Commonly asked Questions to a Small Animal Theriogenology Technician

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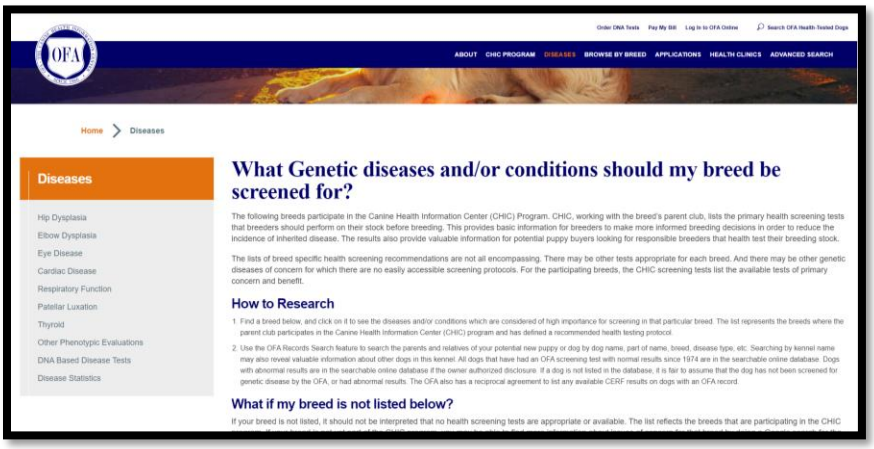
SA Theriogenology Technician

Overview

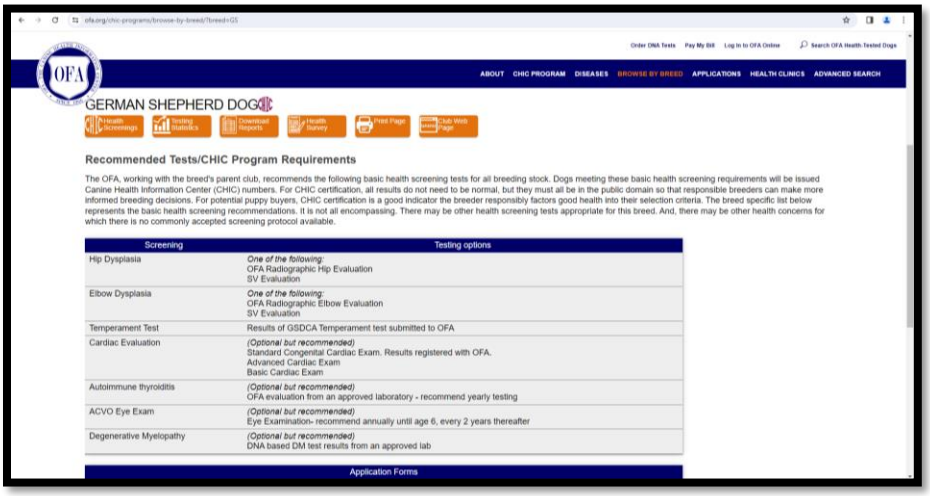
- Health Screening
- Genetic Testing
- Accidental Breeding
- Semen Collection Postmortem

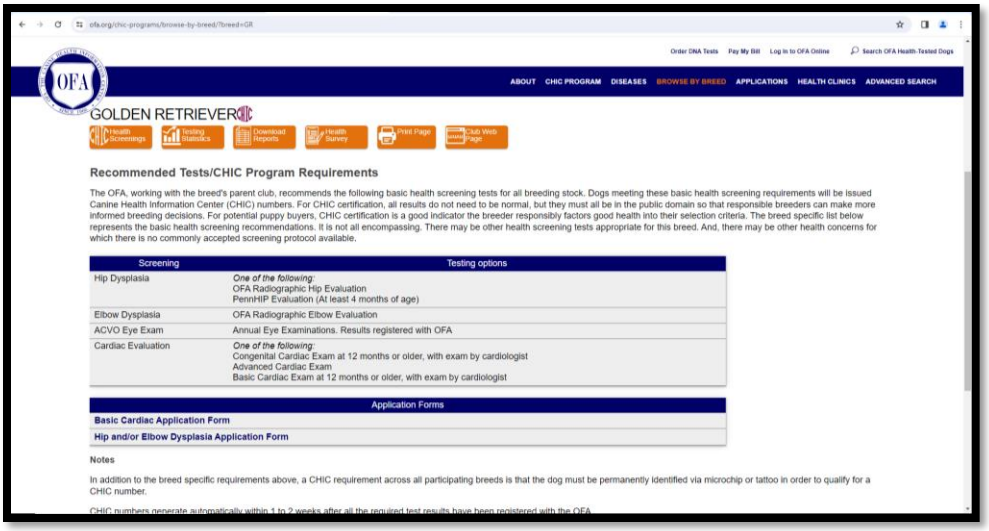
What health testing should be done before breeding?

