What is Bartonella?
- Bartonella spp. are small, vector-transmitted Gram-negative intracellular bacteria
- Over 22 species have been described, three of which have the cat as primary reservoir: *B. henselae*, *B. claridgeiae* and *B. koehlerae*.
- Cats are the main reservoir for *B. henselae*, the agent of cat scratch disease in humans (zoonosis).
- Bartonella spp. have a worldwide distribution. In Europe, the antibody prevalence in cats was found to be between 8 and 53%.

Infection
- *B. henselae* is most commonly transmitted between cats by flea faeces.
- *B. henselae* lives in the red blood cells which are ingested by the flea and can survive in the flea faeces for up to nine days.
- Flea faeces end up under the cat’s claws and Bartonella is transmitted by scratching.

Clinical signs (cats)
- Most cats infected with *B. henselae* have no clinical signs.
- Infections with certain other Bartonella species, for which the cat is an accidental host (e.g. *B. vinsonii subsp. berkoffii*), may lead to disease.
- Bartonellosis may cause uveitis, endocarditis and multifocal CNS disease.

Clinical signs (humans)
- Infection does not always lead to the development of clinical signs in healthy people.
- In humans, *B. henselae* may cause cat scratch disease: A primary papular lesion is usually followed by a self-limiting regional lymphadenopathy that may last weeks to months. Occasionally, abscessation of the lymph node and systemic signs may occur.
- In immunocompromised individuals, Bartonella infection may lead to bacillary angiomatosis that may be fatal if untreated.

Diagnosis
- Isolation by culturing is considered the gold standard. However, due to the high prevalence of infection in healthy cats, a positive culture is not confirmatory for a causative role of the infection in the disease of the cat.

Bartonellosis is therefore diagnosed by exclusion of other compatible diseases and confirmed by response to therapy.
- Due to fluctuating bacteraemia, repeated blood cultures are required or PCR performed on more than one kind of sample (blood, lymph node, oral swab) to confirm the infection.
- There is serological cross reactivity between different Bartonella species that may or may not cause clinical signs. However, antibody detection (IFAT or ELISA) may be useful because of the good negative predictive value.
- Bartonella laboratory testing is required for feline blood donors and for pet cats belonging to immunocompromised people.

Treatment
- Antibiotic therapy is recommended in infected healthy cats living with immunosuppressed persons or in the rare cases where Bartonella actually causes a disease in the cat, e.g. endocarditis.
- However, clearance of infection cannot be guaranteed, and treatment of healthy carriers may not eliminate the zoonotic risk.
- Data from controlled efficacy studies in cats are lacking and no treatment consistently eliminates infection; but doxycycline or amoxycillin-clavulanate can be effective.

Prevention
- There are no vaccines against Bartonella infection.
- Strict flea and tick control is the only demonstrated preventive measure of avoiding infection of cats.
- Immune-suppressed owners should preferably adopt cats that are older than 1 year, flea free and in good health (avoid cats from shelters and multicat households).
- Avoid rough play with cats and maintain the cat’s claws trimmed.
- Wash any wound promptly with soap and water and seek a medical advice.