

TAHC Certified CWD Postmortem Sample Collection Recertification



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Overview

- Recertification Process
- CWD Characteristics & History
- Agencies & Programs
- CWD Postmortem Obex Sample Collection
- Medial Retropharyngeal Lymph Node (MRLN) Collection
- TVMDL Account Set-up
- Packaging & Shipping
- Submission Forms
- Recertification Quiz



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Recertification Process

1. Review this presentation
2. Register for [QuizStar](#) (instructions can be found [here](#))
3. Complete the ten (10) question quiz. A grade of 70 or above is required to pass and qualify for recertification
4. Once completed, fill out the [TAHC Certified CWD Postmortem Sample Collector Online Application](#)
 - To access the application, please email:
authorized_personnel@tahc.texas.gov
5. When your application has been received and processed, you will received a confirmation email from TAHC



CWD

Characteristics & History



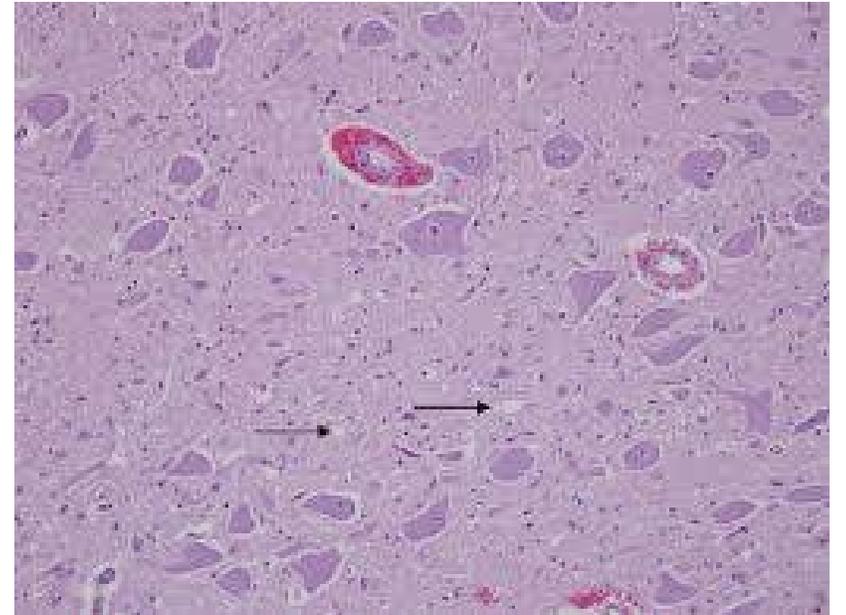
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Chronic Wasting Disease (CWD)

- Transmissible spongiform encephalopathy
 - What causes TSE's? Prions
 - What are some other TSE's?
 - Bovine Spongiform Encephalopathy
 - Scrapie – sheep and goats
 - Creutzfeldt-Jakob Disease – humans
 - Feline Spongiform Encephalopathy
 - Transmissible Mink Encephalopathy





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Chronic Wasting Disease (CWD)

- Species affected:
 - Black-tailed Deer
 - Mule Deer
 - Moose
 - North American Elk
 - Red Deer
 - Reindeer
 - Sika Deer
 - White-tailed Deer
 - Hybrids of above species
 - Muntjac



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Chronic Wasting Disease (CWD)

- Incubation – average 2-4 years
- Symptoms include
 - Appetite loss
 - Emaciation
 - Excessive salivation, difficulty swallowing
 - Behavioral changes
 - Excessive urination
 - Increased water intake
 - Neurologic deficits – lack of muscle coordination and exaggerated wide posture
- Death often occurs within months of being symptomatic



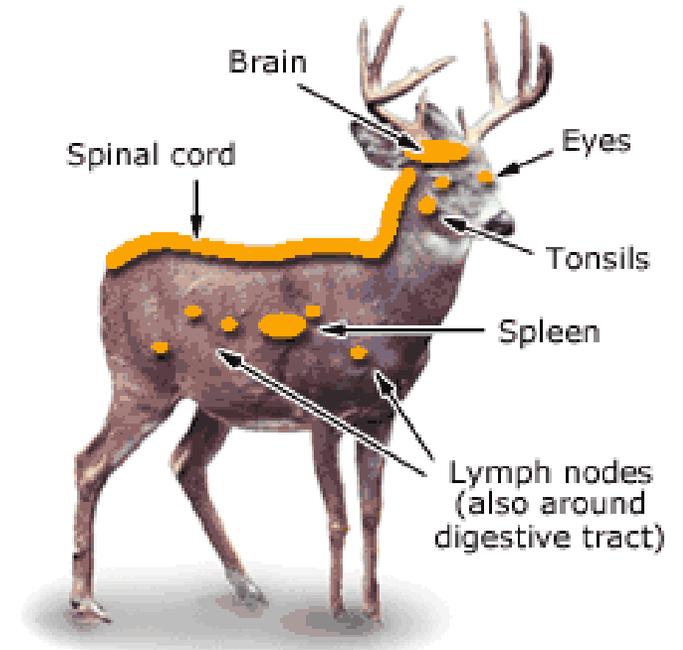


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Chronic Wasting Disease (CWD)

Transmission:

- CWD prions accumulate in nervous and lymphatic tissues
- Prions are shed in saliva, urine, blood, feces, soft antler material, and decomposing carcasses
- Prions accumulate in environment
- Transmitted from animal to animal or indirectly to the animal from a contaminated environment
- Prevalence increases overtime as more animals are infected and environment is contaminated



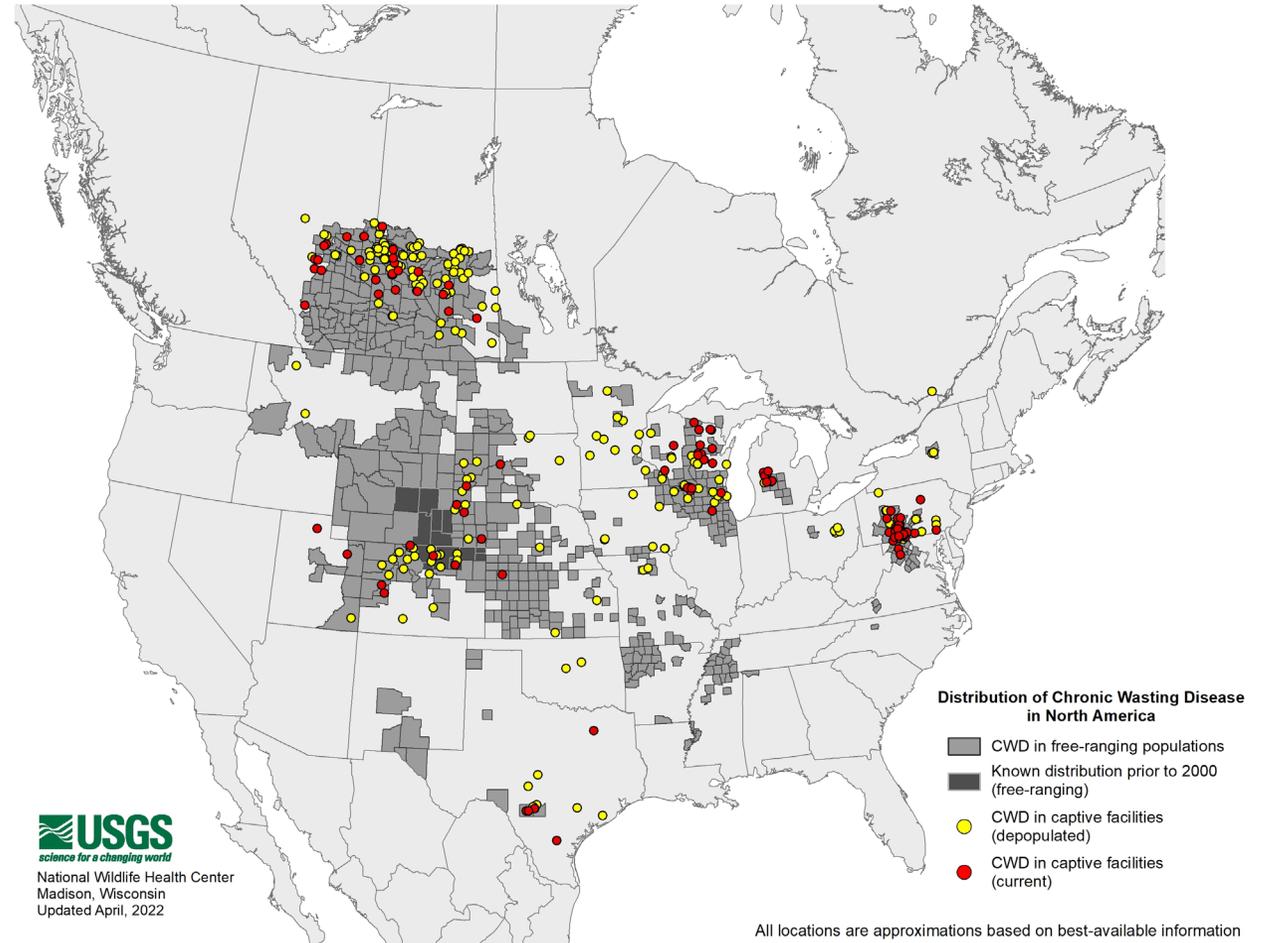
CWD prions accumulate in nervous and lymphatic tissues



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CWD Distribution in US

- 1967 First found in Colorado Wildlife Research Facility
- Currently in 30 states and 4 Canadian Provinces, Finland, Korea, and Norway



All locations are approximations based on best-available information



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CWD Chronology in Texas

- July 2012- detected in free-ranging mule deer in far west Texas
- July 2015- detected in captive white-tailed deer herd in Medina County
- February 2016- detected in free-ranging mule deer in the Texas Panhandle
- December 2016- detected in free-ranging elk in the Texas Panhandle
- January 2017- detected in free-ranging white-tailed deer in Medina County



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CWD Chronology in Texas

- May 2017- detected by antemortem testing in captive white-tailed deer herd
- October 2017- detected in elk located on high-fenced premises with common management as a property where white-tailed deer were previously confirmed to have CWD
- December 2017-discovered in a free-ranging white-tailed deer in the Texas Panhandle
- December 2019 – detected in free-ranging Texas white-tailed deer in Val Verde County
- February 2020 – detected in captive white-tailed deer herd in Kimble County



