



VetExpert rapid tests

Diagnostics
Medicines
Nutrition
Cosmetics



What is a rapid test ?

Immunochromatography assay (ICA), also namely lateral flow test – a simple to use **diagnostic device** used to confirm the **presence or absence** of a target analyte in liquid sample (qualitative method)

The most commonly known type of lateral flow rapid test strip is the pregnancy test

Test based on a highly specific interaction between antigen (Ag) and antibody (Ab) which formed immunocomplex (antigen-antibody complex)

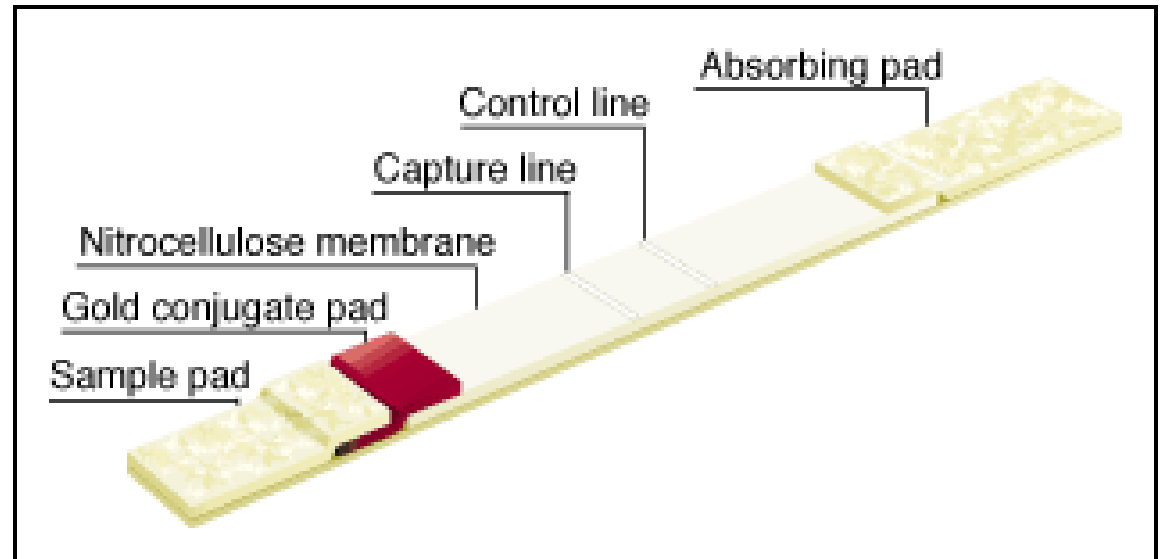
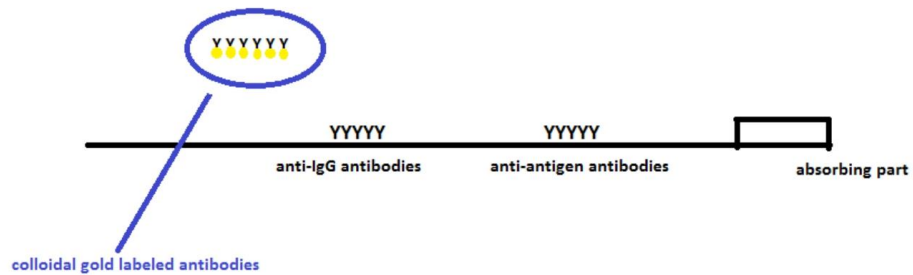
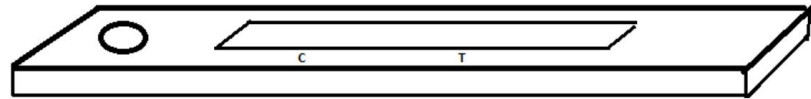
- **Sensitivity** (also called the **true positive rate, the recall**) - measures the proportion of actual positives that are correctly identified as such
→ expresses the ratio of positive results to true positive results; the ability to detect the disease

High sensitivity = low risk of false positives results

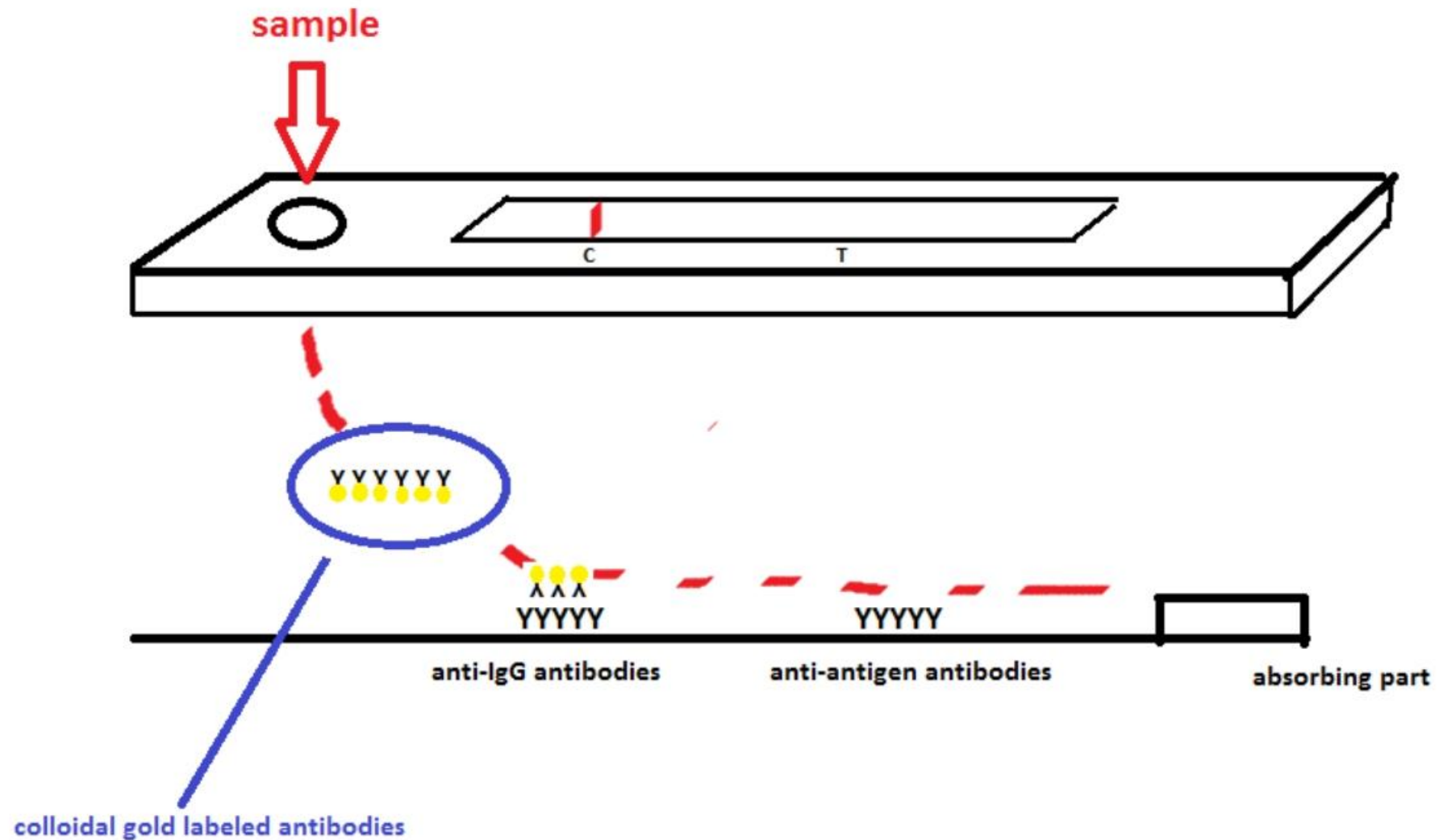
- **Specificity** – (also called the **true negative rate**) measures the proportion of actual negatives that are correctly identified as such
→ expresses the ratio of negative results to true negative results, the ability to not detect the disease if it is not there

