

Pathology - Necropsy and Biopsy in ZIMS

Tracking data on disease processes and death records

[Contact Species360 Support](#)

From the [Medical Dashboard](#) in ZIMS you can initiate a pathology record from the New menu dropdown or with the [keyboard short cuts](#) of:

- Shift+N = Necropsy/Death record
- Shift+B = Biopsy record

Necropsy Index

The death screens in ZIMS Medical include eight tabs for:

1. [Submission](#)
2. [Case Information](#)
3. [Gross Necropsy](#)
4. [Samples and Tests](#) (associated with the Necropsy)
5. [Measurements](#) (associated with the Necropsy)
6. [Histopathology](#)
7. [Images](#)
8. [Finalization of the record](#)

Biopsy Index

The biopsy screens in ZIMS Medical include tabs for:

1. [Submission](#)
2. [Case Information](#)
3. [Preliminary Examination](#)
4. [Samples and Tests](#) (associated with the Biopsy)
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Additional topics

- [Incomplete Dispositions](#)
- [Data Shared outside of Medical ZIMS](#)

Necropsy

Submission Information

Captures the core details on the animal who has died. Creating a necropsy record triggers an Incomplete Disposition pending transaction in the Husbandry record if the death has not yet been recorded there. If the death is first recorded in the Husbandry module, some of the Necropsy information will be pre-filled.

[Learn more about Incomplete Dispositions below...](#)

If a death was recorded in the Husbandry module first, the highlighted data will prefill but is editable. If a death has not yet been recorded in the Husbandry module, saving the information in this tab will create a pending death disposition event (Incomplete Disposition) in the Husbandry record. Once you have 'Saved' the Submission screen, you can enter details on the remaining necropsy record tabs.

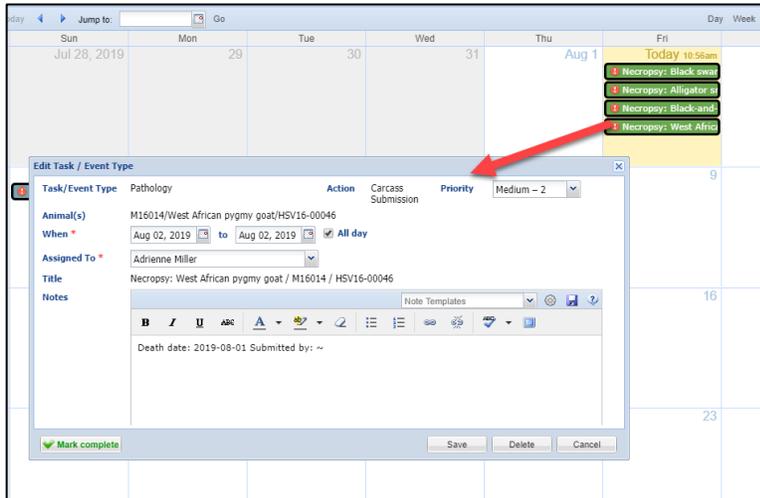
If the Necropsy is for a group record, there will be a carcass count option.

Additional Necropsy Records Needed?

If multiple sets of tissues for histopathology (one to the university diagnostic lab and one to a TAG pathology advisor) are sent out, then a second necropsy record can be created to capture the histopathology report from the second pathologist.

A second necropsy record is most common for group GANs where there may be multiple carcasses for the GAN. While a necropsy record has multiple tabs to provide a place for the various details for a complicated postmortem exam, for a simple dissection only gross necropsy (the cause of death is clear) then the extra tabs can be left blank and only complete the basic info, gross report, and final tab.

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Saving a submission also generates a calendar item for the pathologist defined in your [institutional preferences](#).

It is typical for husbandry staff to be the responsible parties for necropsy submissions. Supporting this workflow, you can grant access to just creating a submission record to husbandry staff via a custom role. They will not have to have access to the remainder of the pathology record.

