JERRY

Veterinary Report by Embark

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Test Date: January 29th, 2022

Customer-supplied information

Owner Name: Kimberly Clinton
Dog Name: Jerry
Sex: Male (intact)
Date of birth: 11/08/21

Breed type: N/A
Breed: Bernedoodle
Breed registration: N/A
Microchip: N/A

Genetic summary

Genetic breed identification:
Bernedoodle

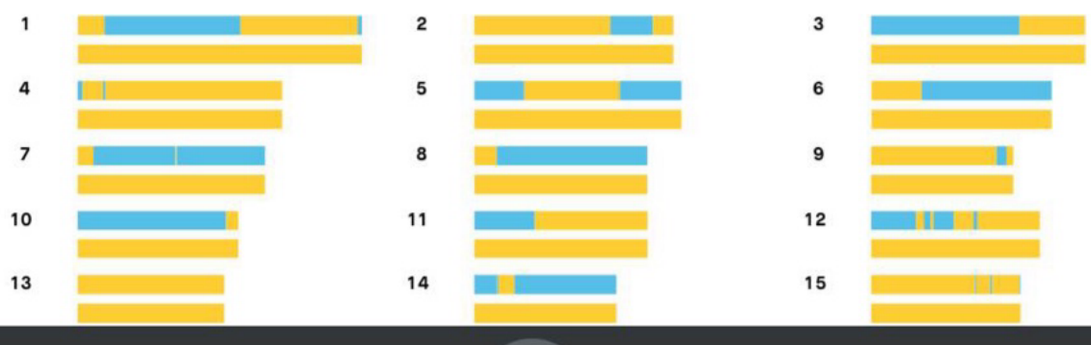
Breed ancestry:

Poodle (Small): 73.0%
Bernese Mountain Dog: 27.0%

Predicted adult weight: **41 lbs**
Calculated from 17 size genes.

Life stage: **Mature adult**
Based on date of birth provided.

Karyogram (Chromosome painting)



Karyogram (Chromosome painting)

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BREED-RELEVANT RESULTS

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

Degenerative Myelopathy, DM (SOD1A)	Clear
GM2 Gangliosidosis (HEXB, Poodle Variant)	Clear
Intervertebral Disc Disease (Type I) (FGF4 retrogene - CFA12)	Clear
Neonatal Encephalopathy with Seizures, NEWS (ATF2)	Clear
Osteochondrodysplasia (SLC13A1, Poodle Variant)	Clear
Progressive Retinal Atrophy, prcd (PRCD Exon 1)	Clear
Von Willebrand Disease Type I, Type I vWD (VWF)	Clear

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OTHER RESULTS

Canine Multifocal Retinopathy, cmr3 (BEST1 Exon 10 Deletion, Finnish and Swedish Lapphund, Lapponian Herder Variant)	Cle
Canine Multiple System Degeneration (SERAC1 Exon 4, Chinese Crested Variant)	Cle
Canine Multiple System Degeneration (SERAC1 Exon 15, Kerry Blue Terrier Variant)	Cle
Cardiomyopathy and Juvenile Mortality (YARS2)	Cle
Centronuclear Myopathy, CNM (PTPLA)	Cle
Cerebellar Hypoplasia (VLDLR, Eurasier Variant)	Cle
Chondrodysplasia (ITGA10, Norwegian Elkhound and Karelian Bear Dog Variant)	Cle
Cleft Lip and/or Cleft Palate (ADAMTS20, Nova Scotia Duck Tolling Retriever Variant)	Cle
Cleft Palate, CP1 (DLX6 intron 2, Nova Scotia Duck Tolling Retriever Variant)	Cle
Cobalamin Malabsorption (CUBN Exon 8, Beagle Variant)	Cle
Cobalamin Malabsorption (CUBN Exon 53, Border Collie Variant)	Cle
Collie Eye Anomaly (NHEJ1)	Cle
Complement 3 Deficiency, C3 Deficiency (C3)	Cle
Congenital Hypothyroidism (TPO, Rat, Toy, Hairless Terrier Variant)	Cle
Congenital Hypothyroidism (TPO, Tenterfield Terrier Variant)	Cle
Congenital Hypothyroidism with Goiter (SLC5A5, Shih Tzu Variant)	Cle
Congenital Macrothrombocytopenia (TUBB1 Exon 1, Cairn and Norfolk Terrier Variant)	Cle
Congenital Myasthenic Syndrome, CMS (COLQ, Labrador Retriever Variant)	Cle

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OTHER RESULTS

Congenital Myasthenic Syndrome, CMS (COLQ, Golden Retriever Variant)	Cle
Congenital Myasthenic Syndrome, CMS (CHAT, Old Danish Pointing Dog Variant)	Cle
Congenital Myasthenic Syndrome, CMS (CHRNE, Jack Russell Terrier Variant)	Cle
Congenital Stationary Night Blindness (LRIT3, Beagle Variant)	Cle

