

Brucella Testing in Dogs Decision-Making Flowchart

Purpose: To identify testing, PPE, and isolation requirements for patients with a history of international travel, or possible Brucella exposure

Does the dog have a history of travel to any of the following countries or regions (considered high risk for transmission)?

Eastern Europe: Romania, Moldova, Macedonia, Bulgaria, Bosnia, Serbia, Belarus, Ukraine, Poland, Hungary, Slovakia, Estonia, Latvia, Lithuania, Russia, Turkey
Southern Europe: Greece, Spain, Cyprus
Asia: East Asia (including China, Japan, Mongolia), Southeast Asia (including Thailand, Vietnam), Afghanistan, Pakistan, Iran, India
Africa: All regions
Americas: Central & South America

No

No Brucella testing required
 Unless specific concern e.g. living with/bred with a dog with a travel history, or suspicion of Brucella exposure

Yes

Brucella testing must be performed

Has the patient undergone APHA Brucella testing (combined SAT and iELISA), and received a negative result?

Yes

No further testing or specific measures required
 Exceptions include dogs who were tested within 3 months of travel/exposure (as seroconversion can take up to 3 months), or where clinical suspicion of Brucella remains. Repeat testing (if now more than 3 months since travel/exposure), or PPE/isolation outlined below as a precaution, can be considered on a case by case basis

No

Is it clinically appropriate, and logistically possible, to perform APHA testing before the patient is seen at Eastcott (turnaround time 4-7 days, or 2-3 days if expedited)?

Yes

Perform APHA testing (combined SAT and iELISA on serum samples) through primary care practice
 Request confirmation of negative result sent to us prior to appointment at Eastcott.

No

In-house Brucella testing (FASTest Brucella canis) required before hospital admission / any further investigations

Notes:

- False positive results can be seen with EDTA samples
- Positive predictive value not optimal (all positives must be confirmed by APHA testing)
- Only tests IgG

Negative result

Considered reliable in the absence of:

- Clinical signs suggestive of Brucella
- Travel to a high-risk region in the preceding 3 months

or

- Specific concerns regarding Brucella exposure

No further testing or specific measures required
 There may be exceptions where seroconversion may not have occurred or clinical suspicion of Brucella remains. PPE/isolation as outlined below may be considered as a precaution on a case by case basis

Negative result but clinical suspicion of Brucella

A negative FASTest alone cannot be used to exclude Brucella in a patient with compatible clinical signs or specific concerns regarding exposure

If the patient is demonstrating:

- Disease affecting the reproductive tract e.g. pyometra, abortion, stillbirth, neonatal deaths, infertility, orchitis (enlarged painful testicles, or atrophy if chronic), scrotal dermatitis.
- or
- Non-reproductive tract compatible clinical signs e.g. discospondylitis, polyarthritis, endocarditis, lymphadenopathy, splenomegaly, uveitis, pyrexia (infrequently reported sign)

Confirmatory testing (APHA combined SAT and iELISA) MUST be performed and expedited. Patients should be managed as positive until results of confirmatory testing become available. Further procedures should not be performed pending results unless clinically inappropriate to delay (any further testing must be agreed with SLT)

NOTE: Most infected dogs do not show clinical signs and signs can be vague (lethargy, reduced appetite, weight loss)

Positive result (even weak)

Confirmatory APHA testing (combined SAT and iELISA) MUST be performed on serum samples, and expedited

IF result is positive

Pending results:

- **Discharge** if clinically appropriate (with appropriate owner information)
- For positive cases, please send an advice request to the relevant service to initiate a discussion around the procedure requirements and management of that individual case

Procedure examples:

VERY HIGH RISK: Pyometra, neutering, joint taps, CSF sampling, dentistry, urine sampling, caesarean section, prostatic wash, urethral catheterisation, semen analysis, artificial insemination, aerosol-generating practices e.g. FNAs, surgeries involving joints e.g. TPLO, arthroscopy, post-partum care involving reproductive fluids, lactation products, or aborted material, cystoscopy, aqueocentesis

PPE needed IF procedures performed: FFP3 mask (fit-tested), visor, disposable fluid-repellent apron/gown with full length sleeves, non-sterile gloves, scrubs (changed after procedure)

HIGH RISK: Cutaneous surgery (lumpectomy), abdominal surgery not involving reproductive tract (splenectomy, enterectomy), thoracic surgery, endoscopy, bronchoscopy, bone marrow biopsy

PPE needed IF procedures performed: FFP3 mask (fit-tested), visor, disposable fluid-repellent apron/gown with full length sleeves

LOWER / MEDIUM RISK: Clinical examination (including rectal examination), vaccination, blood sampling, IV catheter placement, bite management, intubation, oral medication administration, dermatology, anal gland expression, diagnostic imaging without sampling, handling of cadavers (including performing euthanasia), cleaning after a positive/suspected case

PPE needed IF procedures performed: non-sterile gloves, type IIR surgical mask, visor, disposable fluid-repellent apron/gown with full length sleeves

BRUCELLA IS A REPORTABLE DISEASE

- APHA will investigate and risk assess all potential exposures, and advise on further steps to be taken
- **Any suspected cases must also be reported to APHA (03000 20 0301)**