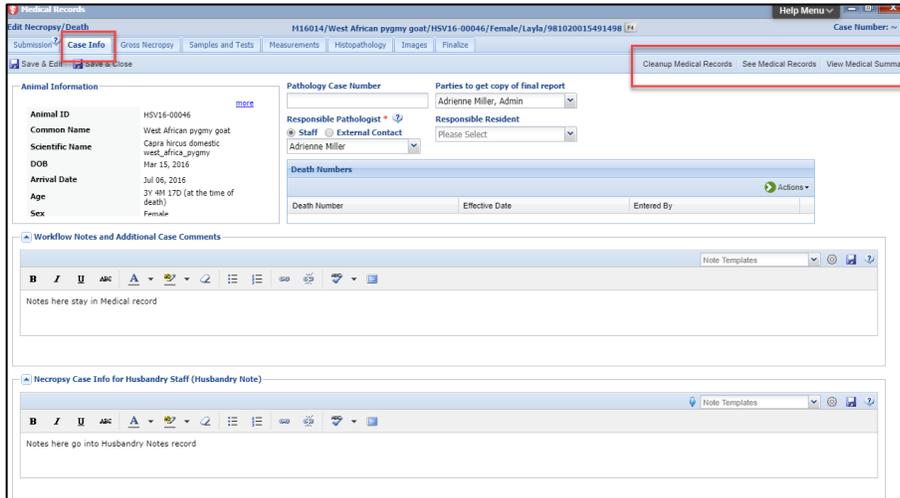
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Case Information

Captures the business information about the case number and additional aspects of the business processes surrounding death records.

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The Responsible Pathologist is a staff lookup from the [my institution staff options](#) or from the [Contact Directory](#) in ZIMS. The Responsible Pathologist can be set to default in Institution Preferences. Notes entered into the Case Info for Husbandry box will be copied into the Note in the Husbandry record. You also have the options to Cleanup the Medical Record (resolve active problems, terminate active prescriptions and remove future Calendar tasks), view the Medical Records or view the Medical Summary from this screen.

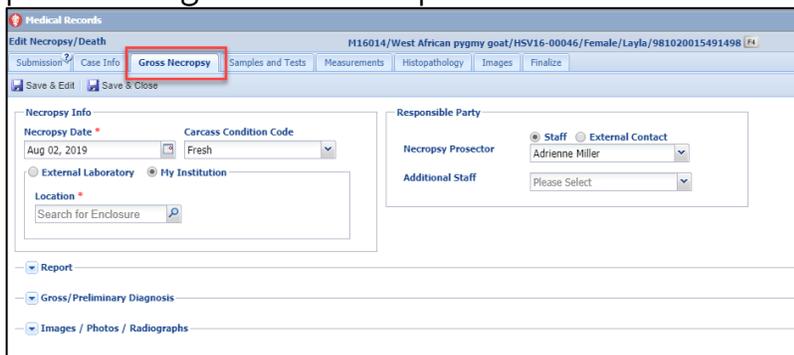
The Necropsy Case Info for Husbandry Staff is a note field that will show for the husbandry staff in their note stream within the Husbandry record. It cannot be edited or deleted via the Husbandry module

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Gross Necropsy

This is where the initial details of the necropsy report are collected along with possible diagnosis and interpretations.



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If External Contact is selected for the Responsible Party they must be entered as a Contact. See [my institution staff options](#) or [Contact Directory](#) to learn how to do this. The Location sources from your Enclosure List if My Institution is checked. If an External Lab is selected it must be entered into your Institution List. See [institution list](#) or [Enclosures](#). The Report is a free text field to capture the initial Necropsy findings and interpretations.