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CWD Chronology in Texas

- 2021 – 7 whitetail breeder facilities test positive
 - 4 have been depopulated
 - 1 has signed a genetic herd plan and has tested over 800 head thus far
 - 1 self-depopulated the breeder deer, TPWD depopulated the DMP
 - 1 in litigation
- From the 7 positive facilities, 303 direct traces
 - 221 met requirements & released (164 breeder & 57 release, etc)
 - 24 are under a Herd Plan (2 breeder & 22 release/DMP)
 - 50 are pending a Herd Plan (4 breeder & 46 release/DMP)
 - 8 out of state



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CWD Positive Cases in Captive Susceptible Species in TX

Updated as of July 2022

- 3 CWD Positive Breeding Facilities
- 369 positive CWD cases to date
 - 278 CWD Positive detections captive deer or on release sites in Texas
 - 6 CWD Positive detections in captive elk/red stag in Texas
 - 84 CWD Positive detections in free range deer in Texas
 - 1 CWD Positive detection in free range elk in Texas
- 242 facilities enrolled in CWD Herd Certification Program



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CWD Positive Cases in Texas

CWD Zone	Species	2016 and prior	2017	2018	2019	2020	2021	2022*	Total
Trans Pecos	FR Mule Deer	8	6	5	2	8	6	4	39
Panhandle	FR Mule Deer	1	4	1	1	9	1	7	24
	FR Elk	1	0	0	0	0	0	0	1
	FR White-Tail Deer	0	1	3	0	1	0	1	6
South-Central	FR White-Tailed Deer	0	1	1	1	5	1	3	12
	BP White-Tailed Deer	26	21	46	17	9	114	0	233
	RS White-Tailed Deer	4	3	6	1	6	0	2	22
	RS Elk/Red Deer	0	1	1	0	3	0	1	5
Val Verde	FR White-Tailed Deer	0	0	0	1	2	0	0	3
Kimble	BP White-Tailed Deer	0	0	0	0	10	0	2	12
Hunt	BP WTD	0	0	0	0	1	5	5	11
Total		40	37	63	23	54	127	25	369

FR-free range BP-breeder pen RS-release site

*Data through July 2022



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Chronic Wasting Disease (CWD)

- Implications
 - Impacts on deer populations
 - Population declines
 - Shift in age structure—fewer mature deer
 - Higher mortalities due to other causes—predators, vehicle collisions, hunters
 - Economic losses related to CWD
 - Hunting
 - Captive breeding programs
 - Surveillance and program enforcement
 - Unknown long-term risk to human health
 - To date there is no indication that CWD can be transmitted to humans



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Chronic Wasting Disease (CWD)

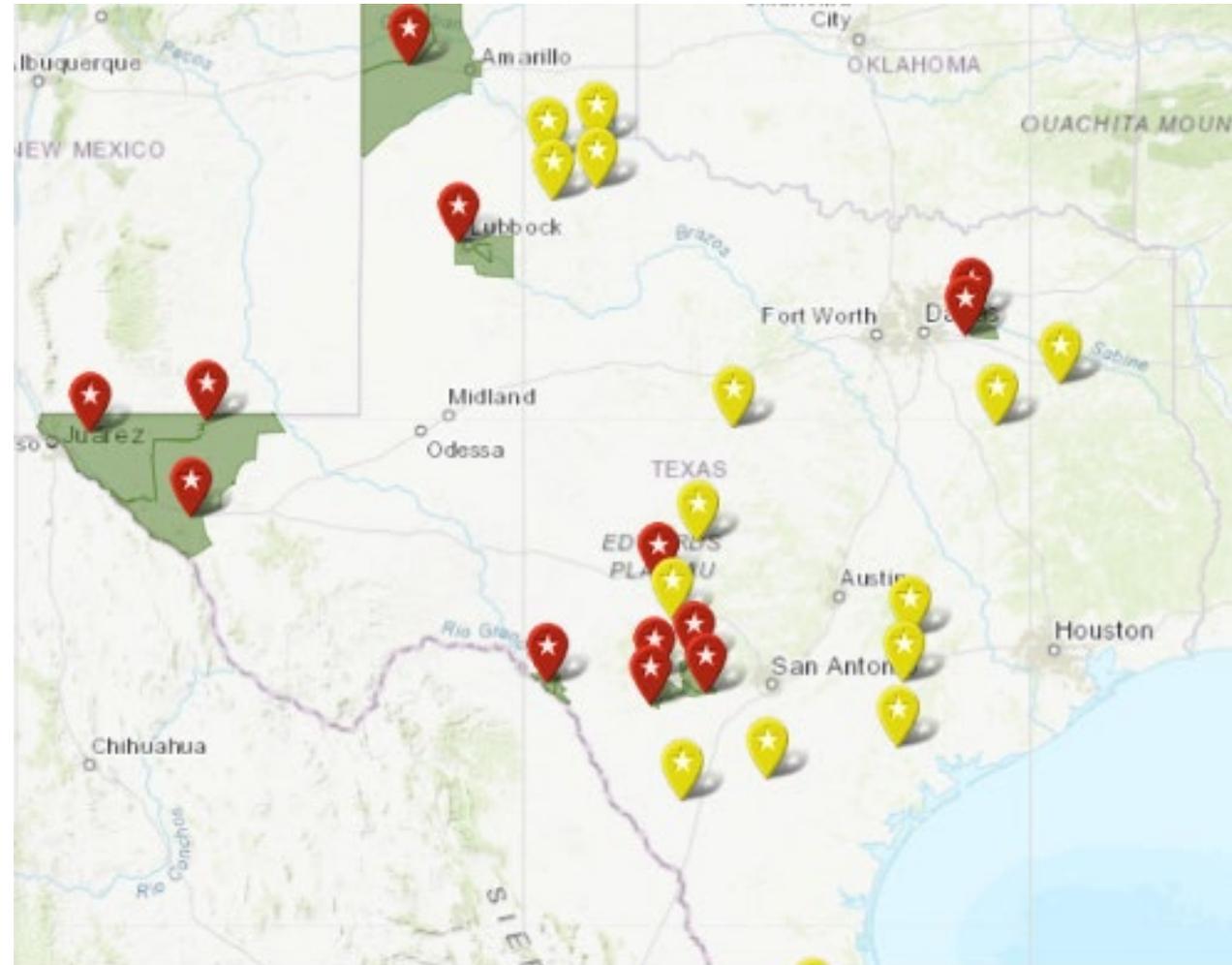
- Disease Management
 - **Control**
 - Strategies to restrict/reduce movement of free-ranging and captive cervids and carcass parts
 - Reduce or eliminate points of deer concentration
 - Keep deer densities at or below carrying capacity to reduce contact and environmental contamination
 - **Outreach**
 - Distribute correct, factual information
 - Reduce potential economic implications



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Current CWD Containment and Surveillance Zones

- Kimble County
- Trans-Pecos
- South Central
- Panhandle
- Val Verde County
- Hunt County
- Lubbock County





CWD Agencies & Programs



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Agencies

TPWD Mission - to manage and conserve the natural and cultural resources of Texas

- Regulates free-ranging white-tailed deer and mule deer
- Administers the Captive Deer Breeder Program in Texas



TAHC Mission - TAHC protects the health of all Texas livestock, including cattle, swine, poultry, sheep, goats, equine, exotic livestock

- Administers Voluntary TAHC CWD Herd Certification Program
- Regulates non-native “CWD susceptible” species
- Regulates captive native cervids (shares authority with TPWD)





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TAHC Program

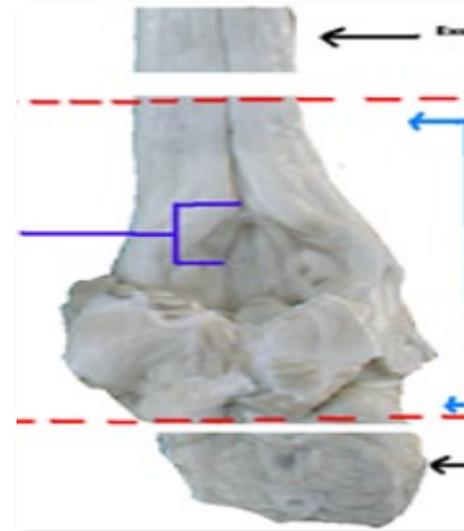
- **Administers Voluntary** TAHC CWD Herd Certification Program
- **Regulates non-native “CWD susceptible” species** (interstate/intrastate movements and surveillance): elk or wapiti, red deer, black tailed deer, sika deer, moose, and subspecies and hybrids of the above
- **Regulates captive native cervids** (interstate/ intrastate movements and surveillance): white-tailed deer & mule deer possessed under the authority of Deer Breeder Permits (shares authority with TPWD)



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Chronic Wasting Disease (CWD)

- Diagnosis
 - Tissues for postmortem testing
 - Obex
 - Medial Retropharyngeal Lymph Nodes (RLN's)
 - Tissues for antemortem testing
 - *Practice of veterinary medicine and can only be performed by a veterinarian*
 - Tonsil Biopsy
 - Rectal Biopsy
 - RLN Biopsy





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Tests For Chronic Wasting Disease

- Postmortem CWD Testing options available from the Texas A&M Veterinary Medical Diagnostic Laboratory:
 - Immunohistochemistry (IHC)
 - Enzyme-linked Immunosorbent Assay (ELISA)
- Who can collect samples:
 - USDA Accredited Veterinarian or Certified CWD Postmortem Sample Collector for appropriate sample collection (not for traces or positive facilities)
 - TPWD CWD Check Stations –Kimble County, Trans-Pecos, South Central, Panhandle, Val Verde County, Hunt County, Lubbock County
 - For more information on TPWD Surveillance Stations please visit:
[Chronic Wasting Disease \(CWD\) — Texas Parks & Wildlife Department](#)



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Differences Between ELISA and IHC

ELISA

- Obex & Medial Retropharyngeal Lymph Nodes submitted fresh
- TVMDL cost - \$25 for one Tissue; \$30 for both tissues + accession fee of \$7 per submission
- Turnaround time is typically 2-3 days , but can be longer during times of heavy demand
- Complete a TVMDL CWD Submission Form Accessible only through the facility TPWD/TWIMS Account
- Use a single container for each animal

IHC

- Obex & Medial Retropharyngeal Lymph Nodes submitted fixed in formalin
- TVMDL cost - \$45 + accession fee of \$7 per submission
- Normal turnaround time is 14-21 days, but can be longer during times of heavy demand
- Complete a TVMDL CWD Submission Form Accessible only through the facility TPWD/TWIMS Account
- Use a single container for each animal



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Differences Between ELISA and IHC

ELISA

- Samples **MUST** be submitted fresh or frozen, shipped on cool packs, **NOT FIXED IN FORMALIN**
- Entire head can be submitted to TVMDL for sample collection
- Ship samples overnight courier (strongly recommended)
- Critical: Collect all animal ID devices with a quarter-sized piece of tissue (ear, hide, etc.) attached to each device and submit fresh in a separate bag with sample submission
- Payment for test is directly to TVMDL by the hunter or producer

