



# The Work-Up

Diagnostic Services Unit | Issue 11 - January/February, 2024

## Inside this Issue

**SPECIAL EDITION:** Best practices for sample submission

*This special edition of The Work-Up will highlight some of the common problems with sample submissions we see at the DSU and provide some tips on best practices for sample submission.*

Spotlight: Accessioning Team

Importance of appropriate sample packaging

Submission forms

Sample labeling

Sample packaging

## DSU Announcements

### Holiday Closures:

Alberta Family Day: Monday, February 19, 2024

The DSU Cytology Service is closed until September 2024. All cytology submissions will be sent out during this time.



**Poorly packaged:** leaking box within the courier's vehicle and on the DSU receiving desk

## Spotlight: Accessioning

Our accessioning team plays a vital but often hidden role at the DSU. They receive the samples, input sample information into our Laboratory Information Management System (LIMS), and make sure the samples get to the right lab section for diagnostics! Without their attention to detail and organizational skills, the lab would lose significant efficiency in its workflow. In the last year, as the lab expanded and sample numbers increased substantially, the DSU expanded to have two accessioning technicians, Chloe and Callum.



PC: Todd Kroll



Chloe completed her BSc in Psychology at Manchester Metropolitan University, England in 2014. She previously worked as a Medical Laboratory Assistant at Royal Preston Hospital and as a Laboratory Technician supporting teaching and research at the University of Central Lancashire. Since moving to Canada in 2022, Chloe worked in the University of Calgary Health Sciences Animal Resources Centre as an Animal Technician. Chloe joined the DSU in August 2023.



Callum graduated from The University of Abertay, Dundee in 2019 with a BSc (hons) in Biomedical Science. After gaining state registration as a Biomedical Scientist, he started working at the University of Edinburgh in the Forensic Medicine and Neuropathology unit performing specialist diagnostic histopathology techniques. Callum particularly excelled in the development and implementation of immunohistochemistry protocols using the Leica Bond platform; and performing RNA in situ hybridization staining. He

joined the DSU in September 2023 after moving to Canada and is excited to be a part of the unit as it grows.

## Importance

Complete and well-packaged samples have many benefits. Of utmost importance is that properly packaged samples protect those shipping and receiving the sample, ensuring that couriers and our staff are not exposed to hazardous chemicals or zoonotic infectious agents. It also improves efficiency; not only for the accessioning team, but for the entire lab. The benefit for the client is potential decreased turnaround times and better diagnostic accuracy.



**Well-packaged:** leak proof inner and outer containers; labeled specimens in their own containers and bags; submission form in separate bag.

# The Work-Up

## Diagnostic Services Unit

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### DSU Team

#### Anatomic Pathologists:

Dr. Jennifer Davies  
Dr. Dayna Goldsmith  
Dr. Ashish Gupta  
Dr. Cameron Knight  
Dr. Carolyn Legge  
Dr. Jamie Rothenburger (*on leave*)  
Dr. Amy Warren  
Dr. Katie Waive  
Dr. Erin Zachar

#### Clinical Pathologists:

Dr. Angelica Galezowski  
Dr. Catherine Wagg (*sabbatical*)  
Dr. Amy Warren

#### Microbiologist:

Dr. Beverly Morrison

#### Support Staff:

Jim Carlsen  
Nancy Coulter  
Dr. Manga Devi  
Mai Farghaly  
Patrick Fuller  
Karan Gadani  
Lori Goodbrand  
Kerin Hudson  
Chloe Ingham  
Jennifer Larios  
Callum MacDonald  
Mel Nicolas  
Ciara O'Higgins (*on leave*)  
Dr. Lindsay Rogers  
Sara Skotarek Loch

### DSU Contact Information

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Clinical Skills Building  
11877 85th Street NW  
Calgary AB, T3R 1J3



### Submission Forms

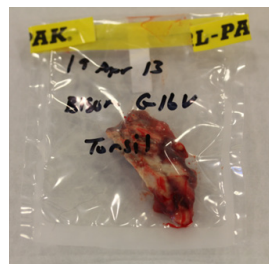
One of the most common problems the accessioning team sees is incomplete submission forms submitted with the sample. As much information as possible should be filled out on the submission form! It is one of the most important steps in the diagnostic process and is where veterinarians and the animal owner can make the biggest impact on their submission and quality of the results. Common examples of missing information include marking the animal for cremation but not indicating which cremation facility to use, not indicating which tests are required, missing sample collection dates, and not including information such as production stage of animals. The missing information slows down the diagnostic process when we need to call clinics to clarify missing information. Not only is this time consuming for the accessioning team, but it also results in delays to processing cases. We are also seeing several clients still using old DSU submission forms. Our submission forms were updated in January 2023 and the most up to date forms are available on our [website](#).

### Sample Labeling

Ensuring the labels on the sample match the submission form also improves diagnostic efficiency and accuracy, especially when samples from multiple animals are being submitted under the same submission form. Samples should be labeled with the animal ID, the tissue type, collection date, and whether it is fixed or fresh. Poorly or inaccurately labeled samples result in diagnostic delays as the team works to determine what a sample is and where it needs to go within the DSU. If animal owners routinely package and submit the samples under clinic direction, please communicate with them clearly to ensure their packaging matches the submission form from the veterinarian.

### Sample packaging

Appropriate sample packaging is critical to protecting the integrity of the submission, ensuring the best diagnostic outcome. Fresh tissues should be submitted in individual and labelled bags. For fixed tissues, using the appropriate ratio of formalin to tissue can decrease turnaround times as the sample will likely be fixed upon arrival at the lab and not necessarily require additional fixative time. In cold weather, samples can be fixed in formalin in clinic for 24 hours and then shipped in 70% alcohol to minimize freezing risk. When packaging, guard against leaks with multiple Ziploc bags and absorbent padding and include icepacks with fresh/frozen and perishable samples. A rigid outer container should be used to protect samples. Leak free packaging protects those shipping and receiving the sample.



**Well labeled:** species & animal ID, collection date, sample type



**Poorly packaged:** all tissues in one bag without labels, leaking containers. Results - contaminated, decomposing, nearly unrecognizable tissues leading to poor diagnostic outcomes



### Tips & Tricks

For more information on sample submission and our most up to date submission forms, please visit the [submissions page](#) of our website. Additional protocols for specific post-mortem sampling can be found on the [resources page](#) of our website. If you have more questions about your submission, please call us!

