

## SDHS Canine Distemper Protocol

### Quick Reference Protocol Guide

**Distemper Suspect:** Often presents at a soft cough with oculonasal discharge that doesn't resolve after 7-10 days and may progress to pneumonia, or vomiting and diarrhea resembling parvovirus but repeatedly tests negative for parvo. Development of myoclonous or tremors of the head or forelimbs and generalized seizures occurs in about 10% of infected dogs and is usually associated with a worse prognosis. Animals with viral counts higher than 10 million (1,000 THOUS/SWAB) are at greater risk for developing neurologic signs, and a repeat PCR may be useful to help predict the length of shedding and overall prognosis.

**Once distemper is suspected, stop all movement in and out of exposed areas and immediately take action:**

1. Designate quarantine area(s) with proper signage and email the Disease Management Group with Animal IDs
2. Isolate the suspect(s) exhibiting clinical signs. For non-specific respiratory signs- submit a comprehensive CRD PCR Panel (Code 2524) to IDEXX by collecting two swabs from the nasal cavity and oropharyngeal area near the tonsillar crypt. For classic distemper signs including any neuro signs or known distemper exposure, submit the Quant PRC (code 3265) to IDEXX.
3. Trace all potentially exposed animals and provide Animal IDs to the Disease Management Group
4. Assess the risk level of all exposed and visually examine all of these dogs. All exposed, at-risk animals should be assigned a 2-week quarantine period starting from the last date of exposure to an infected animal.

**Low-Risk Exposed:** *includes all adult dogs with no clinical signs and history of at least 2 MLV DHPP vaccinations, given at least 2 weeks apart and the most recent being given at least 1 week prior to exposure*

- Examine for clinical signs, and if none observed process as usual. No need to quarantine.

**Medium-High Risk Exposed:** *Includes all puppies, adult dogs with no vaccine history, and adults with a history of only one MLV DHPP vaccine*

- Consider titer testing asymptomatic adult dogs only if the initial exposure was less than 3 days ago. If titer positive, release without quarantine. If titer negative, continue quarantine for full 14 days.
- Hold Quarantine for 14 days, then release with 1 negative Quant PCR taken on day 14
- If still asymptomatic after 2 weeks of quarantine, submit individual Quantitative PCRs (code 3265) to IDEXX
  - Pooled samples may be considered for multiple exposed adult dogs with no symptoms. Include up to 4 swabs in one tube to save cost. Puppies should be confirmed with individual PCR tests. If housing multiple dogs together in quarantine and all have a negative PCR, release as long as there are no clinical signs
  - If a dog has a positive PCR, isolate the positive and restart a 2 week quarantine for any at-risk exposed to that dog. Continue protocol for confirmed positive distemper and email the disease management group.
- If an exposed animal is already adopted, courtesy call for wellness check and if any concerns reported, offer a recheck exam +/- PCR testing
- If reclaim or RTO is possible for exposed animals, conduct an in-person consult to discuss home quarantine. Offer recheck exam and booster in 14 days.

**Confirmed Positive Distemper:** *Min 14 day Isolation and 2 consecutive negative PCRs 1 week apart to clear*

- If the initial PCR is positive, email the Disease Management Group, update the animal status and condition to UU for Canine Distemper Virus, then submit a case review to the hospital director and campus director.
- Any at-risk exposed dogs continues a 2 week exposure quarantine starting from the date of isolation away from the infected dog.
- If initial PCR is positive but results are equivocal due to possible vaccine interference (low-intermediate viral load):
  - Consider positive until proven otherwise. Quarantine without boosters, and repeat Quant PCR in 1 week
    - If 2nd PCR negative with no clinical signs, booster and release
    - If 2nd PCR positive, consider true infection

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### Detailed Disease Fact Sheet

#### Treatment

There is no specific treatment for CDV. Treat symptomatically with broad spectrum antibiotics, fluid therapy, anti-diarrheal meds, dewormers, antiemetics, and appetite stimulants as needed. Once outpatient care is possible, consider sending to foster.

#### Vaccination

Booster vaccination with DHPP can and should continue for puppies in distemper quarantine as long as the timing does not interfere with repeat testing. Vaccine interference is possible with PCR testing if it has been less than 7 days between vaccination and testing. Parvo only vaccines may be considered as an alternative during distemper quarantine to help eliminate the possibility of distemper vaccine interference with PCR testing. Distemper positive dogs are especially susceptible to parvo and other nosocomial infections due to the immunocompromising effect of CDV. A dog may be considered fully-vaccinated if they are older than 6 months old and have received at least 2 MLV DHPP vaccinations, given at least 2 weeks apart and the most recent being given at least 1 week prior to potential distemper exposure.

#### Fostering

Medically stable CDV exposed and CDV positive dogs should be routed to foster when possible to reduce the risk of spread to the general shelter population. If neuro signs are present or viral counts are at/near 10 million, it may be prudent to refrain from sending to foster until a repeat PCR can be obtained to determine if the viral load is increasing or decreasing. CDV Foster assignments may be weeks to months long depending on the length of viral shedding. CDV Fosters will need to review and sign the CDV Foster Fact Sheet and Agreement Form upon taking home a distemper dog. The infected or exposed foster dog is to remain isolated in the home with no dog-to-dog interaction other than resident adult dogs who are fully vaccinated.

#### Testing and Interpretation

The IDEXX Comprehensive CRD PCR Panel (Code 2524) is a more costly test and should be used when only respiratory signs are present to rule out other infectious respiratory diseases, particularly Strep zooepidemicus and Canine influenza virus. The IDEXX CDV Quant PCR (code 3265) is the preferred test when distemper virus is highly suspect and/or there is known exposure to CDV. Sample collection requires the use of PPE and the tester must obtain two swabs from the nasal cavity and oropharyngeal area near the tonsillar crypt. To save on cost, wait until an animal is no longer symptomatic to begin serial PCR testing in CDV recovering dogs. Testing may be scheduled every 2-3 weeks for high viral counts. Once a CDV dog tests negative, repeat the Quant PCR in one week. Two consecutive negative (0 THOUS/SWAB) results at least one week apart are required to clear and consider no longer contagious.

Titer testing may be useful if the exposure window is less than 3 days. After this time frame, a positive titer cannot accurately be differentiated from a true infection. Maternal antibodies may interfere with titer results so this is not recommended for puppies under 6 months. Do not titer test if an animal is exhibiting any signs of distemper.

IDEXX CDV Quant PCR results that are intermediate or low positive reported as “vaccine strain” should be considered a true positive until proven otherwise with repeat testing in a minimum of one week to confirm negative.

#### Quarantine vs Isolation

Confirmed positive and positive suspects should be housed in an isolated room away from other dogs. Asymptomatic exposed animals may share a room in quarantine. If designated quarantine space is unavailable, consider housing with well-vaccinated adults only (no play-yards, no movement in/out). Since CDV may be spread through aerosols, a dog in the same room at the same time as an infected dog may be considered exposed.

#### The Recovered CDV Patient

Fully recovered CDV negative dogs tend to do very well. Dated accounts of spontaneous old-dog-encephalitis have not been proven to be linked with recovered distemper virus. A mild myoclonus that develops during distemper infection may persist long-term or indefinitely, but rarely affects overall quality-of-life and may not require any treatment. Dogs who fully recover from CDV may develop partial or lifelong immunity to CDV, but should still continue to receive routine vaccinations for other canine infectious diseases.