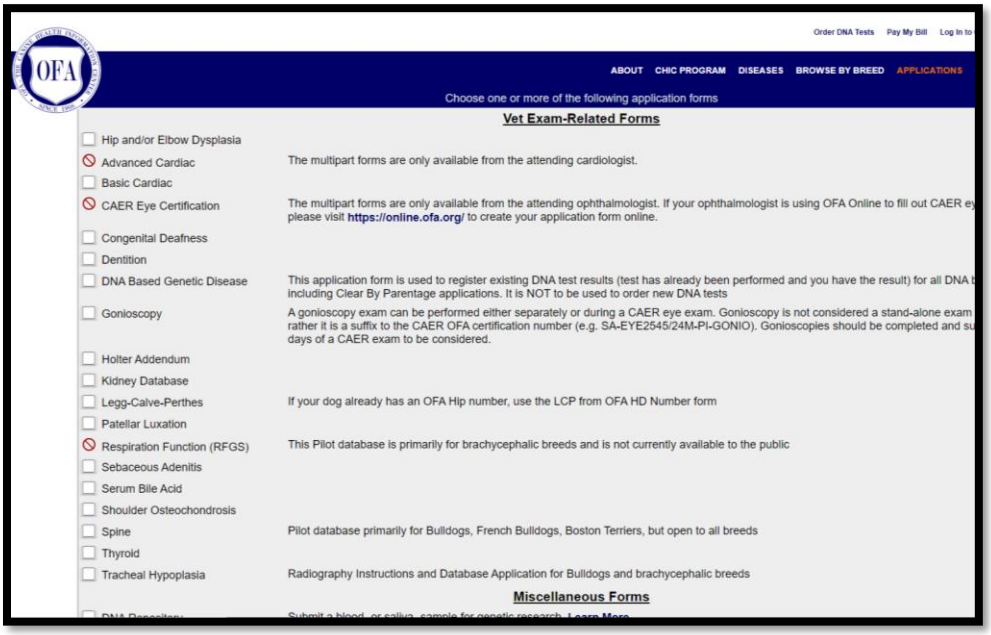
Canine Health Information Center (CHIC)
A centralized canine health database jointly sponsored by the AKC Canine Health Foundation (CHF) and the Orthopedic Foundation for Animals (OFA).
Health Screening

