

Tips and tricks with the use of Porcine models

General tips

Tip: Make sure that the models are sufficiently thawed. If they are still frozen, perforations can easily occur during snaring or cutting which can interfere with the training, the model in question will need to be replaced.

In our experience a thawed model can be used for about 4 hours. If possible, attach the models to the swivels directly before the training.

Tip: dab the lens of the endoscope beforehand with 70% alcohol to prevent it fogging up during the procedures. To do this, wipe with a tissue in a single movement away from the nozzle. Do not use gauze which can spread microparticles and clog the nozzle.

Installation in training room

Place the TD-Box on a stable surface. When you are scoping, you are fully focused on the image and it is important that the therapeutic workspace is secure.

Anti-slip stickers are placed at the bottom of the four corners of the black tray. The black bubble mat can be used for additional stability.

When working with veterinary models, one often stands in a skills lab or cutting room. Place as little fabric/cloth/plastic as possible between the workspace and the table, otherwise the workspace may slip.

If possible, place a disposable sheet with pockets on the table. These are ideal to (temporarily) store materials that are not used. In addition, you immediately create a workspace.

Black plugs

Black plugs are provided to reduce air loss, and thus odor, during scoping. These can be placed on the outside of the large swivel. Three different stoppers of different diameters are included.



Electrocautery

The TD Box comes standard with a metal plate which serves as a patient plate. The neutral electrode can be attached to this metal plate by sliding it into the appropriate place.

Tip: if the electrocautery does not work optimally, you can place a monopolar patient plate under the metal plate. The model can also be moistened with NaCl 0.9% solution.

Attaching models to swivel

Some esophagi are very narrow. If necessary, stretch these with your thumb before sliding them onto the swivel. Use cable ties to tighten them onto the swivel. Before you slide the model onto the swivel, clamp a cable tie together and push it over the swivel in its entirety. Then the model can be placed over the swivel and the cable tie can easily be tightened.

Cover plates

We recommend that you, if at all possible, always cover the therapeutic area with the transparent or black cover plate. This prevents spatters and minimize the odor.



EMR/ESD

Once the models are secured, you can start training.

Suturing and suture techniques

If veterinary endoscopes are available, the porcine models can be used for more 'advanced' training than is possible with the silicone models.

You can, for instance, attach the cardia to the esophagus (Nissen fundoplication), attach a cuff or, for example, train in suturing after an ESD procedure.

It is an advanced training in the sense that, compared with silicone models, animal tissue has a more realistic feel and appearance.

Tip: make sure that the endoscope has good support outside the swivel, about 30 centimeters in length.

Bleeding and complication management

Nitinol clips. Several nitinol clips are available on the market. These clips can be used for training as well as for safe removal.

Make perforations in the wall of the model with a knife for 'treatment.'

Conventional clips. Clips can be placed at random places in the models.

Tip: as with the silicon models, to simulate bleeding, a needle of an infusion system can be punctured through the wall of the model. Bleeding can be simulated by adding a dye to the infusion bag.

If you have any additional tips, ideas, or additions you would like to share with us, please do not hesitate to send us an email at info@medicaltrainingtools.com