



VOICE OF REASON

Informative, clear communication with the pet owner can help alleviate stress concerning lumps.

EXAM ROOM

“What Is This Lump on My Pet?”

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Abstract

“What is this lump on my pet?” is a very common question asked by pet owners. It can be difficult dealing with such a question because a lump can be many things, such as a benign mass, superficial infection, nodule, cyst, or neoplasia. The most important role of a veterinary nurse is to obtain all the information the veterinarian needs to help guide the list of differentials. In addition, veterinary nurses can play a crucial part in helping to alleviate client concerns about lumps and answer questions they may have about diagnostic tests. As part of the healthcare team, we can also educate owners on how to identify lumps, why early intervention matters, and when to contact the veterinary office.



Take-Home Points

- Client questions about lumps are common in general practice.
- The veterinary nurse has an important role during appointments where a lump is noted.
- A good place to start is asking open-ended questions about the current lump and any past lumps.
- The veterinary nurse should let the owner know what to expect during the physical exam.
- Lumps can have many etiologies, and diagnosis cannot be made based on the way a lump looks or feels; diagnostics are necessary.
- As the veterinary nurse, we can also help alleviate client concerns and answer questions they may have about diagnostic tests.
- Owners should be instructed on how to identify lumps, which will help them understand when to contact the veterinarian.
- The client should be made aware that the sooner intervention for a lump is instigated, the quicker the recovery and the lower the chance of possible metastasis.
- Lumps that suddenly change size, shape, or color should be investigated, and the veterinarian should be made aware of any dramatic change in the patient's behavior.

Client questions about lumps are common, accounting for 4% of presenting complaints and almost 6% of nonpresenting clinical examination findings in general practice.¹ The question “What is this lump on my pet?” may be the sole reason for a patient visit or may arise during an annual exam. Annual exams are necessary to check on the overall systemic health of the patient but also to look for other things that can potentially affect long-term health.

A full physical exam can identify any lumps, redness, or irritation and provide clues as to the overall health of the patient's skin and coat. If the owner mentions a lump they have noticed, the veterinary nurse should note it on the record and bring it to the attention of the veterinarian. A lump can be anything from a crusted papule to a neoplasm, or it can be as benign as a tick or a scab that the owner has found.

The veterinary nurse has an important role during these appointments:

- Documenting the location of any lumps noted by owners or noted on physical exam
- Speaking to owners about the necessity of diagnosing the lumps and explaining the procedures used
- Reassuring owners about the diagnostic procedures
- Answering questions for owners
- Obtaining a thorough history, which can assist the veterinarian with differential diagnoses

HISTORY

The veterinary nurse is usually the first person in the clinic to talk with the owner about their concerns. A

well-informed veterinary nurse can help alleviate a lot of those concerns and create rapport with the client. Asking knowledgeable, open-ended questions is a good start. The veterinary nurse should obtain a thorough history from an owner about a specific lump by asking questions such as:²

- When did you first notice the lump?
- Has the lump changed in size? If so, how rapidly did it grow?
- Does the lump come and go, or is it there all the time?
- What changes have you noticed in the lump's appearance (e.g., color, shape, texture)?
- How much is the pet bothered by the lump? Does the pet excessively lick, scratch, or rub the area? How painful is it to the touch?
- Has the pet had any other lumps noted in the past? If so, were they removed and sent for diagnostics? What was the diagnosis, if one was obtained? Did the lumps regress on their own?
- Has the pet had a recent traumatic experience (e.g., bite, surgery, injection)? What happened?
- Has the pet shown signs of systemic illness (e.g., vomiting, diarrhea, coughing, sneezing, changes in behavior or bathroom habits)? What specific signs did they show?

PHYSICAL EXAM

The veterinary nurse will need to document all findings during the physical exam. Before the owner meets with the veterinarian, the veterinary nurse should let them know what to expect during the exam. If a lump is found, the veterinarian will examine it closely to



A punch biopsy can typically be closed with 1 to 2 sutures, whereas sutures required for an excisional biopsy depend on the size of the mass.⁴



determine how deep the lump goes into the skin. If multiple lumps are found, the veterinarian will compare them to each other, checking whether they look and feel the same. Is the lump firm or soft to the touch? Is it movable or attached to deeper structures? If it is movable, what layer is it in (dermal versus subcutaneous)? Are any peripheral lymph nodes enlarged? Once the physical exam is completed, the veterinarian will have a better idea about what diagnostic test will be best for a particular lump.