Term	Term Type
<input checked="" type="checkbox"/> Bacterial	Medical Modifier - Other
<input checked="" type="checkbox"/> Aspiration	Medical Condition/Syndrome/...
<input type="checkbox"/> Crepitation	Clinical Sign
<input type="checkbox"/> Deposition	Medical Condition/Syndrome/...
<input type="checkbox"/> Dessication	Clinical Finding
<input type="checkbox"/> Evisceration	Medical Condition/Syndrome/...
<input type="checkbox"/> Herniation	Medical Condition/Syndrome/...
<input type="checkbox"/> Perforation	Medical Condition/Syndrome/...
<input type="checkbox"/> Proliferation	Medical Modifier - Other
<input type="checkbox"/> Respiratory	Medical Modifier - Other

Diagnosis	Standardized Diagnosis
bacterial, respiration	Aspiration.Bacterial
arthritis	

When adding Gross/Preliminary Diagnosis you can select if it was an Incidental finding or one that was a Significant Contributor to the death. Any marked as Incidental will not appear on the Finalize tab to select. In the Add Diagnosis screen you can type your terms (using commas in between) and then generate Standardized Terms. You can also add Local terms to the list. Both your entry and the standardized terms will display.

Finally, you can upload copies of Images/Photos/Radiographs related to the necropsy case -- images attached here will display on the Images tab. There is an institutional limit to the amount of [image space](#) available. If this limit is reached, contact Support@Species360.org to discuss increasing your limit.

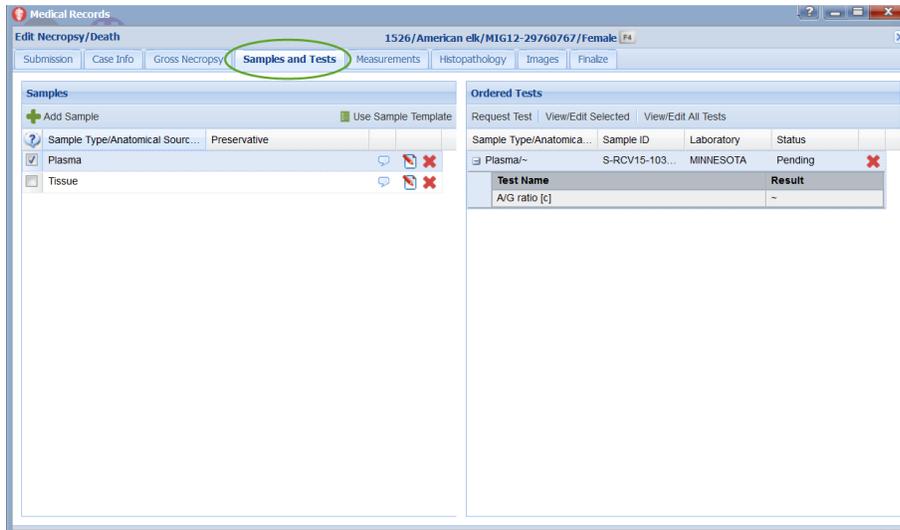
[Click here for more information on linking to documents outside of ZIMS in your notes](#)
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Samples and Tests

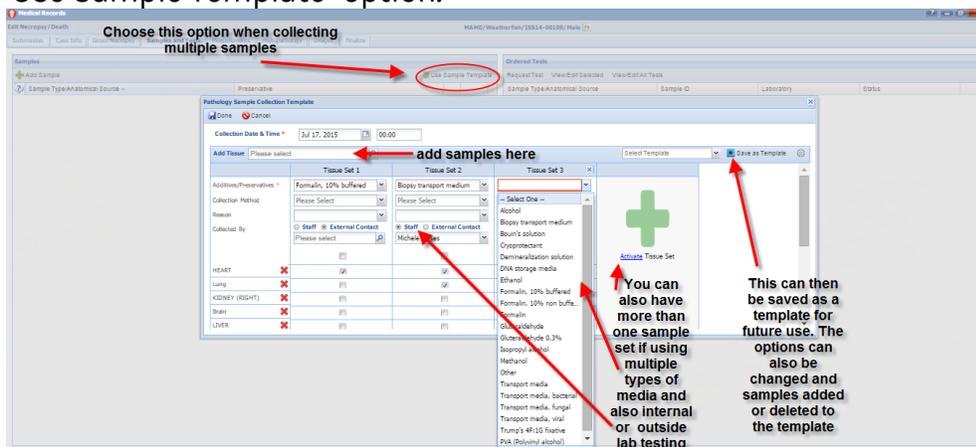
(associated with the Necropsy)

Create Samples and request Tests on them.

