

Understanding Skin Biopsies and Histopathology

What is Biopsy and Histopathology and when are they needed?

Taking a biopsy for histopathology is the surgical removal of a piece or pieces of skin that a pathologist will later examine. Biopsy and histopathology are broad tests that can diagnose many skin diseases. Some skin diseases can only be diagnosed by biopsy and histopathology. However, there are a few diseases that biopsy and histopathology are not good at diagnosing, so the doctor may recommend additional tests for these specific diseases (including ring worm, mite infestations, or other specific infections). After examining your pet, Dr. Strauss will discuss the role of these tests in the diagnosis and treatment of your pet's specific situation.

How we perform the biopsies:

Biopsy samples are usually taken from abnormal areas of the skin, but may sometimes include normal areas for the pathologist to compare. Usually several biopsies (two to six) are taken to be sure that a representative sample is obtained. Only an injection local anesthetic (lidocaine) is used in most cases to numb the area where the biopsies are taken. Rarely, the patient must be sedated to safely get the tissue. Sedation is typically required if biopsies are to be taken from the face or ears, or deep biopsies of the claw or foot pads. If a patient is upset or frightened, using a mild and reversible sedative is often the most humane option for getting the samples.

Samples are taken using a specialized biopsy instrument which removes a circular 'plug' of tissue. This can be as small as 2mm but up to 12mm in diameter. The resulting wound is closed using suture. Dr. Strauss typically uses suture that dissolves after about 14 days so that manual suture removal is not required. The tissue samples are then placed in special containers that 'fix' the tissue to prevent degradation and are sent overnight to the pathologists.

Who is the pathologist and what does she do with the biopsies?

Dr. Strauss is very selective when choosing who will read the biopsies. He personally knows each of the pathologists we employ. All of the pathologists only read skin biopsies, and have both a special interest and additional training in 'reading' skin samples.

Once the pathologist receives the tissue sample, they will review the history and clinical photographs provided by Dr. Strauss. The samples are then sliced very thinly, stained and mounted on microscope slides. The pathologist then examines the samples, provides a detailed description and makes a diagnosis. In some cases, special stains will be ordered to further clarify what the diagnosis. Typically the information is complete about 5 days after biopsies are

taken, but it may take longer in some cases. We strive to notify you as soon as we get the results.

What to expect when your pet is biopsied:

Biopsy procedures usually take between 30 and 60 minutes to complete. The patient is not expected to experience significant discomfort during the procedure. The areas where biopsies are taken are generally not shaved, so it may be difficult to see where the biopsies were taken. Patients rarely bother the biopsy sites, but occasionally the area will be bandaged or an Elizabethan collar will be placed to prevent dramatization of the areas. You will be instructed on specific after care for your pet, please follow all instructions carefully and call the clinic if you have any questions or concerns.

Risks and benefits of biopsy and histopathology:

Biopsy and histopathology is considered a very low risk procedure. The most common side effects include discomfort or hemorrhage (bleeding) at the biopsy sites. This is normal for up to 48 hours after the samples are taken. Keep all biopsy sites clean and dry until they are healed. Prevent your pet from traumatizing the areas. Infection has been reported at the site of skin biopsies, but is very rare. Pets do scar at the biopsy sites, but scars are generally small and covered by hair. Cosmetic results are important, and Dr. Strauss attempts to take samples from areas that will heal without noticeable scarring. Sedation is very safe, but unexpected, serious and even life threatening side effects have been reported with the sedating agents we use. Fortunately, these are very rare, and sedation is usually not required for most patients.

The benefit to the procedure is that it is often the safest, most cost effective and best method for diagnosing skin diseases. Dr. Strauss will discuss the role of biopsy and histopathology for your pet's diagnosis and treatment plan after examining and discussing your pet's specific situation with you.