IHC

- Samples will be fixed in 10% formalin
- Entire head can be submitted to TVMDL for sample collection
- Tracking your shipment is strongly recommended
- Critical: Collect all animal ID devices with a quarter-sized piece of tissue (ear, hide, etc.) attached to each device and submit fresh in a separate bag with sample submission
- Payment for test is directly to TVMDL by the hunter or producer



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Enzyme-linked Immunosorbent Assay (ELISA) Testing

- **Precautions & Additional Notes**

- Cannot be used for the TAHC CWD Herd Certification Program
- Tissues submitted in formalin cannot be tested with the ELISA method
- Any ELISA suspect samples will be re-tested by IHC for confirmation at the National Veterinary Services Laboratories (NVSL) at no additional cost. In some cases, confirmation with IHC at TVMDL may also be approved. The IHC result will be the final official result
- Samples **MUST** remain chilled until delivery to the lab. Samples received at TVMDL that are not chilled cannot be tested



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TAHC HCP Regulations Related to Postmortem Testing

- RULE §40.3. Herd Certification Program for Cervidae
- Each animal must be identified no later than March 31 of the year following the year the animal is born using official animal identification
- Test all deaths aged 12 months or older, including, but not limited to, animals killed on premises maintained for hunting and animals sent to slaughter



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TAHC HCP Regulations Related to Postmortem Testing

- RULE §40.3. Herd Certification Program for Cervidae
- Samples shall be collected and submitted to an approved laboratory within 7 days of collection
- Tissue samples must include the obex and half of each medial retropharyngeal lymph node from each animal being tested in formalin
- Additional tissue samples include the remainder of the brainstem and the other half of each MRLN fresh (not in formalin)
- If samples are missed, or poor-quality samples are submitted, the state epidemiologist or designee will review the circumstances and determine if the herd status will be advanced, held, reduced, or removed



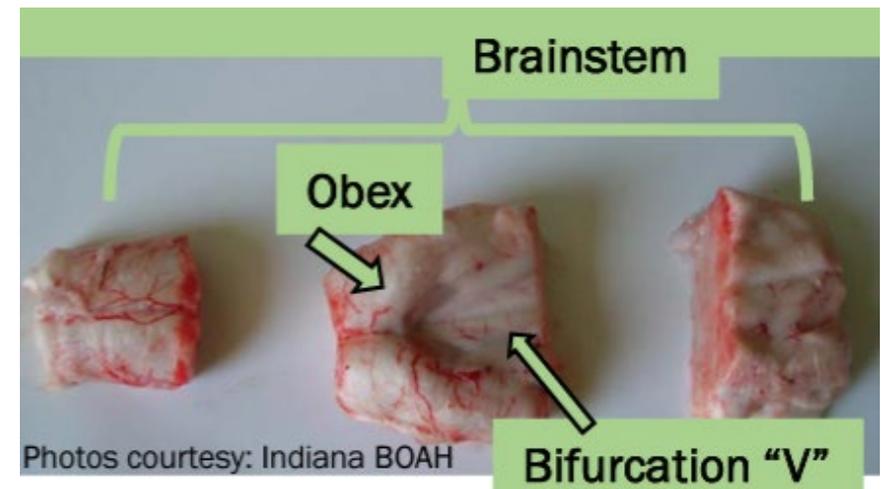
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Sample Collection Summary

10% neutral buffered formalin jar 1 jar per animal	Fresh Labeled whirl packs
Half of right and left MRPLN	Other halves of right and left MRPLN
Obex	2 nd Brainstem piece*
Brainstem piece	Official ID w/ 1"x1" piece of ear**

* if testing for ELISA, place the second piece of brainstem and trimmed pieces in a conical tube

** if a trophy animal, submit the official ID and a new official ID attached to a piece of skin, if no official ID is present, the collector must affix one and record the information; microchips must be in the tissue





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Sample Quality

- Collect all required tissues regardless of sample condition and submit to the lab
- There may be circumstances when only one tissue sample can be collected
 - Notify TAHC immediately
 - Explain the reason – severe tissue/carcass decomposition, destruction of tissues at slaughter
 - TAHC & the USDA will determine if the single sample submission is acceptable
- If the single sample submission is unsuitable or untestable, then it will be recorded as a missed sample



TVMDL Account Setup



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TVMDL Account Setup



Search...



TVMDL is proposing fee changes for Fiscal Year 2023. View the proposed changes and offer your feedback at [FY23 Proposed Fee Changes](#).

TVMDL is accepting public comment until **August 25, 2022**.

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Search for Tests

[View TVMDL's Syndromic Diagnostic Plans](#)

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Become a Client

TVMDL clients are afforded many benefits. Download our [client brochure](#) to learn more.

TVMDL now offers clients a [volume discount rewards program](#).

To become a client, complete the [New Client Form](#), including the full contact information for your credit references. Trade references may include phone and utility companies.



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Ordering Supplies - TVMDL

Locations: Canyon Center College Station Gonzales TVMDL Career Center [Contact Us](#)

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Search...

USA, Canada, Mexico, Spain, France, Germany, Italy

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Specimen Collection Information

Packaging Samples for Shipment

Drop Off a Sample

Cremation

Order Supplies

Specimen Collection Info

Drop Off a Sample

Packaging Samples for Shipment

Examples of Improper Packaging

All Species SEARCH TESTS

Deliver a Sample

Sign up for TVMDL's discounted shipping program with SVA. Learn more about the benefits of the program [here](#).

These pages offer useful information about the proper collection and safe shipping of biologicals, infectious substances or diagnostic specimens.



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Ordering Supplies - TVMDL

Locations: Canyon Center College Station Gonzales TVMDL Career Center [Contact Us](#)

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Search for Tests All Species

Order Supplies

TVMDL provides clients with supply shipping containers that comply with all requirements for shipping Category B biological substances for a nominal fee (order below). If used as designed, this packaging will comply with all requirements.

While TVMDL has no affiliation with the following companies, we are happy to provide a few links for sources of products used to ship diagnostic samples. This is not a complete list, but may serve as a starting point.

- [InfeKta](#)
- [Therapak](#)
- [EXAKT-PAK](#)
- [Casing Scientific](#)

Order Supplies

To start your supply order, please select the category of supplies you'd like to purchase.

- [General Supplies](#)
- [Housing or Livestock Show Supplies](#)



Packaging & Shipping



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Supplies Needed For IHC Testing

- Formalin jars, 120ml or 180ml (10% buffered formalin)
- Electrical tape (to tape formalin jar lids)
- Permanent markers
- Ziploc® like bags
- TVMDL submission form/
TWIMS submission form
- Ice Packs (for shipping whole head only)
- Labels and shipping boxes





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Immunohistochemistry (IHC)

- Ship obex and ½ of each RLN's (in formalin) to TVMDL
- Ship remainder of brain stem and ½ of each RLN's (fresh) to TVMDL
- Collect all animal ID devices with a quarter-sized piece of tissue (ear, hide, etc.) attached to each device
- DO NOT use ice/ice packs in boxes with formalin fixed tissues
- If submitting the entire head
 - must ship overnight
 - do not freeze samples
 - thoroughly cool the head prior to shipping
 - ship in a cooler box, with ice packs to the lab
- Payment for test is directly to TVMDL by the hunter or the owner of the deer



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Supplies Needed For ELISA Testing

- Shipping Box – cardboard outer box with a Styrofoam inner cell
- Frozen Ice Packs
- Crumpled paper to fill dead space inside the inner Styrofoam
- Whirl-Pak® type plastic container or plastic tubes
- TVMDL CWD Submission Form
Accessible only through the facility TPWD/TWIMS Account
- Plastic bag for submission forms
- Packing tape and Overnight Courier Shipping Label





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Packaging and Shipping

- All CWD samples sent in to TVMDL must have “Exempt Animal Specimen” written on the outer package in letters at least 6 mm high
- All samples should be submitted within **7 days** of collection
- For questions regarding IHC and ELISA testing please contact TVMDL at (979) 845-3414



CWD Sample Submission Forms



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CWD Sample Submission Forms

- There are four (4) postmortem sample submission forms available:
 - In the TWIMS Database:
 - Postmortem Breeder Facility Submission Form
 - Postmortem Breeder Deer Release Site Submission Form
 - On TAHC's website:
 - [Exotic CWD Susceptible Species Submission Form](#)
 - On TVMDL's website:
 - [TVMDL Submission Form](#)



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CWD Sample Submission Forms

Postmortem Breeder Facility Submission Form :

- Use this form when sending in samples from deer that have died in a breeding facility
- This form is generated through TWIMS
- The deer's death needs to be reported in TWIMS before this accession form can be created

Texas Veterinary Medical Diagnostic Laboratory System

College Station Lab			Amarillo Lab		
PO Drawer 3040	1 Sippel Rd	P: 979-845-3414	PO Box 3200	6610 Amarillo Blvd	P: 806-353-7478
College Station TX 77841	College Station TX 77843	P: 888-646-5623	Amarillo TX 79116	West	P: 888-646-5623
		F: 979-845-1794		Amarillo TX 79106	F: 806-359-0636

Test	Premise Name	County	
IHC for CWD	TPWD Special	Travis	
Address	Breeder Serial #/Name	Email	Phone
5 mi SE of Austin on 71 Austin, TX 78744	TX0000/ODBS Testing	deer.breeder.tx@gmail.com	5123894688
Account ID	Signature of Submitter	Print Name of Submitter if different than Breeder Name	
_____	_____	_____	

Use of this accession form provides TVMDL authorization to release CWD test results directly to TPWD.

