



CatWatch

Expert information on medicine, behavior and health from a world leader in veterinary medicine



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Vomiting more than once a week could be a sign of trouble.

IN THE NEWS ...

A New Era in Medicine: Feline Genetic Screening

Complete genomes — genetic blueprints — of numerous cats' DNA have been sequenced in what has been described as a new era in veterinary medicine.

Cornell's Veterinary Biobank, as one example, is a database of DNA and tissue samples from several species. The biobank is supported in part by the Cornell Feline Health Center.

Now the Winn Feline Foundation has awarded the University of Missouri a grant believed to be the first "precision medicine" screening of a domestic cat. Precision medicine considers individual variations in genes and environment in diseases. Researchers will map the genome of an American shorthair cat with neurological disease and compare it to their 99 Lives Cat Genome Sequencing database. The goal is to use the cat's genetic signature to help determine the disease's cause and novel therapies for treatment. ♦

How to Navigate a Second Opinion

A specialist's fresh perspective can be helpful, but know the etiquette involved and tread confidently

When you bring a cat into your family, you make decisions in his best interest for food, litter and veterinary care. As your cat's healthcare proxy, you're also responsible for routine check-ups, dental health and vaccinations. Sometimes, however, you may need to make more difficult decisions, perhaps to seek a second opinion when the current treatment isn't working.

The dilemma: You want your cat to get well and feel better, yet you don't want



In some multi-vet practices, the primary vet may make an internal referral to one who more commonly sees a particular condition.

to offend his veterinarian. Despite dedicated effort, sometimes a second opinion is necessary, just like when your own family doctor refers you to a specialist.

Quality Practice. Excellent general practice vets know second opinions are part of a quality practice, and they respect owners actively engaged in their pet's health care, but you should know etiquette is involved. "Primary care veterinarians, especially if they work in a solo practice,

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Easily Missed Signs of Skin Cancer

They can appear as innocently as a wart or a scratch and go undetected until the disease is in its late stages

Signs of squamous cell carcinoma (SCC) can be difficult to recognize in cats. Sometimes this common form of skin cancer looks like nothing more than a minor scratch or wart, and owners may not detect the disease until it has progressed. Signs of another form — oral squamous cell carcinoma — can often be mistaken for dental disease, which is common in older cats.

These tumors are often diagnosed in their advanced stages because of the cat's exceptional ability to hide signs of serious disease. However, new research and emerg-

ing targeted therapies have the potential to improve lives. The advances may be able to provide a better outcome to patients stricken with these cancers, says Cheryl Balkman, DVM, ACVIM, Senior Lecturer and Chief of Oncology at Cornell University College of Veterinary Medicine.

Reducing Pain. Improvements are being made in pain medications and anti-inflammatory drugs, local nerve blocks and drugs that help reduce the pain caused by local destruction of bone that can be associated with oral squamous cell carcinoma.

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CatWatch

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SHORT TAKES

A New Report Says Healthy Aging Can Be Achievable

Owners are increasingly aware of the risks of their cats being overweight, and at the veterinary clinic may view those poster silhouettes of feline body conditions — under, over and ideal weight — with a wary eye.

But who knew that assessing muscular condition should be an integral part of regular wellness visits? That's among the recommendations in a report on healthy feline aging in a special issue of the international *Journal of Feline Medicine and Surgery* from SAGE Publishing.

About 20 percent of the estimated 80 million cats in the U.S. are believed to be 11 years of age or older, with many expected to live into their 20s. Given the size of the population, it's disheartening to learn that, "There is a paucity of research in feline aging," according to the journal report.

It's now generally accepted that feline healthy aging is achievable just as it is in humans where the field of aging is dedicated to optimizing mental, social and physical well-being and function in older adults, the report says. "What has been less well defined, however, is what healthy aging actually looks like in a cat; in other words, what changes would be considered 'normal for age' ... as opposed to deteriorative changes."

A panel of experts reviewed information on common changes observed in cats, including the musculoskeletal system and cognitive and behavioral health. The panel included Sharon A. Center, DVM, ACVIM, Professor of Internal Medicine at Cornell.

