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## Animal Specialty Hospital of Florida

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*Exceptionally skilled. Uniquely compassionate.*

### Cardio Clearance F.A.Q.s:

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#### ***What is a cardiac clearance?***

A cardiac clearance is a physical examination performed by a licensed veterinarian (DVM – Doctor of Veterinary Medicine, VMD – Veterinary Medical Doctor) who determines that the physical examination is within normal limits. Many different types of clearances exist, including orthopedic (i.e. to rule-out hip dysplasia), ophthalmologic (i.e. to rule-out potentially hereditary eye problems such as progressive retinal atrophy), and **cardiac** – which is to rule-out evidence of **congenital/hereditary cardiovascular disease** (i.e. conditions such as **subaortic stenosis/SAS**, or other conditions, such as **patent ductus arteriosus/PDA**). Typically, a cardiac clearance should be performed for all potential breeding animals from 1-2 years of age before their entrance into a breeding program. Individuals being sold to buyers may also be cleared before sale, and is a good-will gesture on behalf of the conscientious breeder to help the buyer be assured that the animal being purchased is reasonably free of obvious cardiac disease.

#### ***What is an OFA form?***

An OFA form is a clearance form that a veterinarian fills out when evaluating a patient for a clearance. OFA stands for the Orthopedic Foundation for Animals, and is the most widely-used form for clearing dogs. For more information, please visit: <http://offa.org/cardiacgeninfo.html>.

NOTE: The OFA does *not* consider its database as a tool for the screening of SAS since a consensus as to what actually constitutes the condition does *not* exist. An animal must be at least **1 year of age** before an OFA cardiac clearance can be granted.

#### ***What is ARCH?***

ARCH is the American College of Veterinary Medicine's specialty of Cardiology cardiac registry for dogs and cats. ARCH stands for the ACVIM Registry of Cardiac Health. For more information, please visit <http://archcertify.org>.

#### ***What constitutes a "clearance"?***

A clearance means that the animal examined for the veterinarian has no *obvious* evidence of cardiovascular disease, whether congenital or acquired. This generally means the heart rate, rhythm, pulses, and heart sounds are within normal limits. An animal may be cleared if the physical examination is within normal limits. IF the physical examination is *abnormal*, then **further testing is required** before a clearance can be issued. Under rare circumstances, an animal may have a normal physical examination, but cardiac disease may be evident based on further testing.

#### ***What constitutes a non-clearance?***

A non-clearance means that the animal examined by the veterinarian has evidence of cardiovascular disease, whether congenital or acquired. Most commonly, this means the veterinarian has auscultated a cardiac murmur. Occasionally, the animal has an abnormal heart rhythm, or arrhythmia. This does not mean the animal in question *definitely* has congenital or acquired cardiovascular disease, but simply that the animal *may* have a problem. Further testing is required to determine if there is a problem or not.

### ***What is a murmur?***

A cardiac murmur is an abnormal heart sound. This is typically a whooshing sound created as the result of turbulent blood flow within the heart. A cardiac murmur is diagnosed by auscultation – which is the process of using a stethoscope to listen to the heart. A murmur does not necessarily mean that there is a congenital defect or acquired cardiac disease, but it is a sign of a possible problem. Further testing is indicated if a cardiac murmur is detected, and is required before a clearance can be issued.

### ***What “further testing” is typically warranted?***

Further testing may include thoracic radiographs (chest x-rays) to evaluate the size of the heart, the pulmonary vasculature (blood vessels within the lungs), and the lungs themselves. **Echocardiography** (cardiac ultrasound) is often the preferred test, as detailed information about the heart size, the function of the heart muscle pump, the integrity of the heart valves, and the blood flow (color flow Doppler) through the various chambers of the heart can be evaluated. Electrocardiography (EKG, ECG) is a test that is used to evaluate the heart’s rhythm, and is the only test that can diagnose an arrhythmia, or abnormal heart rhythm. Blood pressure measurement may be indicated in specific cases. It is exceedingly *rare* that cardiac catheterization, computed tomography (CT or CAT scan), magnetic resonance imaging (MRI), nuclear scintigraphy scanning, or necropsy (animal autopsy) is necessary for accurate diagnosis of congenital or acquired cardiovascular disease.