High specificity = low risk of false negative results

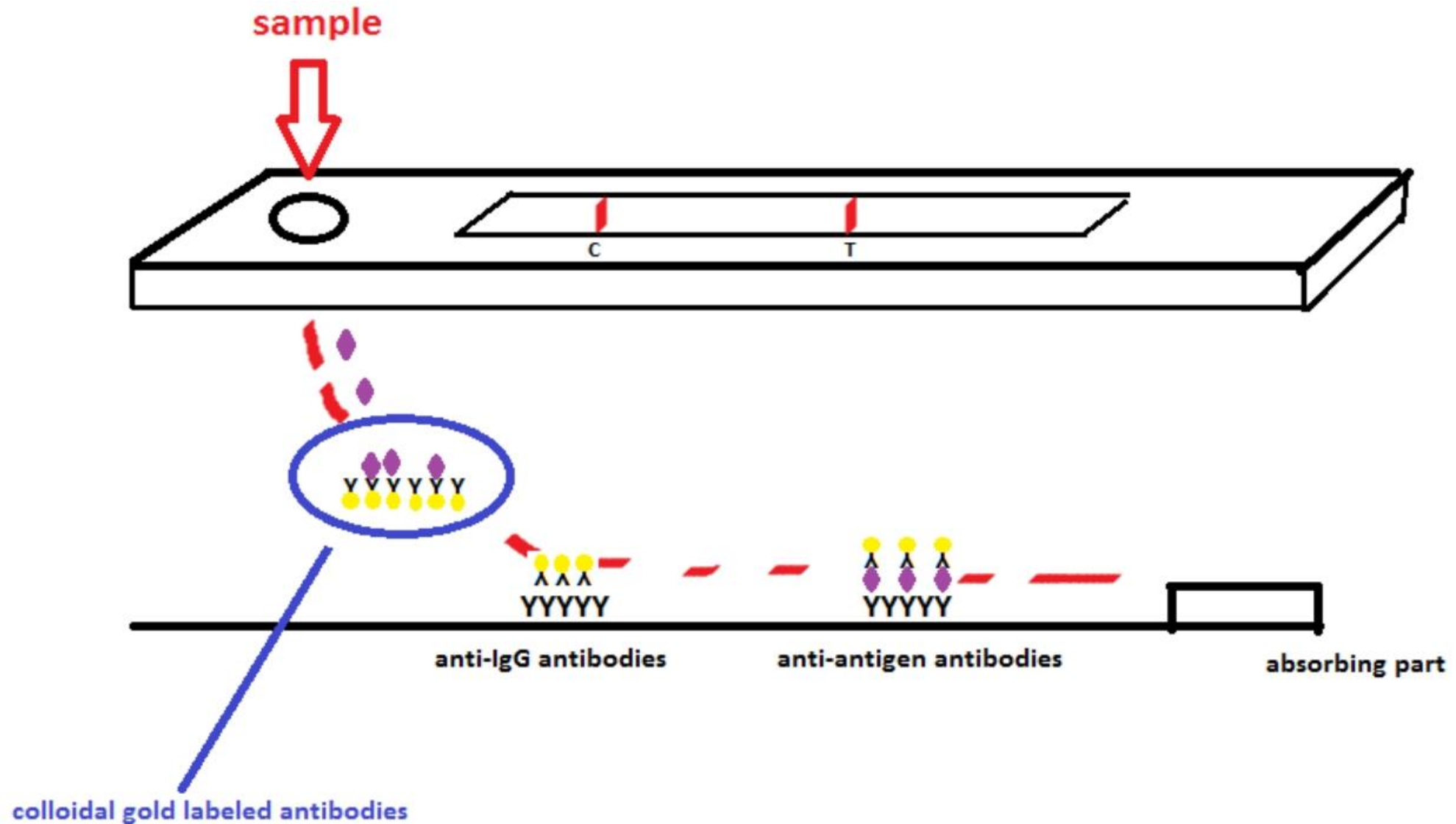
What's inside



Negative result



Positive result





Immunochromatography

- **Quality test**– weakly stained line is also positive
- Possibility to detect antibody or antigen
- Quick result, diagnose in 10-15 minutes
- Based on the labeled monoclonal antibodies
- Store at 2-30 degrees

2 TYPES OF TESTS

-to detect the antigen (infectious agent) - Ag

(CAV, CCV, CPV, CDV, Giardia, FCoV, FeLV, FPV, Heartworm, Cryptosporidium, BoviD-4)

TEST SHOULD BE PERFORMED USING BLOOD, FECES, SWAB, URINE

-detecting antibody (the body's response) - Ab

(Anaplasma, C.brucella, E.canis, FIV, Leishmania, Lyme, Total IgE, Toxoplasma)

TEST SHOULD BE PERFORMED USING SERUM, PLASMA OR WHOLE BLOOD

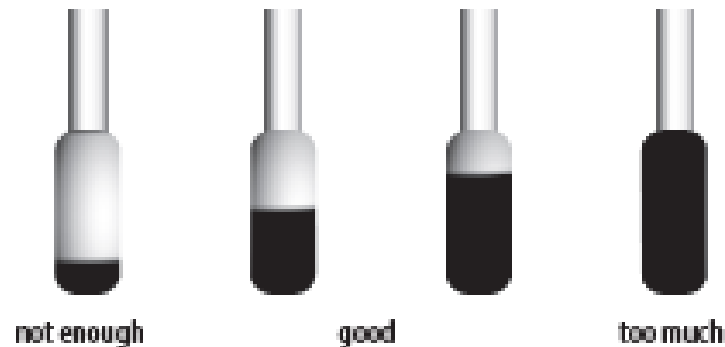
- mixed: CaniV-4 – diagnostics of vector-borne disease



FREQUENT PROBLEMS

More often, the technical problem is with **Ag** detection tests, why?

- too much feces/blood → "clogging" of the band → the test does not take off
- bad picking moment, there are no diseases there, eg parvovirus - CPV, leukemia - FeLV
- post-treatment examination





FREQUENT PROBLEMS

Antibody detection tests:

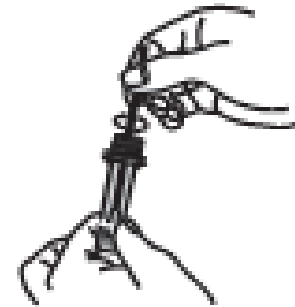
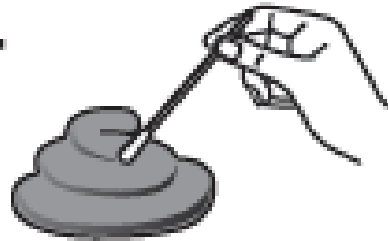
- it takes time to appear antibodies in the blood; this time often (coincides) with the appearance of disease symptoms
- it should not be done after vaccination
- color of the belt:
 - Keep in mind that even a thin line is a positive result. A thin line indicates fewer antigens / antibodies. However, often in infectious diseases "weak band" is still a big problem.

Test procedure

[Test Procedure]



collect the samples from canine feces using the swab



insert the swab into the sample collection tube and stir the swab at least 10 times

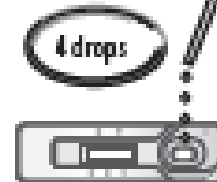


discard the swab while squeezing the swab against the wall of tube



take the supernatant with disposable dropper provided

add 4 drops into the sample well of test device



Interpret test results at 5-10 minutes.



CANIV – 4

Vector-borne diseases



An increasingly serious problem in Poland, global warming plays an important role.

Transmitted by mosquitoes:

- *Dirofilaria immitis* - the test detects the **antigen**.

Transmitted by ticks:

- *Borrelia burgdorferi* – Lyme disease
- *Anaplasma spp.*
- *Ehrlichia canis*

The test detects the **antibodies**.





- **Caniv-4** – vector-borne diseases: antigen of *Dirofilaria immitis*, antibodies to: *Ehrlichia canis*, *Anaplasma phagocytophilum/platys*, *Borrelia burgdorferi*
 - ✓ Clinical symptoms: fever?
 - ✓ Lab symptoms: thrombocytopenia, anemia
 - ✓ Tick-borne: it is difficult to differentiate between *E.canis*, *Anaplasma*– similar symptoms – varying degrees of thrombocytopenia and anemia. *Borrelia* and *Anaplasma* – arthritis (more frequently found at later stages). Also in humans!
- Dirofilariasis = mosquitoes – similar symptoms – thrombocytopenia, anemia. The test only detects the *Dirofilaria immitis* (heartworm)





Caniv-4



Dirofilariosis: test detects 14kDa antigen

Gives possibility to detect forms of juvenile and adult males and females.

No risk of false-negative tests if:

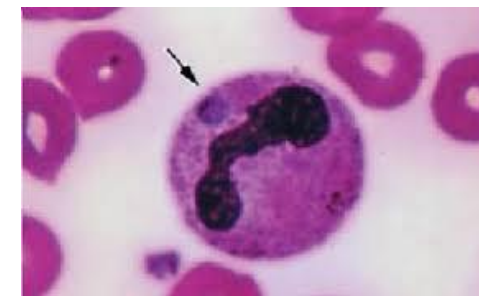
- only males invasion
- immature female

antigen is possible to detect at the beginning of the invasion!