Premise ID
 2811B

Deer Unique ID	DOB	DOD	Sample Collection Date	Tissue Type
 01LG	06/01/2012	07/08/2013	07/09/2013	Post-mortem Obex and RLN
 4G6R	07/01/2004	12/31/2010	01/01/2011	Post-mortem Obex
 H19F	06/15/2008	01/02/2010	01/03/2010	Post-mortem RLN



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CWD Sample Submission Forms

Exotic CWD Susceptible Species Test Submission Form:

- Landowners required to test all mortalities within a CWD zone and first 3 mortalities statewide annually
- Use this form for the submission of exotic CWD susceptible species samples
- Both obex and RLNs submitted in formalin are required for exotic CWD susceptible species
- Always submit both tissues from the same animal in one container
- Any exotic CWD susceptible species under a herd plan or in HCP are required to use IHC tests
- Exception to above point: Elk may be tested with ELISA unless on a herd plan or HCP



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Exotic CWD Susceptible Species Test Submission

TVMDL Account #: _____

Accession #: _____

Owner / Property Information							Collector Information			
Property PIN or LID		County		TAHC Region			TAHC Certified CWD Sample Collector		NAN (if applicable)	
Property Owner Name			Property Name				Collector Signature			
Property Owner's Mailing Address							Collector Mailing Address			
Property Owner's Phone			Alternate Phone		Collector Phone		Collector Alternate Phone			
Property Owner's Email							Collector Email			
NO.	COLLECTION DATE	ANIMAL IDENTIFICATION (or enter None if applicable)	AGE	SPECIES	SEX	TISSUE TYPE	TEST		REMARKS & ADDITIONAL INFO	
							IHC	ELISA		
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
<small>Distribute 2 copies of completed form as follows: submit one with test submission, maintain one for recordkeeping, and submit one to TAHC using one of the options below. Submit all test results to TAHC within 30 days of receipt. Submit a completed Exotic CWD Susceptible Species Mortality Record (TAHC Form 17-10) by April 1st of each year.</small>										
<small>By email: CWD_reports@tahc.texas.gov</small>					<small>Fax: 512-719-0729</small>			<small>By mail: TAHC, Attention CWD SS Reporting PO Box 12966 Austin, TX 78711-2966</small>		

TAHC Form 17-11 (Revised 01/22/2021)



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CWD Sample Submission Forms

TVMDL Submission Form:

- Use this form for the submission of samples from Trap, Transport, and Transplant permits (TTT) and Trap, Transport, and Process (TTP) permits

TVMDL TEXAS A&M
VETERINARY MEDICAL
DIAGNOSTIC LABORATORY

Submission Form
Document: 10741 | Revision: 11

Avoid postal service delays by shipping specimens via overnight courier directly to the physical address listed below. Not all locations perform all tests. For faster service, ship directly to the location that performs the tests requested. Visit our website for the latest information on test offerings.

College Station Laboratory		Canyon Laboratory	
USPS Mail Address PO Box 3040 College Station, TX 77841-3040 Telephone 979.845.3414	Physical /Shipping Address 483 Agronomy Road College Station, TX 77843-4471 FAX 979.845.1794	USPS Mail Address WT Box 60818 Canyon, TX 79016 Telephone 806.651.7478	Physical /Shipping Address 3209 Russell Long Blvd Canyon, TX 79016 FAX 806.651.7477

SUBMITTER INFORMATION	ANIMAL OWNER INFORMATION	For TVMDL Use
Account # _____	<input type="checkbox"/> Mark if Submitter and Owner Information are the same	Accession # _____
Clinic _____	Name _____	Assignments _____
Address _____	Address _____	Opened By _____
City _____	City _____	<input type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> LBO
State _____ ZIP _____	State _____ ZIP _____	<input type="checkbox"/> USPS <input type="checkbox"/> Messenger
Email _____	Email _____	Other Carrier _____
Telephone _____	Telephone _____	# Samples _____
FAX _____	FAX _____	Comment _____
Veterinarian _____	Previous Accession # _____	
Service/Price Agreement # _____		

Animal ID(s) _____
List multiples below in Clinical History or attach additional pages.

Species Avian Bovine Canine Caprine Equine Feline Ovine Porcine Wildlife Zoo Non-Animal

Breed _____ Sex Male M-Neut Female F-Neut Age _____ Yr Mo Day Felus Weight _____ lb kg

Specimen Type and Anatomic Location	Collection Date	Test Code	Test Name

For biopsies only: was the entire lesion submitted? Yes No

Hold for Cremation Gross Necropsy Only Legal/Insurance Case Zoonotic Suspect Export Case

Clinical History (please print):

Clinical Diagnosis

- An accession fee is charged on each submission
- All samples and documentation submitted become property of TVMDL and may be tested as part of state/federal surveillance programs, utilized for research and educational purposes, and/or development of new assays.
- TVMDL is unable to return samples unless prior arrangements are approved by the agency director or designee.
- Order supplies and view a complete catalog of tests, fees, sample requirements, and testing schedules at <https://tvmdl.tamu.edu>

Page 1 of 1



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Determining the Correct Accession Form

Is the CWD Sample From a Deer Breeding Facility?

Yes

Post-Mortem
Test
Generate a
TVMDL
Accession Form
in TWIMS from
the post-
mortem
section of the
CWD
Monitoring Tab

Ante-Mortem
Test
Generate a
TVMDL
Accession
Form in
TWIMS from
the ante-
mortem
section of the
CWD
Monitoring Tab

No

Is the CWD Sample from a registered
breeder deer release site (i.e., has a
facility ID in TWIMS)?

Yes

Generate a
TVMDL
Accession Form
in TWIMS from
the Harvest Log
page for that
release site

No

Use the standard
TVMDL
Accession Form
(available on
TVMDL's
website) for
submission of
samples
collected for TTT,
TTP, and general
surveillance

Questions? Contact
deer.breeder@tpwd.texas.gov



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TWIMS Sample Submission Forms

- For questions regarding TWIMS submission forms please contact the TPWD Deer Breeder Program at 512-389-4585 or deer.breeder@tpwd.texas.gov



Reminders



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Chronic Wasting Disease (CWD)

- Recertification every 3 years
 - TAHC will notify you 3 months prior to your expiration date
 - Complete application on TAHC website
 - Review on-line module and complete exam
- Texas-Specific Program
 - If you would like to collect in a state other than Texas, please check with their State Animal Health Officials



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Chronic Wasting Disease (CWD)

- Additional Resources
 - Updated CWD Rules
 - 10/13 [TAHC Adopts Rules and Rule Reviews at Recent Commission Meeting](#)
 - Texas Animal Health Commission:
 - www.tahc.state.tx.us
 - Texas Parks and Wildlife Department:
 - www.tpwd.state.tx.us/cwd
 - Texas Veterinary Medical Diagnostic Laboratory:
 - <https://tvmdl.tamu.edu/2016/08/19/tpwd-alerts-deer-breeders-tvmdl-usda-live-testing-approved-faster-elisa-testing-now-available/>
 - Texas A&M AgriLife Extension:
 - <http://agrilifeextension.tamu.edu/blog/2015/07/28/chronic-wasting-disease-cwd-in-white-tailed-deer/>

CWD Postmortem Obex Sample Collection

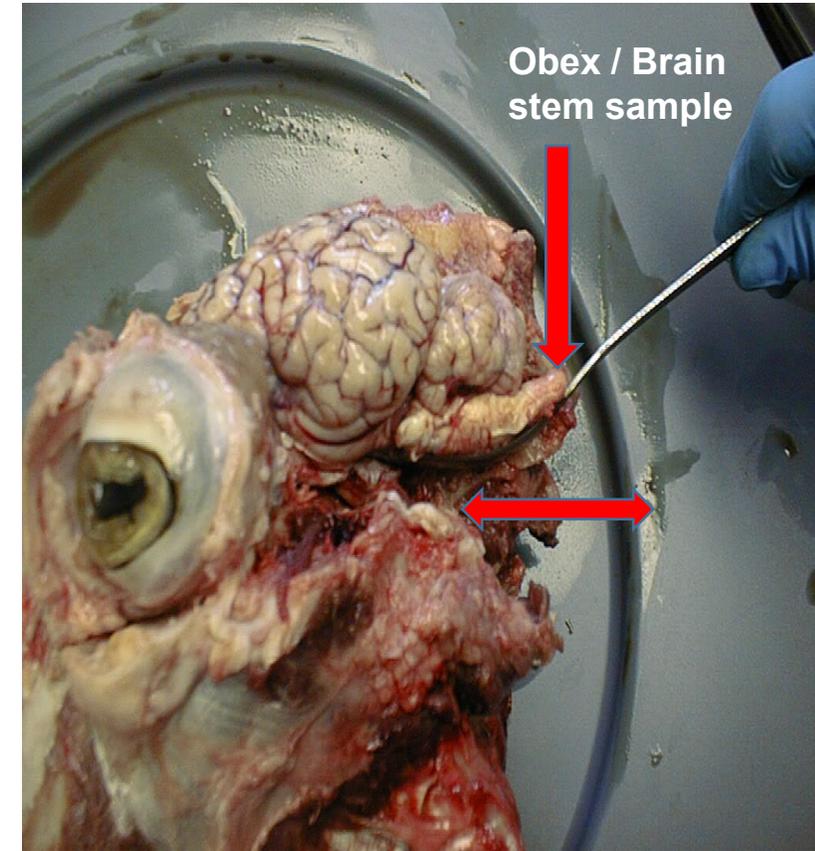
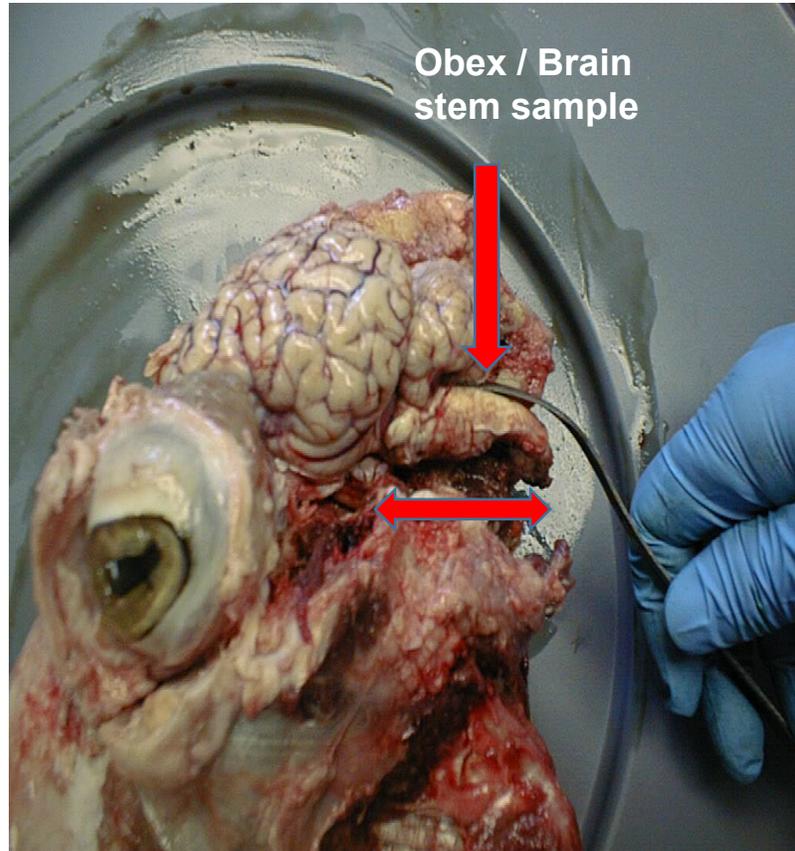