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OTHER RESULTS

Congenital Myasthenic Syndrome, CMS (COLQ, Golden Retriever Variant)	Cle
Congenital Myasthenic Syndrome, CMS (CHAT, Old Danish Pointing Dog Variant)	Cle
Congenital Myasthenic Syndrome, CMS (CHRNE, Jack Russell Terrier Variant)	Cle
Congenital Stationary Night Blindness (LRIT3, Beagle Variant)	Cle
Congenital Stationary Night Blindness (RPE65, Briard Variant)	Cle
Craniomandibular Osteopathy, CMO (SLC37A2)	Cle
Cystinuria Type I-A (SLC3A1, Newfoundland Variant)	Cle
Cystinuria Type II-A (SLC3A1, Australian Cattle Dog Variant)	Cle
Cystinuria Type II-B (SLC7A9, Miniature Pinscher Variant)	Cle
Day Blindness (CNGB3 Deletion, Alaskan Malamute Variant)	Cle
Day Blindness (CNGA3 Exon 7, German Shepherd Variant)	Cle
Day Blindness (CNGA3 Exon 7, Labrador Retriever Variant)	Cle
Day Blindness (CNGB3 Exon 6, German Shorthaired Pointer Variant)	Cle
Deafness and Vestibular Syndrome of Dobermans, DVDob, DINGS (MYO7A)	Cle
Demyelinating Polyneuropathy (SBF2/MTRM13)	Cle
Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis (INPP5E Intron 9, Norwich Terrier Variant)	Cle
Dilated Cardiomyopathy, DCM (RBM20, Schnauzer Variant)	Cle
Dilated Cardiomyopathy, DCM1 (PDK4, Doberman Pinscher Variant 1)	Cle

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OTHER RESULTS

Dilated Cardiomyopathy, DCM2 (TTN, Doberman Pinscher Variant 2)	Cle
Dry Eye Curly Coat Syndrome (FAM83H Exon 5)	Cle
Dystrophic Epidermolysis Bullosa (COL7A1, Central Asian Shepherd Dog Variant)	Cle
Dystrophic Epidermolysis Bullosa (COL7A1, Golden Retriever Variant)	Cle
Early Bilateral Deafness (LOXHD1 Exon 38, Rottweiler Variant)	Cle
Early Onset Cerebellar Ataxia (SEL1L, Finnish Hound Variant)	Cle
Ehlers Danlos (ADAMTS2, Doberman Pinscher Variant)	Cle
Enamel Hypoplasia (ENAM Deletion, Italian Greyhound Variant)	Cle
Enamel Hypoplasia (ENAM SNP, Parson Russell Terrier Variant)	Cle

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OTHER RESULTS

- Dilated Cardiomyopathy, DCM2 (TTN, Doberman Pinscher Variant 2) Cle
- Dry Eye Curly Coat Syndrome (FAM83H Exon 5) Cle
- Dystrophic Epidermolysis Bullosa (COL7A1, Central Asian Shepherd Dog Variant) Cle
- Dystrophic Epidermolysis Bullosa (COL7A1, Golden Retriever Variant) Cle
- Early Bilateral Deafness (LOXHD1 Exon 38, Rottweiler Variant) Cle
- Early Onset Cerebellar Ataxia (SEL1L, Finnish Hound Variant) Cle
- Ehlers Danlos (ADAMTS2, Doberman Pinscher Variant) Cle
- Enamel Hypoplasia (ENAM Deletion, Italian Greyhound Variant) Cle
- Enamel Hypoplasia (ENAM SNP, Parson Russell Terrier Variant) Cle
- Episodic Falling Syndrome (BCAN) Cle
- Exercise-Induced Collapse, EIC (DNM1) Cle
- Factor VII Deficiency (F7 Exon 5) Cle
- Factor XI Deficiency (F11 Exon 7, Kerry Blue Terrier Variant) Cle
- Familial Nephropathy (COL4A4 Exon 3, Cocker Spaniel Variant) Cle
- Familial Nephropathy (COL4A4 Exon 30, English Springer Spaniel Variant) Cle
- Fanconi Syndrome (FAN1, Basenji Variant) Cle
- Fetal-Onset Neonatal Neuroaxonal Dystrophy (MFN2, Giant Schnauzer Variant) Cle
- Glanzmann's Thrombasthenia Type I (ITGA2B Exon 13, Great Pyrenees Variant) Cle

