

Specimen Collection Guide for
Rabies or Bovine Spongiform
Encephalopathy (BSE) Sampling from
Cattle, Horses, and other large animals

Adapted from the
National Standard Protocol
for the Diagnosis of Rabies in Animals

Rabies Diagnosis

- Rabies diagnosis requires fresh (NOT FIXED) brain tissue sampled from the brainstem and cerebellum
- A full cross-section of the mid-cerebellum and subjacent rostral brain stem are needed for a valid test especially in large animals, because rabies virus antigen can be localized unilaterally
- The entire cerebellum and underlying brainstem is the optimal sample
- Keep the specimen cold (at refrigerator temperature)

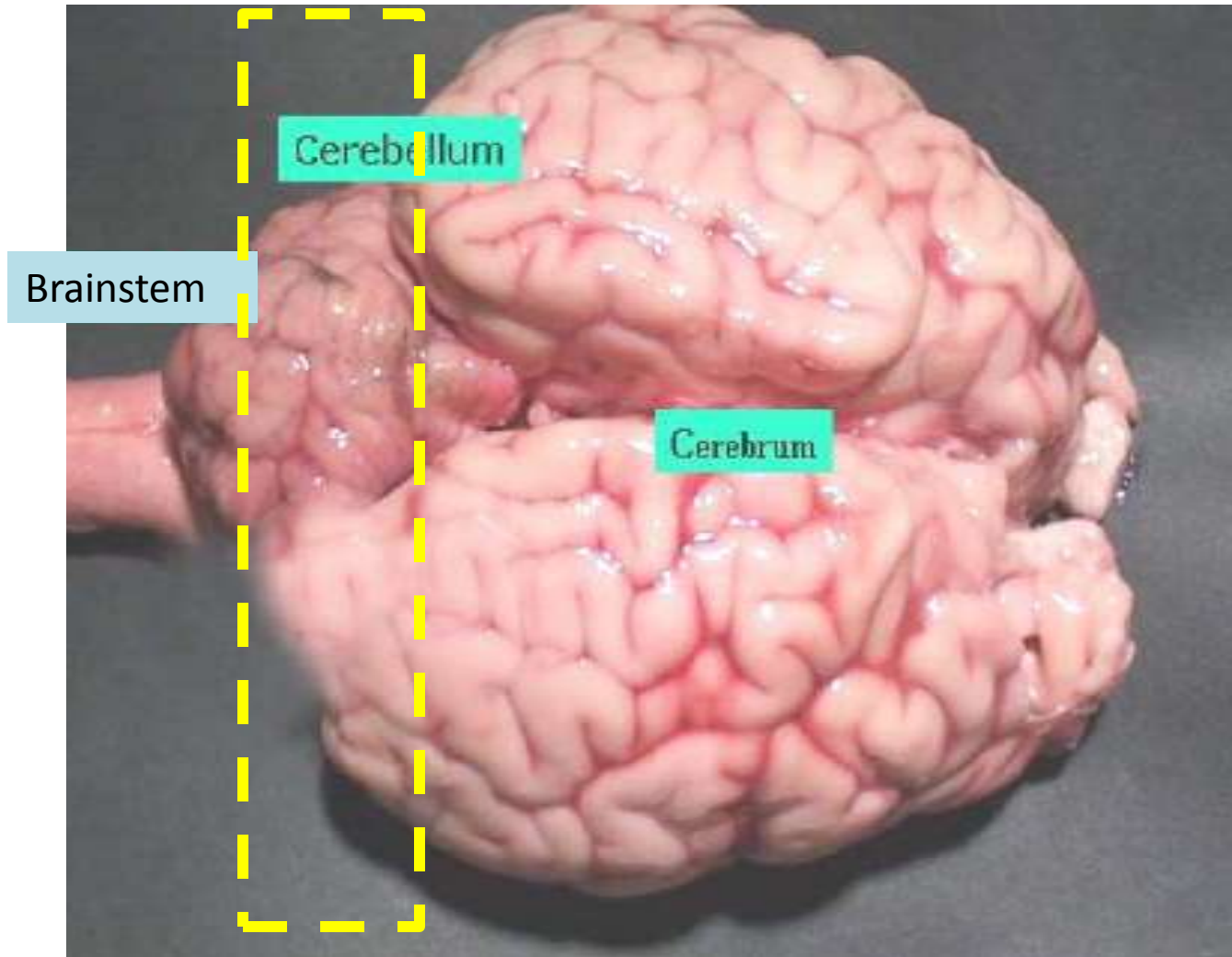
Introduction

- Rabies and Bovine Spongiform encephalopathy (BSE) are uncommon but important causes of neurological illness in horses and cattle.
- Appropriate specimen collection is essential for laboratory testing.

