Cats are the most popular pet in the United States and much of northern Europe.1 Although 78% of owners consider their cats to be family members,2 many cats, particularly seniors, do not receive appropriate preventive care.3,4 With good care, many cats live into their late teens and some into their twenties; the percentage of older cats is increasing.5,6

Older cats can be classified as mature or middle-aged (7 to 10 years), senior (11 to 14 years), or geriatric (15+ years). In this article, as elsewhere, the word senior is used as a broad category for all older cats, unless otherwise noted.

The goals of the American Association of Feline Practitioners (AAFP) Senior Care Guidelines are to assist veterinarians to deliver consistent high-quality care to senior cats, promote feline longevity, and improve the quality of life of senior cats.

The Senior Cat Wellness Visit

Use open-ended questions (e.g., “What behavior changes have you noticed in the last few weeks?”) to obtain a comprehensive medical and behavioral history. Issues identified with such questions can raise the index of suspicion for early disease. The frequency of behavior problems increases with age.

Perform a thorough physical examination to enable detection of problems that may not be obvious to owners or discovered with laboratory testing. Make weight and body condition score (BCS) comparisons at each visit.

About These Guidelines

This report represents a consensus of current information compiled by the researchers and practitioners on the panel. These guidelines are based on the best research data, clinical experience, and technical judgments available at the time of preparation. While the guidelines are as accurate and comprehensive as possible, they are subject to change should new insights become available from additional research or technological updates.

The American Association of Feline Practitioners is a professional organization of practitioners and board-certified specialists who seek to raise the standards of feline medicine and surgery among practitioners.

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Examine apparently healthy senior cats every 6 months. More frequent evaluations may be needed once evidence of an age-related disease process is discovered.

Obtain a minimum database (MDB; TABLE 1) at least annually starting at age 7 to 10 years. Increase the frequency of the MDB as a cat ages. Rely on clinical judgment and discussions with the owner to determine the specific age and frequency of testing for each individual cat. Trends in the MDB can be significant, allowing detection of disease earlier than interpretation of a single sample.

Interpretation of the Urinalysis
Interpretation of the urinalysis, particularly the urine specific gravity and protein, is of particular importance in senior cats.

Assess proteinuria in the absence of urinary tract infection or gross hematuria. Dipstick protein measurement is inaccurate; the microalbuminuria test or urine protein:creatinine (UPC) ratio may be indicated for confirmation of proteinuria when the dipstick is positive or when the dipstick is negative and the cat has a disease known to promote proteinuria.

If the urine specific gravity is <1.035, repeat the measurement on a subsequent sample to evaluate persistence.

Conduct urine culture and sensitivity testing in patients with chronic kidney disease (CKD), diabetes mellitus, and hyperthyroidism. Bacterial infection can be present in the absence of an inflammatory sediment, particularly in patients with these conditions, or when the urine is sufficiently dilute to potentially cause misinterpretation of the urine sediment.

Blood Pressure Monitoring and Hypertension

Measure blood pressure at least annually in cats in the senior and geriatric age groups. Some also recommend routine blood pressure monitoring in mature cats to provide baseline measurements for future comparison.

Most hypertensive cats have an identifiable cause for their elevated blood pressure, but idiopathic increases in blood pressure may occur in a substantial subpopulation of older cats.

Obtaining an accurate blood pressure requires a consistent approach with attention to detail. Measure blood pressure with the owner present in a quiet room. Allowing the cat to acclimate to the room for 5 to 10 minutes can decrease anxiety-associated hypertension by up to 20 mm Hg.

Nutrition and Body Condition

Individualize diet recommendations depending on the BCS.

Increase water intake by offering canned food and multiple water dishes. Feeding small meals frequently increases nutrient availability.

Measure serum cobalamin (vitamin B₁₂) concentration in any cat with weight loss, diarrhea, or poor appetite that may have gastrointestinal disease. Deficiencies in essential B vitamins can occur with poor intake or intestinal disease.

### TABLE 1

<table>
<thead>
<tr>
<th>Minimum Database in Senior Cats</th>
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<tbody>
<tr>
<td>Test/Panel</td>
</tr>
<tr>
<td>Complete blood count (hematocrit, red blood cell count, white blood cell count and differential, cytology, platelets)</td>
</tr>
<tr>
<td>Chemistry screen (total protein, albumin, globulin, ALP, ALT, glucose, blood urea nitrogen, creatinine, potassium, phosphorus, sodium, calcium)</td>
</tr>
<tr>
<td>Urinalysis (specific gravity, sediment, glucose, ketones, bilirubin, protein)</td>
</tr>
<tr>
<td>Thyroxine</td>
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<tr>
<td>Blood pressure</td>
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ALP = alkaline phosphatase, ALT = alanine aminotransferase

Disclaimer
These guidelines are not exclusive. Other techniques and procedures may be available. The AAFP expressly disclaims any warranties or guarantees, express or implied, and shall not be liable for any damages of any kind in connection with the material, information, techniques, or procedures set forth in these guidelines.
Design or maintain a weight loss plan for obese cats. Obesity is a metabolic disease with hormonal, metabolic, and inflammatory changes; it is a risk factor for diabetes, osteoarthritis, respiratory distress, lower urinary tract diseases, and early mortality.11

When possible, identify and correct the underlying health problem in cats with unexplained weight loss. Cats in the senior and geriatric age groups often become underweight, resulting in a low BCS.