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- Glanzmann's Thrombasthenia Type I (ITGA2B Exon 12, Otterhound Variant) Cle
- Globoid Cell Leukodystrophy, Krabbe disease (GALC Exon 5, Terrier Variant) Cle
- Glycogen Storage Disease Type IA, Von Gierke Disease, GSD IA (G6PC, Maltese Variant) Cle
- Glycogen Storage Disease Type IIIA, GSD IIIA (AGL, Curly Coated Retriever Variant) Cle
- Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Whippet and English Springer Spaniel Variant) Cle
- Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Wachtelhund Variant) Cle
- GM1 Gangliosidosis (GLB1 Exon 2, Portuguese Water Dog Variant) Cle
- GM1 Gangliosidosis (GLB1 Exon 15, Shiba Inu Variant) Cle

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OTHER RESULTS

- Glanzmann's Thrombasthenia Type I (ITGA2B Exon 12, Otterhound Variant) C
- Globoid Cell Leukodystrophy, Krabbe disease (GALC Exon 5, Terrier Variant) C
- Glycogen Storage Disease Type IA, Von Gierke Disease, GSD IA (G6PC, Maltese Variant) C
- Glycogen Storage Disease Type IIIA, GSD IIIA (AGL, Curly Coated Retriever Variant) C
- Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Whippet and English Springer Spaniel Variant) C
- Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Wachtelhund Variant) C
- GM1 Gangliosidosis (GLB1 Exon 2, Portuguese Water Dog Variant) C
- GM1 Gangliosidosis (GLB1 Exon 15, Shiba Inu Variant) C
- GM1 Gangliosidosis (GLB1 Exon 15, Alaskan Husky Variant) C
- GM2 Gangliosidosis (HEXA, Japanese Chin Variant) C
- Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1 (SLC4A3) C
- Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2 (TTC8) C
- Goniodysgenesis and Glaucoma, Pectinate Ligament Dysplasia, PLD (OLFM3) C
- Hemophilia A (F8 Exon 11, German Shepherd Variant 1) C
- Hemophilia A (F8 Exon 1, German Shepherd Variant 2) C
- Hemophilia A (F8 Exon 10, Boxer Variant) C
- Hemophilia B (F9 Exon 7, Terrier Variant) C
- Hemophilia B (F9 Exon 7, Rhodesian Ridgeback Variant) C

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- Hereditary Ataxia, Cerebellar Degeneration (RAB24, Old English Sheepdog and Gordon Setter Variant) C
- Hereditary Cataracts (HSF4 Exon 9, Australian Shepherd Variant) C
- Hereditary Footpad Hyperkeratosis (FAM83G, Terrier and Kromfohrlander Variant) C
- Hereditary Footpad Hyperkeratosis (DSG1, Rottweiler Variant) C
- Hereditary Nasal Parakeratosis (SUV39H2 Intron 4, Greyhound Variant) C
- Hereditary Nasal Parakeratosis, HNPK (SUV39H2) C
- Hereditary Vitamin D-Resistant Rickets (VDR) C
- Hypocatalasia, Acatalasemia (CAT) C
- Hypomyelination and Tremors (FNIP2, Weimaraner Variant) C

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OTHER RESULTS

- Hereditary Ataxia, Cerebellar Degeneration (RAB24, Old English Sheepdog and Gordon Setter Variant) Cle
- Hereditary Cataracts (HSF4 Exon 9, Australian Shepherd Variant) Cle
- Hereditary Footpad Hyperkeratosis (FAM83G, Terrier and Kromfohrlander Variant) Cle
- Hereditary Footpad Hyperkeratosis (DSG1, Rottweiler Variant) Cle
- Hereditary Nasal Parakeratosis (SUV39H2 Intron 4, Greyhound Variant) Cle
- Hereditary Nasal Parakeratosis, HNPK (SUV39H2) Cle
- Hereditary Vitamin D-Resistant Rickets (VDR) Cle
- Hypocatalasia, Acatalasemia (CAT) Cle
- Hypomyelination and Tremors (FNIP2, Weimaraner Variant) Cle
- Hypophosphatasia (ALPL Exon 9, Karelian Bear Dog Variant) Cle
- Ichthyosis (NIPAL4, American Bulldog Variant) Cle
- Ichthyosis (SLC27A4, Great Dane Variant) Cle
- Ichthyosis, Epidermolytic Hyperkeratosis (KRT10, Terrier Variant) Cle
- Ichthyosis, ICH1 (PNPLA1, Golden Retriever Variant) Cle
- Inflammatory Myopathy (SLC25A12) Cle
- Inherited Myopathy of Great Danes (BIN1) Cle
- Inherited Selected Cobalamin Malabsorption with Proteinuria (CUBN, Komondor Variant) Cle
- Junctional Epidermolysis Bullosa (LAMA3 Exon 66, Australian Cattle Dog Variant) Cle

