

# FELINE CALICIVIRUS INFECTION

## BASICS

### OVERVIEW

- A common viral disease of domestic and exotic cats characterized by upper respiratory tract signs, ulcers in the mouth, pneumonia, and occasionally inflammation of the joints (known as “arthritis”), or a highly fatal, generalized (systemic) disease with bleeding and fever
- “Upper respiratory tract” (also known as the “upper airways”) includes the nose, nasal passages, throat (pharynx), and windpipe (trachea)
- “Lower respiratory tract” (also known as the “lower airways”) includes the bronchi, bronchioles, and alveoli (the terminal portion of the airways, in which oxygen and carbon dioxide are exchanged)

### SIGNALMENT/DESCRIPTION of ANIMAL

#### *Species*

- Cats

#### *Mean Age and Range*

- Young kittens greater than 6 weeks of age—most common
- Cats of any age may show clinical disease

### SIGNS/OBSERVED CHANGES in the ANIMAL

- May present as an upper respiratory infection with eye and nose involvement, as an ulcerative disease primarily of the mouth, as pneumonia, as an sudden (acute) inflammation of the joints (arthritis), as a generalized (systemic) disease characterized by bleeding, or any combination of these
- Sudden onset
- Generally alert and in good body condition
- Lack of appetite (known as “anorexia”)
- Discharge from the eyes or nose, usually with little or no sneezing
- Ulcers on the tongue, hard palate, lips, tip of nose, or around the claws; ulcers may occur without other signs
- Difficulty breathing (known as “dyspnea”) from pneumonia
- Sudden (acute), painful lameness
- Fever
- Evidence of generalized (systemic) bleeding

### CAUSES

- Calicivirus
- Numerous strains exist in nature

### RISK FACTORS

- Lack of vaccination or improper vaccination
- Multicat facilities
- Coexistent infections with other disease-causing agents (such as feline herpesvirus-1 or feline parvovirus)
- Poor air circulation (ventilation) in multicat facilities (such as catteries)

## TREATMENT

### HEALTH CARE

- Outpatient, unless severe pneumonia or bleeding occurs
- Clean eyes and nose, as needed
- Oxygen—for cases with severe pneumonia

### ACTIVITY

- Patients should be restricted from contact with other cats to prevent transmission of the calicivirus

### DIET

- No restrictions
- Special diets—perhaps to entice cats to resume eating
- Provide soft foods—if ulcers in the mouth restrict eating

## MEDICATIONS

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive.

- No specific medications to eliminate the virus (known as “antiviral drugs”) are effective
- Broad-spectrum antibiotics—may be indicated (such as amoxicillin); however, secondary bacterial infections of affected cats are not nearly as important as for cats with feline herpesvirus-1 infections
- Antibiotic eye ointments—to reduce secondary bacterial infections of the moist tissues of the eye (known as the “conjunctiva”)
- Appropriate pain medication—for transient pain from inflammation of the joints (arthritis); should be administered only under the direction of your pet’s veterinarian

## FOLLOW-UP CARE

### PATIENT MONITORING

- Monitor for sudden development of difficulty breathing (dyspnea) associated with pneumonia
- No specific laboratory tests

### PREVENTIONS AND AVOIDANCE

- All cats should be vaccinated at the same time they are vaccinated against feline herpesvirus-1; routine vaccination with either modified live virus (MLV) vaccine or inactivated vaccines should be done at 8 to 10 weeks of age and repeated 3 to 4 weeks later
- Breeding catteries—respiratory disease is a problem; vaccinate kittens at an earlier age, either with an additional vaccination at 4 to 5 weeks of age or with an intranasal vaccine at 10 to 14 days of age; follow-up vaccinations at 6, 10, and 14 weeks of age
- American Association of Feline Practitioners—classifies feline herpesvirus, feline parvovirus (panleukopenia), and feline calicivirus as core vaccines; vaccinate all cats with these three agents on the initial visit, after 12 weeks of age, and 1 year later; revaccinate for calicivirus every 3 years
- Vaccination will not prevent virus infection in a subsequent exposure, but will prevent serious clinical disease caused by most strains of calicivirus

### POSSIBLE COMPLICATIONS

- Pneumonia—most serious complication; can be life-threatening
- Secondary bacterial infections of the lungs or upper airways
- Ulcers of the mouth and the sudden (acute) inflammation of the joints (arthritis) usually heal without complications
- Generalized (systemic) bleeding disease may be fatal

### EXPECTED COURSE AND PROGNOSIS

- Clinical disease—usually appears 3 to 4 days after exposure to calicivirus
- Once antibodies appear, about 7 days after exposure, recovery is usually rapid; an “antibody” is a protein that is produced by the immune system in response to a specific antigen (in this case, the calicivirus)—when the body is exposed to the antigen, the antibody responds
- Prognosis excellent, unless severe pneumonia or generalized (systemic) bleeding disease develops
- Recovered cats—persistently infected for long periods; will shed small quantities of virus continuously in secretions from the mouth

## KEY POINTS

- Proper vaccination is very important in controlling development of clinical disease for most strains of calicivirus
- Modify the vaccination protocol in breeding catteries to include kittens before they become infected (often at 6 to 8 weeks of age) from a mother cat carrying the virus (known as a “carrier queen”)
- Calicivirus is relatively stable in the environment and is resistant to many disinfectants