DIAGNOSTIC TESTS

For an owner, any lump they find is concerning, and the first question they are likely going to ask is, “Is it cancer?” Unfortunately, you can never definitively say it is not. What can be answered is that the diagnosis of cancer cannot be determined based on the way a lump looks or feels. Some lumps may have a high suspicion for cancer; however, to diagnose any lump, diagnostics need to be done.

Until the distinction is made, the owner needs to continue to monitor the lump. Veterinary nurses can help alleviate the client’s concerns about the diagnostic tests and explain the procedures.

Fine-Needle Aspiration

With any lump, the basic diagnostic test is a fine-needle aspiration (FNA). FNAs are noninvasive, fairly safe, and inexpensive, and they can be done in-house.² FNAs may or may not give an idea of what the lump is but will not provide a definitive diagnosis. An FNA is used to collect a very small sample of cells within the lump. The concentration of certain cells can give the veterinarian a working diagnosis of the pathology of the lump, which will help determine the best course of action, whether it be surgical removal, referral to a veterinary oncologist, or benign neglect.

A small needle is inserted into the lump, and some answers can be gathered by identifying the cells involved. There are usually no side effects from an FNA, but certain forms of cancer can react poorly to being aspirated. The veterinary nurse should discuss the potential for possible aspirate reaction of mast cell tumors with the owner, explaining that premedication with the appropriate dose of diphenhydramine can minimize the resulting reaction.³ In addition, certain types of cancer do not exfoliate well on FNA, which could result in a nondiagnostic sample. If this is the case, or if the mass is bothersome to the patient, biopsy could be more beneficial.

Biopsy

Biopsy will usually provide a definitive diagnosis but is not guaranteed. Biopsy is invasive, the degree of which depends on the size and type of the mass, but at times the removal of the lump may be curative. The cost of the biopsy is directly correlated to the amount of tissue that needs to be removed:

- Punch biopsies take small plugs of tissue with minimal suture.
- Excisional biopsies take more equipment and time, depending on the size of the lump and the size of the margins needed.

The veterinarian will decide whether to perform a full excisional biopsy or a punch biopsy. A punch biopsy is usually very small, ranging from 2 to 8 mm, with the most common being the size of a pencil eraser. A punch biopsy can typically be closed with 1 to 2 sutures, whereas sutures required for an excisional biopsy depend on the size of the mass.⁴

Once the patient is examined, a better estimate on removal costs can be generated, which the veterinary nurse can then share with the client. In addition, the veterinary nurse should explain the type of biopsy the veterinarian will perform and what to expect, both during and after the procedure.

Most veterinarians will use a local block to numb the area before taking a sample so the patient will not feel pain during the procedure. The temperament of the patient and the location to be biopsied determine if a patient can be biopsied without sedation or if sedation or even anesthesia will be required. The veterinary nurse should discuss sedated versus nonsedated biopsy options with the owner before the procedure. Estimates for each option should also be covered. If the



veterinarian chooses a nonsedated biopsy and the local block does not seem adequate on its own, they may opt to sedate to ensure the patient is as comfortable as possible for the procedure. The owner should be informed about this possibility.

PATIENT RECOVERY

Recovery time also depends on which route is taken for biopsy. Small surgical sites take less time to heal than larger sites and tend to have fewer healing complications.

The patient should not be bathed until the sutures are removed, usually in 10 to 14 days. If the patient is bothered by the sutures, an Elizabethan collar should be used to prevent the patient from chewing on the sutures and reduce the chance of the sutures being removed too soon. If punch biopsy sites cannot be closed or the patient removes the sutures too early, the biopsy sites can heal by second intention. If an excisional biopsy is done, the area will need to be reclosed for proper healing.

Owners should be asked to monitor the incision site for severe swelling, discharge, or dehiscence of the suture line and notify the clinic if any signs are noted.