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Chronic Wasting Disease Spoon Placement



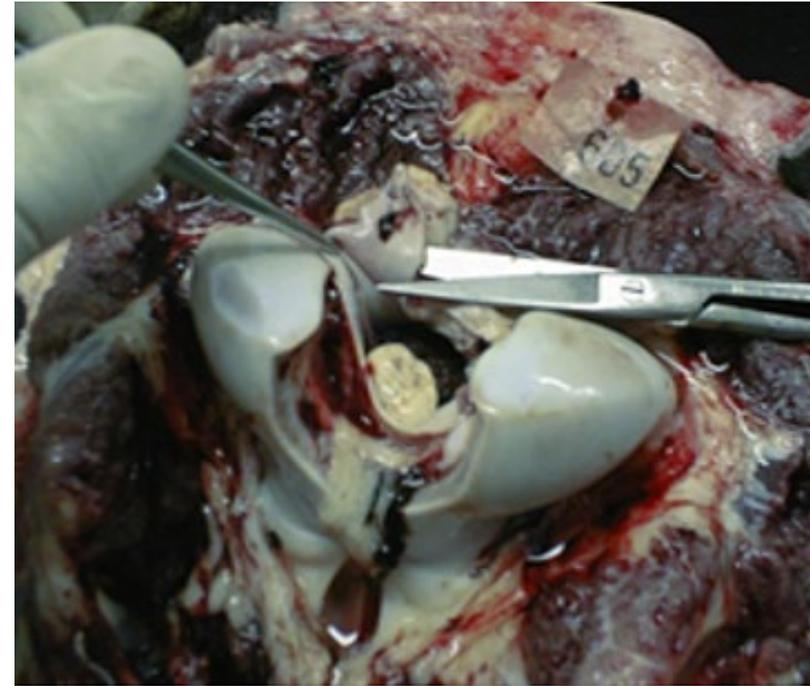
(Cross section view) Photos Courtesy of Kent Munden, USDA APHIS VS Animal Identification Coordinator



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Spoon Collection

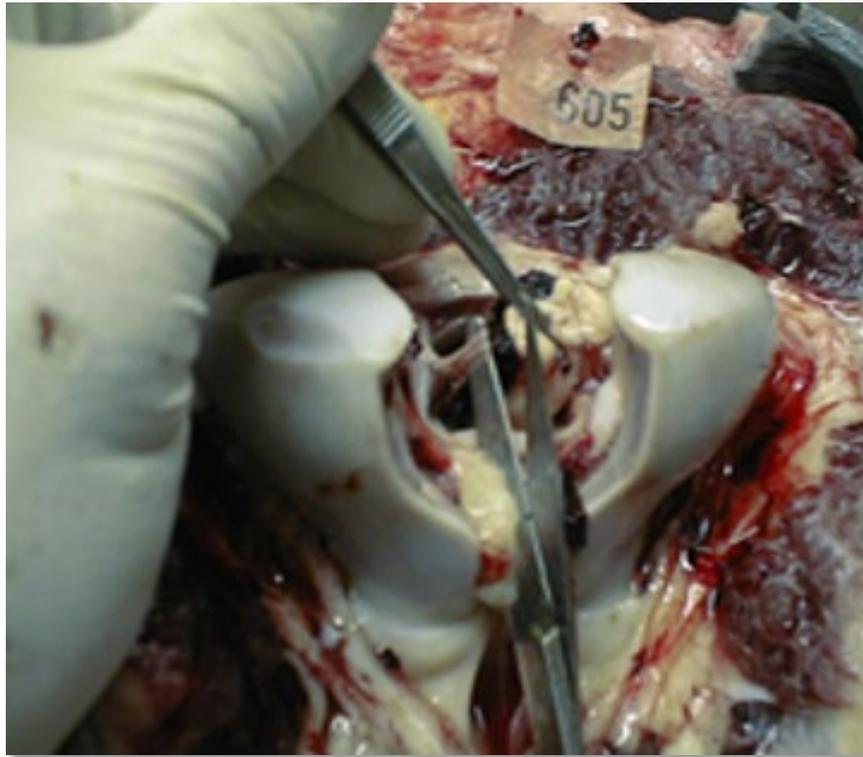
- With forceps and scissors
 - Remove as much dura as possible
 - This will allow for easier sample removal
 - This will also allow a better view of the sample to be collected





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Spoon Collection



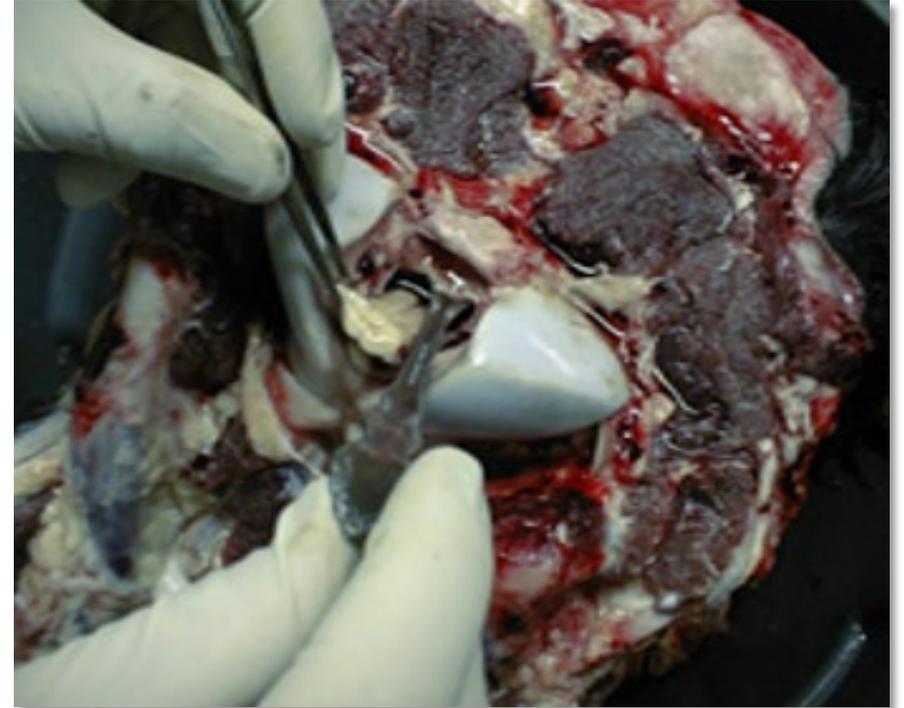
- **Sever the cranial nerves**
 - These are located on both sides of the spinal cord
 - This may be done with scissors or a knife
 - Failure to sever these nerves could cause damage to the brain stem upon removal



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Spoon Collection

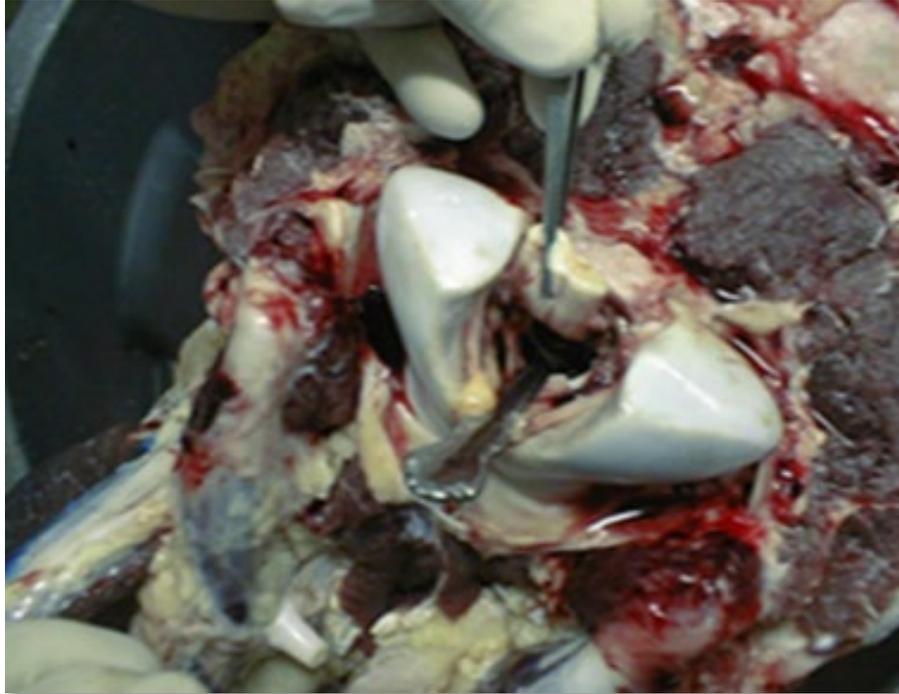
- Spoon Insertion
 - With light pressure, use forceps to hold the spinal cord to the back of the foramen
 - Insert the spoon on the top side and press it gently into the foramen opening the to sever the cerebellum
 - At a depth of 2/3 of the tool, push the spoon handle forward in order to sever the brain stem
 - Then remove the spoon





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Spoon Collection



- With forceps, move the spinal cord forward.
 - Insert the spoon behind the spinal cord to a depth of 2/3 of the handle
 - Gently pull upward on the spoon to remove the sample
 - NOTE: the spoon tip should be kept close to the skull cap during removal to keep from damaging the sample



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Spoon Collection

- Once the brain stem has been removed:
 - Clean off all excess blood prior to cutting
 - With a clean sample, this will allow for easier processing at the lab