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OTHER RESULTS

- Junctional Epidermolysis Bullosa (LAMB3 Exon 11, Australian Shepherd Variant) Cle
- Juvenile Epilepsy (LGI2) Cle
- Juvenile Laryngeal Paralysis and Polyneuropathy (RAB3GAP1, Rottweiler Variant) Cle
- Juvenile Myoclonic Epilepsy (DIRAS1) Cle
- L-2-Hydroxyglutaricaciduria, L2HGA (L2HGDH, Staffordshire Bull Terrier Variant) Cle
- Lagotto Storage Disease (ATG4D) Cle
- Laryngeal Paralysis (RAPGEF6, Miniature Bull Terrier Variant) Cle
- Late Onset Spinocerebellar Ataxia (CAPN1) Cle
- Late-Onset Neuronal Ceroid Lipofuscinosis, NCL 12 (ATP13A2, Australian Cattle Dog Variant) Cle

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OTHER RESULTS

- Junctional Epidermolysis Bullosa (LAMB3 Exon 11, Australian Shepherd Variant) Cle
- Juvenile Epilepsy (LGI2) Cle
- Juvenile Laryngeal Paralysis and Polyneuropathy (RAB3GAP1, Rottweiler Variant) Cle
- Juvenile Myoclonic Epilepsy (DIRAS1) Cle
- L-2-Hydroxyglutaricaciduria, L2HGA (L2HGDH, Staffordshire Bull Terrier Variant) Cle
- Lagotto Storage Disease (ATG4D) Cle
- Laryngeal Paralysis (RAPGEF6, Miniature Bull Terrier Variant) Cle
- Late Onset Spinocerebellar Ataxia (CAPN1) Cle
- Late-Onset Neuronal Ceroid Lipofuscinosis, NCL 12 (ATP13A2, Australian Cattle Dog Variant) Cle
- Leonberger Polyneuropathy 1 (LPN1, ARHGEF10) Cle
- Leonberger Polyneuropathy 2 (GJA9) Cle
- Lethal Acrodermatitis, LAD (MKLN1) Cle
- Ligneous Membranitis, LM (PLG) Cle
- Limb Girdle Muscular Dystrophy (SGCD, Boston Terrier Variant) Cle
- Limb-Girdle Muscular Dystrophy 2D (SGCA Exon 3, Miniature Dachshund Variant) Cle
- Long QT Syndrome (KCNQ1) Cle
- Lundehund Syndrome (LEPREL1) Cle
- Macular Corneal Dystrophy, MCD (CHST6) Cle

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OTHER RESULTS

- Malignant Hyperthermia (RYR1) Cle
- May-Hegglin Anomaly (MYH9) Cle
- MDR1 Drug Sensitivity (ABCB1) Cle
- Microphthalmia (RBP4 Exon 2, Soft Coated Wheaten Terrier Variant) Cle
- Mucopolysaccharidosis IIIB, Sanfilippo Syndrome Type B, MPS IIIB (NAGLU, Schipperke Variant) Cle
- Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, Dachshund Variant) Cle
- Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, New Zealand Huntaway Variant) Cle
- Mucopolysaccharidosis Type VI, Maroteaux-Lamy Syndrome, MPS VI (ARSB Exon 5, Miniature Pinscher Variant) Cle

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OTHER RESULTS

Malignant Hyperthermia (RYR1)	Cle
May-Hegglin Anomaly (MYH9)	Cle
MDR1 Drug Sensitivity (ABCB1)	Cle
Microphthalmia (RBP4 Exon 2, Soft Coated Wheaten Terrier Variant)	Cle
Mucopolysaccharidosis IIIB, Sanfilippo Syndrome Type B, MPS IIIB (NAGLU, Schipperke Variant)	Cle
Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, Dachshund Variant)	Cle
Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, New Zealand Huntaway Variant)	Cle
Mucopolysaccharidosis Type VI, Maroteaux-Lamy Syndrome, MPS VI (ARSB Exon 5, Miniature Pinscher Variant)	Cle
Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 3, German Shepherd Variant)	Cle
Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 5, Terrier Brasileiro Variant)	Cle
Muscular Dystrophy (DMD, Cavalier King Charles Spaniel Variant 1)	Cle
Muscular Dystrophy (DMD, Golden Retriever Variant)	Cle
Musladin-Lueke Syndrome, MLS (ADAMTSL2)	Cle
Myasthenia Gravis-Like Syndrome (CHRNE, Heideterrier Variant)	Cle
Myotonia Congenita (CLCN1 Exon 23, Australian Cattle Dog Variant)	Cle
Myotonia Congenita (CLCN1 Exon 7, Miniature Schnauzer Variant)	Cle
Narcolepsy (HCRTR2 Exon 1, Dachshund Variant)	Cle
Narcolepsy (HCRTR2 Intron 4, Doberman Pinscher Variant)	Cle