The test is not calibrated to detect *D. Repens*



Ehrlichia canis



- **Ehrlichiosis** is an infectious, multiple organ disease that affects humans and animals and includes symptoms such as a reduced platelet count (thrombocytopenia)
- It is caused by a group of bacteria previously classified within the *Anaplasmatidae* (formerly *Rickettsiaceae*) family and the genus of Ehrlichia.
- Intracellular microorganism can be located (attacking) mainly in **monocytes and neutrophils**
- If treated quickly, the disease ends in full recovery. If not, after 4-6 weeks it enters a subclinical or chronic phase, whose manifestation may be mild, with symptoms of depression and weight loss, or severe, with high fever, persistent bleeding from the mucous membranes, severe anemia, leukopenia, and thrombocytopenia. Heavy ehrlichiosis may lead to hypotensive shock and death.
- In general, such symptoms are observed after 60-120 days from the moment of infection. Because of the impaired immune response of the affected animal, chronic ehrlichiosis is also frequently accompanied by secondary bacterial infections. Some of those affect the skin of limbs, which may be covered with sores.

PLEASE NOTE! The same tick as Babesia!

Erlichiosis: test detects antibodies against E.canis

The antibodies appears from day **7**, but in some dogs appears after **28 days** - in these cases test may give false negative result.

After treatment Ab level decrease after 3-9 months

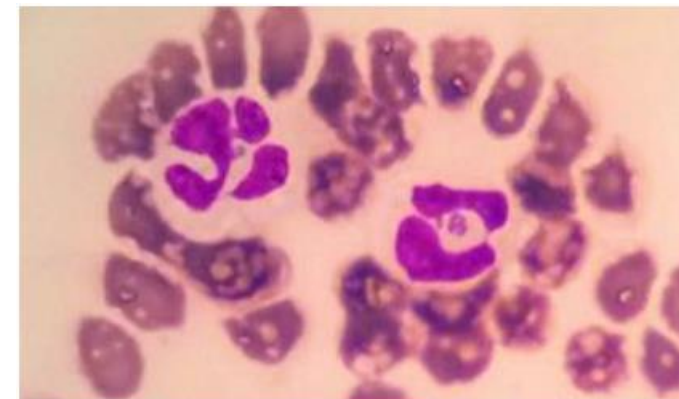
The test result should be confirmed PCR.

Another method is to find the morula in the cytoplasm of neutrophils, but it's difficult: the morula in neutrophils can be observed only during first three days.

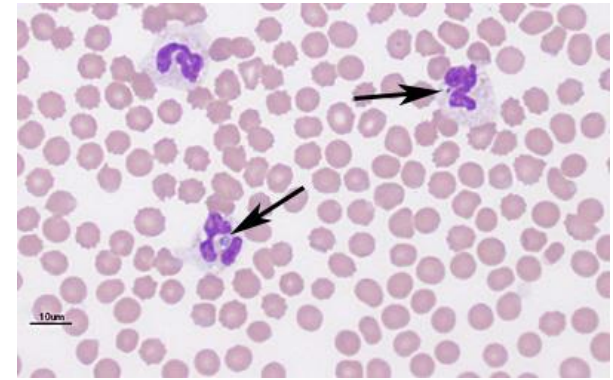
Most sensitive breed: German Shepherd!

Asymptomatic dogs are the source of the spread of disease!

		IFA			Diagnostic Sensitivity	Diagnostic Specificity
		+	-	Total		
VetExpert® Rapid E.canis	+	110	0	109	98.2%	100%
	-	2	296	299		
	Total	112	296	408		

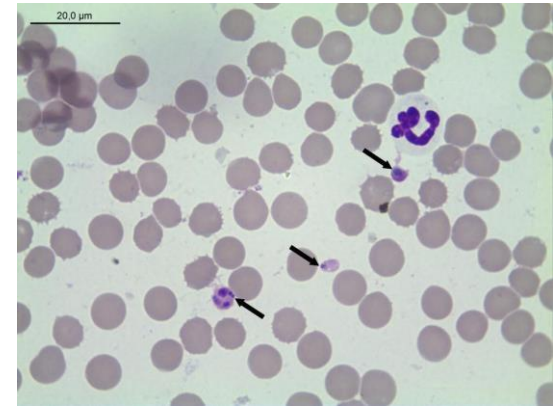


Anaplasma phagocytophilum



- The disease occurs all around the world. The pathogens are most often found in horses and dogs, but also, with lower frequency, in cattle, sheep, goats, cats, foxes, lamas, deers, and people. In Poland, the incidence of granulocytic anaplasmosis in animals has recently been on the rise.
- The disease is transmitted by **Ixodes spp.** ticks.
- Clinical symptoms are non-specific. Initially, patients show apathy, weakness, and a high fever. In acute anaplasmosis, weight loss, bleeding from the mucous membranes, and enlarged liver, spleen, and lymph nodes can also be observed. Other symptoms may include vomiting, diarrhea, arthritis, arrhythmia, quickened heart rate, as well as thrombocytopenia, anemia, lymphopenia, monocytosis, leukopenia, leukocytosis, hyperglobulinemia, hypoalbuminemia, increased liver enzyme activity, and hyperbilirubinemia.

Anaplasma platys



- The exact natural transmission route of the disease has not yet been determined, but it is believed to involve ticks and other arthropod vectors. In the experimental setting, the incubation period lasts between 8 and 15 days.
- The infection leads to cyclical thrombocytopenia, and the largest bacteria count can be observed during the first spike of the bacteriemia; in subsequent cycles, only c. 1% of platelets are infected, while episodes of thrombocytopenia remain at a roughly similar level. The reduction in platelet count diminishes over time. The most frequent clinical symptoms include fever, drowsiness, pale mucous membranes, skin hemorrhages. The disease may also be asymptomatic.

Anaplasmosis - test detects antibodies against antigen - **MSP (major surface protein)**, does not distinguish between *A.phagocytophilum* and *A.platys*.

Level of antibodies after the disease can persist for a lifetime!

The antibodies are detectable 2 weeks after infection.

If the test gives a positive result and the dog shows disease symptoms, treatment is necessary.

The test result should be confirmed by PCR

Sample: Canine sera		IFA Test		Total
		Positive	Negative	
VetExpert	Positive	25	2	27
	Negative	1	317	318
	Total	26	319	345
Sensitivity		96.1% (25/26)		
Specificity		99.3% (317/319)		



Boreliosis (Lyme disease) - test detects antibodies against *Borrelia burgdorferi*

- Among European countries, the biggest problem is in Poland, Slovakia, Slovenia.
- Dogs are usually asymptomatic.
- Dogs can be a reservoir of the disease!
- The most sensitive are Labradors, Golden Retrievers, Rottweilers.
- In dogs there is no erythema migrans.

Lyme disease is a diagnostic and therapeutic challenge because of the high expression of surface proteins (Lyme disease is a diagnostic and therapeutic challenge because of the high expression of surface proteins)



➤ **In infected dogs, Borrelia proteins have been quite well studied:**

- OspC protein – acute-phase protein, disappears after 4-5 months even though the infection continues
- C6 protein – appears around day 30 and persists until recovery
- OspF protein – appears around day 42 and persists until recovery

The VetExpert test detects the **antibodies to OspF**.

➤ **Treatment monitoring?**

The antibody count falls after 3-4 months of effective treatment

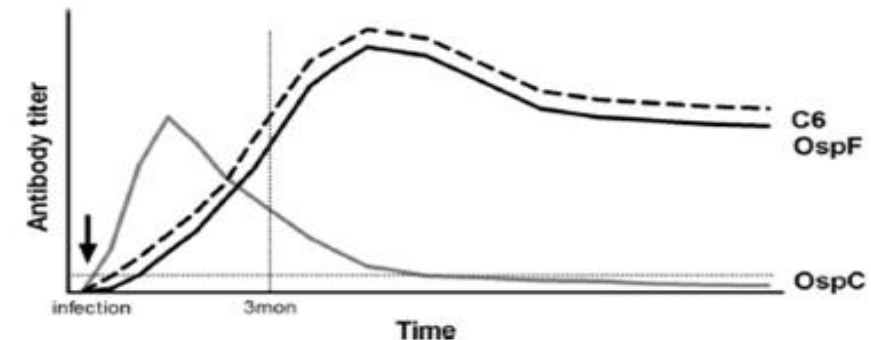


FIG 4 Summary of experimentally confirmed and projected values based on canine patient sera for antibodies to OspC, OspF, and C6 antigens of *B. burgdorferi* during early and late infection. The data were obtained by multiplex analysis. The lines for the first 3 months after infection are based on the multiplex results from experimentally infected dogs. After 3 months the lines are projected from the data obtained from patient serum. The horizontal dotted line shows the cutoff value for the multiplex assay. The vertical dotted line indicates 3 months after infection.

