аргументовано описання у висновку експерта результатів аналізу окремих ветеринарних документів, що стосуються предмета доказування. Показано, що за результатами клінічного судово-ветеринарного дослідження живої підекспертної тварини судовий експерт окреслює судово-ветеринарний діагноз, а в розділі дослідницької частини висновку, який синтезує результати, – узагальнює отримані дані. Стверджується, що заключна частина висновку судового експерта містить повні, науково обґрунтовані, послідовно викладені, чіткі, конкретні, виразні, зрозумілі відповіді на поставлені питання, перелік яких зазначено у вступній частині висновку. Окреслено структуру додатків до висновку судового експерта, яким найчастіше є фотоілюстрації тілесних ушкоджень, виявлених у підекспертної тварини. Розроблені в цій статті шляхи вирішення проблем укладання висновку експерта за результатами проведеної судово-ветеринарної експертизи живої тварини гарантовано відобразяться на проведенні та укладанні результатів судово-ветеринарних досліджень

Ключові слова: судово-ветеринарне дослідження, судово-ветеринарний експерт, підекспертна тварина, судово-експертна діяльність, оформлення результатів судово-ветеринарної експертизи