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Narcolepsy (HCRTR2 Intron 6, Labrador Retriever Variant)	Cle
Nemaline Myopathy (NEB, American Bulldog Variant)	Cle
Neonatal Cerebellar Cortical Degeneration (SPTBN2, Beagle Variant)	Cle
Neonatal Interstitial Lung Disease (LAMP3)	Cle
Neuroaxonal Dystrophy, NAD (VPS11, Rottweiler Variant)	Cle
Neuroaxonal Dystrophy, NAD (TECPR2, Spanish Water Dog Variant)	Cle
Neuronal Ceroid Lipofuscinosis 1, NCL 1 (PPT1 Exon 8, Dachshund Variant 1)	Cle
Neuronal Ceroid Lipofuscinosis 10, NCL 10 (CTSD Exon 5, American Bulldog Variant)	Cle
Neuronal Ceroid Lipofuscinosis 2, NCL 2 (TPP1 Exon 4, Dachshund Variant 2)	Cle

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OTHER RESULTS

- Narcolepsy (HCRTR2 Intron 6, Labrador Retriever Variant) Cle
- Nemaline Myopathy (NEB, American Bulldog Variant) Cle
- Neonatal Cerebellar Cortical Degeneration (SPTBN2, Beagle Variant) Cle
- Neonatal Interstitial Lung Disease (LAMP3) Cle
- Neuroaxonal Dystrophy, NAD (VPS11, Rottweiler Variant) Cle
- Neuroaxonal Dystrophy, NAD (TECPR2, Spanish Water Dog Variant) Cle
- Neuronal Ceroid Lipofuscinosis 1, NCL 1 (PPT1 Exon 8, Dachshund Variant 1) Cle
- Neuronal Ceroid Lipofuscinosis 10, NCL 10 (CTSD Exon 5, American Bulldog Variant) Cle
- Neuronal Ceroid Lipofuscinosis 2, NCL 2 (TPP1 Exon 4, Dachshund Variant 2) Cle
- Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 SNP, Border Collie Variant) Cle
- Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 Deletion, Golden Retriever Variant) Cle
- Neuronal Ceroid Lipofuscinosis 6, NCL 6 (CLN6 Exon 7, Australian Shepherd Variant) Cle
- Neuronal Ceroid Lipofuscinosis 7, NCL 7 (MFSD8, Chihuahua and Chinese Crested Variant) Cle
- Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8, Australian Shepherd Variant) Cle
- Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Exon 2, English Setter Variant) Cle
- Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Insertion, Saluki Variant) Cle
- Neuronal Ceroid Lipofuscinosis, Cerebellar Ataxia, NCL4A (ARSG Exon 2, American Staffordshire Terrier Variant) Cle
- Oculocutaneous Albinism, OCA (SLC45A2, Small Breed Variant) Cle

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OTHER RESULTS

- Oculoskeletal Dysplasia 2 (COL9A2, Samoyed Variant) Cle
- Osteogenesis Imperfecta (COL1A2, Beagle Variant) Cle
- Osteogenesis Imperfecta (SERPINH1, Dachshund Variant) Cle
- Osteogenesis Imperfecta (COL1A1, Golden Retriever Variant) Cle
- P2Y12 Receptor Platelet Disorder (P2Y12) Cle
- Pachyonychia Congenita (KRT16, Dogue de Bordeaux Variant) Cle
- Paroxysmal Dyskinesia, PxD (PIGN) Cle
- Persistent Mullerian Duct Syndrome, PMDS (AMHR2) Cle
- Pituitary Dwarfism (POU1F1 Intron 4, Karelian Bear Dog Variant) Cle

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OTHER RESULTS

- Oculoskeletal Dysplasia 2 (COL9A2, Samoyed Variant) Cle
- Osteogenesis Imperfecta (COL1A2, Beagle Variant) Cle
- Osteogenesis Imperfecta (SERPINH1, Dachshund Variant) Cle
- Osteogenesis Imperfecta (COL1A1, Golden Retriever Variant) Cle
- P2Y12 Receptor Platelet Disorder (P2Y12) Cle
- Pachyonychia Congenita (KRT16, Dogue de Bordeaux Variant) Cle
- Paroxysmal Dyskinesia, PxD (PIGN) Cle
- Persistent Mullerian Duct Syndrome, PMDS (AMHR2) Cle
- Pituitary Dwarfism (POU1F1 Intron 4, Karelian Bear Dog Variant) Cle
- Platelet Factor X Receptor Deficiency, Scott Syndrome (TMEM16F) Cle
- Polycystic Kidney Disease, PKD (PKD1) Cle
- Pompe's Disease (GAA, Finnish and Swedish Lapphund, Lapponian Herder Variant) Cle
- Prekallikrein Deficiency (KLKB1 Exon 8) Cle
- Primary Ciliary Dyskinesia, PCD (NME5, Alaskan Malamute Variant) Cle
- Primary Ciliary Dyskinesia, PCD (CCDC39 Exon 3, Old English Sheepdog Variant) Cle
- Primary Hyperoxaluria (AGXT) Cle
- Primary Lens Luxation (ADAMTS17) Cle
- Primary Open Angle Glaucoma (ADAMTS17 Exon 11, Basset Fauve de Bretagne Variant) Cle

