Is it ok to send a spleen in a bucket?

With Dr Flaminia Coiacetto

Dr Flaminia is one of the team pathologists at the **SVS Pathology Group** (Vetpath in Western Australia and the NT, QML in Queensland, Vetnostics in New South Wales and the ACT, ASAP Labarotory in Victoria and South Australia, and TML in Tasmania) who are also our supporters for this pathology series.

If you want to polish your necropsy skill check out her video at https://www.vetnostics.com.au/our-services/educational-resources/

The '**salami slicer'** (microtome) in action! - at the 7 minute mark: https://www.youtube.com/watch?v=3PBoHU_pidQ

Tips for getting the best results from your histopath samples.

1. SEND A GOOD HISTORY

"Processes on histopathology that can look very similar to each other. It requires more information, in terms of history, location and species to help us differentiate between those things."

2. FORMALIN

Use enough formalin relative to the sample size.

Ideally you would have tissue that is **no thicker than 1cm** thick.

Placed one parts tissue to **10 parts formalin** in a jar.

The reason for the one cm rule is that the formalin takes a certain amount of time to penetrate each millimetre of tissue. In any sample bigger than a cm thick autolysis at the centre of the tissue is going to happen faster than the formalin can penetrate.

For big samples - **incise the masses in 1cm thick sections,** while maintaining the overall shape of the mass. (ie don't cut through it completely)

3. SEND THE ENTIRE MASS

Use a big bucket if you need to to achieve this, eg for an entire spleen.

If you're just sending the mass with no tissue around it there's a risk that you've missed the important pathology.

4. MARK THE MARGINS

Ideal way to mark a margin is with **ink,** but making sure that you put the ink on it and then **dry it** so that there isn't ink everywhere in the pot making everything green - then everything will look like a margin!

Can use **sutures,** eg place one suture in the qaudal margin, two sutures in the cranium margin etc, to mark them out.

5. HANDLE YOU BIOPSIES CAREFULLY

Especially very small samples, eg gut biopsies, can be crushed when gripped with forceps or handled too much.

Pro tip: Use rat-toothed forceps to handle your biopsies - they are less crushing.

Remember - histopathology is really just one tool. Some tissues are impossible to diagnose, even on histopath.

Immunohistochemistry

Some neoplasia is so poorly differentiated that you are unable to identify them on histopath. The next step for diagnosis would be looking at IHC - using antibodies to help us identify the tumour type.

Pro tip: Histopathology is one of the worst ways that you can look for organisms, eg bacteria or fungi, in tissue.