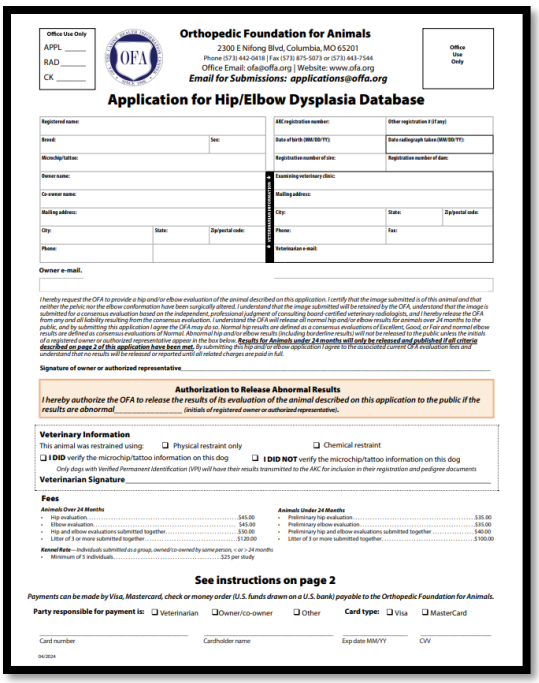


- https://ofa.org/chic-programs/browse-by-breed/




ofa.org/chic-programs/browse-by-breed/?breed=GR
Order DNA Tests
Pay My Bill
Log In to OFA Online
Search OFA Health-Tested Dogs
OFA
ABOUT
CHIC PROGRAM
DISEASES
BROWSE BY BREED
APPLICATIONS
HEALTH CLINICS
ADVANCED SEARCH
GOLDEN RETRIEVER
Health Screenings
Testing Statistics
Download Reports
Health Survey
Print Page
Club Web Page
Recommended Tests/CHIC Program Requirements
The OFA, working with the breed's parent club, recommends the following basic health screening tests for all breeding stock. Dogs meeting these basic health screening requirements will be issued Canine Health Information Center (CHIC) numbers. For CHIC certification, all results do not need to be normal, but they must all be in the public domain so that responsible breeders can make more informed breeding decisions. For potential puppy buyers, CHIC certification is a good indicator the breeder responsibly factors good health into their selection criteria. The breed specific list below represents the basic health screening recommendations. It is not all encompassing. There may be other health screening tests appropriate for this breed. And, there may be other health concerns for which there is no commonly accepted screening protocol available.
Screening
Testing options
Hip Dysplasia
One of the following:
OFA Radiographic Hip Evaluation
PennHIP Evaluation (At least 4 months of age)
Elbow Dysplasia
OFA Radiographic Elbow Evaluation
ACVO Eye Exam
Annual Eye Examinations. Results registered with OFA
Cardiac Evaluation
One of the following:
Congenital Cardiac Exam at 12 months or older, with exam by cardiologist
Advanced Cardiac Exam
Basic Cardiac Exam at 12 months or older, with exam by cardiologist
Application Forms
Basic Cardiac Application Form
Hip and/or Elbow Dysplasia Application Form
Notes
In addition to the breed specific requirements above, a CHIC requirement across all participating breeds is that the dog must be permanently identified via microchip or tattoo in order to qualify for a CHIC number.
CHIC numbers generate automatically within 1 to 2 weeks after all the required test results have been registered with the OFA.


Order DNA Tests
Pay My Bill
OFA
ABOUT
CHIC PROGRAM
DISEASES
BROWSE BY BREED
APPLICATIONS
Choose one or more of the following application forms
Vet Exam-Related Forms
Hip and/or Elbow Dysplasia
Advanced Cardiac
The multipart forms are only available from the attending cardiologist.
Basic Cardiac
CAER Eye Certification
The multipart forms are only available from the attending ophthalmologist. If your ophthalmologist is using OFA Online to fill out CAER ey
please visit https://online.ofa.org/ to create your application form online.
Congenital Deafness
Dentition
DNA Based Genetic Disease
This application form is used to register existing DNA test results (test has already been performed and you have the result) for all DNA t
including Clear By Parentage applications. It is NOT to be used to order new DNA tests
Gonioscopy
A gonioscopy exam can be performed either separately or during a CAER eye exam. Gonioscopy is not considered a stand-alone exam
rather it is a suffix to the CAER OFA certification number (e.g. SA-EYE2545/24M-PI-GONIO). Gonioscopies should be completed and su
days of a CAER exam to be considered.
Holter Addendum
Kidney Database
Legg-Calve-Perthes
If your dog already has an OFA Hip number, use the LCP from OFA HD Number form
Patellar Luxation
Respiration Function (RFGS)
This Pilot database is primarily for brachycephalic breeds and is not currently available to the public
Sebaceous Adenitis
Serum Bile Acid
Shoulder Osteochondrosis
Spine
Pilot database primarily for Bulldogs, French Bulldogs, Boston Terriers, but open to all breeds
Thyroid
Tracheal Hypoplasia
Radiography Instructions and Database Application for Bulldogs and brachycephalic breeds
Miscellaneous Forms



Orthopedic Foundation for Animals

2300 E Nifong Blvd, Columbia, MO 65201

Phone (573) 442-0418 | Fax (573) 875-5073 or (573) 443-7544

Office Email: ofa@offa.org | Website: www.ofa.org

Email for Submissions: applications@offa.org

Application for Hip/Elbow Dysplasia Database

Office Use Only

APPL _____

RAD _____

CK _____

Office Use Only

Registered name: | AKC registration number: | Other registration # (if any)

Breed: | Sex: | Date of birth (MM/DD/YY): | Date radiograph taken (MM/DD/YY):

Microchip/tattoo: | Registration number of sire: | Registration number of dam:

Owner name:

Co-owner name:

Mailing address:

City: | State: | Zip/postal code:

Phone:

Examining veterinary clinic:

Mailing address:

City: | State: | Zip/postal code:

Phone: | Fax:

Veterinarian e-mail:

Owner e-mail.