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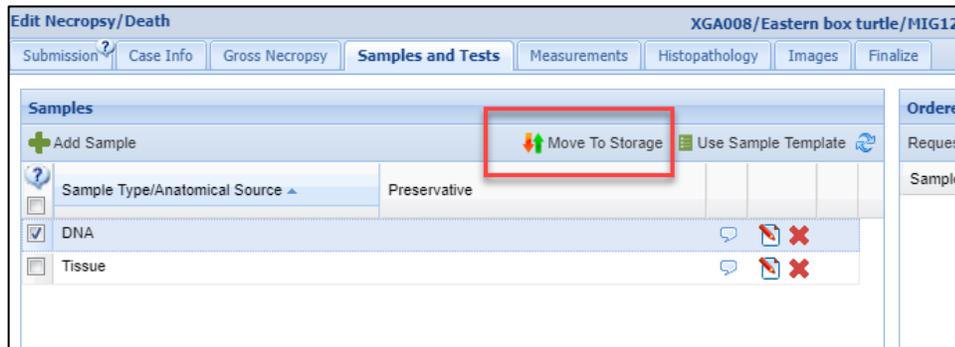
Creating [samples](#) from a necropsy record opens an embedded sample creation window in ZIMS Medical necropsy module. Once your samples have been created in the linked samples section, you are able to highlight an individual record and issue a [request test](#) directly from the necropsy module as well as view/edit the sample test request. You can utilize a pre-defined set of commonly collected samples using the integrated 'Use Sample Template' option.