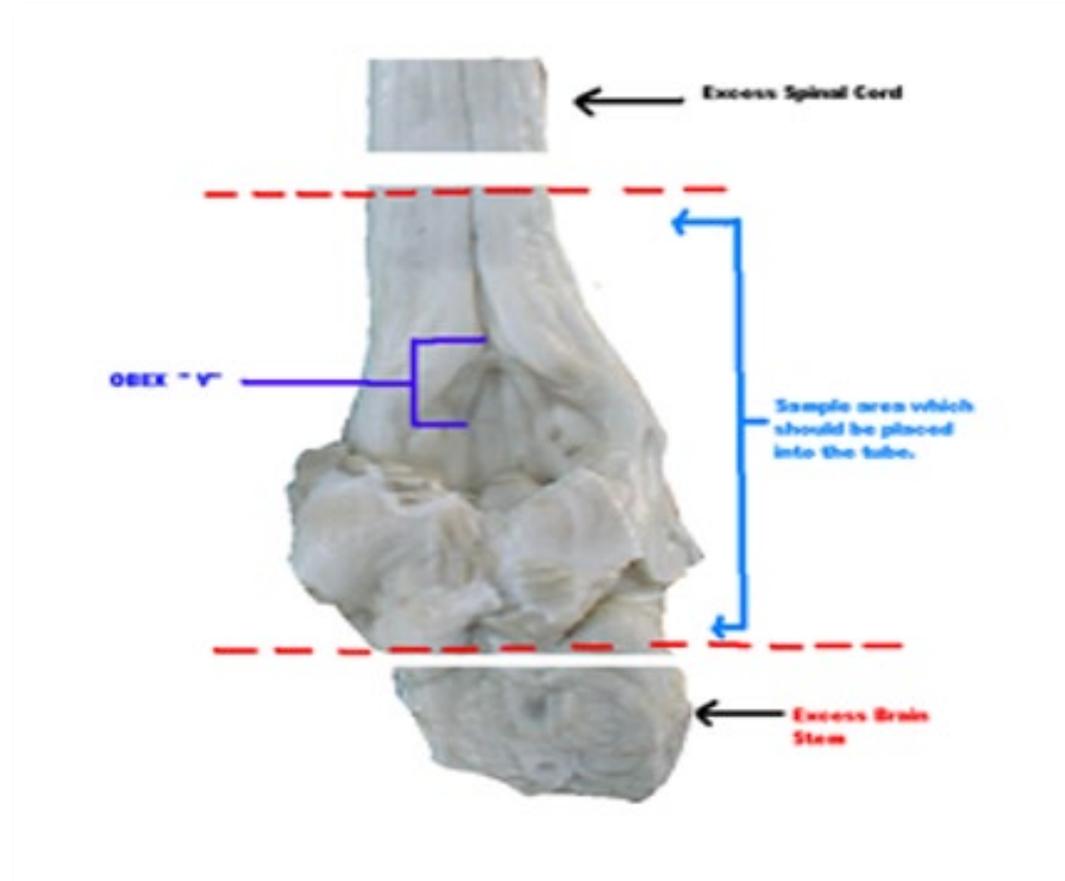




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Obex Collection

- Cut only the middle section with the “V” of the obex



Medial Retropharyngeal Lymph Node (MRLN) Collection



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Method 1 – Neck Method



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The best approach to extract MRLNs is from the bottom of the head/neck area. To begin extraction face the top of the head down as shown in the illustration.





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Make an incision between the back of the two lower jawbones and about 2-3 inches in front of the larynx (voice box). The incision should extend approximately 5-7 inches down the neck just cutting through the skin down to the trachea

Back of Lower Jawbone

Larynx





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Make another incision just in front of the larynx (voice box) starting on the back edge of the lower jawbone below the base of the ear to the initial cut on both sides

Larynx



Back of Lower Jawbone

Base of Ear





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Trachea



After making the necessary cuts, skin the hide away from the neck to expose the trachea (windpipe)



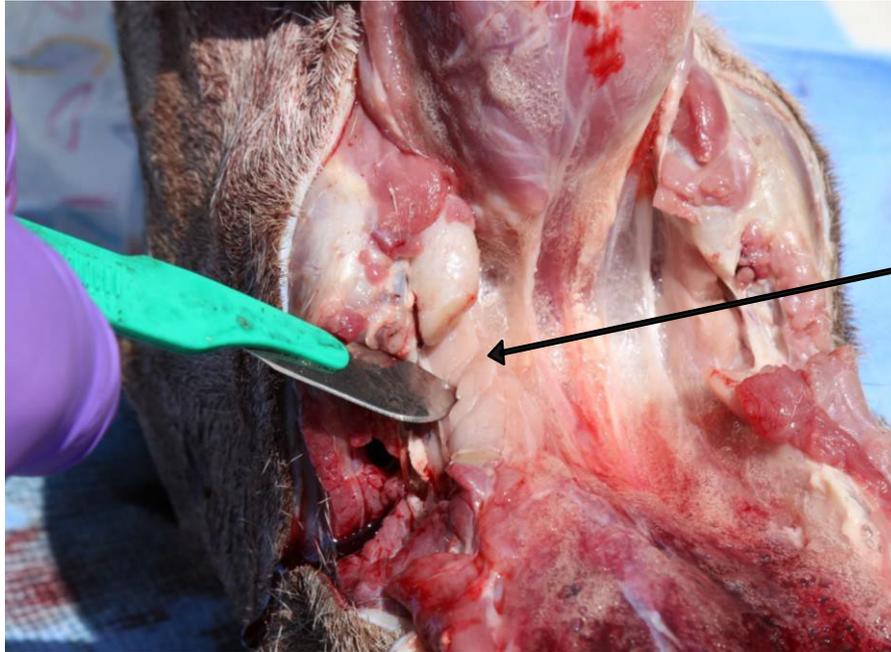
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Cut through the trachea and tissue towards the end of the incision on the lower neck. Pull the trachea towards the nose, skinning and cutting tissue as needed. Avoid cutting too deeply



