2013 ASMH Advanced Cryostat Workshop
Develop the Mohs Artist Within

For the Mohs specimens that challenge us

Do you ever process wedge type specimens, the dreaded double cut, dog ears (burrow's triangles), or struggle with cartilage, fat or epidermis transitioning? If so, this class is for you! The ASMH Advanced workshop will offer an in depth presentation on processing full thickness wedge specimens, provide instruction on how to acquire a complete representative section of fatty (non-cutting) type tissue, how to manipulate the contours of cartilage and to transition epidermis to an even plane with the deep margin. At the end of this workshop, you will be able to provide a high quality representative section with ease!!!

It is all about "Tissue Manipulation". We can learn to listen, and pay attention to what our specimen needs to create a quality representative section for our Mohs surgeon!!!

WEDGES

The full thickness wedge is a specimen that has been completely excised from a free edge of tissue such as the lip, nasal ala, eyelid or ear rim. The wedge is embedded for a complete specimen representation.
The physician must be able to identify the outer layer from the inner layer on eyelid, nose and lip tissue, and identify both the front and back side of ear tissue.
To ensure correct inking and orientation of specimen, you will:

1. Receive specimen and orient the location of the specimen on the map.
2. **Ink margins prior to bisecting specimen** to prevent loss of orientation.
3. Using the reverse slide mount method, place tissue (margin side down) on the embedding slide.
4. Freeze tissue to slide, ensuring that all representative margins are in contact with the slide for a complete representative section.
5. Process as usual.

Eyelid Wedge:

A full thickness representative section of the eyelid will enable the physician to view the epidermis margin, the eyelid, the mucosal conjunctiva and the deep margin.

Lip Wedge:

A full thickness representative section of the lip will enable the physician to view the epidermis margin, the mucosa lining and the deep margin.

Nose Wedge:

A full thickness representative section of the nose will enable the physician to view both the outer and the inner layers of the nose.

Ear Wedge:

A full thickness representative section of the ear will enable the physician to view both the front and back margin of the ear, as well as the deep margin including the cartilage.

DOUBLE CUT:
We have all seen them. We receive a specimen that has a cut (or two) in the epidermis margin. It is our task to miraculously repair this imperfection.

DOG EARS (Burrow's triangle):

These are routinely received as an "additional stage" specimen. Your physician will give you this type specimen since they will need to take it out anyway as part of the repair of the surgical site. A "dog ear" can be in the shape of a V or in the shape of a check mark ☑. With the aid of a score and a relax cut, you can give your physician an impressive complete representative section.

Cartilage:

Cartilage is one of the most difficult tissues to flatten. When confronted by this type of tissue, unique relaxation techniques may be required. It is crucial that the cartilage be kept moist until it is processed.

Cartilage may be flattened by placing decisive hatch marks and scores within the curved areas of the cartilage to relax its concavity. Fan-like darts relax the areas within the conchal bowl, tragus and the anti-tragus.

Due to the behavioral characteristics of cartilage within the ear, some curling and lifting is to be expected.

Cartilage tissue is to be placed on charged slides to prevent loss of tissue during staining.

Fatty Tissue:

The physical characteristics of adipose or connective tissue make embedding fat especially challenging.
Adipose tissue exists in white and brown form, with each serving different needs in the body. Each adipocyte or fat cell is filled with a lipid droplet that is composed mainly of varying mixtures of tripalmitin, tristearin and triolein.
When adipose tissue is viewed on the slide, the cells appear empty. The nucleus may be observed towards the side of the cell.

To successfully section this type of specimen, the adipose must be brought down to a much lower temperature than that used for epidermis. Use the Spot Freeze Technique to accomplish this.

Liquid Nitrogen is very helpful in acquiring sections of fatty, non-cutting tissue. The method that is found to work well is as follows:

1. Face specimen and determine which area of the tissue to be non-cutting

2. Add a small amount of liquid nitrogen to a styrofoam cup and place in a convenient location within the cryostat chamber.

3. Using a rolled 4x4 piece of gauze, dip one end of gauze into liquid nitrogen and apply to non-cutting area of specimen - apply pressure with a pair of embedding forceps.

4. Carefully and lightly reface into block (only to remove top layer where liquid nitrogen was applied to prevent freeze artifact). Sections should now produce quality, complete sections of the specimen. In the event of an excessive fatty specimen, you may need to increase your micron settings to acquire a complete section. Fat cells tend to stain transparent, therefore not creating a thickness issue when cutting at a higher micron setting.

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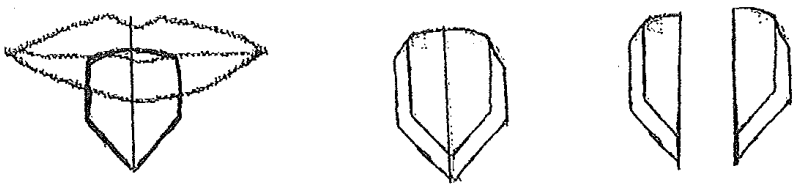

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