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- Primary Open Angle Glaucoma (ADAMTS10 Exon 17, Beagle Variant) Cle
- Primary Open Angle Glaucoma (ADAMTS10 Exon 9, Norwegian Elkhound Variant) Cle
- Primary Open Angle Glaucoma and Primary Lens Luxation (ADAMTS17 Exon 2, Chinese Shar-Pei Variant) Cle
- Progressive Retinal Atrophy (SAG) Cle
- Progressive Retinal Atrophy (IFT122 Exon 26, Lapponian Herder Variant) Cle
- Progressive Retinal Atrophy, Bardet-Biedl Syndrome (BBS2 Exon 11, Shetland Sheepdog Variant) Cle
- Progressive Retinal Atrophy, CNGA (CNGA1 Exon 9) Cle
- Progressive Retinal Atrophy, crd1 (PDE6B, American Staffordshire Terrier Variant) Cle
- Progressive Retinal Atrophy, crd4/cord1 (RPGRIP1) Cle

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OTHER RESULTS

Primary Open Angle Glaucoma (ADAMTS10 Exon 17, Beagle Variant)	Clea
Primary Open Angle Glaucoma (ADAMTS10 Exon 9, Norwegian Elkhound Variant)	Clea
Primary Open Angle Glaucoma and Primary Lens Luxation (ADAMTS17 Exon 2, Chinese Shar-Pei Variant)	Clea
Progressive Retinal Atrophy (SAG)	Clea
Progressive Retinal Atrophy (IFT122 Exon 26, Lapponian Herder Variant)	Clea
Progressive Retinal Atrophy, Bardet-Biedl Syndrome (BBS2 Exon 11, Shetland Sheepdog Variant)	Clea
Progressive Retinal Atrophy, CNGA (CNGA1 Exon 9)	Clea
Progressive Retinal Atrophy, crd1 (PDE6B, American Staffordshire Terrier Variant)	Clea
Progressive Retinal Atrophy, crd4/cord1 (RPGRIP1)	Clea
Progressive Retinal Atrophy, PRA1 (CNGB1)	Clea
Progressive Retinal Atrophy, PRA3 (FAM161A)	Clea
Progressive Retinal Atrophy, rcd1 (PDE6B Exon 21, Irish Setter Variant)	Clea
Progressive Retinal Atrophy, rcd3 (PDE6A)	Clea
Proportionate Dwarfism (GH1 Exon 5, Chihuahua Variant)	Clea
Protein Losing Nephropathy, PLN (NPHS1)	Clea
Pyruvate Dehydrogenase Deficiency (PDP1, Spaniel Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 5, Basenji Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 7, Beagle Variant)	Clea

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Pyruvate Kinase Deficiency (PKLR Exon 10, Terrier Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 7, Labrador Retriever Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 7, Pug Variant)	Clea
Raine Syndrome (FAM20C)	Clea
Recurrent Inflammatory Pulmonary Disease, RIPD (AKNA, Rough Collie Variant)	Clea
Renal Cystadenocarcinoma and Nodular Dermatofibrosis (FLCN Exon 7)	Clea
Sensory Neuropathy (FAM134B, Border Collie Variant)	Clea
Severe Combined Immunodeficiency, SCID (PRKDC, Terrier Variant)	Clea
Severe Combined Immunodeficiency, SCID (RAG1, Wetterhoun Variant)	Clea

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Pyruvate Kinase Deficiency (PKLR Exon 10, Terrier Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 7, Labrador Retriever Variant)	Clea
Pyruvate Kinase Deficiency (PKLR Exon 7, Pug Variant)	Clea
Raine Syndrome (FAM20C)	Clea
Recurrent Inflammatory Pulmonary Disease, RIPD (AKNA, Rough Collie Variant)	Clea
Renal Cystadenocarcinoma and Nodular Dermatofibrosis (FLCN Exon 7)	Clea
Sensory Neuropathy (FAM134B, Border Collie Variant)	Clea
Severe Combined Immunodeficiency, SCID (PRKDC, Terrier Variant)	Clea
Severe Combined Immunodeficiency, SCID (RAG1, Wetterhoun Variant)	Clea
Shaking Puppy Syndrome (PLP1, English Springer Spaniel Variant)	Clea
Shar-Pei Autoinflammatory Disease, SPAID, Shar-Pei Fever (MTBP)	Clea
Skeletal Dysplasia 2, SD2 (COL11A2, Labrador Retriever Variant)	Clea
Skin Fragility Syndrome (PKP1, Chesapeake Bay Retriever Variant)	Clea
Spinocerebellar Ataxia with Myokymia and/or Seizures (KCNJ10)	Clea
Spongy Degeneration with Cerebellar Ataxia 1 (KCNJ10)	Clea
Spongy Degeneration with Cerebellar Ataxia 2 (ATP1B2)	Clea
Stargardt Disease (ABCA4 Exon 28, Labrador Retriever Variant)	Clea
Succinic Semialdehyde Dehydrogenase Deficiency (ALDH5A1 Exon 7, Saluki Variant)	Clea

