

## Procedure information:

Portosystemic shunts are anomalous vessels which allow portal blood to bypass the liver and enter the systemic circulation. Portosystemic shunts can be congenital (intra- or extrahepatic) or acquired. As a consequence, toxins that are normally detoxified in the liver gain access to the systemic circulation, while hepatotropic substances from the pancreas and intestines bypass the liver resulting in hepatic atrophy. Clinical signs of portosystemic shunts can include central nervous system, gastrointestinal and/or urinary tract abnormalities. A presumptive diagnosis of a portosystemic shunt is based on a combination of signalment and history, physical findings, and clinicopathologic abnormalities.

A diagnosis of portosystemic shunting is often achieved at Animal Imaging with Tl<sup>201</sup> where a nuclear portogram is acquired. A small dose of radionuclide is administered under ultrasound guidance into the spleen. The passage of radionuclide is dynamically evaluated to determine if a macroscopic portosystemic shunt is present and if the pattern of uptake supports a single congenital shunt or multiple acquired shunts. This procedure is complemented with an abdominal ultrasound to further evaluate the intra-abdominal organs and further characterize the shunting vessel(s) if present.

Computed tomography (CT) exams are extremely useful in diagnosing portosystemic shunts and are also utilized to assess portal-vascular anatomy. Non-ionic iodinated contrast agents are used in CT exams to define abdominal vasculature.

Our veterinary Radiologists have completed an approved Residency Program in Diagnostic Imaging that includes at least three years of advanced training and intensive study in Radiology (x-ray), Ultrasonography, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and Nuclear Medicine. The radiologists at Animal Imaging include Dr. Rita Echandi, Dr. Dana Neelis, and Dr. Beth Biscoe.

## Scheduling an appointment:

To provide the best diagnosis possible, a completed Nuclear Medicine referral form is required from the referring veterinarian, including any pertinent history related to the exam. This form is available on our website at [www.animalimaging.net](http://www.animalimaging.net). A CBC and chemistry panel (within 60 days) will also be required.

A calibrated dose of the radionuclide is ordered the day before the exam specifically for the