I hereby request the OFA to provide a hip and/or elbow evaluation of the animal described on this application. I certify that the image submitted is of this animal and that neither the pelvic nor the elbow conformation have been surgically altered. I understand that the image submitted will be retained by the OFA. understand that the image is submitted for a consensus evaluation based on the independent, professional judgment of consulting board-certified veterinary radiologists, and I hereby release the OFA from any and all liability resulting from the consensus evaluation. I understand the OFA will release all normal hip and/or elbow results for animals over 24 months to the public, and by submitting this application I agree the OFA may do so. Normal hip results are defined as a consensus evaluations of Excellent, Good, or Fair and normal elbow results are defined as consensus evaluations of Normal. Abnormal hip and/or elbow results (including borderline results) will not be released to the public unless the initials of a registered owner or authorized representative appear in the box below. ***Results for Animals under 24 months will only be released and published if all criteria described on page 2 of this application have been met.*** *By submitting this hip and/or elbow application I agree to the associated current OFA evaluation fees and understand that no results will be released or reported until all related charges are paid in full.*

Signature of owner or authorized representative.

Authorization to Release Abnormal Results

I hereby authorize the OFA to release the results of its evaluation of the animal described on this application to the public if the results are abnormal_____ (initials of registered owner or authorized representative).

Veterinary Information

This animal was restrained using: ❑ Physical restraint only ❑ Chemical restraint

❑ **I DID** verify the microchip/tattoo information on this dog ❑ **I DID NOT** verify the microchip/tattoo information on this dog

Only dogs with Verified Permanent Identification (VPI) will have their results transmitted to the AKC for inclusion in their registration and pedigree documents

Veterinarian Signature

Fees

Animals Over 24 Months

- Hip evaluation.....$45.00
- Elbow evaluation.....$45.00
- Hip and elbow evaluations submitted together.....$90.00
- Litter of 5 or more submitted together.....$120.00

Animals Under 24 Months

- Preliminary hip evaluation.....$35.00
- Preliminary elbow evaluation.....$35.00
- Preliminary hip and elbow evaluations submitted together.....$40.00
- Litter of 5 or more submitted together.....$100.00

Kennel Rate *— Individuals submitted as a group, owned/co-owned by same person, <or > 24 months*

- Minimum of 5 individuals.....$25 per study

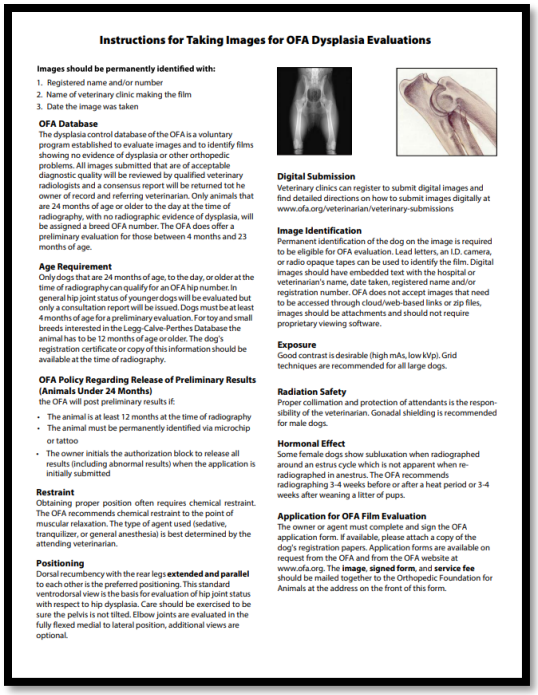
See instructions on page 2

Payments can be made by Visa, Mastercard, check or money order (U.S. funds drawn on a U.S. bank) payable to the Orthopedic Foundation for Animals.

Party responsible for payment is: ❑ Veterinarian ❑Owner/co-owner ❑ Other **Card type:** ❑ Visa ❑ MasterCard

Card number | Cardholder name | Exp date MM/YY | CVV

04/2024



Instructions for Taking Images for OFA Dysplasia Evaluations

Images should be permanently identified with:

1. Registered name and/or number
2. Name of veterinary clinic making the film
3. Date the image was taken

OFA Database

The dysplasia control database of the OFA is a voluntary program established to evaluate images and to identify films showing no evidence of dysplasia or other orthopedic problems. All images submitted that are of acceptable diagnostic quality will be reviewed by qualified veterinary radiologists and a consensus report will be returned tot he owner of record and referring veterinarian. Only animals that are 24 months of age or older to the day at the time of radiography, with no radiographic evidence of dysplasia, will be assigned a breed OFA number. The OFA does offer a preliminary evaluation for those between 4 months and 23 months of age.