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Thrombopathia (RASGRP1 Exon 5, American Eskimo Dog Variant)	Clea
Thrombopathia (RASGRP1 Exon 5, Basset Hound Variant)	Clea
Thrombopathia (RASGRP1 Exon 8, Landseer Variant)	Clea
Trapped Neutrophil Syndrome, TNS (VPS13B)	Clea
Ullrich-like Congenital Muscular Dystrophy (COL6A3 Exon 10, Labrador Retriever Variant)	Clea
Ullrich-like Congenital Muscular Dystrophy (COL6A1 Exon 3, Landseer Variant)	Clea
Unilateral Deafness and Vestibular Syndrome (PTPRQ Exon 39, Doberman Pinscher)	Clea
Urate Kidney & Bladder Stones (SLC2A9)	Clea
Von Willebrand Disease Type II, Type II vWD (VWF, Pointer Variant)	Clea

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OTHER RESULTS

Thrombopathia (RASGRP1 Exon 5, American Eskimo Dog Variant)	Clea
Thrombopathia (RASGRP1 Exon 5, Basset Hound Variant)	Clea
Thrombopathia (RASGRP1 Exon 8, Landseer Variant)	Clea
Trapped Neutrophil Syndrome, TNS (VPS13B)	Clea
Ullrich-like Congenital Muscular Dystrophy (COL6A3 Exon 10, Labrador Retriever Variant)	Clea
Ullrich-like Congenital Muscular Dystrophy (COL6A1 Exon 3, Landseer Variant)	Clea
Unilateral Deafness and Vestibular Syndrome (PTPRQ Exon 39, Doberman Pinscher)	Clea
Urate Kidney & Bladder Stones (SLC2A9)	Clea
Von Willebrand Disease Type II, Type II vWD (VWF, Pointer Variant)	Clea
Von Willebrand Disease Type III, Type III vWD (VWF Exon 4, Terrier Variant)	Clea
Von Willebrand Disease Type III, Type III vWD (VWF Intron 16, Nederlandse Kooikerhondje Variant)	Clea
Von Willebrand Disease Type III, Type III vWD (VWF Exon 7, Shetland Sheepdog Variant)	Clea
X-Linked Hereditary Nephropathy, XLHN (COL4A5 Exon 35, Samoyed Variant 2)	Clea
X-Linked Myotubular Myopathy (MTM1, Labrador Retriever Variant)	Clea
X-Linked Progressive Retinal Atrophy 1, XL-PRA1 (RPGR)	Clea
X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG Exon 1, Basset Hound Variant)	Clea
X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG, Corgi Variant)	Clea
β-Mannosidosis (MANBA Exon 16, Mixed-Breed Variant)	Clea

Health Report

HEALTH REPORT

Notable result

ALT Activity

Jerry inherited one copy of the variant we tested for Alanine Aminotransferase Activity

Why is this important to your vet?
Jerry has one copy of a variant associated with reduced ALT activity as measured on veterinary blood chemistry panels. Please inform your veterinarian that Jerry has this genotype, as ALT is often used as an indicator of liver health and Jerry is likely to have a lower than average resting ALT activity. As such, an increase in Jerry's ALT activity could be evidence of liver damage, even if it is within normal limits by standard ALT reference ranges.

What is Alanine Aminotransferase Activity?
Alanine aminotransferase (ALT) is a clinical tool that can be used by veterinarians to better monitor liver health. This result is not associated with liver disease. ALT is one of several values veterinarians measure on routine blood work to evaluate the liver. It is a naturally occurring enzyme located in liver cells that helps break down protein. When the liver is damaged or inflamed, ALT is released into the bloodstream.

How vets diagnose this condition

Health Report

HEALTH REPORT

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How vets diagnose this condition
Genetic testing is the only way to provide your veterinarian with this clinical tool.

How this condition is treated
Veterinarians may recommend blood work to establish a baseline ALT value for healthy dogs with one or two copies of this variant.