How to use:

- 1) Perform the test when clinical symptoms set in and repeat after 40 days?
 - ✓ Provides boreliosis detection
 - ✓ Reduces the risk of an immunity gap in the case of *E.canis*
- 2) Perform the test at least once a year for every dog regardless of symptoms?
 - ✓ High risk of asymptomatic carrier status
 - ✓ Diseases that pose danger to humans



Caniv-4 in disease monitoring antibodies



Pathogen	Detectable from:	Repeat test:
Anaplasma spp.	day 14	Antibodies may persist for a lifetime
Borrelia burgdorferi	> day 40	after 3-4 months
Ehrlichia canis	day 7 (in some dogs, day 28)	After 3 – 9 months (depending on the individual case)

Caniv-4 vector-borne diseases



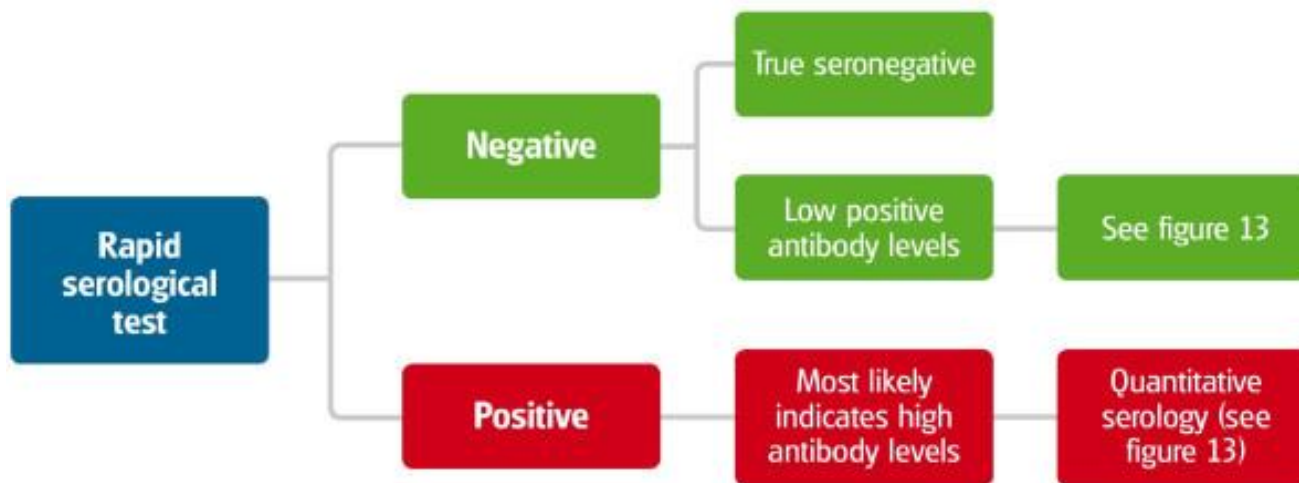
Pathogen	vector	Transmission time	Clinical symptoms	Lab symptoms
Anaplasma phagocytophilum	Ixodes spp.	36-48 hours	Fever, weakness, diarrhea, vomiting, joint pain	Moderate thrombocytopenia, autoimmune hemolytic anemia
Anaplasma platys	Rhipicephalus sanguineus	36-48 hours	Fever	Cyclical thrombocytopenia
Borrelia burgdorferi sensu lato	Ixodes spp.	~24 hours	Often subclinical, fewvr, appetite loss, joint pain, weight loss	Thrombocytopenia, hyperglobulinemia
Ehrlichia canis	Rhipicephalus sanguineus, Ixodes ricinus, Dermacentor spp. (Babesia canis)	< 3 hours	Often subclinical, fever, weight loss, enlarged lymph nodes, splenomegaly	Thrombocytopenia, non-regenerative anemia, hyperglobulinemia, azotemia, increased APTT, bone marrow hypoplasia or aplasia
Dirofilaria immitis	Aedes, Anopheles, Culex mosquitoes	Invasive larvae transmitted when the skin is pricked	Often subclinical, coughing, quickened breath, pulmonary embolism, ascites	eosinophilia, thrombocytopenia, leukocytosis, hyperglobulinemia, radiogram abnormalities

Leishmaniasis



- also **vetor-borne disease**
- transmitted by female **sand flies** belonging to genera *Lutzomyia* and *Phlebotomus*
- dogs are main reservoir of *Leishmania infantum*
- many **mammalian species** can be infected, including humans
- **clinical signs** may be present from three months to several years after dogs become infected
- causes two types of diseases in dogs: a cutaneous (skin) reaction and a visceral (abdominal organ) reaction → also known as black fever, the most severe form of leishmaniasis
- the course of infection may be different from one individual dog to another, ranging from spontaneous cure to acute evolution that leads to death
- due to the large number of asymptomatic dogs and the absence of pathognomonic clinical signs, the diagnosis depends on laboratory support
- vaccination associated with the use of topical insecticides is undoubtedly the most effective form of prevention and control of the disease

- test detects *Leishmania infantum* antibodies and should be used as a screening diagnostic method
- the antibodies are detectable 6 months after infection
- positive results should be confirmed by quantitative serology



Leishmania

Pathogen	Vector	Transmission time	Clinical symptoms	Laboratory symptoms
<i>Leishmania infantum</i>	„sand flies“ <i>Phlebotomus</i> and <i>Lutzomyia</i>	At the moment bites	Often subclinical, various skin lesions, lymphadenopathy, joint pain	nonregenerative anemia, thrombocytopenia, hiperglobulinemia
<i>Anaplasma phagocytophilus</i>	<i>Ixodes spp.</i>	36-48 hours	Fever, weakness, diarrhea, vomiting, joint pain	Moderate thrombocytopenia, IMHA
<i>Anaplasma platys</i>	<i>Rhipicephalus sanguineus</i>	36-48 hours	Fever	Cyclic thrombocytopenia
<i>Borrelia burgdorferi sensu lato</i>	<i>Ixodes spp.</i>	~24 hours	Often subclinical, fever, loss of appetite, joint pain, weight loss	Thrombocytopenia, hiperglobulinemia
<i>Ehrlichia canis</i>	<i>Rhipicephalus sanguineus</i> , <i>Ixodes ricinus</i> , <i>Dermacentor spp.</i>	< 3 hours	Often subclinical, fever, weight loss, lymphadenopathy, splenomegaly	Thrombocytopenia, nonregenerative anemia, hiperglobulinemia, azotemia, prolonged aPTT, hypoplasia or aplasia of the bone marrow
<i>Dirofilaria immitis</i>	Mosquitoes: <i>Aedes</i> , <i>Anopheles</i> , <i>Culex</i>	At the moment bites	Often subclinical, cough, tachypnea, pulmonary embolism, ascites	osinophilia, thrombocytopenia, leukocytosis, hiperglobulinemia, changes in the chest radiograph



Feline leukemia virus (FeLV)

Feline immunodeficiency virus (FIV)



Feline leukemia virus (FeLV)

- one of the most frequent viral diseases in cats in Poland
- caused by **the feline leukemia virus** – a single-stranded RNA virus (retrovirus)
- Interestingly, the FeLV consists of several genes, none of which is an oncogene (a gene that may set off the oncological transformation of a host cell), but the mechanism of leukemia is well-known: whether or not the disease will develop depends on the host and the activation of its oncogenes (every organism carries a different set).



After contact with virus:

- 30% of cats: persistent viremia (if viremia **>16 weeks**)
- 30% of cats: viremia and recovery + resistance or latent phase
- 30% of cats: fights virus at the gate of infection



Rapid tests detects only viremia!!!



