CASE DEFINITION

To properly standardize criteria for identification and management of cases, several case definitions have been developed. Based on the current knowledge and available diagnostic procedures, the further investigations are organised in a separate table (adapted from doi: 10.1080/22221751.2023.2249126).

- **A dog with a confirmed *B. canis* infection** – Dogs with compatible clinical symptoms and at least positive serology or PCR may be considered as infected, beyond reasonable doubt, especially if epidemiological links with infected dogs are highlighted. Various other situations are observed, in which the probability of infection depends on results and epidemiological situation – table.

- **A dog with a suspected or probable *B. canis* infection** – *B. canis* has not been confirmed but some risk factors are present. The additional uncertainty about the true infection status creates additional management issues.

- ***B. canis* positive kennel** - at least one confirmed infected dog (strain isolation or PCR positive) or at least two reproductively active animals with confirmed serological positive response.

- ***B. canis* uninfected dog** – An animal without any clinical symptoms evocative of *B. canis* caused brucellosis and no epidemiological contact with infected cases. However, dogs with one indirect diagnostic or PCR positive result, without repetition cannot be considered as negative, but animals with similar clinical symptoms or in epidemiological contact with infection sources, but no positive diagnostic tests should be regarded as *B. canis* uninfected.

- ***B. canis* free kennel** - Only a kennel in which all animals have been tested negative on B. canis in repeated diagnostic procedures as recommended by competent local authorities.

Definitions of cases and recommendations for further investigations / follow ups

Epidemiological link with known infected dogs	Clinical symptoms evocative of B. canis infection (section 3)	Serology	Bacteriology	Molecular biology (PCR)	Status	Further investigations
YES / NO	YES / NO	YES / NO	YES	YES / NO	Confirmed infected	Test dogs with epidemiological links (serology)
YES	YES	YES	NO	YES		
YES	YES	YES	NO	NO	Confirmed infected	Repeated samples for direct isolation and PCR + test dogs with epidemiological links (serology)
YES	YES	NO	NO	YES		
YES	NO	YES	NO	YES	Suspected	Serology (B. canis + RBT/ELISA if risk of infection with smooth Brucella) + Repeated samples for direct isolation and PCR + test dogs with epidemiological links (serology)
YES	NO	NO	NO	YES		
YES	YES	NO	NO	NO		
YES	NO	YES	NO	NO		
YES	NO	NO	NO	NO	Uninfected	None
No	YES	YES	NO	YES	Suspected	Serology (B. canis + RBT/ELISA if risk of infection smooth Brucella) + repeated samples for direct isolation and PCR
NO	YES	NO	NO	YES		
NO	YES	NO	NO	NO	Uninfected	Look for other differential diagnostic options
NO	NO	YES	NO	YES	Suspected	Repeated samples for Serology and/or direct isolation and PCR
NO	YES	YES	NO	NO		
NO	NO	YES	NO	NO		
NO	NO	NO	NO	YES		
NO	NO	NO	NO	NO	Uninfected	None