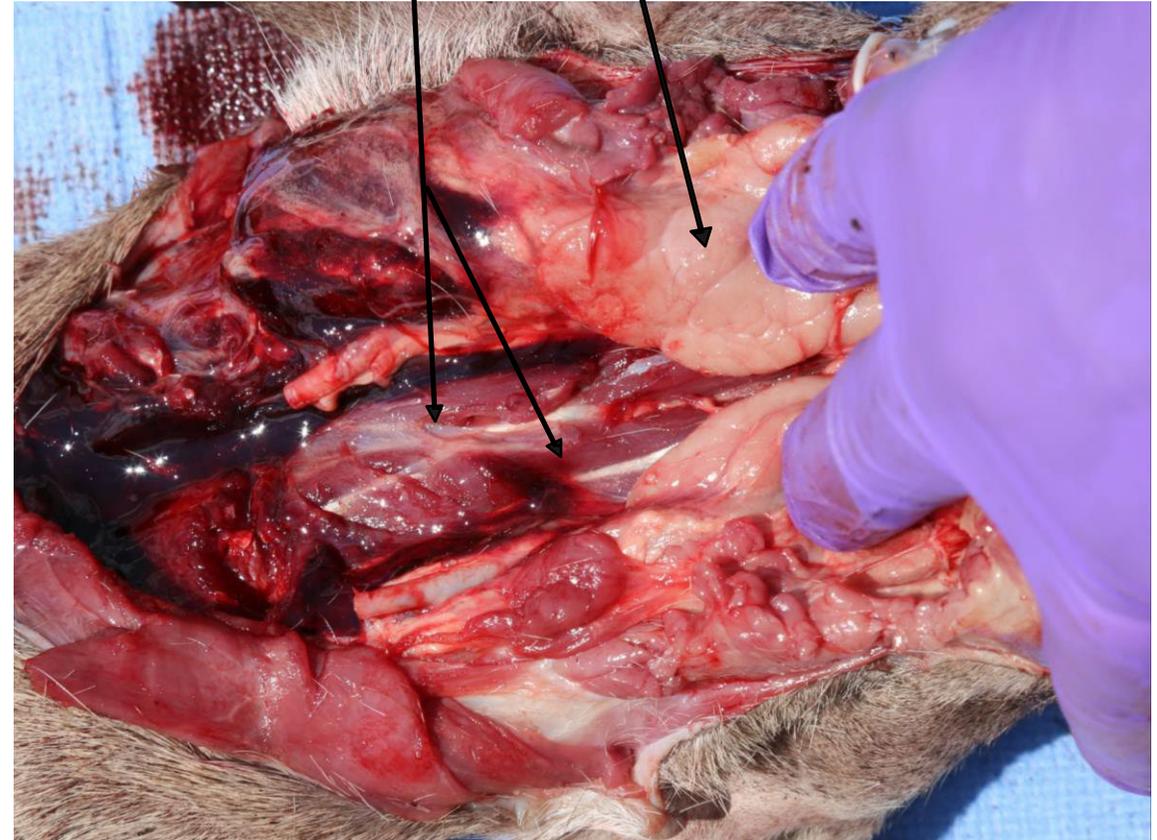


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Salivary Glands

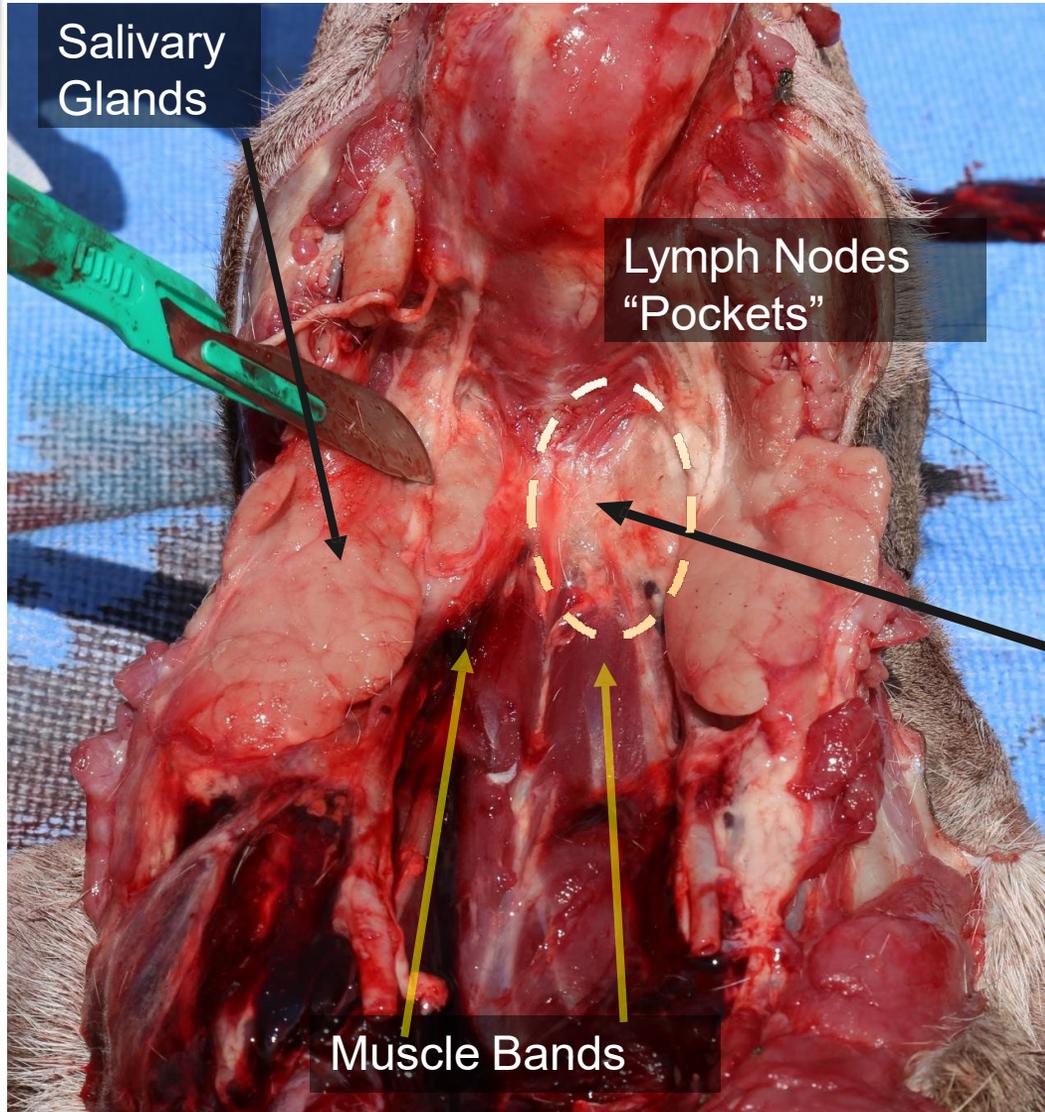
Muscle Bands



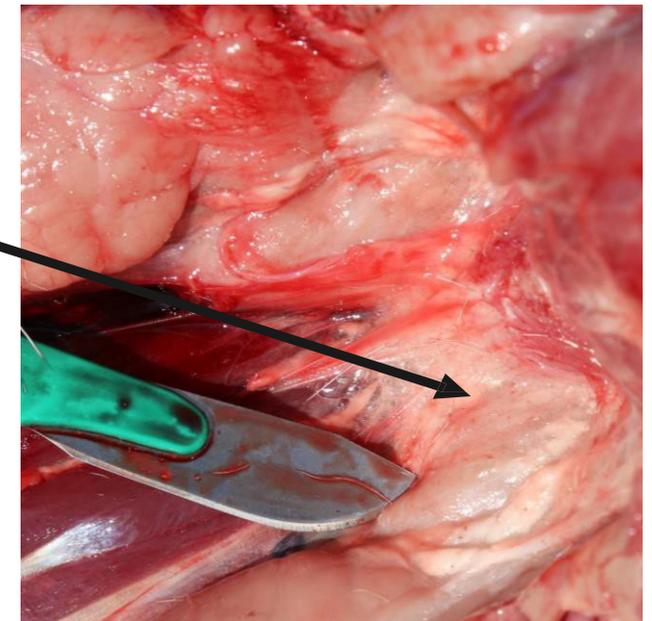
Note the salivary glands which have a flat granular appearance and are located just inside the lower jawbone. Also notice the two muscle bands along the edge of the spine



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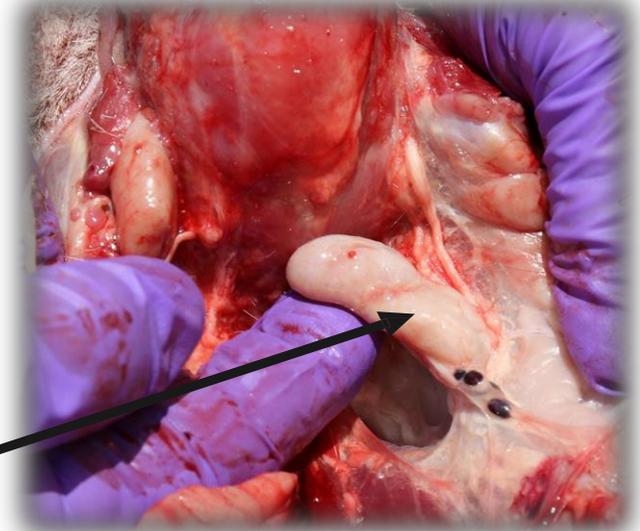
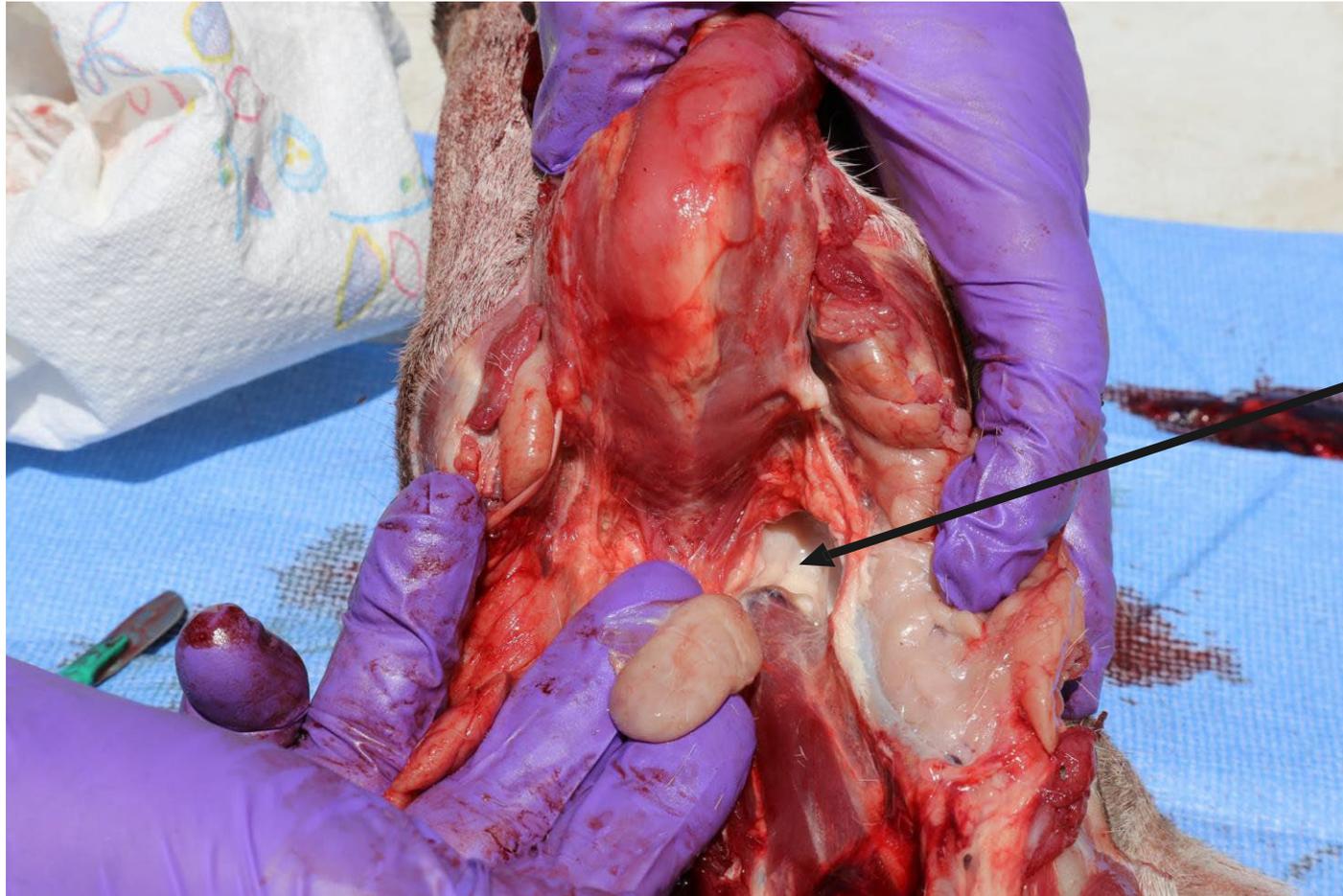
The MLRNs are located on either side of the spine below the pharynx and just inside the lower jawbone. They may be covered by the salivary glands. Notice the two small oval “pockets” at the end of the muscle bands. The lymph nodes are just below this thin membrane of tissue





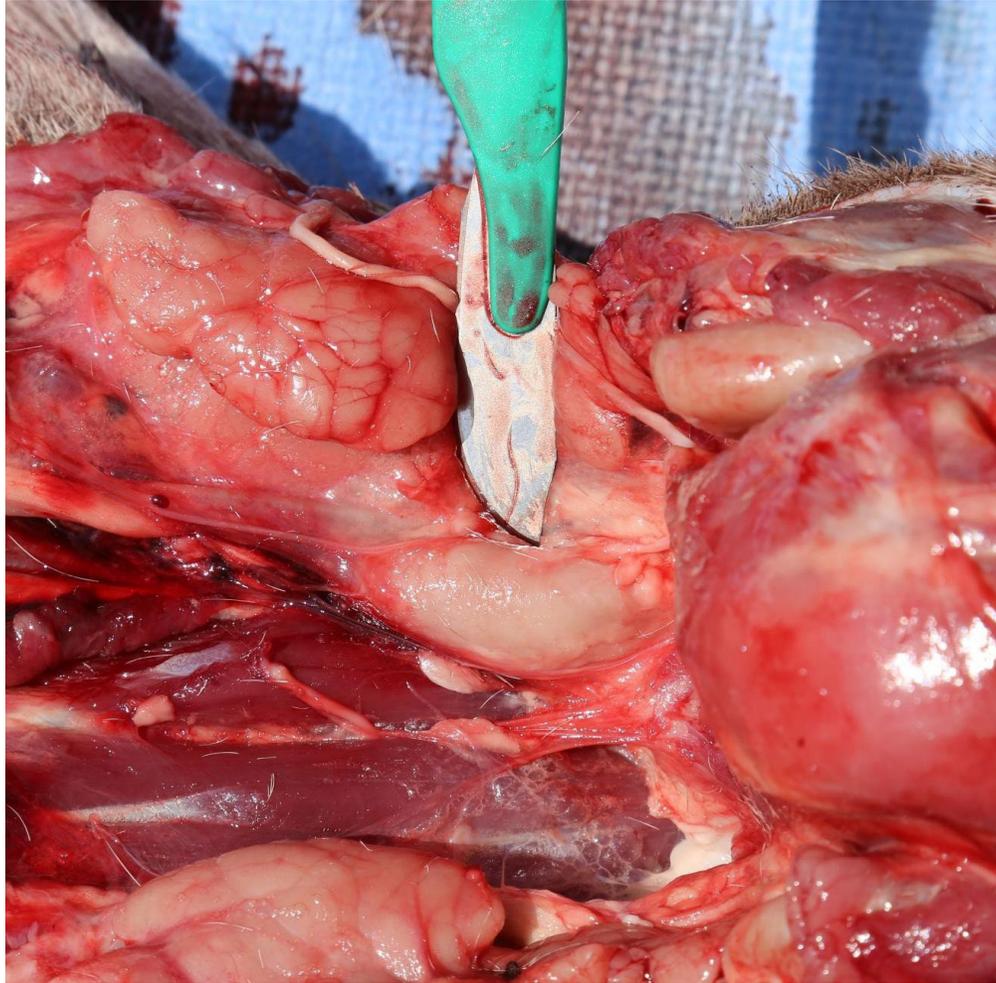
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The MRLN may be removed with a finger by prying or plucking the lymph node out of the “pocket”. A scalpel may be used to cut the lymph node out if difficult to remove by hand or with forceps/tweezers. If possible avoid cutting the lymph nodes to prevent cross contamination