The experts also developed new resources, such as complete blood count intervals as a baseline for mature to geriatric cats. While the 20-page report is intended primarily for veterinarians, many owners will find valuable information, especially about behavior changes related to certain illnesses.

For example, while we may think that thirst and frequent urination are the hallmarks of diabetes, the report lists behaviors also related



A panel of feline experts has described common changes that would be normal in aging versus deteriorative changes.

to metabolic disorders like diabetes mellitus. Among them: anxiety, irritability, aggression, altered sleep, house soiling and mental dullness.

A feline cognitive chart rates telling changes, such as exhibiting clingy and irritable behaviors at the same time, or playing less with toys and other animals. (See "Is It Dementia or Normal Aging?" in the May 2016 issue of *CatWatch*.)

About that advice on muscular condition: "Healthy cats move fluidly, with grace and ease," the report says. "Older healthy cats may move less quickly but still move fluidly." A detectable loss of muscle mass, by visualization and palpation, may indicate degenerative or other systemic disease, such as a digestive problem, insulin-mediated changes, renal disease, a dietary deficiency or hyperparathyroidism, a disorder resulting in high levels of the parathyroid hormone, which regulates calcium and phosphorus circulating in the blood. ♦

TO ACCESS THE REPORT ON AGING

CatWatch readers can have free online access to "Evaluating aging in cats/ How to determine what is healthy and what is disease" in the *Journal of Feline Medicine and Surgery* from SAGE Publishing until Nov. 15, 2016, by visiting: <http://jfm.sagepub.com/cgi/content/full/18/7/551?ijkey=HA2UJ8JS2Y1d2&keytype=ref&siteid=spjfm>

SAGE produces 800 books annually and 900 journals on topics ranging from science, business and the humanities to medicine.

Don't Ignore Extended Head Pressing

It differs from playful nudging and can indicate a problem, often neurologic, requiring immediate care

When your cat seeks affection or attention, he may nudge your forehead or open palm, and you may detect his purring or a gentle mew. "The behavior — called head bunting — is a normal social behavior," says Leni Kaplan, MS, DVM, a lecturer in the Community Practice Service at Cornell University College of Veterinary Medicine.

"Cats will deposit their scent as a means of bonding to signify comfort and familiarity and perhaps to seek attention from their human companion."

But if your cat firmly presses his head against a wall or sofa for extended periods for no apparent reason, don't be quick to dismiss it as attention seeking. He could be facing a significant health problem. "Head pressing is an abnormal behavior," Dr. Kaplan says. "It should be considered an emergency, and veterinary attention should be sought immediately."

Unaware of Pain. You should also report any other changes in your cat's behavior or health. Along with head pressing, he may pace, circle, stumble or vocalize. He may become disoriented and/or develop impaired vision and possibly seizure activity. He often may be in altered mental states and unaware of pain or his circumstances.

"Head pressing is usually one of several clinical signs that indicate an underlying medical problem," says Dr. Kaplan. "These problems can be primarily neurologic in origin but can also be related to serious medical conditions, including a toxin, metabolic derangement or vascular accident."

While head pressing itself is not a source of pain, Dr. Kaplan says it is a red flag, linked to a long list of conditions, including but not limited to:

- ◆ Type 2 diabetes, in which cats produce insulin but, due to insulin

resistance and/or pancreatic dysfunction, they need insulin supplemented. This differs from Type 1 diabetes, the inability to produce insulin to maintain normal blood glucose levels.

- ◆ Sudden head trauma due to a car accident or being struck on the head by a blunt object
- ◆ Vascular incidents, such as a blood clot or cerebral bleed
- ◆ Cancerous tumors on the brain or elsewhere in the body
- ◆ Sinus pain or pressure
- ◆ Liver diseases, such as a liver shunt, or bypass, and chronic hepatitis — see sidebar
- ◆ Hypertension, or high blood pressure, which if untreated can affect eyesight, kidney function and cardiac function
- ◆ Prosencephalon disease, in which the forebrain and thalamus — the part of the brain responsible for transmitting sensory impulses — are affected
- ◆ Exposure to toxins, such as lead
- ◆ Fungal and other infectious diseases that affect the central nervous system
- ◆ Viruses, including rabies
- ◆ Metabolic disorder, including having excessive or inadequate sodium in the blood plasma

In addition to a complete physical exam, your cat's veterinarian may take blood and urine samples to detect the presence of toxins and blood pressure readings. He or she may also examine your cat's retinas for signs of infection and inflammatory disease.

