Fresh-Frozen Tumor Samples
Instructions for Submission to MSU Repository

If your pet has a tumor and you will be having it either surgically removed for biopsy or obtained at the time of euthanasia, please be sure to inform your veterinarian of the specific requests that are listed in this document.

Since correct diagnosis of each tumor is critical for the quality of the Repository, we encourage the diagnostic work-up of each case. We ask everyone to submit a formalin-fixed tissue sample for histopathology to the Diagnostic Center for Population and Animal Health at Michigan State University. Please see instructions for formalin fixed sample submission for further details.

Below are the instructions for frozen tumor sample collection and shipping. Please carefully follow these instructions to ensure that the sample is properly collected and shipped to the Repository. Frozen tissue samples should be immediately frozen on dry ice or immersed in liquid nitrogen. If dry ice or liquid nitrogen is not readily available, it is acceptable to immediately place the specimen into a regular freezer as a temporary storage.

<table>
<thead>
<tr>
<th>SAMPLE COLLECTION</th>
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<tr>
<td>• Tissue should be collected and immediately frozen (within 60 minutes)</td>
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<tr>
<td>• Have two zipper storage bags available and pre-labeled.</td>
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<tr>
<td>o Label the bags (use a sharpie pen if possible) with:</td>
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<tr>
<td>▪ Name of dog</td>
</tr>
<tr>
<td>▪ Name of owner</td>
</tr>
<tr>
<td>▪ Berner Garde ID number if available</td>
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<tr>
<td>▪ Date of collection</td>
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<tr>
<td>▪ Location of tumor</td>
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<tr>
<td>o Please wear gloves when handling the specimen and storage bag!</td>
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<tr>
<td>▪ Do not touch the inside of the bag</td>
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<td>• Have the surgeon drop the specimen directly onto the plastic storage bag (see photo).</td>
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<tr>
<td>• Double bag the specimen (place the ziplock bag containing the specimen inside another ziplock bag), close the seal, then IMMEDIATELY FREEZE, using one of the methods below. Keep specimen frozen at ALL times.</td>
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<tr>
<td>o Temporary storage in freezer: Place bags immediately into a regular freezer as temporary storage if dry ice or liquid nitrogen is not immediately available.</td>
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<tr>
<td>o Dry Ice: Bury the specimen into the middle of a container of dry ice.</td>
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<tr>
<td>o Liquid Nitrogen: Instead of ziplock bags, please place specimen in a sterile cryo-vial (pre-labeled with patient /owner identification), then drop into the liquid nitrogen.</td>
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</table>
REPOSITORY SUBMISSION FORM

Repository submission form

Please print, complete all three pages, sign, and enclose this form with your sample.

PACKAGING FOR SHIPMENT

Supplies required for shipment:
1. Thick walled styrofoam (insulated) shipping container
2. Outer cardboard shipping box
3. Dry Ice
4. "Dry Ice" and "Class 9 Misc Goods" shipping labels
5. "Exempt Animal Specimen” label (this should be typewritten and affixed on package)

IMPORTANT NOTES REGARDING DRY ICE!!

- **Frozen tissue must be shipped to us on DRY ICE ONLY.**
- Dry Ice is a cooling agent and is required for use in the shipment of frozen tumor tissue to the Repository. This coolant evaporates over time and requires gloves for handling. Dry ice must not be mistaken for ice/gel packs. The use of ice/gel packs instead of dry ice will result in an unusable sample for the Repository.
- When purchasing dry ice, plan to use 5 to 10 pounds for each 24-hour period, depending on the quality of the insulated shipping container. This amount will keep everything frozen in a container up to 15 quarts. For larger containers, or longer shipping times, multiply dry ice quantities by this rate.
- Dry ice can be obtained at a local dairy store, ice cream parlor, or a local grocery franchise. An online directory such as www.dryicedirectory.com can also be utilized to locate local distributors.
- There are strict regulations pertaining to the shipment of dry ice. You can contact your local shipping agent for advice on labeling requirements as to remain in compliance with current regulations.
- To make this process as easy as possible, we have prepared a shipping kit that you can purchase directly from us by sending a request to berners@cvm.msu.edu. We would urge you to take advantage of this helpful service, as it will include everything you will need for shipping the sample back to us. Dry ice is NOT included in this kit.
SHIPPING TO REPOSITORY

• Ship samples **Monday-Wednesday** via **Overnight delivery** to:

  Dr. Vilma Yuzbasiyan-Gurkan  
  Michigan State University  
  Biomedical Physical Sciences  
  567 Wilson Road, Room 2209  
  East Lansing, MI 48824

• Please notify us via e-mail at berners@cvm.msu.edu letting us know the shipping date and tracking number
• Your local shipping agent can assist you with the proper shipping labels and requirements for shipping this sample on dry ice to the Repository. If you do not purchase a frozen tissue kit from the Repository, please contact your local shipping agent:

  FED-EX: 1-800-GO-FEDEX or online at www.fedex.com  
  UPS: 1-800-742-5877 or online at www.ups.com

CORRESPONDENCE

If you are interested in purchasing a frozen tissue sample collection kit containing the proper packaging and shipping supplies, please notify the Repository via e-mail of this request and provide your contact information. Please allow 7-10 days for us to process your request and ship the kit out to you. In the case of an emergency, the tissue can be temporarily stored in a freezer until you receive your kit and are able to collect dry ice and ship the sample back to us.

We realize that this is a lot of information and that it is complex in nature. We also realize you are dealing with concerns about your pet’s illness at the same time. We are here to help and assist in making this as smooth of a process as possible.

Please contact the Repository with any questions you may have!

  Email: berners@cvm.msu.edu  
  Phone: 517-432-9902  
  Fax: 517-432-9904  
  Web: http://cvm.msu.edu/berners

Thank you very much for your participation! We would appreciate any future updates regarding your pet’s change in health status. Do contact us by phone or e-mail.