



**AMERICAN
KENNEL CLUB®**

8051 Arco Corporate Drive
Suite 100
Raleigh, NC 27617-3390
www.akc.org

April 23, 2025

DEAR WILLARD HELMUTH,

Congratulations on your new Cavalier King Charles Spaniel and welcome to the world of purebred dogs. Your AKC registration dollars support numerous AKC efforts to benefit dogs and dog owners. By registering your dog with the AKC, you supported valuable programs such as Pet Disaster Relief, the AKC Canine Health Foundation, the AKC Kennel Inspection Program, public education, canine legislation, and DNA parentage verification.

AKC registration provides wonderful opportunities for every purebred dog lover. The AKC Canine Good Citizen® program is an outstanding way to train your dog in basic obedience, valuable for every family. In addition, many dog owners enjoy the thrill of participating in AKC activities, shows and trials throughout the country. I invite you and your dog to get involved with the AKC!

Your registration also includes exclusive health benefits to help keep your new dog safe and healthy. Your dog is eligible for 30 days of pet health insurance with AKC Pet Insurance included with your registration at no additional cost.* This coverage can reimburse you for eligible veterinary expenses due to unexpected accidents and illnesses. It also includes access to a 24/7 Vet Helpline. Activation of coverage is required in most states. For more information or to activate your policy, visit www.akcpetinsurance.com/akc-offer or call 866-725-2747.

Please note, if you ordered multiple items at the time of registration, they will be mailed separately and should arrive shortly. These include the AKC Certified Pedigree, the Dog Care and Training video, *Family Dog* magazine, and the AKC collar tag. If you did not order a Pedigree, you still have the opportunity to do so. An order form is provided on the back of this letter.

All of us want to be responsible dog owners. To help, the AKC offers a wealth of information at www.akc.org. Our site lists national and local dog clubs and AKC Canine Good Citizen® evaluators. Please visit us online and on Facebook and Twitter. If we can be of further service to you, please contact us by phone at 919-233-9767 or by email at info@akc.org.

Sincerely,

Gina M. DiNardo
President and Chief Executive Officer

*The initial 30 days of accident and illness pet insurance is administered by PetPartners, Inc (PPI). Not available in all states (including CA, NY, and WA). Eligibility restrictions apply. Offer for 30 days of initial pet insurance coverage must be activated within 28 days of your pet's registration date with The American Kennel Club (AKC) for coverage to take effect. Premiums are based on the current age of your pet. Premium may increase due to the age of your pet at renewal. Initial premiums may be impacted by the species or breed of your pet. Premium may change based on your home address. For terms and conditions refer to www.akcpetinsurance.com/sample-policies [akcpetinsurance.com]. Products are underwritten by Independence American Insurance Company (NAIC #26581) or Independence Pet Insurance Company (NAIC #17543) and distributed by PetPartners, Inc. AKC Pet Insurance® is a marketing name used by PPI and is not an AKC business nor an insurer.

Please separate below and keep for your records.

AMERICAN KENNEL CLUB

NAME
RIVERSEDGE TWINKLE

BREED
CAVALIER KING CHARLES SPANIEL

COLOR
BLENHEIM

SIRE
JESS' CHIEF
TS38293402 02-22 (OFA26G)

DAM
HERSHY'S CONNIE
TS48174903 07-22

BREEDER
MARLIN HERSCHBERGER

OWNER

NUMBER
TS62647302

SEX
FEMALE

DATE OF BIRTH
NOVEMBER 25, 2023



**AMERICAN
KENNEL CLUB®**

CERTIFICATE ISSUED
APRIL 23, 2025

This certificate invalidates all previous certificates issued.

If a date appears after the name and number of the sire and dam, it indicates the issue of the Stud Book Register in which the sire or dam is published.

For Transfer Instructions, see back of Certificate.

This Certificate issued with the right to correct or revoke by the American Kennel Club.

WILLARD HELMUTH
579 N CR 100 E
ARTHUR IL 61911-6265

REGISTRATION CERTIFICATE

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

RIVERSEDGE TWINKLE
registered name

CAVALIER KING CHARLES SPANIEL
breed

film/test/lab #

202105000010618
tattoo/microchip/DNA profile

2639271
application number

07/03/2025
date of report

RESULTS:

Normal cardiovascular examination via auscultation - No evidence of congenital or acquired heart disease was noted. Since acquired heart disease may develop later, these evaluation results remain valid for one year, and annual examinations are recommended to continue to monitor cardiac health.