Age Requirement

Only dogs that are 24 months of age, to the day, or older at the time of radiography can qualify for an OFA hip number. In general hip joint status of younger dogs will be evaluated but only a consultation report will be issued. Dogs must be at least 4 months of age for a preliminary evaluation. For toy and small breeds interested in the Legg-Calve-Perthes Database the animal has to be 12 months of age or older. The dog's registration certificate or copy of this information should be available at the time of radiography.

OFA Policy Regarding Release of Preliminary Results (Animals Under 24 Months)

the OFA will post preliminary results if:

- The animal is at least 12 months at the time of radiography
- The animal must be permanently identified via microchip or tattoo
- The owner initials the authorization block to release all results (including abnormal results) when the application is initially submitted

Restraint

Obtaining proper position often requires chemical restraint. The OFA recommends chemical restraint to the point of muscular relaxation. The type of agent used (sedative, tranquilizer, or general anesthesia) is best determined by the attending veterinarian.

Positioning

Dorsal recumbency with the rear legs **extended and parallel** to each other is the preferred positioning. This standard ventrodorsal view is the basis for evaluation of hip joint status with respect to hip dysplasia. Care should be exercised to be sure the pelvis is not tilted. Elbow joints are evaluated in the fully flexed medial to lateral position, additional views are optional.

Digital Submission

Veterinary clinics can register to submit digital images and find detailed directions on how to submit images digitally at www.ofa.org/veterinarian/veterinary-submissions

Image Identification

Permanent identification of the dog on the image is required to be eligible for OFA evaluation. Lead letters, an I.D. camera, or radio opaque tapes can be used to identify the film. Digital images should have embedded text with the hospital or veterinarian's name, date taken, registered name and/or registration number. OFA does not accept images that need to be accessed through cloud/web-based links or zip files, images should be attachments and should not require proprietary viewing software.

Exposure

Good contrast is desirable (high mAs, low kVp). Grid techniques are recommended for all large dogs.

Radiation Safety

Proper collimation and protection of attendants is the responsibility of the veterinarian. Gonadal shielding is recommended for male dogs.

Hormonal Effect

Some female dogs show subluxation when radiographed around an estrus cycle which is not apparent when re-radiographed in anestrus. The OFA recommends radiographing 3-4 weeks before or after a heat period or 3-4 weeks after weaning a litter of pups.

Application for OFA Film Evaluation

The owner or agent must complete and sign the OFA application form. If available, please attach a copy of the dog's registration papers. Application forms are available on request from the OFA and from the OFA website at www.ofa.org. The **image**, **signed form**, and **service fee** should be mailed together to the Orthopedic Foundation for Animals at the address on the front of this form.

Should OFA hips or PennHip be done?

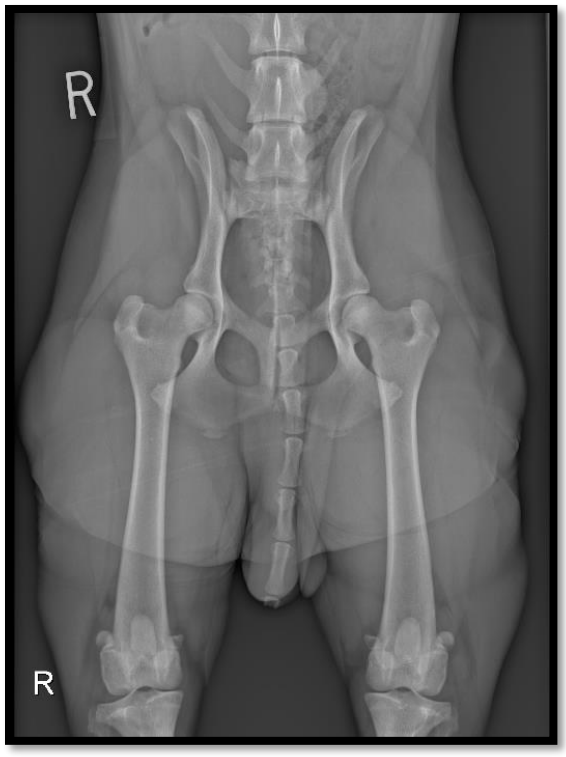
OFA Hip vs PennHip

- OFA Hip
    - 1 image –Extended VD
    - Subjective-consensus evaluation
    - 2y of age
- PennHip
    - 3 images
    - Objective Measurements
    - Training required to obtain images
        - https://info.antechimagingservices.com/pennhip/online-training/
    - 16w of age
    - Breed specific evaluation