### ***Can my pet be cleared even if they have a cardiac murmur?***

Absolutely. Many animals diagnosed with a cardiac murmur may have no evidence of cardiac disease based on a complete echocardiogram including color flow Doppler imaging.

### ***What does an “equivocal” exam mean?***

An equivocal exam means that cardiac disease, whether congenital or acquired, cannot be definitively ruled-out (excluded) based on the results of testing. This term has caused considerable frustration for breeders, veterinarians, and veterinary cardiologists alike. An animal with an equivocal exam should **not** be bred since the available information cannot exclude the animal of potentially hereditary disease.

### ***Should I breed my pet if they are not cleared by a cardiac exam?***

Absolutely not.

### ***Who can perform a cardiac clearance?***

A veterinarian licensed in the state in which the examination is performed may perform a cardiac clearance. The OFA does not *require* that a veterinary cardiologist perform the examination, although it is preferred if the individual clearing the animal is a board-certified veterinary cardiologist. The ARCH registry *requires* that a board-certified veterinary cardiologist perform the clearance examination.

### ***What is a veterinary specialist?***

A veterinary specialist is a veterinarian (DVM, VMD) that has completed an approved residency and passed certification testing administered by the specialty college board. They are said to be “**board-certified**.” The **ACVIM** is the American College of Veterinary Internal Medicine, and has four subdivisions – Internal Medicine (small animal and large animal), Oncology, Neurology and Cardiology. A veterinary specialist is a Diplomate, and as such, their credentials read “DVM/VMD, Diplomate of ...(college). A board-certified veterinary cardiologist’s credentials would therefore read as **DVM, DACVIM (cardiology)**. Other recognized veterinary specialties include surgery (ACVS), radiology (ACVR) emergency and critical care (AVECCS), pathology, dermatology, ophthalmology, anesthesiology, among others. The **ECVIM** is the European College of Veterinary Internal Medicine, and similarly has subspecialties including Cardiology.

An **internship** is typically required of applicants for a residency. This is a one-year program that a licensed veterinarian completes. For cardiology residents, this means they have completed a year internship in small animal medicine and surgery. An internship is an intensive training program that allows veterinarians to learn from, work along side of and interact with veterinary specialists. Required rotations typically include surgery, medicine and emergency. Elective rotations may include oncology, neurology, radiology, cardiology, ophthalmology, dermatology, pathology, etc.

A **residency** is an even more intensive training program for veterinarians that have already completed an internship, and typically lasts from 3-4 years. Residents work under direct supervision of a veterinary specialist or specialists. The term “*residency trained*” refers to a veterinarian that has completed a residency, but has *not* passed the board exams for that particular specialty.

Once a veterinarian has completed an internship *and* residency to the satisfaction of the specialty board, they become eligible to sit for their board examinations. Only a veterinarian that has passed their board examinations and has been *officially* recognized by the specialty college may legally claim to be a **board-certified veterinary specialist**.

NOTE: The terms "Practice Limited to..." or "special interest in..." mean that the veterinarian has interest in the field, but *may not have any specialized training*. The ABVP is the American Board of Veterinary Practitioners, and also has "boarded" members. These individuals are *not* veterinary specialists by strict definitions. They are required to have completed a one-year internship, and a 2-year residency in an approved program in the species (i.e. canine, feline, equine, bovine, exotic, etc.).

Board-certified veterinary cardiologists have had extensive training and expertise in their field, and your veterinarian may recommend referral to a local veterinary cardiologist for patients with known or suspected cardiovascular disease. To find a veterinary cardiologist in your area or for more information, visit <http://www.acvim.org>.