TS62647302
registration no.

F
sex

11/25/2023
date of birth

19
age at evaluation in months



A Not-For-Profit Organization

KCS-BCA6958/19F/P-VPI
O.F.A. NUMBER

*This number issued with the right to correct or
revoke by the Orthopedic Foundation for Animals.*

owner

WILLARD R. HELMUTH
CAROL HELMUTH
579 N CR 100 E
ARTHUR IL 61911

OFA eCert



Verify QR scan

NORMAL/CLEAR - PRACTITIONER

G.G. Keller DVM

G.G. KELLER, DVM, MS, DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

This electronic OFA certificate was generated on: 07/03/2025

This certification can be verified on the OFA website by entering the dog's registration number into the orange search box located at the top of the page or by scanning the QR code above.

If there are any errors on this certificate, please email CORRECTIONS@OFA.ORG to request a correction.

Orthopedic Foundation for Animals, Inc.
2300 E. Nifong Blvd.
Columbia, MO 65201-3806

OFA website: www.ofa.org
E-mail address: ofa@ofa.org
Phone number: 573-442-0418
Fax number: 573-875-5073

BREED-RELEVANT RESULTS

Research studies indicate that these results are more relevant to dogs like Twinkle, and may influence her chances of developing certain health conditions.

	Degenerative Myelopathy, DM (SOD1A)	Increased risk
	Intervertebral Disc Disease (Type I) (FGF4 retrogene - CFA12)	Increased risk
	Dry Eye Curly Coat Syndrome (FAM83H Exon 5)	Clear
	Episodic Falling Syndrome (BCAN)	Clear
	Medium-Chain Acyl-CoA Dehydrogenase Deficiency, MCADD (ACADM, Cavalier King Charles Spaniel Variant)	Clear
	Muscular Dystrophy (DMD, Cavalier King Charles Spaniel Variant 1)	Clear

HEALTH REPORT

Increased risk result

Degenerative Myelopathy, DM

Twinkle inherited both copies of the variant we tested for Degenerative Myelopathy, DM
Twinkle is at increased risk for DM

How to interpret this result

Twinkle has two copies of a variant in SOD1 and is at risk for developing DM. As previously stated, this variant is incompletely penetrant, so while it predisposes Twinkle to developing DM, other genetic and environmental factors will determine whether Twinkle ultimately develops the disease. Please consult your veterinarian to discuss further diagnostic, monitoring, and supportive care options for Twinkle.'

What is Degenerative Myelopathy, DM?

The dog equivalent of Amyotrophic Lateral Sclerosis, or Lou Gehrig's disease, DM is a progressive degenerative disorder of the spinal cord. Because the nerves that control the hind limbs are the first to degenerate, the most common clinical signs are back muscle wasting and gait abnormalities.

When signs & symptoms develop in affected dogs

Affected dogs do not usually show signs of DM until they are at least 8 years old.

Signs & symptoms

You may notice your dog scuffing the tops of his or her hind paws, or walking with a hesitant, exaggerated gait. In advanced cases, it can lead to weakness or near-paralysis of all four legs and widespread muscle wasting.

How vets diagnose this condition

Definitive diagnosis requires microscopic analysis of the spinal cord after death. However, veterinarians use clues such as genetic testing, breed, age, and other diagnostics to determine if DM is the most likely cause of your dog's clinical signs.

How this condition is treated

As dogs are seniors at the time of onset, the treatment for DM is aimed towards increasing their comfort through a combination of lifestyle changes, medication, and physical therapy.

Actions to take if your dog is affected

- Giving your dog the best quality of life for as long as possible is all you can do after receiving this diagnosis.

HEALTH REPORT

Increased risk result

Intervertebral Disc Disease (Type I)

Twinkle inherited both copies of the variant we tested for Chondrodystrophy and Intervertebral Disc Disease, CDDY/IVDD, Type I IVDD

Twinkle is at increased risk for Type I IVDD

How to interpret this result

Twinkle has two copies of an FGF4 retrogene on chromosome 12. In some breeds such as Beagles, Cocker Spaniels, and Dachshunds (among others) this variant is found in nearly all dogs. While those breeds are known to have an elevated risk of IVDD, many dogs in those breeds never develop IVDD. For mixed breed dogs and purebreds of other breeds where this variant is not as common, risk for Type I IVDD is greater for individuals with this variant than for similar dogs.