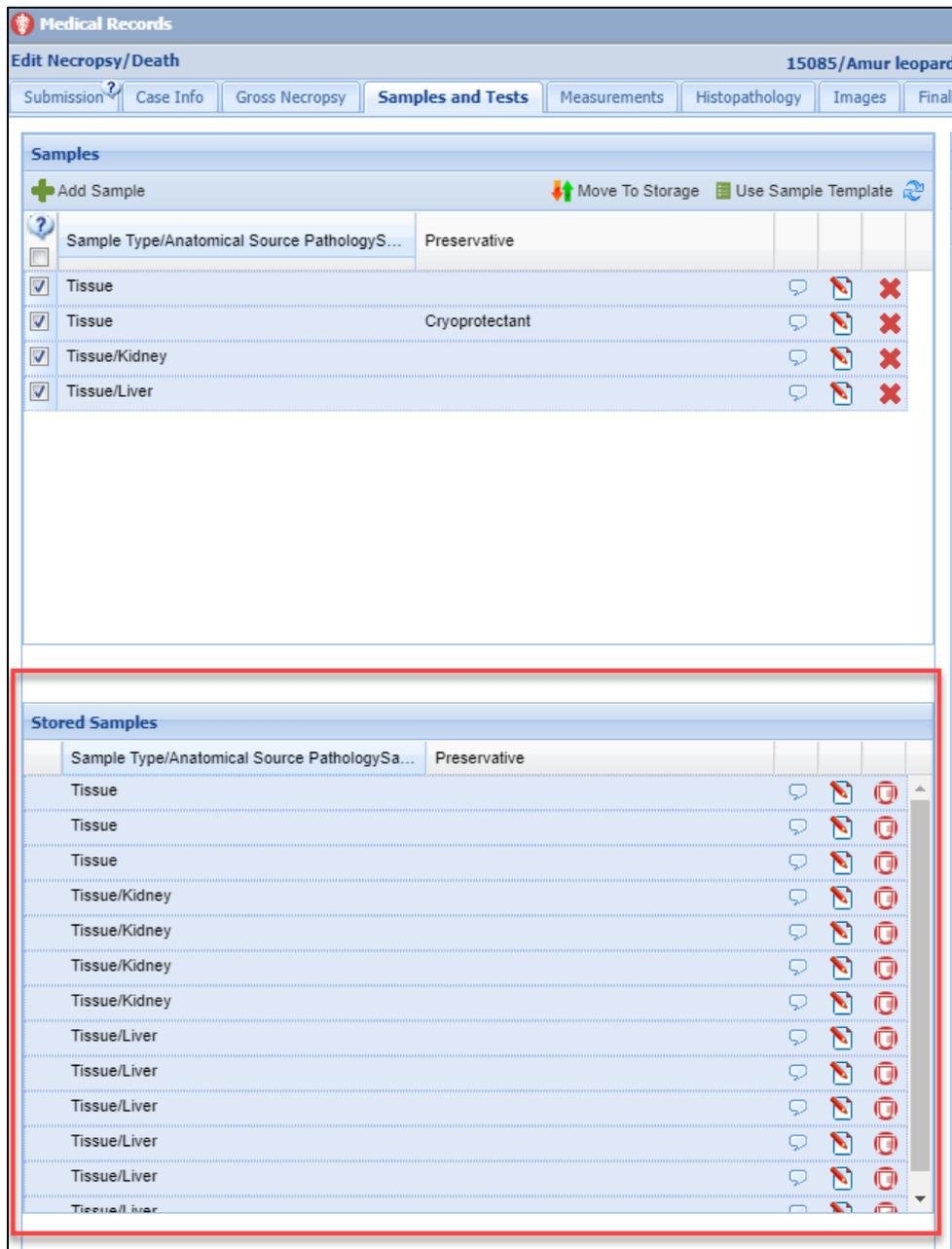
Samples and Tests from the necropsy record do not appear in the Medical Dashboard but biopsy linked samples and tests will.

You can also move the Sample to Storage by selecting the Move to Storage button.

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If there are Samples in storage for the animal they will display at the bottom.



If Samples are moved into storage from the upper grid they will display in the lower grid. Edits to the upper grid are for Sample details and edits to the lower grid are for Storage details. Removing a Sample from storage or performing other actions on it must be done from the Sample Storage module.

For more on Sample Storage see [Sample Storage](#).

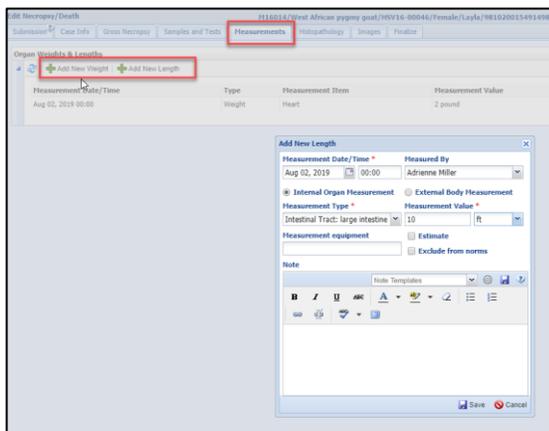
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Measurements

(associated with the Necropsy)

