

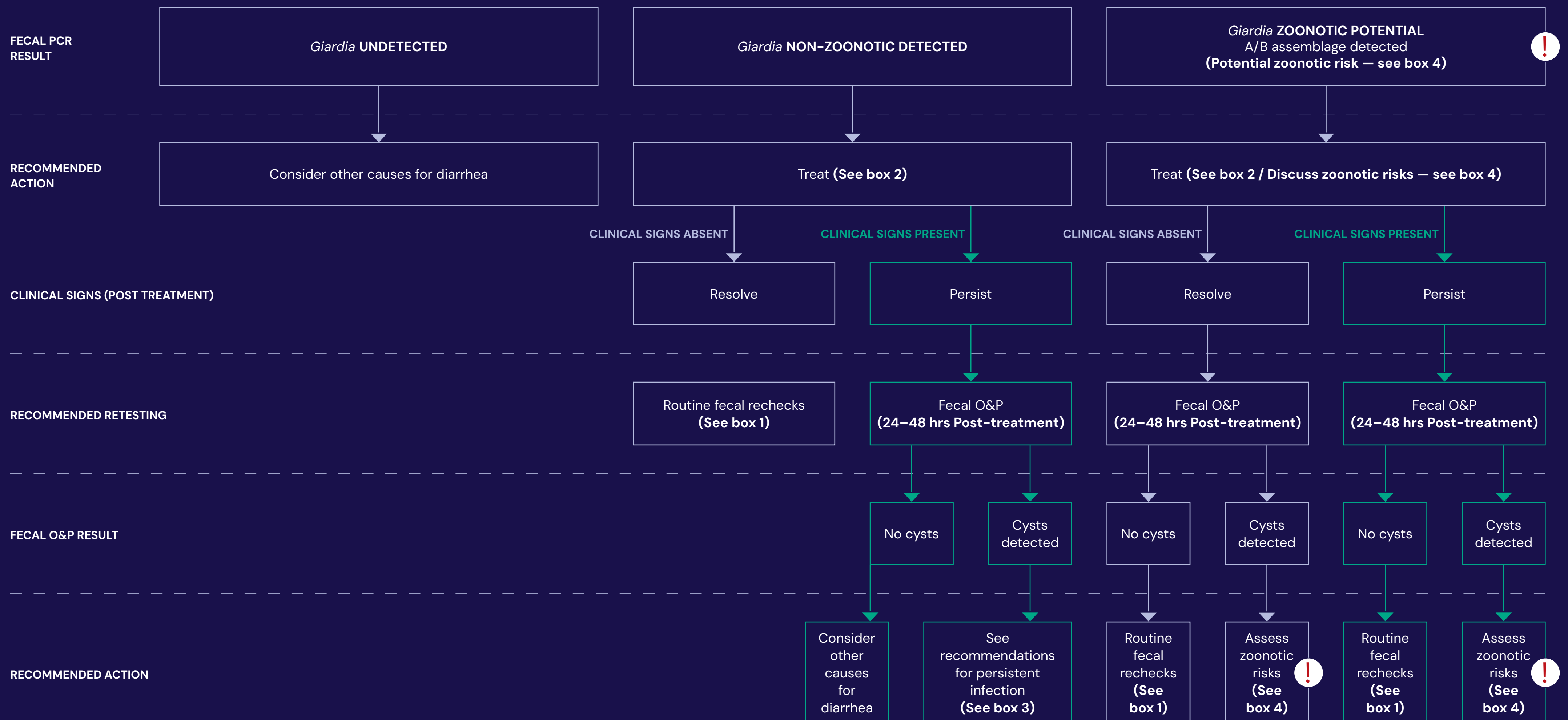
# KeyScreen® GI Parasite PCR *Giardia duodenalis* Algorithm