Do not split the brain sagittally
as cross-sections are needed.

- These slides were developed to assist veterinarians and other qualified persons with specimen collection and submission.

Rabies Sample Collection



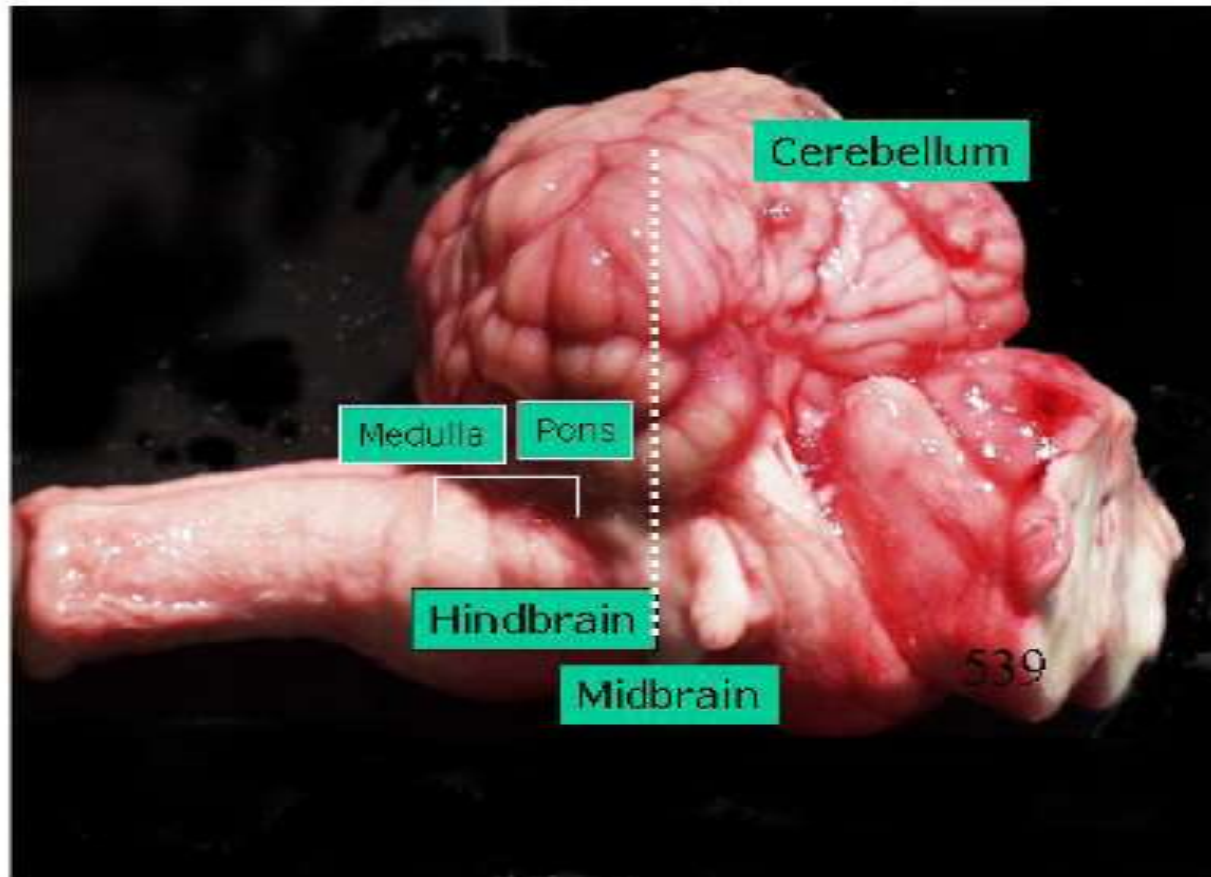


Figure 4. Lateral view of brain with cerebrum removed to show the extension of brain stem beneath the cerebellum. A rabies diagnosis should include an observation of the cut surface of a cross section of the brain stem (through the medulla, pons, or midbrain area) and the cerebellum (through each hemisphere and the vermis). For example, a cross section of the midbrain area (dashed line) would include all tissues necessary for rabies diagnosis.

Bovine Spongiform Encephalopathy: Sample collection

- BSE: The specimen required for BSE testing is the “V” shaped obex on the dorsal aspect of the caudal brainstem
- The sample is inclusive from the cerebellar peduncle and encompassing the entire obex (see next slide)
- The BSE sampling site is caudal to the rabies sampling site
- BSE and rabies testing require fresh brain
(NOT FORMALIN FIXED)

BSE Sample Collection