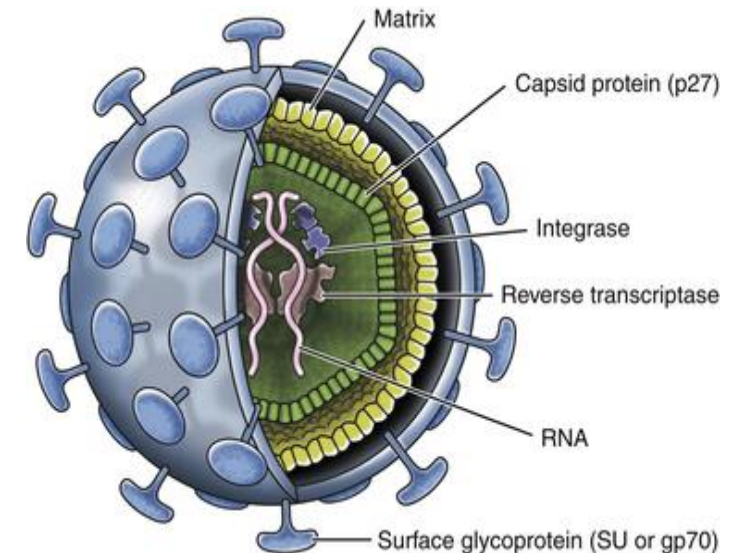
VetExpert FeLV Ag

- FeLV - feline leukemia - test detects viral envelope (capsid) **antigen p27**

Quick tests are diagnose ONLY viremia!

- The latent phase can be diagnosed by PCR provirus/PCR DNA
- FeLV tests performed by laboratories
- Only cats with negative quick test + PCR DNA results can be considered **free from leukemia**

Vaccination do not affect the test result!!!!



Feline leukemia- FeLV

- Quick tests are **ONLY** able to diagnose **viremia** (clinical symptoms are usually present: fever, gingivitis)
- The latent phase can be diagnosed by PCR provirus/PCR DNA FeLV tests performed by Polish laboratories
- Only cats with **negative quick test + PCR DNA** results can be considered free from leukemia
- If the test gives a positive result , it can be repeated at any time, but to rule out permanent viremia, it should be administered around 4 months after the first positive result was obtained



Feline immunodeficiency- FIV

- A disease that affects older cats, often males who leave the house and get into fights
- Carrier status similar to HIV – long duration: impaired immunity; cats easily come down with other diseases. It does not directly lead to death and does not constitute a death sentence. But a FIV-positive cat should be kept away from other cats

The feline immunodeficiency virus is an RNA virus that belongs to the *Lentivirus* species; after infection, its RNA is integrated into the host cell as provirus. FIV-infection only occurs in the latent phase; the provirus slowly multiplies in the host cells of the immune system: macrophages and lymphocytes. First clinical symptoms often appear months or even years after infection.



→ VetExpert FIV Ab - test detects **antibodies**

The antibodies are detectable 6-8 weeks after infection.

Do not perform test in kittens < 6 months (maternal antibodies)

Sensitivity: FIV 99%

Specificity: FIV 96%

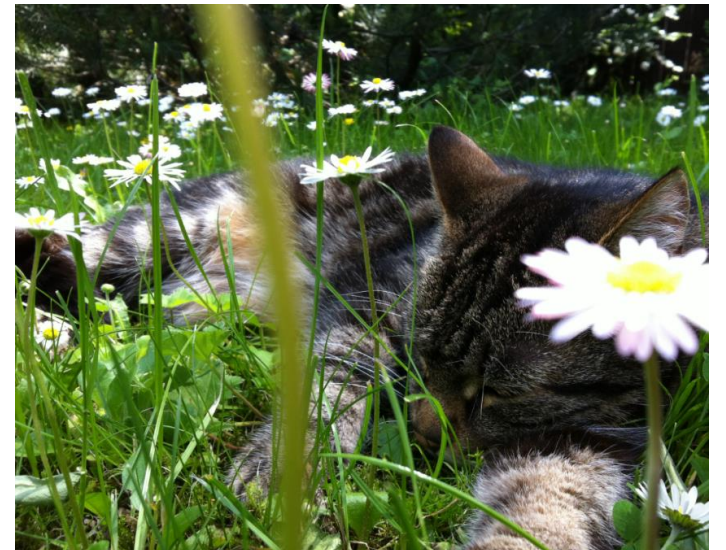




Feline immunodeficiency - FIV

There is no cure for FIV, but it should be kept in mind that when the patient is in good clinical condition, the count of antibodies may fall under detectable levels and a FIV-positive cat may get a negative test result!

When choosing a PCR test, pay attention to make sure that it covers all 5 FIV types (from A to E) (the PCR has 5 starters).



Diarrhea in kittens



Feline panleukopenia

- is a highly contagious viral disease of cats caused by the **feline parvovirus (FPV)**.
- young kittens, sick cats, and unvaccinated cats are most susceptible
- caused by FPV (*feline panleukopenia virus*) but also canine parvoviruses: CPV2a, CPV2b, CPV2c).
- dogs are susceptible only to "canine" types
- parvoviruses are highly resistant to external conditions and disinfectants. If infection occurs, special precautions are recomme

FPV — feline panleukopenia virus

When administering the test (**FPV Ag**), it is important to keep in mind that:

- the quantity of the virus in feces decreases with every day; the test should be taken as fast as possible
- vaccination may affect test results: false positives are possible even as late as 3 weeks after vaccination, in the absence of any symptoms in the kitten.
- positive results in a kitten with heavy diarrhea should not be treated lightly even after vaccination.
- species-specific tests should be used



Feline coronaviruses

Coronavirus infections are very common in cats, especially those kept in larger groups, e.g. in shelters or breeding centers.

The virus causes an episode of diarrhea. Kittens contract it from adult cats.

In terms of pathogenicity, two coronavirus biotypes can be distinguished:

- **intestinal** (feline enteric coronavirus - FECV)
- **FIP-causing** (feline infectious peritonitis virus - FIPV)

The latter is a mutation of the relatively harmless but very widespread intestinal biotype. Despite their radically different degrees of pathogenicity, the two biotypes cannot be differentiated by available diagnostic methods.



Feline coronaviruses

FCoV Ag tests that detect the coronavirus antigen in feces can help you eliminate coronaviruses from your breeding center. It's difficult but doable! Cats should be divided into infected and healthy groups and the groups should be kept apart:

- Preferably in permanent subgroups of 3-4 cats (a group of up to 10 cats will be free of the virus after a number of months)
- Good litter box hygiene (one box for 1-2 cats)
- Successive reintroduction of cured cats into the healthy group

Regular blood and feces tests, especially in cases of diarrhea

Feline coronaviruses

- Blood tests are not very reliable, and FCoV Ab tests fail to differentiate between the antigens of the two biotypes.
- **The presence of coronavirus antibodies does not mean that the cat suffers from FIP! Its absence, on the other hand, does not mean that the cat is not infected!**
- Antibodies can show up in healthy cats (it is worth testing the cat before or soon after adoption):
- **Negative result** = the cat hasn't had any contact with coronaviruses, the risk of FIP is close to zero
- **Positive result** = 33% means carrier status (the higher the count of antibodies, the greater the risk of disease)

Giardia Ag



Test detects cysts antigen of *Giardia duodenalis* (*G.intestinalis*, *G.lamblia*)

Dangerous disease of humans and animals!

7 genotypes (A to G)

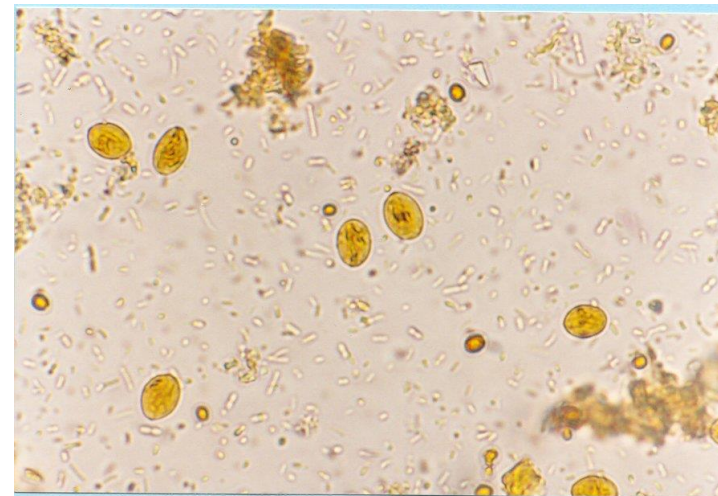
Giardia duodenalis	
A-1	Human, dog, cat, cow
A-2	Human, dog
B	Human, dog, guinea pig
C	Dog
D	Dog
E	Ruminants
F	Cat
G	rat