Sedation

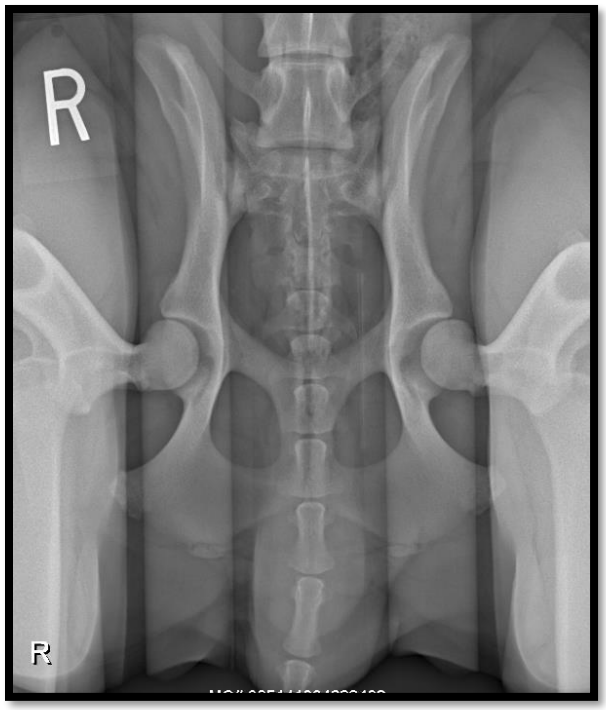
- OFA does not require sedation (recommend)
- PennHip Requires sedation
    - Many options
    - AU Therio uses-
        - Dexmedetomidine 10mcg/kg IV
        - Butorphanol 0.25 mg/kg IV
        - Reversal- Atipamezole IM

Hip extended



Compression

Distracted



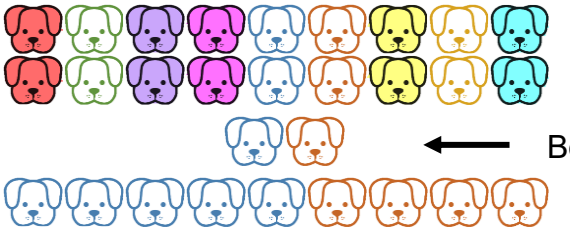
Puppies with hip dysplasia:

- Both parents with standard radiographs: 23.0%
- 1 parent with standard radiographs & 1 parent with standard radiographs AND Laxity: 7.5%
- Both parents with standard radiographs AND Laxity: 1.6%

How are DNA testing results used for breeding decisions?

Important to remember:

- When it comes to genetics, pure bred dogs should be treated like an endangered species.
- DNA tests are NOT diagnostic for the disease.



High diversity; lots of genetic mutations w/ low frequency

Bottleneck

Low diversity; Few genetic mutations w/ high frequency

- Interpreting Genetic Test
    - Individual- Will this dog get this disease?
        - Evaluate the specific disease/condition
            - Variable presentation between breeds
            - Simple fully penetrant diseases
            - Incomplete penetrance
            - Complex mode of inheritance
                - other genetics
                - environmental factors
- https://omia.org/home/
    - Combining Individual- Will the puppies get this disease?
        - Autosomal recessive
        - Autosomal dominant
        - X-link dominant
        - X-link recessive