What is Chondrodystrophy and Intervertebral Disc Disease, CDDY/IVDD, Type I IVDD?

Type I Intervertebral Disc Disease (IVDD) is a back/spine issue that refers to a health condition affecting the discs that act as cushions between vertebrae. With Type I IVDD, affected dogs can have a disc event where it ruptures or herniates towards the spinal cord. This pressure on the spinal cord causes neurologic signs which can range from a wobbly gait to impairment of movement. Chondrodystrophy (CDDY) refers to the relative proportion between a dog's legs and body, wherein the legs are shorter and the body longer. There are multiple different variants that can cause a markedly chondrodystrophic appearance as observed in Dachshunds and Corgis. However, this particular variant is the only one known to also increase the risk for IVDD.

When signs & symptoms develop in affected dogs

Signs of CDDY are recognized in puppies as it affects body shape. IVDD is usually first recognized in adult dogs, with breed specific differences in age of onset.

Signs & symptoms

Research indicates that dogs with one or two copies of this variant have a similar risk of developing IVDD. However, there are some breeds (e.g. Beagles and Cocker Spaniels, among others) where this variant has been passed down to nearly all dogs of the breed and most do not show overt clinical signs of the disorder. This suggests that there are other genetic and environmental factors (such as weight, mobility, and family history) that contribute to an individual dog's risk of developing clinical IVDD. Signs of IVDD include neck or back pain, a change in your dog's walking pattern (including dragging of the hind limbs), and paralysis. These signs can be mild to severe, and if your dog starts exhibiting these signs, you should schedule an appointment with your veterinarian for a diagnosis.

How vets diagnose this condition

For CDDY, dogs with one copy of this variant may have mild proportional differences in their leg length. Dogs with two copies of this variant will often have visually longer bodies and shorter legs. For IVDD, a neurological exam will be performed on any dog showing suspicious signs. Based on the result of this exam, radiographs to detect the presence of calcified discs or advanced imaging (MRI/CT) to detect a disc rupture may be recommended.

How this condition is treated

HEALTH REPORT

Notable result

Proportionate Dwarfism

Twinkle inherited both copies of the variant we tested for Proportionate Dwarfism

Twinkle is not known to be at increased risk for Proportionate Dwarfism

What does this result mean?

We do not know whether this increases the risk that Twinkle will develop Proportionate Dwarfism.

Scientific Basis

Research studies for this variant have been based on dogs of other breeds. Not enough dogs with Twinkle's breed have been studied to know whether or not this variant will increase Twinkle's risk of developing this disease.

Impact on Breeding

Research into the clinical impact of this variant is ongoing. We recommend tracking this genetic result and incidence of Proportionate Dwarfism in your breeding program and related dogs.

What is Proportionate Dwarfism?

Embark's data suggests that this variant in the GH1 gene may contribute to a smaller body size. The original publication predicts this is due to a growth hormone (GH) deficiency. However, adult body size is influenced by several different genetic variants. Other changes noted by the publication, including retained baby teeth, persistent puppy-like coats, and low blood sugar have been occasionally reported by owners of dogs with two copies of this variant. These changes may or may not be associated with this variant.

When signs & symptoms develop in affected dogs

Dogs with this variant may never show clinical signs. Smaller stature may be noticeable if the puppy grows at a different rate than littermates without this variant. Low blood sugar is a potential issue common to most toy breeds but could persist beyond four months of age. Retained puppy teeth and puppy-like coats can only be noted at more than six months of age.

How vets diagnose this condition

Clinical history, genetic testing, and laboratory testing can be used to diagnose this form of Proportionate Dwarfism. Further research is needed to determine the full effects of this variant.

How this condition is treated

Our internal data suggests that most dogs with two copies of this variant will not require additional care than other toy breed puppies. If a complication occurs, your veterinarian may recommend various treatments, including correcting blood sugar or extracting retained baby teeth.

Actions to take if your dog is affected

- Monitor for signs of hypoglycemia, including not eating, lethargy, and inability to stand. Call your veterinarian immediately for advice if you notice these signs.