LUMP REMOVAL AND IDENTIFICATION

Whenever tissue is removed from a patient, it should be sent for identification. Results from a biopsy are usually back in 5 to 7 business days, depending on the lab. The veterinary nurse should remind owners to call the office if they have not received any test results in 7 to 14 business days.

For any lump, the sooner intervention is instigated, the quicker the recovery and the less chance of metastasis, if that is a possibility. Removal depends on the type of lump; benign lumps can be left alone unless they are causing problems, whereas more aggressive masses should be removed as soon as reasonably possible. For lumps that are not neoplastic in origin, removal may not be indicated, as treatment of the underlying cause may be curative. A mass in the early stages may be able to be removed using a single 6-mm punch with a single cruciate suture versus waiting and requiring a 6-inch suture line to remove the same mass later on. Owners must understand the significance of waiting to have a tumor removed.

Owners should also be instructed on how to identify lumps, which will help them understand when to contact the veterinarian and when a lump can wait to be examined until the patient's next checkup. As with any disease, it is necessary for the owners to monitor the lump(s) for changes, regardless of whether a diagnosis has been obtained or an owner has elected not to pursue diagnostics. If any changes are noted, then the veterinarian needs to be notified.

TYPES OF LUMPS AND BUMPS

A lump on either a dog or a cat can have many etiologies. It can be as simple as an insect bite or superficial pyoderma to something more involved or malignant, such as sterile nodular panniculitis or cancer. The number and size of the lumps, as well as their color and shape, can point toward a certain set of differentials. This discussion of lumps will be limited to the more common ones seen in the clinic.

Common Canine Lumps

Benign Lumps

A benign lump is usually of no concern. These lumps include lipomas (**FIGURE 1**), sebaceous gland tumors (**FIGURE 2**), papillomas (**FIGURE 3**), hemangiomas, and histiocytomas.^{5,6} These lumps are usually left alone but can be removed if they are bothersome to the pet. The age and general health of the patient should be considered when removing these masses for cosmetic purposes. When speaking to owners of older patients about mass removals, it is important to discuss the risks of sedating them. An older patient that is systemically fine can usually handle sedation without a problem but may take longer to fully recover. If the patient is not systemically well, discussions should happen before the procedure on how to proceed if sedation is needed to complete the biopsy.

As dogs age, sebaceous adenomas become more common in toy breeds and small terriers.⁵ These benign masses all have the same basic appearance of a firm, wart-like or cauliflower-like mass that can vary in size.⁵ If the lump grows to a substantial size, is constantly being traumatized or bleeding, or is impeding the patient's movement, then the lump should be surgically removed. Diagnostic tests for a benign lump would be an FNA or a biopsy to identify the cell population.^{2,4}



Inflammatory Lumps

Inflammatory lumps include superficial pyoderma (**FIGURE 4**) and hives (**FIGURE 5**).⁷⁻⁹ Superficial pyoderma can cause the appearance of hives in short-coated breeds. The crusted papule associated with pyoderma causes the short, stiff coat to piloerect.⁸⁻¹⁰ This is common in breeds such as boxers, pit bull terriers, and bulldogs.¹¹ These lumps will remain as long as the infection is present. A true hive will only last 24 hours, then disappear.¹⁰ The hive is created from the influx of edema limited to within the epidermis and dissipates over a few hours.



FIGURE 1. Lipoma: benign fatty mass.



FIGURE 2. Sebaceous hyperplasia: benign growth from sebaceous gland.

Diagnostic testing for pyoderma is a direct impression, looking for bacteria and inflammation. For a hive, a biopsy would be necessary; waiting to see if it resolves over a few days is also acceptable. Diascopy is useful in distinguishing between a hive and pyoderma because the wheal will disappear when pressure is applied, and pyoderma will not.¹⁰ Inflammatory lumps typically resolve with treatment of underlying disease and can be managed over the long term.

Nodules

A nodule (**FIGURE 6**) is a well-circumscribed lesion with solid elevation greater than 1 cm.⁴ Nodules are limited to the dermis, and on cytology from an FNA have a massive amount of inflammation with an array of cells. Nodules can be sterile, fungal, bacterial, or neoplastic in origin.⁴ Most nodules will need to be



FIGURE 3. Canine papilloma: nonenveloped DNA virus that infects epithelial cells.