Degenerative Myelopathy

Pembroke Welsh Corgi

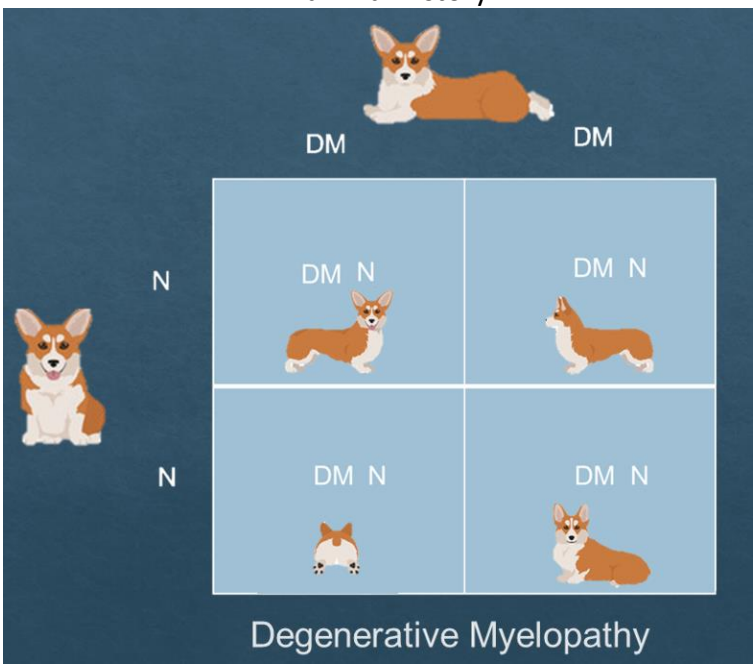
- Evaluate the specific disease/condition
    - How it presents in this breed

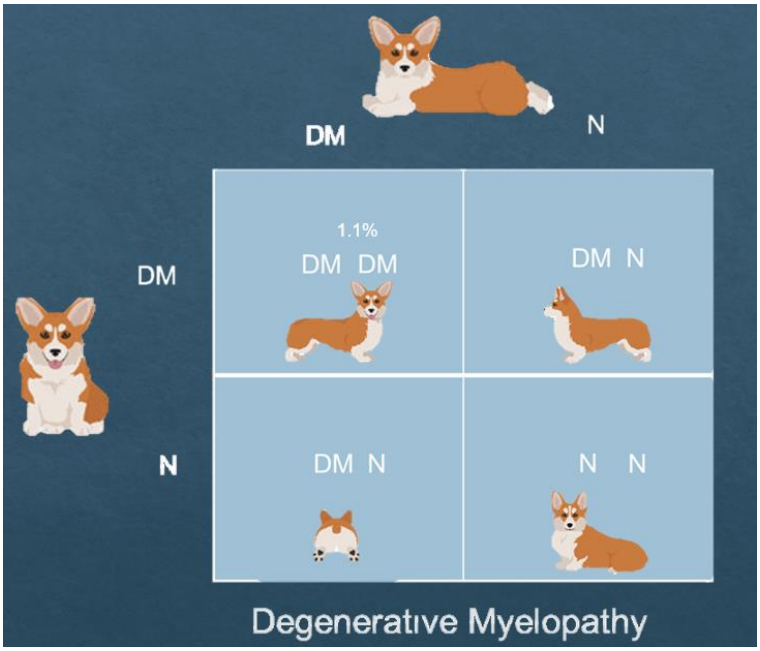
- 52.7% Homozygous at risk (DM DM)
- 35.1% Heterozygous carriers (DM N)
- 12.2% Homozygous normal (N N)

Degenerative Myelopathy

Pembroke Welsh Corgi

- 52.7% Homozygous at risk (DM DM)
- Incomplete penetrance
    - 98.9% will never develop disease
    - Familial history





Pembroke Welsh Corgi

- Hip dysplasia
- Eye disorders

- Elbow dysplasia
- Degenerative Myelopathy
- Von Willebrand's
- Cardiac health
- Breeding program goals

A bitch was accidentally bred, is there a shot for that?

- Is this a dog that will be bred in the future?
    - No- Spay
    - Yes

Medical Termination

- Previously used medications
- Most commonly used medications
- Newer used medication

Do not handle any of these medications if there is any possibility that you could be pregnant.

Estradiol cypionate (ECP)

- Long-acting estrogenic compound
- Side effects
    - Prolonged estrus
    - Predispose to pyometra
    - Bone marrow toxicity
        - Thrombocytopenia
        - Aplastic anemia
        - Leukocytosis
        - Leukopenia
- No longer recommended

Multi-modal

- Prostaglandin F2a; Dopamine agonists, Prostaglandin E1, Antiemetic
- 30 d. post tie
- Confirm pregnancy
    - 62% not pregnant
- Hospitalization
    - Close monitoring
    - Until complete
        - 5-10 days
        - 2 p4 <2ng/ml 24 hr apart
- Next cycle sooner

Multi-modal

- Prostaglandin F2a (PGF2a)
    - Luteolytic
- Lutalyse/ Cloprostenol
    - Multiple injections per day
    - Side effects

