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## Getting the most from your skin biopsies

### Skills for taking skin biopsies

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Skin biopsy is a valuable diagnostic test in veterinary dermatology which enables the investigation of inflammatory or neoplastic diseases, as well as conditions that change the anatomy and structure of the skin (e.g. follicular dysplasia, endocrine disorders). **In many dermatological diseases, a biopsy is needed to achieve diagnosis.**

## Punch biopsy technique

Pictures Dr Carmen Lorente



1. Sedate the animal
2. Mark the sample area
3. Apply subcutaneous lidocaine

4. Rotate the punch, always in the same direction  
Whenever possible use 8 mm punch, 6 mm is acceptable

5. Elevate the skin cylinder with a needle (do not use forceps)
6. Excise through the subcutaneous layer and obtain the sample

7. Clean the sample over gauze
8. Introduce into formalin
9. Close the wound

Do not surgically prepare the skin for the procedure, if required trim hair  
Use 4 mm punch exclusively in very delicate areas (e.g. nose)

### How to obtain relevant information from a skin biopsy

1. Do a complete clinical workup of the case, including a list of the differential diagnoses that the Vet wants to confirm or rule out.

2. Sampling of relevant lesions, ideally representative primary lesions, and taking enough samples (3 - 5) of an appropriate size to allow for pathological diagnosis.

3. Follow the correct procedure for taking and sending the skin biopsies (Fig 1, 2, 3).

4. Submit a full summary of relevant case information: animal's signalment, brief medical history, description of dermatological lesions, medications received and differential diagnosis.

5. Evaluation of the sample by a dermatopathologist.

6. Interpretation by the clinician of the biopsy results together with the clinical data. Some cases may benefit from a further discussion between the clinician and the dermatopathologist.

## How to take a skin biopsy?

1. Select most representative lesions: primary lesions (e.g: papules, pustules, macules, nodules) are always the most useful.
2. Do not surgically prepare the skin for the procedure. Scrubbing the skin or shaving can produce artefacts that complicate the diagnosis, or can remove crusts that can be important for the diagnosis.
3. Mark the areas you want to sample. Take 4-5 representative samples.
4. Use Lidocaine without adrenaline as a local anaesthetic.

5. Punch biopsy samples of 8 mm are preferred, 6 mm are acceptable. Use 4 mm punch exclusively in very delicate areas, such as the nose. Place the lesion in the center, and do not include lesional and non-lesional skin in a punch biopsy.
6. Scalpel biopsies should be shaped like a buttonhole. They are useful to include the lesional margin in cases of ulcers.
7. Clean the skin sample on gauze to avoid artefactual blood crusts.
8. Immediately introduce the sample into a container with formalin.
9. Send to BattLab in a sealed container, with relevant information about the case.

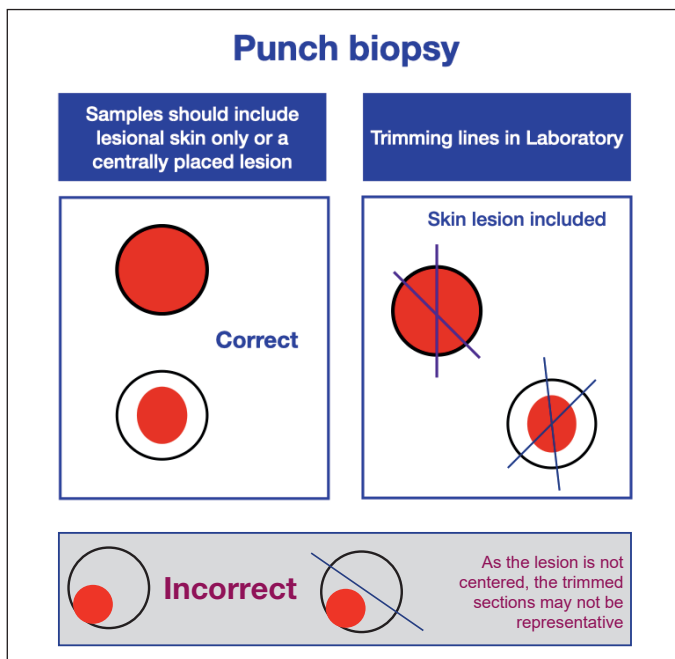


figure 2

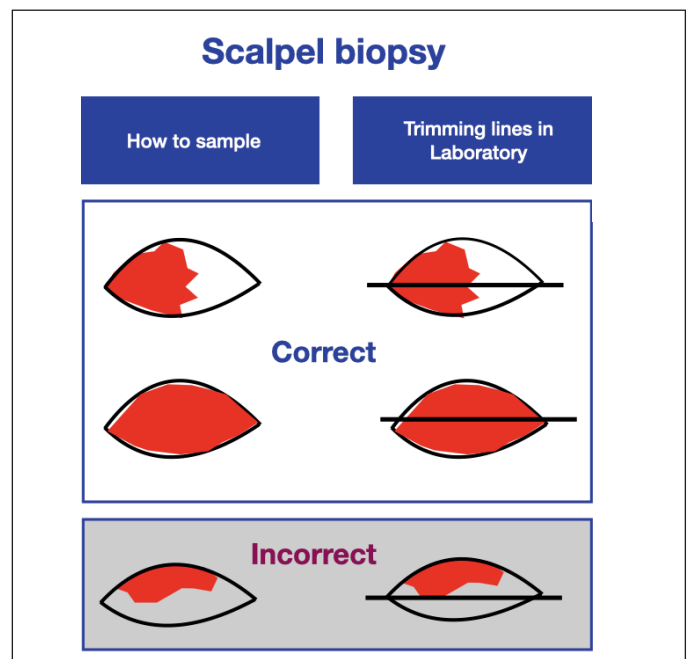


figure 3

## Advice

All the biopsies will be trimmed in the laboratory.

**Punch biopsies** are trimmed in half at the laboratory. The trimming line will always go

through the centre of the sample. Do not send punch samples with lesional and non-lesional skin. If you sample small lesions such as a papule, this needs to be central in the sample to make sure that the lesion will be correctly included in the cut allowing the pathologist to analyse this on the slide (figure 2).

**Scalpel biopsies** are trimmed along their long axis. You can include lesional and non-lesional skin, as long as the transition area is included on the line where the sample will be cut (figure 3).

Treatment with glucocorticoids, or other anti-inflammatory drugs, can mask diagnostic lesions. Avoid the use of glucocorticoids before taking the biopsy.

Always indicate if the animal is receiving or has received glucocorticoids or other anti-inflammatory drugs, as well as active ingredient, dosage, duration of treatment and withdrawal time.

At BattLab, complex skin biopsies are examined by a dermatopathologist, and you always have direct access to our experts to discuss the results with them.

At BattLab we aim for a fast turnaround time, which is typically the 3-4 working days. Exceptional cases which require specialist stains may take longer.

## **BattLab Dermatology Services**

### **Allergy tests and Profiles**

Pruritus Profile  
Food allergy profile  
Mediterranean panel  
Perennial panel  
Seasonal panel

### **Allergen-specific immunotherapy**

ASIT incl. insects

### **Ectoparasites**

Demodex PCR  
Sarcoptes Ab - PCR

### **Pathology**

Impression smears, FNA,  
solid biopsies  
24 hours results for cytology  
3-4 working days for histopathology  
Board Certified Anatomic and  
Clinical Pathologists

### **Microbiology**

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and species specific antibiogram

### **Dermatologists available**

ready to assist you with your  
dermatological cases on

For further information on our  
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