Actions to take if your dog is affected
- Talk to your vet about your dog's ALT result, as it may help them better interpret your dog's blood work.
- Dogs with this result do not exhibit symptoms or develop health issues associated with this variant.

Health Report

HEALTH REPORT

Notable result

Methemoglobinemia

Jerry inherited one copy of the variant we tested for Methemoglobinemia

What does this result mean?
This variant should not impact Jerry's health. This variant is inherited in an autosomal recessive manner, meaning that a dog needs two copies of the variant to show signs of this condition. Jerry is unlikely to develop this condition due to this variant because he only has one copy of the variant.

Impact on Breeding
Your dog carries this variant and will pass it on to ~50% of his offspring. You can email breeders@embarkvet.com to discuss with a genetic counselor how the genotype results should be applied to a breeding program.

What is Methemoglobinemia?
Oxygen is carried in the blood by hemoglobin. Methemoglobin forms when hemoglobin iron is oxidized, and it cannot carry oxygen in th blood. Methemoglobinemia is a diseas[redacted]he body no longer has the oxygen supply it

Health Report

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What is Methemoglobinemia?
Oxygen is carried in the blood by hemoglobin. Methemoglobin forms when hemoglobin iron is oxidized, and it cannot carry oxygen in th blood. Methemoglobinemia is a disease where too much methemoglobin is present and the body no longer has the oxygen supply it needs to function. This disease was first described in a mixed breed dog.

When signs & symptoms develop in affected dogs
Signs often first appear with a concurrent disease, such as a respiratory infection, that causes affected dogs to decompensate.

How vets diagnose this condition
Genetic and laboratory testing can be used to diagnose this condition. Please note that there are also toxins that can cause this condition.

How this condition is treated
Methylene blue can be administered to control the clinical signs, however, this is not a cure and is a long term therapy. Treatment of concurrent infections or inflammation is also recommended.

Actions to take if your dog is affected

- Talk to your vet about your dog's methemoglobinemia result, as it may influence their choice of medications or anesthesia.
- Most dogs with this result do not show symptoms, but some may be more sensitive to certain drugs or oxygen-related stress.
- Watch for signs of breathing difficulty, fatigue, or bluish gums, and contact your vet right away if you notice any of these symptoms.
- Seek veterinary care promptly if your dog has a respiratory infection or any condition that affects oxygen levels.

Genetic Diversity and Inbreeding

Coefficient of Inbreeding (COI)

Genetic Result: 3%

Our genetic COI measures the proportion of your dog's genome (his genes) where the genes on the mother's side are identical by descent to those on the father's side. The higher your dog's coefficient of inbreeding (the percentage), the more inbred your dog is.

Your Dog's COI

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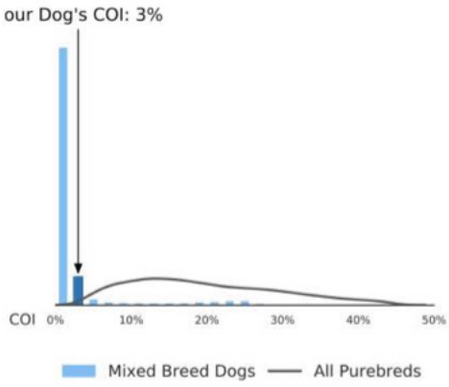

This graph represents where your dog's inbreeding levels fall on a scale compared to both dogs with a similar breed makeup to him (t
blue bars) and all purebred dogs (the grey line).

Genetic Diversity and Inbreeding

More on the Science

Embark scientists, along with our research partners at Cornell University, have shown the impact of inbreeding on longevity and fertili
and developed a state-of-the-art, peer-reviewed method for accurately measuring COI and predicting average COI in litters.

Citations

Sams & Boyko 2019 "Fine-Scale Resolution of Runs of Homozygosity Reveal Patterns of Inbreeding and Substantial Overlap with Recessive Disease Genotypes in Domestic Dogs" (https://www.ncbi.nlm.nih.gov/pubmed/30429214)

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About Embark

Embark Veterinary is a canine genetics company offering research-grade genetic tests to pet owners and breeders. Every Embark tes examines thousands of genetic markers, and provides results for over NaN genetic health conditions, breed identification, clinical tool and more.

Embark is a research partner of the Cornell University College of Veterinary Medicine and collaborates with scientists and registries to accelerate genetic research in canine health. We make it easy for customers and vets to understand, share and make use of their dog unique genetic profile to improve canine health and happiness.

Learn more at embarkvet.com

Veterinarians and hospitals can send inquiries to veterinarians@embarkvet.com.

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Signing Complete	Security Checked	12/9/2025 6:22:27 PM
Completed	Security Checked	12/9/2025 6:22:27 PM

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