A referral to a specialty hospital for computed tomography or magnetic resonance imaging to check for brain damage might also be recommended. Treatment may include surgery to remove a tumor or medications to treat infections.

(continued on bottom of page 4)

WHEN THE CAUSE IS A LIVER SHUNT

Liver disease, such as a liver shunt, or bypass, can cause head pressing. Some breeds, including domestic shorthair, Himalayan, Persian and Siamese, are predisposed to developing the shunts.

Also known as a portosystemic shunt, this rare condition results when a blood vessel from the intestines bypasses the liver and prevents blood from being detoxified. Toxins can then enter the body through the bloodstream, causing life-threatening conditions, even death. "Liver shunts are less commonly diagnosed in cats than in dogs, but they are diagnosed in both species," says Leni Kaplan, MS, DVM, at Cornell.

In feline cases of liver shunts, veterinarians often recommend a change to a low-protein therapeutic diet in addition to medication. The toxins mainly derive from protein, and a therapeutic diet helps reduce their level. Surgery may also be recommended to close the shunt so blood can flow normally to the liver, but the procedure is expensive and best performed at a specialty clinic.



Siamese are predisposed to developing liver shunts, or bypasses, that leave them vulnerable to head pressing.

OPINION... (continued from cover)

are generalists and can't possibly stay on top of all the advances in veterinary medicine," says dermatologist William H. Miller, VMD, a director of the Cornell Companion Animal Hospital.

In some cases in a multi-vet practice, the primary vet may make an internal referral within the practice to one who more commonly sees a particular condition. "This internal referral often solves the problem and keeps the pet in the same practice where his entire list of problems and idiosyncrasies are known to the entire staff," says Dr. Miller.

When the general practitioner or the internal specialist recognizes the condition is beyond the scope of the practice, referral to a specialist is common protocol, Dr. Miller says, adding that making a lateral move to another primary care veterinarian will likely bring you full circle to the place where you started.

Disease Similarity. "This commonly happens when the pet has a skin disease," Dr. Miller says. "Many skin diseases look very similar, and it's not uncommon to have to go through a diagnostic evaluation where conditions are eliminated one at a time in a sequential fashion. Each of these steps takes time, effort and money and some won't work, which prolongs the animal's skin problem. This lack of instantaneous cure makes some people move on to the next primary care veterinarian. Having another pair of eyes look at the problem isn't a bad idea, but reports of all of the details on the various diagnostics and therapeutics performed by the all the previous veterinarians rarely follow the patient."

On the other hand, when your cat's therapy stalls or fails, or the recommendation is an expensive or invasive treat-

ment, a second opinion with a specialist with a new perspective can be helpful. The two of you can discuss the advantages and disadvantages of the new plan as well as the likelihood of its success.

Some nuances are involved in working with a primary care veterinarian, and having an open, trusting relationship eases the way. "A potentially uncomfortable moment revolves around your request for a referral when the attending veterinarian does not suggest one," Dr. Miller says.

"A lateral move to another primary care veterinarian may bring you full circle to where you started."

"After giving the veterinarian a fair chance to resolve or develop a safe and effective management plan, the client should never be afraid to ask for advice on seeking a referral to a specialist. The veterinarian may have a variety of valid reasons a referral may not be necessary at this point. If the reasoning sounds good, it may not be time yet. If the request is dismissed but a new diagnostic or therapeutic plan isn't suggested, it may be time to seek the advice of a specialist."

Ask for Referral. Your cat's veterinarian can recommend a second opinion from a board-certified specialist or you may request a referral. Some specialists don't require a referral while others do. "If a referral is required, no one should be afraid to ask for it," Dr. Miller says. "Just as we are advocates of our own health care, we are advocates for our pets."

Specialties include behavior, surgery, neurology, dermatology, oncology and cardiology. Various specialty organizations confer diplomate, or board certification, status and list them online by region, along with their requirements.

For example, the American College of Veterinary Dermatology, www.acvd.org, requires a two-to-three year residency training program, an original research project, publication in a scientific journal and a certification examination. Only several hundred ACVD board-certified dermatologists work in private specialty practices, academic positions and industry worldwide.