Dental Care
Oral cavity disease is an often-overlooked cause of morbidity in older cats and can contribute to a general decline in attitude and overall health.12 Age should not exclude the treatment of dental disease.

Anesthesia
Provide intravenous fluids and thermal support; monitor blood pressure and body temperature. Older cats require particularly attentive care and monitoring to prevent hypoxia, hypotension, and hypothermia.

Attend to comfort and handle gently, particularly for cats with osteoarthritis or muscle wasting.

Monitoring and Managing Disease
Chronic Kidney Disease
Stage and manage CKD patients using the International Renal Interest Society (IRIS) guidelines.13 The IRIS stage is assigned based on the serum creatinine concentration, UPC ratio, and blood pressure.

Monitor blood pressure. CKD is the leading cause of secondary hypertension.

Evaluate for proteinuria. A UPC ratio >0.4 warrants consideration of treatment.

Recommend feeding a “renal” prescription diet. Use of such diets has been shown to reduce uremic episodes, decrease phosphorus retention, prevent muscle wasting, and increase survival times.14–16

Hyperthyroidism
The total thyroxine (T₄) level is the appropriate screening test. However, the total T₄ level may be equivocal or normal in cats with a concurrent illness.17

Interpret free T₄ in conjunction with total T₄ and clinical signs in cats with normal total T₄ and suspected of having hyperthyroidism. The free T₄ level can be elevated in cats with nonthyroidal illness.17

Monitor affected cats for kidney disease and hypertension.

Hypertension may persist or develop after treatment. Even cats with a urine specific gravity >1.035 may have kidney disease that is unmasked after treatment of hyperthyroidism.18

Diabetes Mellitus
Although most cats are insulin dependent at the time of diagnosis, early glycemic control may lead to clinical remission. Of particular importance for senior cats is the effect of concurrent disease, such as chronic pancreatitis, on their health status.

Inflammatory Bowel Disease and Associated Disease
Inflammatory bowel disease, pancreatitis, and cholangiohepatitis may occur separately or together.

Rule out disorders causing digestion/absorption problems in euthyroid, nondiabetic cats with unexplained weight loss, vomiting, diarrhea, and increased appetite and thirst.

Include measurement of feline pancreatic lipase immunoreactivity (fPLI), feline trypsin-like immunoreactivity (fTLI), cobalamin (vitamin B₁₂), and folate concentration in the evaluation.19–22

Cancer
Weight loss in the absence of other identifiable causes is a common sign of cancer. Pursuing a diagnosis before the cat’s body condition deteriorates may affect the outcome.23 Critical components of cancer therapy include pain management, antinausea medication, and nutritional support.

Osteoarthritis
Osteoarthritis is a common but underrecognized condition in senior cats. Signs are often subtle behavioral and lifestyle changes that are mistaken for “old age.”24 Management is ideally holistic in scope, attending to both the cat and its environment.25

QuickNotes
With good care, many cats live into their late teens and some into their twenties.
Cognitive Disorders
Cognitive changes may result from systemic illness, organic brain disease, true behavioral problems, or cognitive dysfunction syndrome, a neurodegenerative disorder.

Rule out all medical illnesses to diagnose a primary cognitive disorder.

Complex Disease Management
Search for additional disease processes when expected therapeutic results are not obtained. The likelihood of developing more than one disease increases with age.

Be aware of issues surrounding multiple diseases in senior cats:
- Diagnosing one disease while missing another, or assuming a single disease is severe when signs are due to multiple diseases (e.g., concurrent hyperthyroidism and CKD), is common.
- Treatment of some diseases may affect concurrent diseases (e.g., hyperthyroidism and diabetes mellitus).

Quality of Life
Hand in hand with the management of chronic illness in senior patients comes the responsibility to control pain and distress, assess quality of life, and provide guidance to the owner in end-of-life decisions. The veterinarian must act as a patient advocate when counseling clients about decisions regarding use or continuation of treatment.

Hospice care patients and their owners benefit from examination every 2 to 4 weeks or as deemed necessary to assess comfort, quality of life, and quality of the relationship. Quality-of-life scales can aid tremendously in end-of-life decision making.

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References

QuickNotes
The likelihood of developing more than one disease increases with age.