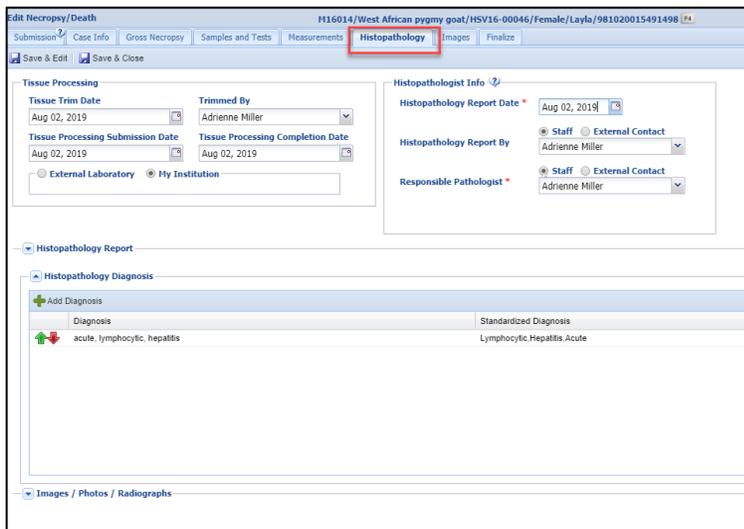
Providing a location to record measurements of weights and lengths of all biomaterial included in the necropsy.



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Histopathology

Tracking tissue specific analysis completed in conjunction with a necropsy report.



If External Lab is selected it must be in your Institution List. If External Contact is selected, they must be in your Contact List. The Report is a free text field. The

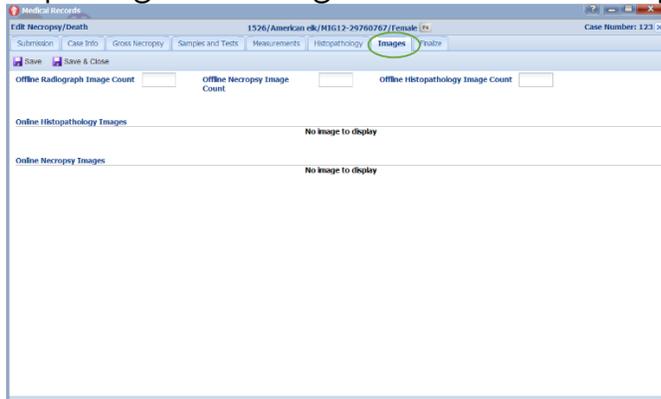
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Diagnosis area functions just as it did in the Gross Necropsy tab. You can also add Images here.

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Images

Capturing all the Images related to the Necropsy.



Images added under Gross Necropsy and Histopathology tab show here, along with the ability to note the number of additional offline images that are related but not attached to the ZIMS record.

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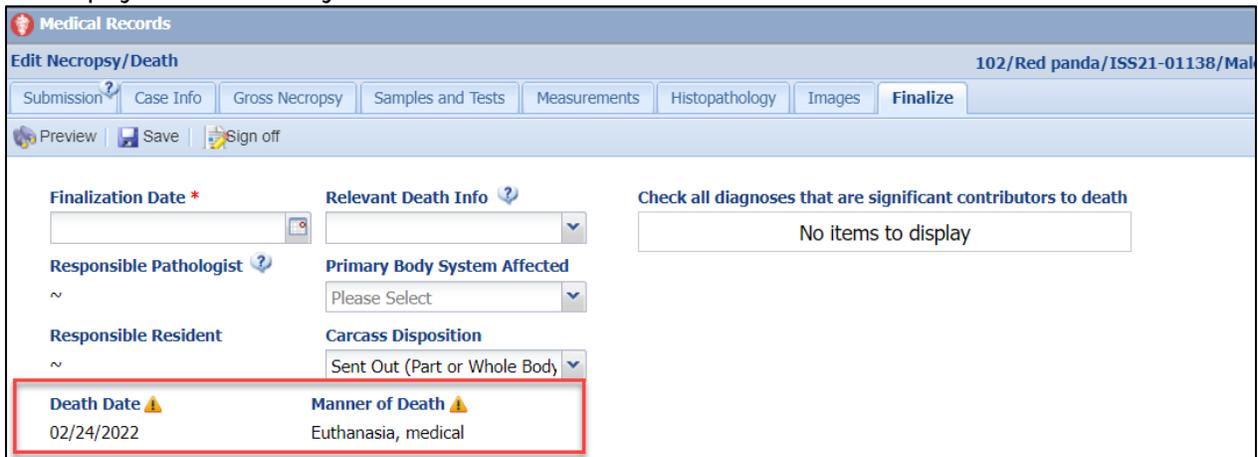
Finalization of the Record

Completing the necropsy case, confirming final diagnosis and closing (protecting) the record from further editing.