FIGURE 4. Crusted papule: small, elevated lesion smaller than 1 cm with an accumulation of dried exudate serum or pus adherent to the skin surface, usually associated with pyoderma.

biopsied and cultured to distinguish between inciting causes. Depending on the cause, treatment of the underlying disease will resolve the nodules.⁴

Cysts

A cyst (**FIGURE 7**) is defined as a “nonneoplastic sac-like structure with an epithelial lining,” the majority of which is follicular in origin.^{5,6} To diagnose a cyst, it must be either aspirated or biopsied. On aspirate, a large number of squamous cells will be noted, with usually no bacteria or inflammation. Cysts can be drained by trained personnel to decrease the size, but they can refill over time if the sac is not removed.

The veterinary nurse must explain to the owner that they should not squeeze the cysts at home because if it is not done correctly, the content of the cyst can get pushed deeper into—not out of—the skin. This will cause inflammation in the surrounding tissue and create a much bigger problem.⁵ Surgical removal is the only definitive cure for a cyst. Cysts can develop throughout the patient’s life, and removal of 1 cyst will not decrease the chance of another developing.



Diascopy is useful in distinguishing between a hive and pyoderma because the wheal will disappear when pressure is applied, and pyoderma will not.¹⁰

Malignant Neoplasms

Neoplastic masses can come in many different shapes and sizes. The most common seen in dogs are mast cell tumor (**FIGURE 8**), squamous cell carcinoma (**FIGURE 9**), and malignant melanoma.⁶ They can be fluid-filled or solid and flesh-toned or highly



FIGURE 5. Wheal (hive): well-circumscribed, raised lesion of edema.



FIGURE 6. Nodule: well-circumscribed lesion greater than 1 cm that can extend into deeper layers of the skin.



FIGURE 7. Cyst: epithelial-lined cavity filled with fluid or solid material.



erythematous. Some types of cancer will not create a lump of any kind.^{5,6} In some cases, malignant neoplasms can be diagnosed based on an FNA, but most neoplastic lumps will need a biopsy for definitive diagnosis. And as previously mentioned, mast cell tumors in particular are very reactive to manipulation and tend to swell quickly after an FNA.^{3,5} Treatment for neoplastic lumps varies, depending on the type and aggressiveness of the cancer.^{5,6}

Feline Lumps

Lumps on cats can occur as commonly as in dogs. The most common feline lumps are caused by insect bites, injection-site reactions (**FIGURE 10**), and neoplasia. Injection-site fibrosarcomas occur in younger cats at the site of an injection. For this reason, many experts recommend that feline vaccines be given as low as possible on the limbs so that amputation can be performed if needed. Other neoplastic lumps, such as mast cell tumors, basal cell tumors, and squamous cell carcinoma (**FIGURE 11**), are usually seen in older cats. History, diagnosis, and treatments are no different in the cat than in the dog.^{5,6}

RED FLAGS

Certain things can be a red flag in the case of lumps. Typically, any lump that has a sudden change in size, shape, or color must be looked at sooner rather than later. Also, if any of the lumps begin to drain, this could be indicative of a more infectious etiology. If the lump becomes bothersome to the patient, then surgical intervention may be needed. The veterinarian should be made aware of any dramatic change in the patient's



FIGURE 8. Mast cell tumor: common neoplasm from mast cells.

behavior, such as lethargy, vomiting, and diarrhea.² Diseases such as systemic histiocytosis, lymphosarcoma, and cutaneous lymphoma can all point to a systemic cause to the lumps.^{5,6}

TELEMEDICINE

Telemedicine on a new lump should not be offered. Diagnostics and a full physical exam need to be performed to be sure nothing is missed. After lump removal, depending on what the lump turns out to be, follow-up telemedicine appointments may be appropriate. However, most etiologies will need multiple in-house rechecks to get the patient into remission before telemedicine appointments may be possible. If at any point the lump changes or the behavior of the patient changes, a telemedicine appointment must be changed to an in-house recheck to look for reasons for the change.

