### FELINE CALCIVIRUS

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<th>Animal Group(s) Affected</th>
<th>Transmission</th>
<th>Clinical Signs</th>
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<td>Felids - domestic and exotic</td>
<td>Direct (oronasal); indirect (fomites)</td>
<td>Acute and chronic respiratory forms (mainly upper respiratory infection); arthritic form (lameness); virulent systemic form</td>
<td>Variable</td>
<td>Symptomatic</td>
<td>Prevention of exposure to infected animals; vaccination; disinfection</td>
<td>No</td>
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**Fact Sheet compiled by:** Tara M. Harrison  
**Sheet completed on:** 2 May 2011; updated 7 September 2012  
**Fact Sheet Reviewed by:** Dalen Agnew; Annabel Wise; Roger Maes; Rebecca Smedley  
**Susceptible animal groups:** Domestic and exotic felids  
**Causative organism:** Feline calicivirus (FCV)  
**Zoonotic potential:** None  

**Distribution:** World-wide distribution is in all members of Felidae. Disease is most common in multi-cat environments (e.g., shelters, breeding facilities) and in feral cats. The latter has been implicated in spreading this virus to a zoological institution in North America. Reports of this infection have been made in other zoological institutions.  
**Incubation period:** Variable (2-10 days) and recovery typically in 7-10 days in the absence of complications.  

**Clinical signs:**  
Mild upper respiratory infection: ocular and nasal discharge with potential for secondary infections; oral ulceration is a common transient sign.  
Systemic infection: sloughing of oral mucosa (tongue), foot pads, and other mucosal epithelia; edema; pyrexia; ulcerative dermatitis; anorexia; jaundice; and death (mortality rates up to 60%); adult cats are more severely affected than kittens with virulent systemic infections.  
Lymphoplasmacytic gingivitis/stomatitis and arthritis (“limping syndrome”) are also observed in domestic cats.  

**Post mortem, gross, or histologic findings:**  
Respiratory form: oral ulceration; nasal and ocular discharge; conjunctivitis; rarely interstitial pneumonia.  
Virulent systemic form: cutaneous edema and ulceration associated with vasculitis; hepatocellular necrosis; interstitial pneumonia; rarely gastrointestinal ulceration; intestinal crypt lesions and pancreatitis have been reproduced experimentally.  
Lymphoplasmacytic gingivitis/stomatitis: proliferative/ulcerative lesions.  
Limping syndrome: acute synovitis with thickening of the synovial membrane and increased joint fluid.  

**Diagnosis:** Virus isolation (VI), RT-PCR, virus neutralization or ELISA on paired sera, FA, immunohistochemistry (IHC); always in conjunction with compatible clinical signs  

**Material required for laboratory analysis:** Oropharyngeal and conjunctival swabs of lesions for VI or RT-
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| PCR (use synthetic swabs); paired sera to quantitate virus neutralizing antibody titers; affected tissues for VI, RT-PCR, FA, or IHC. |
| Relevant diagnostic laboratories: Most diagnostic laboratories can identify. |
| **Treatment:** Supportive; prevention or treatment of secondary infections |
| **Prevention and control:** Prevention: Vaccination using Fel-O-Vax PCT + CaliciVax® vaccine to minimize severity of infection, particularly of virulent systemic strains; only killed vaccines should be used in exotic felids. There have been cases of suspected vaccine-induced calcivirus in tigers in the United States (personal communication, Harrison 2012). Control: limit access to feral cats that can carry and spread FCV and recovered animals can shed infectious virus for months to years. Proper cleaning as FCV can survive up to 14 days on inanimate objects. |
| **Suggested disinfectant for housing facilities:** 1:30 dilution of commercial bleach; potassium peroxymonosulfate; chlorine dioxide; substituted phenolic compounds; quaternary compounds formulated at appropriate concentration and pH. |
| **Notification:** None required |
| Measures required under the Animal Disease Surveillance Plan: N/A |
| Measures required for introducing animals to infected animal: Vaccination of non-exposed animal and monitoring of shedding status of both infected and incoming animal; preferably introduce incoming non-shedding animals to infected animal only after verification that the infected animal is no longer shedding infectious FCV. |
| Conditions for restoring disease-free status after an outbreak: Many felids can become chronic carriers so continue to monitor shedding through VI or RT-PCR. Once absence of shedding has been verified, continue to vaccinate infected animals as immunity is waning, and vaccinate susceptible animals to minimize clinical signs. |
| Experts who may be consulted: |
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