## Clinical Decision-Making Workflow

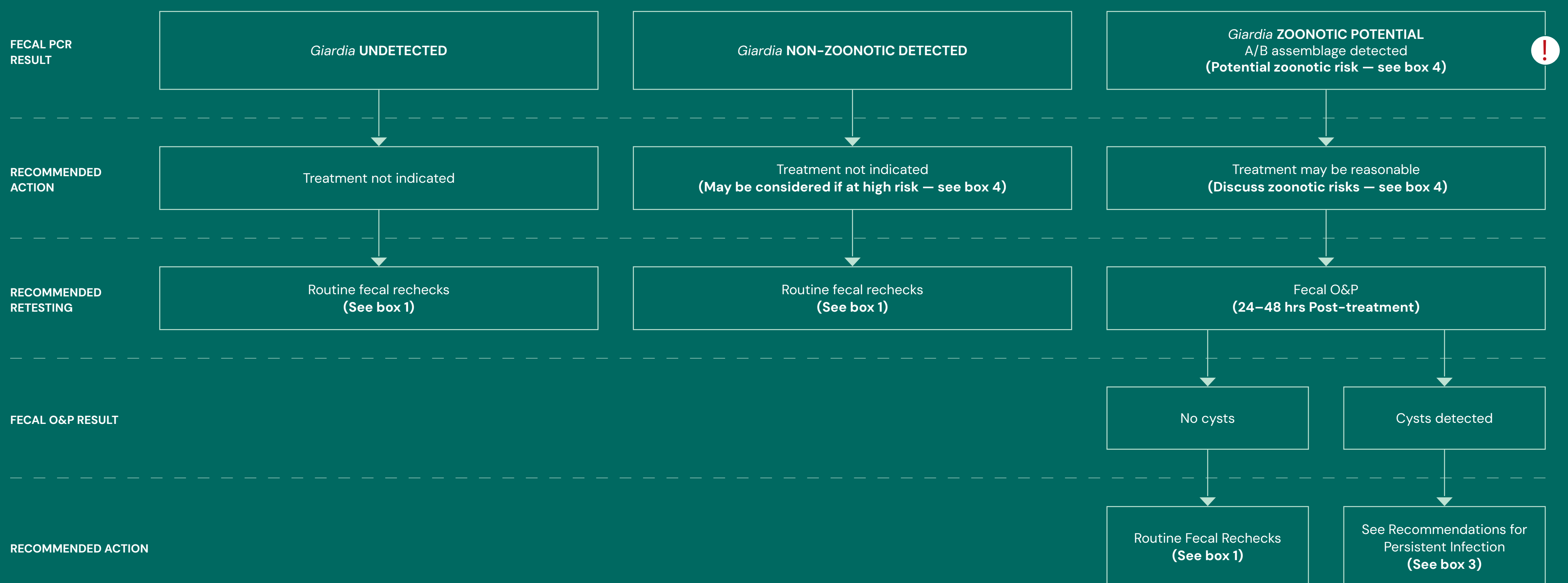
Pet signalment, history (clinical, treatment), test results, risk, and pet-owner specific factors will inform individual case treatment decisions. Consideration should be given to appropriate antimicrobial use/stewardship and One Health.

Antech Consultation Services (1-800-872-1001, option 2) is available to provide case support.

### Pet evaluated for clinical signs (typically diarrhea) & *Giardia* detected



### Pet evaluated for wellness/preventive fecal screening & *Giardia* detected with NO clinical signs



#### 1: Fecal Testing

The KeyScreen® GI Parasite PCR panel detects 20 GI parasites and markers for zoonotic potential *Giardia* and hookworm treatment resistance. It can be used for routine monitoring/screening and for patients with clinical signs, e.g., diarrhea.

##### Routine endoparasite monitoring (wellness/ screening):

- The Companion Animal Parasite Council (CAPC) recommends fecal testing 4 times/year in the first year of life and twice/year for adult pets.
- The Canadian Parasitology Expert Panel (CPEP) recommends fecal testing twice/year in the first six months of life, and 1 to 2 times/year for dogs over 6 months. Risk factors (Box 4) may impact (increase) advised testing frequency.

##### Retesting for *Giardia*:

- At 24 to 48 hours, after completion of appropriate treatment of *Giardia* (Box 2), fecal testing by centrifugal flotation (O&P) can be used to evaluate for persistent shedding of *Giardia* cysts.
- Note, PCR is highly sensitive, some pets may continue to detect positive during this timeframe.

#### 2: Management/Treatment

##### Treatment goal:

- Improvement of clinical signs (diarrhea)

##### Pharmaceutical treatment:

- Drug and other treatment recommendations: [capcvet.org/guidelines/giardia](http://capcvet.org/guidelines/giardia)

##### Non-pharmaceutical treatment:

- Supportive care
- Dietary management (higher-fiber, probiotics)
- Bathing of patient to remove infectious cysts from hair coat, perineum
- Picking up feces immediately to reduce environmental contamination
- Cleaning of environment
- Disinfection if possible/practical

#### 3: Persistent *Giardia*

##### Pets may have persistent clinical signs or infection (despite appropriate treatment) due to:

- An alternate underlying disease as a cause of (or contributor to) clinical signs, e.g., chronic enteropathy or neoplasia
- Co-infection with another pathogen
- Environmental re-infection
- Compliance concerns, e.g., medication, dosing, duration
- Immunosuppression
- Drug resistance

To help rule out environmental re-infection, re-testing (centrifugal fecal flotation, O&P) at 24–48 hours post-treatment (Box 1) can be considered.

Repeating treatment for patients with clinical signs and persistent cysts detected can be considered.

#### 4: Risk Assessment Zoonotic Potential

##### Management is guided by individual pet risk factors, including contact with or exposure to:

- Young children, the elderly, immunocompromised, or pregnant individuals
- Other household pets
- Highly contaminated environments, e.g., kennels, dog parks etc.
- Environments shared with wildlife

Additional risk assessment resources at CPEP: [research-groups.usask.ca/cpep](http://research-groups.usask.ca/cpep)

##### Zoonotic potential *Giardia*:

- If zoonotic potential *Giardia* (A or B assemblage) is detected, pet-owners should be informed of potential zoonotic risks.
- If the A or B assemblage is not detected, pet-owners can be assured that zoonotic risk is low.