CONCLUSION

Dealing with a lump on a pet can be concerning for clients and the veterinary staff. Because of the long list of differentials that can cause a lump, performing diagnostics is essential to achieve a definitive diagnosis. Until that time, only educated guesses can be made on



FIGURE 9. Squamous cell carcinoma: malignant neoplasm that can be associated with chronic sun exposure.



what it is and how to treat it. Once a diagnosis is made, then a plan can be developed for the long-term care of the patient, which typically can include multiple recheck appointments and continued follow-up care. Depending on the comfort level of the general practitioner, many lumps can be treated in-house, whereas others may need the expertise of a specialist.

As a veterinary nurse, your interactions with the owner during this concerning time can make or break the situation. If communications with the owner are informative, it will help alleviate a lot of their concerns and create a positive experience, even if the outcome is suboptimal. **TVN**



FIGURE 10. Feline injection-site carcinoma.



FIGURE 11. Feline squamous cell carcinoma.

References

1. Robinson NJ, Dean RS, Cobb M, Brennan ML. Investigating common clinical presentations in first opinion small animal consultations using direct observation. *Vet Rec.* 2015;176(18):463. doi: 10.1136/vr.102751
2. Williams R. Lumps and bumps. In: Hutchinson T, Robinson K, eds. *BSAVA Manual of Canine Practice: A Foundation Manual.* Wiley; 2015:319-326.
3. Wright ZM. Mast cell neoplasia. In: Bruyette DS, Bexfield N, Chretien JD, et al., eds. *Clinical Small Animal Internal Medicine.* Vol 1. Wiley-Blackwell; 2020:1359-1367.
4. Diagnostic methods. In: Miller WH, Griffin CE, Campbell KL, eds. *Muller & Kirk's Small Animal Dermatology.* 7th ed. Elsevier; 2013:57-107.
5. LeBlanc A. Neoplastic and nonneoplastic tumors. In: Hnilica K, Patterson A, eds. *Small Animal Dermatology: A Color Atlas and Therapeutic Guide.* 4th ed. Elsevier; 2017:448-507.
6. Clifford CA, de Lorimier LP. Neoplastic and non-neoplastic tumors. In: Miller WH, Griffin CE, Campbell KL, eds. *Muller & Kirk's Small Animal Dermatology.* 7th ed. Elsevier; 2013:774-843.
7. Bacterial skin diseases. In: Hnilica K, Patterson A, eds. *Small Animal Dermatology: A Color Atlas and Therapeutic Guide.* 4th ed. Elsevier; 2017:45-93.
8. Lloyd D. Bacterial skin diseases. In: Miller WH, Griffin CE, Campbell KL, eds. *Muller & Kirk's Small Animal Dermatology.* 7th ed. Elsevier; 2013:184-222.
9. Campbell J. Allergic skin diseases in dogs and cats. In: Coyner KS, ed. *Clinical Atlas of Canine and Feline Dermatology.* Wiley-Blackwell; 2020:215-253.
10. Marsella R. Hypersensitivity disorders. In: Miller WH, Griffin CE, Campbell KL, eds. *Muller & Kirk's Small Animal Dermatology.* 7th ed. Elsevier; 2013:363-431.
11. Schissler JR. Bacterial pyoderma. In: Bruyette DS, Bexfield N, Chretien JD, et al., eds. *Clinical Small Animal Internal Medicine.* Vol 1. Wiley-Blackwell; 2020:1461-1470.



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Amanda started working at the Texas A&M Small Animal Teaching Hospital in 1995, and her focus has been strictly dermatology since 2003. In 2007, she graduated with a bachelor's degree in animal science from Texas A&M, was licensed in Texas in 2014, and obtained her veterinary technician specialty in dermatology in 2018. Amanda is on the Board of Regents for the Academy of Dermatology Veterinary Technicians and is also on the Examination and Credentialing committees. Amanda has published numerous articles as well as a book chapter and enjoys speaking to veterinary nurses/technicians on dermatologic conditions. Her hobbies include spending time with her daughter and showing her Rhodesian ridgeback in conformation, lure coursing, and agility.