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After extracting one lymph node move to the opposite side and extract the other lymph node



Method 2 – Skull Base Method

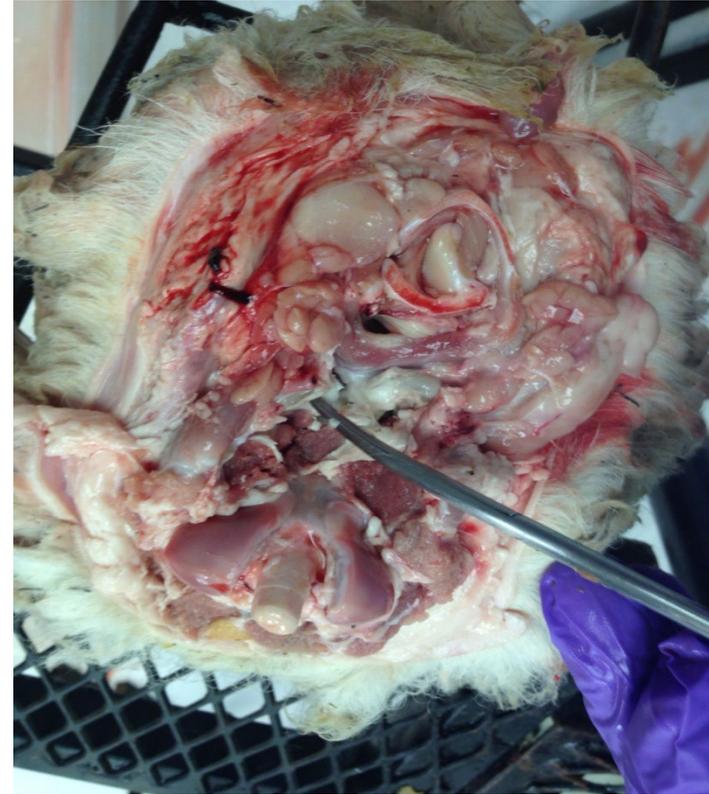


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Medial Retropharyngeal Lymph Node (MRLN) Collection

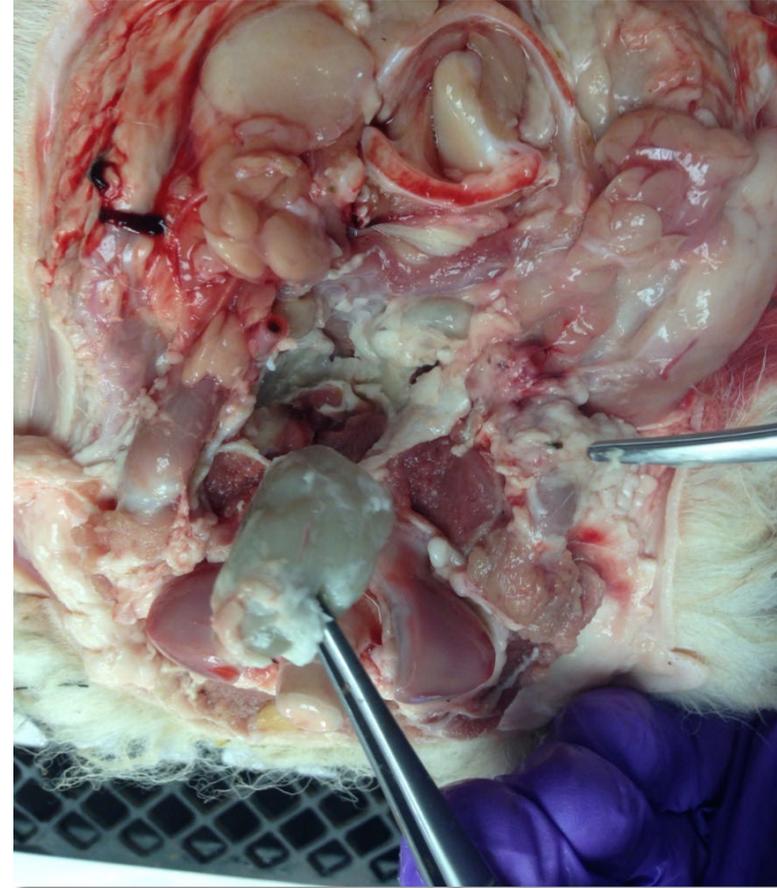
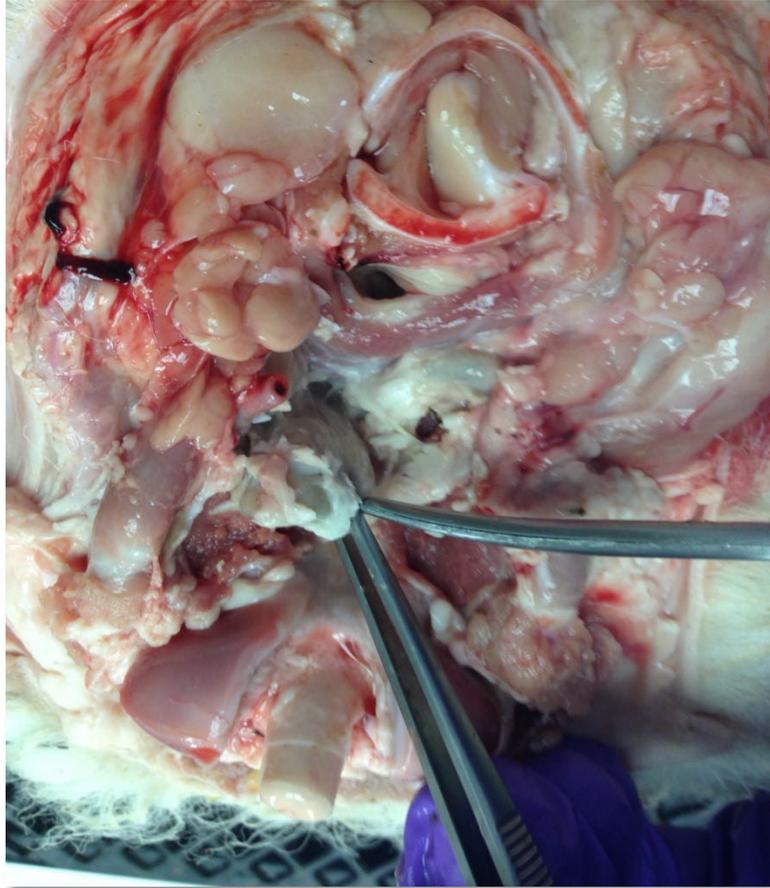


Insert the closed scissor tip, at the base of the skull, just inside the jaw bone, then pull toward you. This will tear the tissue which covers the node and expose the medial retropharyngeal lymph node. Then grab the node with forceps and trim it out with the scissors.



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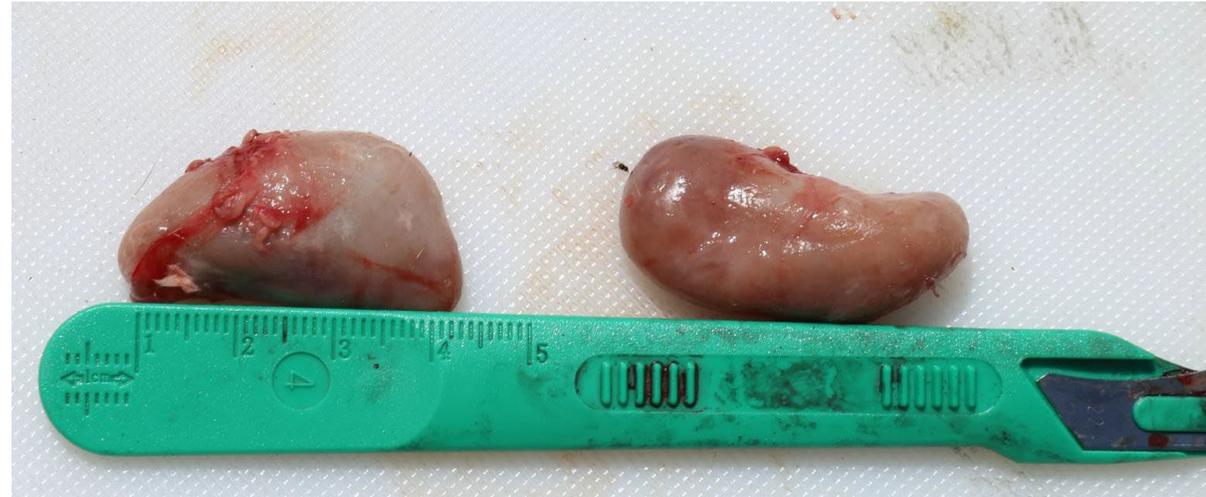
MRLN Collection





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The lymph nodes vary in size from a small jelly bean to a walnut. Most are about $\frac{1}{2}$ x $1 \frac{1}{2}$ inches in size.



The lymph node is a firm pale gray, pinkish, or light tan tissue that retains shape when pressure is applied and may be slightly glossy in appearance.



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Time to Take Your Quiz!

1. Register for QuizStar (instructions on page 3)
2. Complete the ten (10) question quiz. A grade of 70 or above is required to pass and qualify for recertification
3. Once completed, fill out the [TAHC Certified CWD Postmortem Sample Collector Online Application](#)
 - To access the application, please email:
authorized_personnel@tahc.texas.gov
4. When your application has been received and processed, you will receive a confirmation email from TAHC



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TAHC Region Offices

Amarillo Region

Agency Veterinarian, Nicole Sheedy, D.V.M.
Region Manager, Ty McCoy

Beeville Region

Interim Agency Veterinarian, Joseph Burkett, D.V.M.
Region Manager, Joe Gutierrez

Laredo Region

Agency Veterinarian, Vacant
Region Manager, Rene Garza

Giddings Region

Agency Veterinarian, Bud Dinges, D.V.M.
Region Manager, Ryan Brockenbush

Stephenville Region

Agency Veterinarian, Dustin Dorris, D.V.M.
Region Manager, Trevor Powe

Sulphur Springs Region

Agency Veterinarian, Scott Munger, D.V.M.
Region Manager, Bill Curry