Involving the primary vet in providing your cat's history and health background isn't necessary as long as you obtain your cat's full medical records for the specialist. If you make an appointment without a referral, be open and honest about it. "If the specialist does not require a referral and an appointment is made, do not keep the results of that evaluation secret — share them with the primary care veterinarian," Dr. Miller says. "Health care is a team effort and everyone needs to know what the others are doing."

Seeking a second opinion offers the opportunity to learn not only more about your cat's medical condition but options for treatment. It's your right to seek a second opinion and you should never hesitate to ask for a referral to a board-certified veterinary specialist. If the specialist upholds the primary veterinarian's diagnosis, you have the invaluable comfort of knowing he or she made an accurate assessment of your cat's condition. You'll also have the peace of mind knowing that you took the necessary steps for your cat to receive the best treatment possible. ❖

HEALTH

HEAD PRESSING... (cont. from page 3)

The take-home message is to recognize normal behavior in your cat and report changes to his veterinarian when treatment may be the most effective.

Some senior and geriatric cats who suffer from cognitive dysfunction syndrome may become "stuck" in corners and appear to be lowering or pressing their head as they try to navigate their

way out. Their disorientation is unrelated to head pressing but does warrant consulting the veterinarian about management of reduced mental capacity. ❖

Considering Pet Sitting or Boarding?

Here's what you need to know to provide a safe, disease-free and low-stress experience

Cats crave routine and seem to be in sync with your work schedule. But they know that the daily routine is about to be upended when they see you bring out the dreaded suitcase. Even though you look forward to a much-needed vacation, you may find yourself worrying about how your cat will fare during your absence.

After friends and relatives, your options for care are boarding or hiring a professional pet sitter. The choice depends on your cat's health, temperament and experience with other companion animals. To set him up for success while you're away, it's also important to base your decision on his safety and well-being.

Staying at Home. "Cats who are easily stressed by change in routine or environment or by unfamiliar cats are better suited to staying in their own home," says Leni Kaplan, MS, DVM, a lecturer in the Community Practice Service at Cornell University College of Veterinary Medicine. "Cats who are not used to living with dogs will be quite stressed in a boarding facility with barking dogs, an experience that may be new to them." A cat-only facility might be the wiser choice.

Keep in mind that all cats need and deserve time alone for sleeping, eating and relaxing. It's imperative that those caring for your cat understand feline behavior, recognize signs of stress and can administer medication if needed. "They also need to recognize early signs that your pet needs to be examined by a veterinarian," Dr. Kaplan says.

Stick to Diet. She suggests owners take a favorite cat bed from home, toys and a piece of their own worn clothing with their scent to comfort their cats. They will also do better eating their regular food

from their own bowl, and if the facility can provide Feliway — a feline pheromone — make sure staffers spray the cat's bed and blanket twice daily to help combat stress.

In choosing a professional pet sitter, consider one who belongs to a professional pet sitting organization, such as the National Association of Professional Pet Sitters, www.petsitters.org, and Pet Sitters International, www.petsit.com. Individuals must show proof of being licensed and bonded.

Take the time to set up a meet-and-greet between a pet sitter and your cat at home to gauge compatibility. "Engaging a pet sitter who is already familiar with your cat is also great, as this may decrease your cat's anxiety when you are out of town," Dr. Kaplan says. "Find one who expresses an interest in what your cat likes and who strives to maintain your cat's schedule."

Maintain Routine. Yvette Gonzalez, president of the Pet Sitters Association and owner of the As You Wish Pet Sitters in Denver, says: "Our philosophy is that the companion animal is healthier and happier in his own surroundings and when maintaining his own schedule. Deviation from routines, particularly in cats, can throw off their health and psyche."

Both NAPPS and Pet Sitters International offer membership lists for the public that identify members' credentials, services and geographic areas they cover. They also provide on-going education for members through webinars, conferences and publications.

