

# Feline Coronavirus PCR on effusion samples and CSF

## **Effusion samples (peritoneal and Pleural effusions):**

PCR detection of Feline Coronavirus in effusion fluids has a reported sensitivity of 72-100%. Several studies have reported a 100% specificity, but some studies have detected Feline Coronavirus in effusion fluids from cats with non FIP disease. This has been reported variably in 3-12% of control cats in these studies, usually with a low level of virus present.

The presence of Feline Coronavirus RNA, particularly in high levels, in an effusion that also has cytological and biochemical features suggestive of FIP, is highly supportive of a diagnosis of FIP.

### *Collection guideline:*

**Fluid in EDTA. Minimum volume of 0.5ml.**

## **Mesenteric lymph node aspirates:**

PCR for feline Coronavirus in mesenteric lymph nodes should only be performed when there is a strong index of suspicion for FIP based on clinical presentation and laboratory diagnostic tests. This should not be used as a screening assay in healthy cats.

A controlled study of Feline Coronavirus RNA detection in FNAs collected from the mesenteric lymph nodes from 20 cats with FIP without effusions reported a sensitivity of 90% and specificity of 96%.

### *Collection guideline:*

Add 0.2 - 0.5 ml of saline into an EDTA tube.

Under ultrasound guidance, aspirate the mesenteric lymph node(s) using suction and add to the EDTA tube. Redraw the fluid from the EDTA tube through the needle and gently return into the EDTA tube. Repeat this process if necessary – the sample in the EDTA tube should be cloudy.

## **CSF:**

Two studies have evaluated feline Coronavirus PCR on CSF samples and reported 100% specificity and a sensitivity of 30- 41.2%, however, not all cats included in these studies had neurological signs. When only cats with neurological and ophthalmological signs were considered the sensitivity of PCR was 86%. The same group found similar findings in a larger number of cats, where the sensitivity of PCR was only 30% when both neurological and non-neurological FIP cases were included but rose to 83.3% when only cats with neurological signs were included.

### *Collection guideline:*

**CSF in EDTA. Minimum volume of 0.2ml.**

**Reference:** Feline Coronavirus & Feline Infectious Peritonitis ABCD1 Guidelines 2022