Giardia Ag

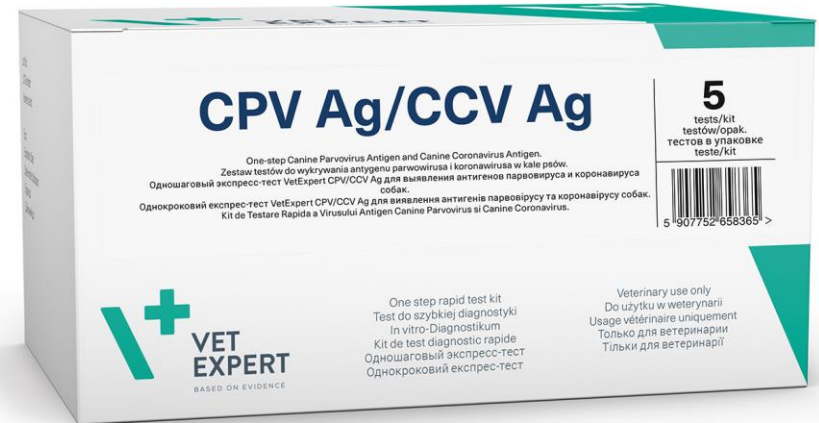


Giardia is a protozoan parasite of the small intestine in numerous animal species (ranging from rodents, cats, dogs, pigs, and ruminants, all the way to primates, including humans). Giardiasis is the leading cause of parasite-related diarrhea in humans and animals.

Giardia is found in the form of **trophozoites** or **cysts**. Feces most frequently contain cysts, but excreted trophozoites can also be observed. Cysts show up in feces around 4-5 days after ingestion with water or food.



Diarrhea in puppies



	Parvovirus	Coronavirus
Age	3-12 months	Up to 6 months
Breeds	All	All
Infectiousness	Yes	Yes
Mortality	High (puppies and young dogs)	Very low (only puppies)
Duration	6-10 days	6-10 days (or fewer)
Body temperature decrease	2-3 days, significant	No decrease in body temperature
Leukopenia	Frequent, but short-lasting	No leukopenia
Feces	Watery, greyish-white, often with traces of blood and occasional strands of mucus, soapy smell	Watery, yellowish-orange or greenish, foul smell
Response to intravenous rehydration	Gradual improvement	Fast improvement
Complications	Hypoglycemia, acidosis, hypopotassemia, hypoproteinemia, immunosuppression, sepsis, endotoxemia, shock	No complications
Relapses	No relapses	No relapses (immunity is short-lived but subsequent infections are asymptomatic)

CPV vs CCV

The canine parvovirus and coronavirus can cause similar clinical symptoms, especially in young, unvaccinated puppies.

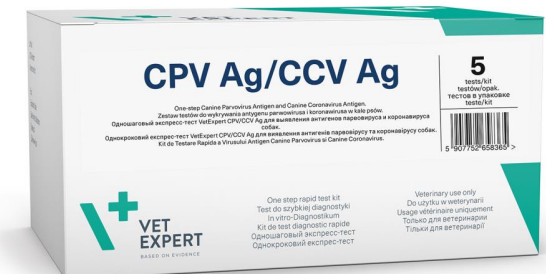
The essential difference is that:

- CPV damages intestinal crypts – it penetrates deep into the intestine and causes significant damage to its structure
- CCV destroys enterocytes and villi – damages are more superficial than in CPV

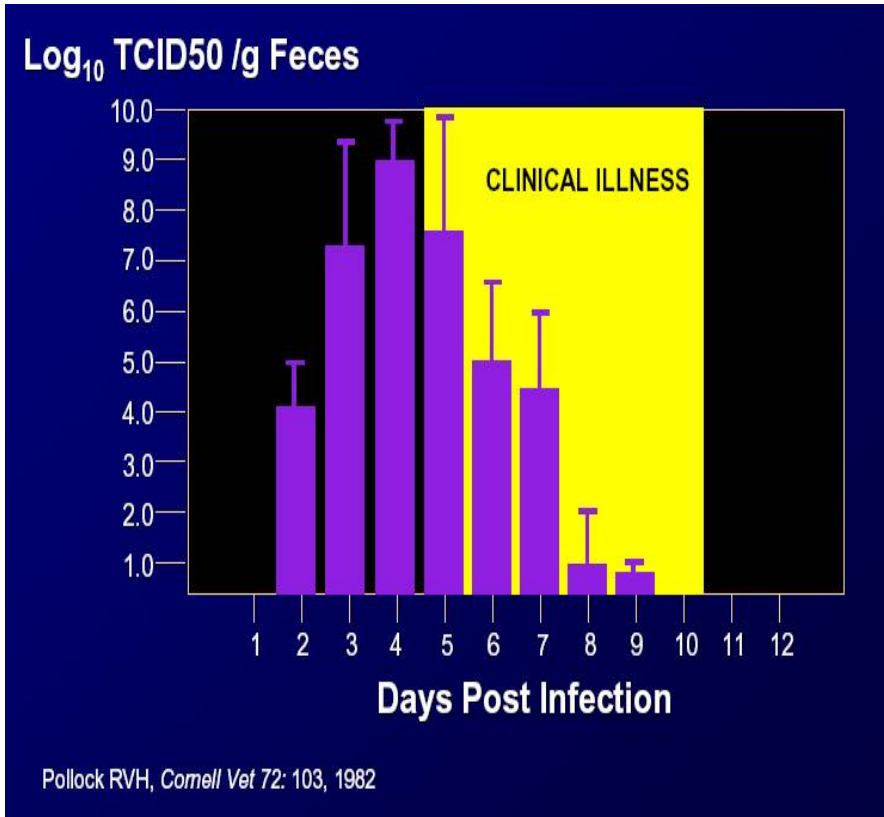
A mixed infection with CPV and CCV is particularly dangerous; it requires radical measures and the prognosis is worse.

→ Test detects CPV and CCV antigens

virus	symptoms	mortality	recovery
CCV	+	0%	100%
CPV	+++	50%	50%
CCV + CPV	+++++	89%	11%



PV Ag virus excretion vs clinical symptoms



- Virus excretion 3-4 days post-infection
- Excretion before the onset of clinical symptoms
- The greatest quantity of the virus is found in feces during the first days of the disease; subsequently, its level decreases

Vaccinations do not affect test results
- N. Decaro et al. / *Vaccine* 32 (2014) 3850–3853

Respiratory diseases



Canine Distemper Virus CDV



- CDV may causes **distemper** in dogs also termed **hardpad disease**
- very dread, usually lethal disease
- often in non-vaccinated, young dogs
- mixed symptoms – neurological, respiratory disorders, gastrointestinal disorders, usually leading to death
- test detects (identify) Ag in conjunctiva (swab), urine, serum, plasma
- difficult diagnosis because the virus is present only for few days:
 - **viremia lasts only 3-5 days**
 - **up to 14 days after infection the virus is present in leukocytes**
 - **up to 21 days after infection in epithelial cells of mucosa**

After this time the virus becomes unobtainable for quick tests - high risk of false negatives results!



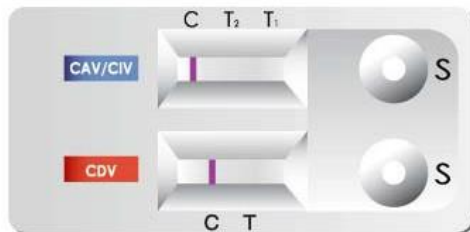
CIRD-3 Ag

→ 3 diseases in double test



- CIV – canine influenza virus
- CDV – canine distemper virus
- CAV – canine adenovirus 1 and 2

→ Test detects virus in conjunctival and nasal discharge



CIV – canine influenza virus



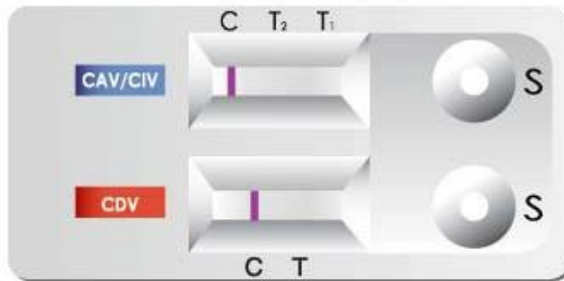
- Canine influenza is caused by varieties of influenzavirus A
- Canine influenza (CI), or dog flu, is a highly contagious viral infection affecting dogs and also cats.
- Influenza viruses belong to the family *Orthomyxoviridae*.
- Canine influenza is a **Type A influenza virus** and is further identified based on the composition of two specific proteins in the lipid outer layer of the capsid: hemagglutinin (HA) and neuraminidase (NA). At present, two strains of canine influenza virus have been identified: **H3N8 and H3N2** (also pathogenic for cats)
- Test detects virus (Ag) in nasal and conjunctival discharge