If your cat enjoys other pets, is even-tempered and not easily rattled by change, consider sending him to a boarding facility. The International Boarding and Pet Services Association, www.ibpsa.com, offers training and encourages members to cultivate strong relationships with local veterinarians, says Director Carmen Rustenbeck. She



Cats like cozy enclosures with perches. Modules at this boarding facility are designed to open to double their length. Some facilities have playrooms that include toys and cat trees.

recommends choosing a facility with a trained staff who welcomes questions.

"A quality boarding facility staff will make you and your pet feel welcomed when you walk in, will be willing to answer your questions, conduct a tour," Rustenbeck says. "We also recommend having someone on site at night."

Do an Inspection. If you choose to board your cat, visit the premises beforehand to assess cleanliness and odor. Ask how often cats are exercised and allowed out of their rooms, if any disease outbreaks have occurred and procedures for handling a situation when an animal needs veterinary attention.

Facilities should require a copy of a pet's vaccine certificate. All cats should be up to date on vaccines for rabies, feline panleukopenia, feline herpesvirus and feline calicivirus, Dr. Kaplan says, adding that, with combination vaccines, cats receive one injection providing protection against the three latter viruses. "These viruses are highly contagious and can cause a serious outbreak in a boarding facility."

If a cat is not up to date on these vaccines for medical reasons, the owner should provide a letter from the cat's veterinarian explaining why he is exempt from vaccination. ✦

CANCER...*(continued from cover)*

"As in the human field, the direction of veterinary oncology is toward more targeted therapies," Dr. Balkman says. "Understanding the molecular basis of a tumor can help in identifying targeted therapeutics to treat cancer."

The mainstay of cancer therapy has been surgery, radiation and chemotherapy, but the latter two destroy both normal and cancer cells. This is where more targeted treatments come in. Some are drugs that block the growth and spread of cancer by interfering with specific molecules expressed by the cancer cells, versus standard chemotherapy that destroys rapidly dividing cells, including both normal and cancerous cells.

A targeted anti-cancer drug with an unusual name — toceranib phosphate — is being investigated for use in cats, Dr. Balkman says. Toceranib phosphate (Palladia) is a small molecule inhibitor approved for the use in dogs with mast cell tumors but has shown to be effective in other tumor types. The drug targets a number of molecules involved in cancer cell growth and survival. Disruption of these molecular signaling pathways can stop the cells from grow-

ing and lead to death of the cancer cell.

Preliminary data on the use of toceranib phosphate in cats shows that it is well tolerated and safe. More studies are needed to determine the drug's efficacy in cats with SCC.

Targeting Tumors.

The installation of newer equipment in a limited number of veterinary radiation facilities, including intensity modulated radiation and stereotactic radiation, has also improved targeting of tumors while minimizing the dose to the normal surrounding tissues, Dr. Balkman says. Fewer side effects to normal tissues make the treatment better tolerated and improve overall quality of life.

Intensity-modulated radiation therapy delivers precise radiation doses to a malignant tumor or specific areas within it from many different angles. At each of these angles, the intensity of the radiation varies, and the shape of the beam is changed to match the shape of the tumor. Stereotactic radia-



Veterinarians typically use radiation alone or in combination with surgery to treat oral squamous cell carcinoma.

tion uses 3-D imaging to target high doses of radiation to the affected area with minimal impact on surrounding healthy tissue. The radiation damages the DNA of the targeted cells. They lose their ability to reproduce, causing tumors to shrink.

Most cases of SCC are one of two types:

- ◆ **Oral SCC occurs in and around the mouth.** It's the most common malignant oral tumor in cats. Oral cavity tumors account for only about 3 percent of feline cancers, but about three-fourths are squamous cell tumors. The average age of cats with oral SCC is about 12 years, although it has been diagnosed in cats much younger. Any breed can be affected. Cats with oral SCC can have ulcerated lesions in or around the mouth.

Symptoms may include loss of appetite, weight loss, bad breath, drooling or frequent chewing motions. "Owners need to be vigilant in monitoring their pets for any changes that could be early signs of cancer and partner with their veterinarian in examining their pets," Dr. Balkman says. Oral SCC in cats is typically very aggressive. "The key here is an oral exam on a regular basis to identify a tumor in the early stages. It still requires aggressive therapy, but surgery is more likely to be successful."