        - Vomiting
        - Diarrhea
        - Trembling
        - Panting

Multi-modal

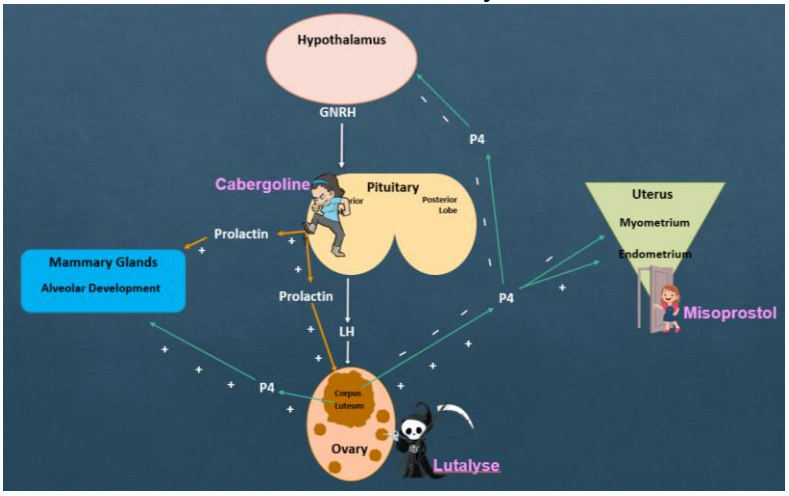
- Dopamine agonists
    - suppresses prolactin secretion
- Cabergoline or Bromocriptine
    - Once daily
    - Oral tablet
        - human compounding pharmacy for small dogs
    - Side effects
        - Nausea
        - Rare vomiting

Multi-modal

- Prostaglandin E1 (PGE1)
- Misoprostol
    - Once daily
    - Intravaginally
    - Side effects
        - Vomiting
        - Diarrhea
        - Abdominal pain

Multi-modal

- Antiemetic
- Cerenia (Maropitant)
    - Injectable or oral
    - Once daily
- Atropine
    - Injectable
    - Given before PGF2a injection



Aglepristone

- Special import permit
- Synthetic, steroidal antiprogestogen
- 2 injections 24 hours apart
    - 10mg/kg/day
    - Day 0-45
        - Early pregnancy <21d
            - Prevents pregnancy; None- Slight discharge
        - Late pregnancy 21-45d
            - Terminates pregnancy; Discharge- expelled tissue
- $$$$

Can semen be harvested and frozen after the patient dies?

Epididymal Semen Harvesting

- YES!!
    - Post mortem
    - Post castration
- Things to consider
    - Semen quality is decreased
    - Last effort
    - Extremely time sensitive
    - $$$$

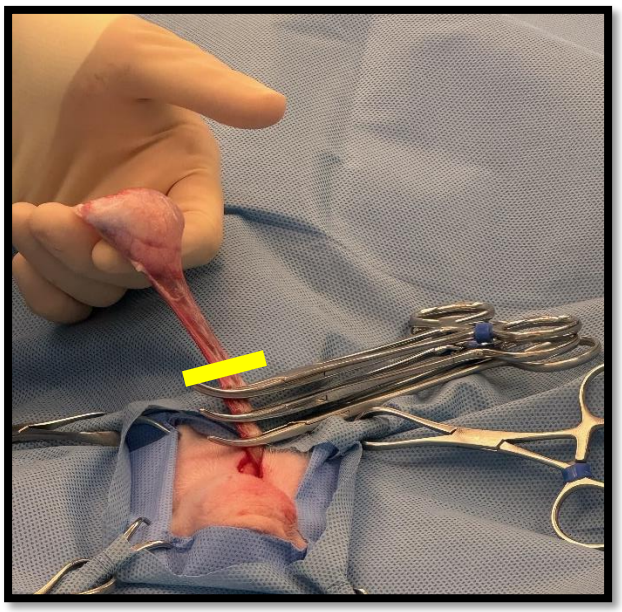
Things to do ASAP

- Contact freezing facility
    - Clinic and/or client
        - Paperwork
- Obtain blood for Brucella testing
- Harvest testicles
- Package testicles

Supplies

- Gloves
- Suture
- Surgical blade
- Hemostats
- Zip lock bag
- Paper towels
- Shipping box with Ice packs
- Packing tape

https://www.exodusbreeders.com



Shipping/ Transport

- All about logistics
    - Client drive/deliver
    - FedEx or UPS
        - No shipping/delivery Sundays, holidays, or afterhours
    - Counter to counter w/ courier
        - same day
        - $$$$

Questions?

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