Canine Adenoviruses – CAV 1 and 2

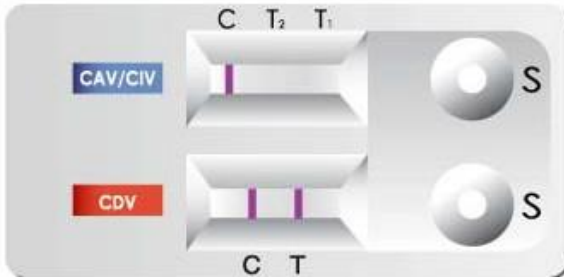


- There are two commonly recognized types of adenovirus which can cause disease in dogs:
- **Adenovirus 1** - causes infectious liver disease
- **Adenovirus 2** - causes respiratory infection (Infectious Tracheobronchitis, kennel cough) and is commonly also used in vaccines against both diseases

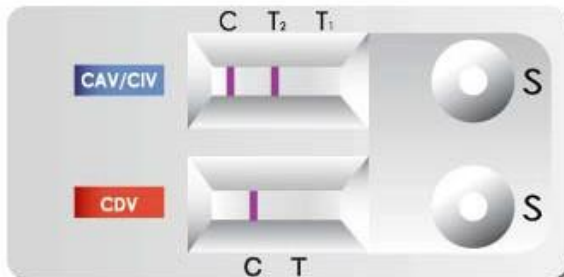
- Negative result



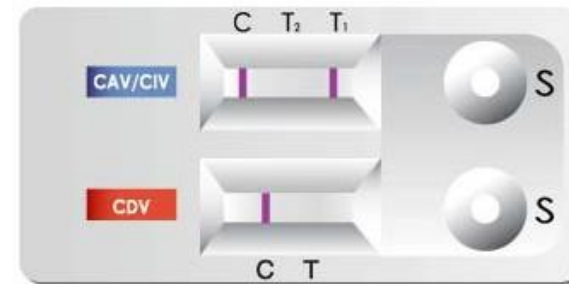
- CDV Ag Positive result



- CAV Ag Positive result



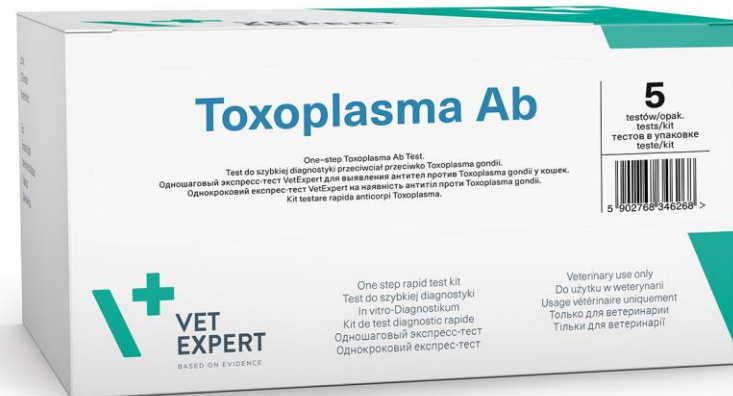
- CIV Ag Positive result



Toxoplasmosis

- Infectious, zoonotic disease caused by one of the most prevalent a single-celled parasite called *Toxoplasma gondii*
- Warm-blooded vertebrates can be infected (cats and dogs too)
- Only cats complete the coccidian life cycle and shed environmentally resistant oocysts in feces, only for days to several weeks after primary inoculation
- Animals that are fed raw or incompletely cooked meat are at higher risk of developing toxoplasmosis, as well as animals that are immunosuppressed
- Prevention for human : eating uncooked meats or ingesting sporulated oocysts should be avoided

- The One step Toxoplasma Ab test is for the qualitative detection of antibodies to *T. gondii* in feline whole blood, serum or plasma
- Positive results should be confirmed by IgM and IgG antibodies measuring in commercial lab (twice, 3-4 weeks break)



Total IgE

Preliminary atopy diagnostics

Total IgE – initial allergy diagnostics during the first visit:

Positive result: atopy or food allergy → introduce elimination diet → repeat the test after 4-6 weeks, and if:

- negative result – food allergy, no atopy
- positive result – atopy, with or without food allergy



Total IgE



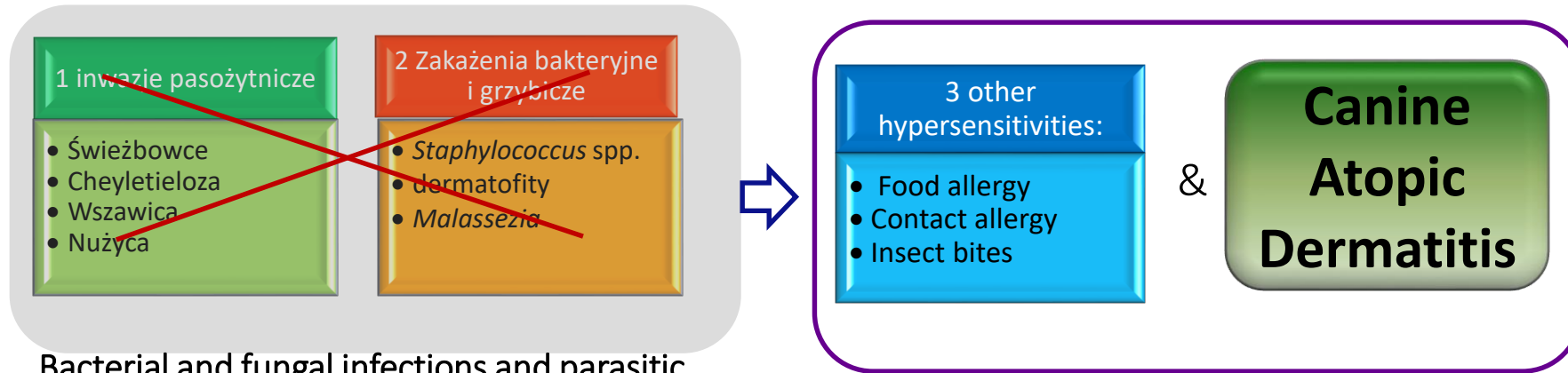
Specific IgE: intradermal or blood tests

These tests do not serve to diagnose atopy; instead, they help determine what substance the dog is allergic to in order to monitor the pollen calendar and take appropriate action to prevent symptoms from recurring.

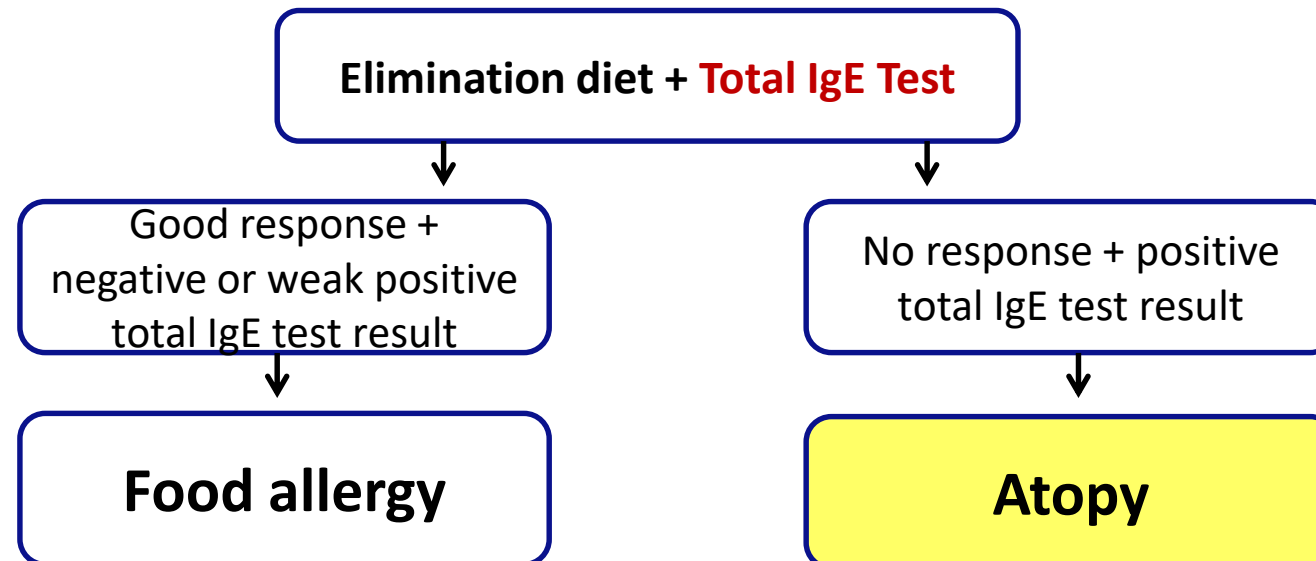
Intradermal tests: the animal first needs to be taken off steroids. Not sufficient for food allergies. Expensive and often require sedation.