- ◆ **Solar-induced SCC is a cancer of the skin that occurs due to sun exposure.** Skin tumors in general are the second

A PROMISING TREATMENT NEEDS MORE STUDY

Electrochemotherapy has emerged in recent years as a new treatment option for certain cancers in cats, including squamous cell carcinoma. The treatment involves the use of small doses of chemotherapy agents followed by electric pulses applied to the tumor, which stimulate the pores of the cells to open and absorb higher doses of the chemotherapy into the cancer cells.

Electrochemotherapy targets the tumor specifically to help minimize the potential systemic side effects.

Oncologist Cheryl Balkman, DVM, ACVIM, at Cornell notes that while electrochemotherapy is offered at some veterinary cancer treatment centers, it is not widely available at this time. Initial research into electrochemotherapy has found it to be potentially safe and effective for SCC of the skin, although further investigation is needed.

A cat with squamous cell carcinoma of the nasal planum — the tip of the nose — undergoes the new treatment called electrochemotherapy.



most common type of feline cancer diagnosed at Cornell University Hospital for Animals, exceeded only by lymphoma. Cats with thin, light-colored hair — especially white-colored ones — are at the greatest risk, and among them blue-eyed, cats are the most susceptible.

The development of the disease, which mostly affects older cats, depends on the level of exposure to sunshine and lack of pigmentation. In cats, solar-induced SCC of the skin is common particularly in areas of the country where the sun shines most days. Cats who go outdoors are most at risk, although sunbathing in a window can expose them to dangerous rays and increase the risk.

The cancer can occur anywhere on the body but usually develops on the ears or bridge of the nose, eyelids, face and sometimes the toes. The lesions appear as ulcers with or without scabs, or as nodules with a rough surface, much like a wart. These lesions are usually slow growing.

Dr. Balkman notes that early detection of solar-induced carcinomas is vital because a range of treatment options is available then. “The problem is that early lesions can look like a simple scratch or scab that may even heal before the lesion again declares itself.”

Extensive Diagnosis.

A biopsy is often the first step in diagnosis. A work-up before the procedure usually includes routine blood work to determine the cat's health status before sedation. A veterinarian administers anesthesia as needed to obtain the biopsy to confirm the presence of SCC and help determine its invasiveness. Lymph node biopsies might also be performed to determine if the tumor has spread.

X-rays and computed tomography (CT) scans can provide more information. A biopsy can cost from \$250 to \$500, and an initial diagnostic workup from \$1,200 to \$1,500.

With oral tumors, surgery that requires removal of a portion of the jaw will vary from \$2,500 to \$3,500, depending on the extent of the tumor and duration of surgery, Dr. Balkman says. Radiation therapy is commonly used alone or in combination with surgery to treat oral squamous cell carcinoma. Again, the cost will vary based on whether it is a shorter course to alleviate some of the signs associated with



Solar-induced squamous cell carcinoma is common in areas with abundant sunshine. Even sunbathing in a window can expose cats to increased risk.

the tumor, such as pain and difficulty eating, or a more prolonged protocol.

Surgical removal of the tumor and the surrounding tissue can be challenging when oral tumors have become invasive, and often a portion of the jaw must be removed. Surgery alone is rarely successful, and treatment may also include radiation therapy and chemotherapy, with supportive pain control.

Unfortunately, recurrence of these oral tumors is quite common. The one-year survival rate of cats with oral SCC is less than 10 percent. The prognosis is more favorable if the tumor is identified early and treatment is intensive.

With solar-induced SCC of the skin, surgical removal of the tumor and the surrounding tissue is also the treatment of choice. Radiation therapy or cryosurgery — which “freezes” the tumor — may also be used. Sometimes chemotherapeutic drugs are injected directly into the lesion.

In recent years, researchers have explored the efficacy of many drugs in the treatment of SCC, but no magic bullet has emerged.

However, Dr. Balkman offers this hopeful note: “It is vital for owners to know that they still have options. Even if there isn't a definitive treatment available, there are ways we have to make the patient more comfortable.” ♦

NEW THERAPIES SEEK TO BLOCK THE GROWTH OF CANCER CELLS

Targeted therapies are the focus in much of today's development of drugs to fight cancer, according to the U.S. National Cancer Institute. Some are being studied in clinical trials in people, and many more are in pre-clinical testing with animals, the center says, adding that in people the therapies are a cornerstone of a new movement called precision medicine, which uses information about a person's genes and protein expression to prevent, diagnose and treat disease.