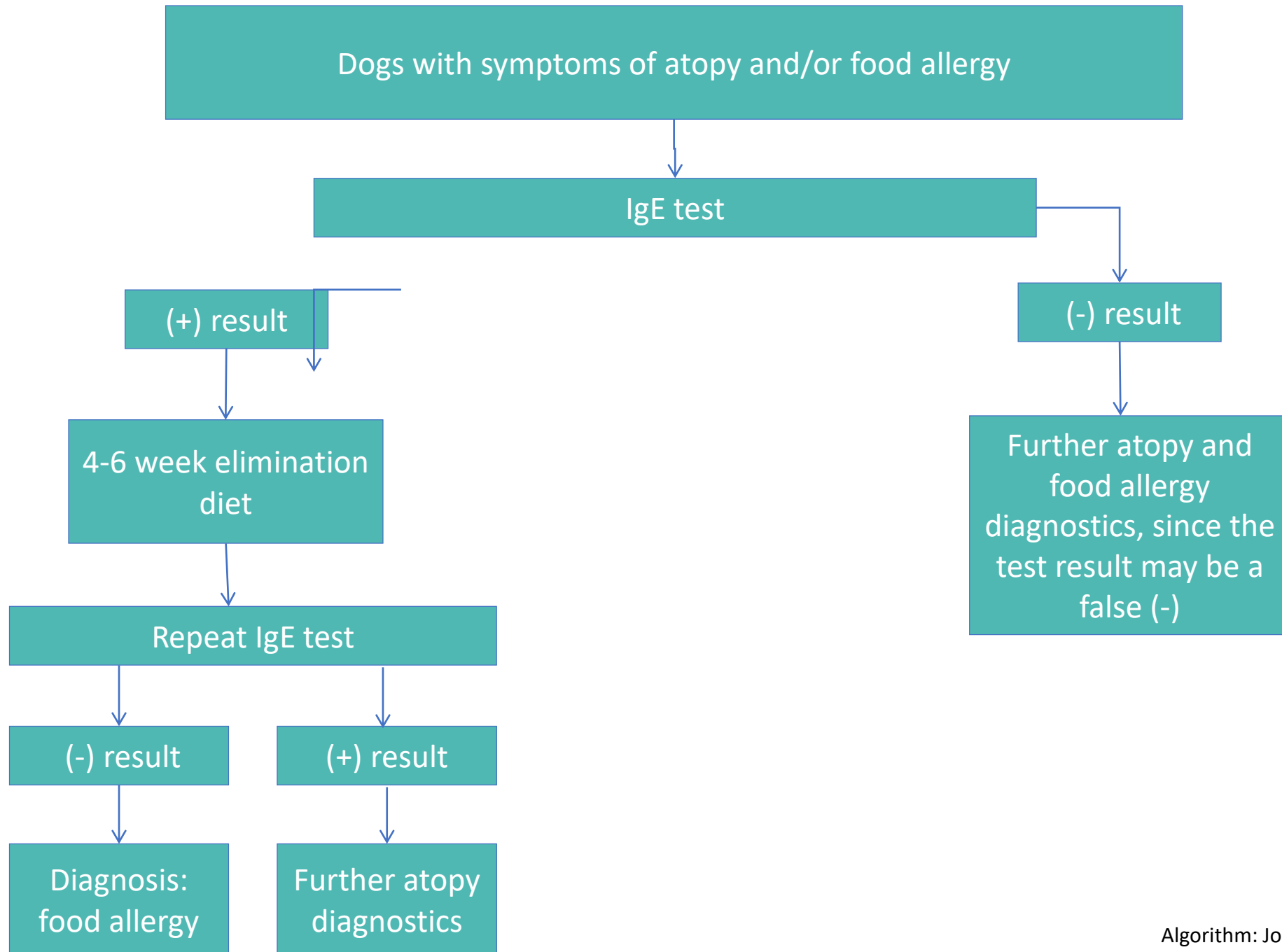
Blood tests: the animal may be taken off steroids at the discretion of the doctor. Opinions on the matter are divided, but it is better if the treatment is discontinued. The test often yields a false positive/negative result. It is expensive and it takes time to get the result.

Total IgE



Bacterial and fungal infections and parasitic invasions are ruled out







DIAGNOSTYKA
katalog produktów



TESTY VETEXPERT DLA PSÓW
DIAGNOSTYKA CHOROÓB WEKTOROWYCH

Choroba zakaźna	Wektor	Czas trwania	Metoda wykrycia przeciwciał	Monitoring	Objawy kliniczne	Objawy laboratoryjne
Anaplazma phagocytophilum	klasy I i II	35-40 dni	po 14 dniach od zakażenia	przeciwciała mogą być wykrywane w surowicy krwi	Goniec, kaszel, biegunka, wymioty, bóle stawów	Goniec
Anaplazma platys	klasy I i II	35-40 dni	po 14 dniach od zakażenia	przeciwciała mogą być wykrywane w surowicy krwi	Goniec, kaszel, biegunka, wymioty, bóle stawów	Goniec

MAŁY WEKTOR, DUŻY PROBLEM

- Wykrywa antygen *Dirofilaria immitis* oraz przeciwciała *Ehrlichia canis*, *Borrelia burgdorferi* i *Anaplasma phagocytophilum/Anaplasma platys*.
- Wysoka czułość i specyficzność.
- Precyzyjna diagnoza w kilka minut.
- Łatwe wykonanie i interpretacja.
- Umożliwia monitoring leczenia.

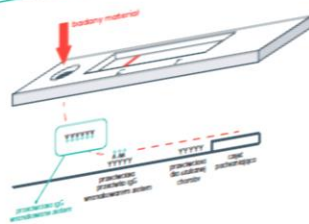


PROMOCJA 20%



PŁYTKI TESTOWE

Wynik ujemny

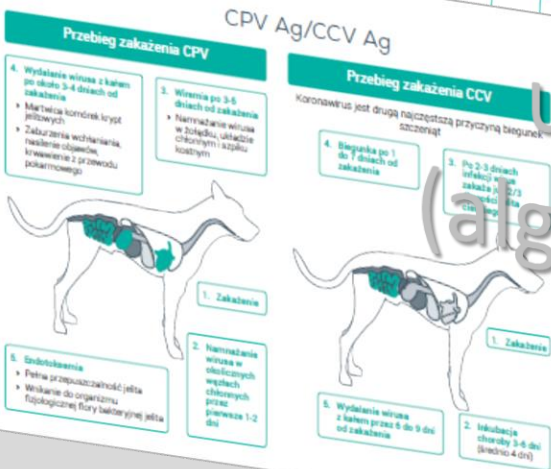


Wynik dodatni



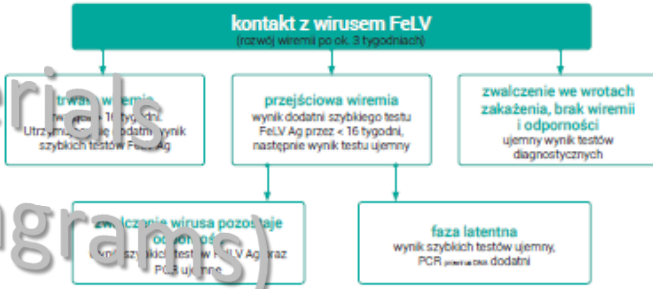
WYKRYWA SIĘ, ILE MOŻESZ ZYSKAĆ!
DZWOŃ DO SWOJEGO PRZEDSTAWICIELA VETEXPERT.

CPV Ag/CCV Ag



Useful learning materials (algorithms, tables, diagrams)

FelV Ag





Thank you!

Diagnostics
Medicines
Nutrition
Cosmetics