The therapies require identifying targets — often on the molecular level — that play a key role in cancer cell growth and survival. One approach is to compare the amount of individual proteins in cancer cells with those in normal cells. More abundant proteins in cancer cells would be potential targets for treatment.

“Targeted therapies are often cytostatic (that is, they block tumor cell proliferation), whereas standard chemotherapy agents are cytotoxic (that is, they kill cells),” the center says.



Elizabeth

Elizabeth is thankful for the assistance of the Cornell Feline Health Center in providing the answer on this page.

**PLEASE
SHARE YOUR
QUESTIONS**

We welcome questions on health, medicine and behavior, but regret that we cannot comment on prior diagnoses and specific products. Please write CatWatch Editor, 535 Connecticut Ave., Norwalk, CT 06854-1713 or email catwatcheditor@cornell.edu.

COMING UP ...

❖
**WEIGHT LOSS
STRATEGIES**

❖
**WHAT MRIs
REVEAL**

❖
**INDOOR WINTER
SAFETY**

❖
LIVER DISEASE
❖

**Vomiting More Than Once
a Week Warrants an Exam**

Q My 13-year-old domestic shorthaired cat vomits two to three times a week, and I am concerned about his health. A friend of mine told me that it is normal for cats to vomit occasionally, but this seems more frequent than it should be. Can you provide any advice regarding what I should do?

A Thanks for getting in touch about this common problem in cats. It is true that it is not uncommon for healthy cats to vomit occasionally, but any cat who vomits more than once per week should be taken to a veterinarian for an examination. In some cases, this frequency of vomiting may not be associated with disease, but in many cases, it is.

Vomiting can be caused by many problems, ranging from obstruction of the gastrointestinal tract by hairballs or ingested string and other objects to metabolic diseases like kidney disease and hyperthyroidism, to inflammatory diseases like inflammatory bowel disease, to the ingestion of toxic substances such as plants, to cancer.

While the causes of this symptom are varied, a veterinarian will be able to narrow down potential causes by obtaining a thorough history (it's very useful for owners to document the frequency of vomiting in their cats) and performing a thorough physical examination and diagnostic testing. If a cat has been ingesting any potential toxins such as plants or household chemicals, owners should take this information (plant species, if known) along with any materials included in the packaging of the ingested products, if available, with them to the clinic.

Typical tests that may be recommended include a complete blood count (which characterizes the numbers and types of various blood-born cells such as red and white blood cells), a biochemistry (which quantifies the concentrations of a number of compounds such as electrolytes and enzymes in the blood), and a urinalysis

(which looks at the chemical, physical, and cellular composition of the urine).

Depending upon the results of these tests, other diagnostics such as X-rays, abdominal ultrasound, endoscopy (the passage of a small, flexible camera down the gastrointestinal tract) and measurement of thyroid hormone may be recommended. In some cases, advanced imaging such as magnetic resonance imaging and/or surgical exploration may also be considered.

It's important for owners to realize that long-term vomiting can cause loss of fluids and important electrolytes that may lead to serious illness in cats. Another issue with cats who are vomiting is that they will often not eat, and their metabolism is such that not eating for more than two days can cause serious health problems in and of itself.

The treatment of vomiting cats involves stabilization of the patient's fluid and electrolyte disturbances with fluid therapy, (given intravenously or subcutaneously), the feeding of a bland, easily digestible diet, nausea control and in some cases drugs to suppress vomiting and the treatment of the specific problem that is causing the vomiting if this can be determined.

The prognosis depends very much upon the cause. In many cases, affected cats can return to a good to excellent quality of life for long periods of time, but owners of cats with a history of vomiting are cautioned to be vigilant even once the initial bout of illness subsides.

I hope this is helpful and that this note finds you and your kitty doing well. It sounds like you should take him to his veterinarian for an evaluation as soon as possible.

Best of luck, and please keep us up to date on his progress.

—Sincerely, Elizabeth ❖



Ingestion of any of the many potentially poisonous plants such as lilies can cause vomiting.

CORRESPONDENCE

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