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Date of Death and Manner of Death are sourced from the Submission tab and are not editable on this tab. If both fields were entered in the Husbandry module first, they will default to those values. If both fields have different values in the Necropsy compared to Husbandry, they will be flagged as a conflict (see below).

Relevant Death Information, Primary Body System Affected and Carcass Disposition may be sourced from the Husbandry record if the death was first recorded there. All three boxes are editable, and will update with the latest information saved in either Necropsy or Husbandry.



Medical Records
102/Red panda/ISS21-01138/Mal

Submission Case Info Gross Necropsy Samples and Tests Measurements Histopathology Images **Finalize**

Preview Save Sign off

Finalization Date * [] **Relevant Death Info** [] **Check all diagnoses that are significant contributors to death**
No items to display

Responsible Pathologist [~] **Primary Body System Affected** [Please Select]

Responsible Resident [~] **Carcass Disposition** [Sent Out (Part or Whole Body)]

Death Date [02/24/2022] **Manner of Death** [Euthanasia, medical]

Check any Diagnosis that were significant contributors to the death. Additionally, there are two notes grids, one called Final Summary that contains the physicians final case notes and the Necropsy Case Info for Husbandry Staff that will be visible in the Husbandry module. This is copied from the Husbandry Staff note in the Gross Necropsy tab but it can be updated.

When adding a Necropsy to a group record, Date of Death, Relevant Death Information, Primary Body System Affected and Carcass Disposition will not source information from the Husbandry module and will not be editable.

Selecting the Sign Off button will lock the record. This will activate the Addendum and Audit Trail grids. Only the Medical Admin (Species360) role holder at your organization can unlock a record. The Audit Trail displays the activity of locking and unlocking the record. Once locked, no changes can be made. Notes can be added to the Addendum by anyone with access even after the record is locked.

Addendum		
Date	Note	Reported By
Aug 02, 2019	Notes can be added here	Adrienne Miller

Audit Trail	
Record unlocked by Adrienne Miller on Aug 02, 2019 at 13:59	
Record locked by Adrienne Miller on Aug 02, 2019 at 13:57	

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Biopsy

Biopsy Submission

Basic details on samples collected for biopsy. Once this tab is filled out and 'saved' the remaining 6 tabs become active.

Similar to Necropsy, the first tab gathers information on the Submission of the Biopsy. You can use an existing Sample or create a new Sample. This screen must be completed and saved before the remaining six tabs become active.

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Biopsy Case Information

Captures the business information about the record.

The screenshot shows the 'Edit Biopsy' window with the 'Case Info' tab selected. The 'Animal Information' section contains the following data: Animal ID: HSV18-00120, Common Name: Ameraucana chicken, Scientific Name: Gallus gallus domesticus americana, DOB: Apr 15, 2017, Arrival Date: May 08, 2018, Age: 2Y 3M 21D, Sex: Female. The 'Pathology Case Number' is 123. The 'Parties to get copy of final report' section lists Adrienne Miller as the Responsible Pathologist and Responsible Resident. The 'Workflow Notes and Additional Case Comments' section is currently empty. The 'Biopsy Case Info for Husbandry Staff (Husbandry Note)' section is also empty.

The Animal information copies from the selected animal's record. You can Cleanup Medical Records from this screen (resolve active problems, terminate active prescriptions and remove future Calendar tasks). You can also see all the Medical Records or View the Medical Summary from this screen. The Biopsy Case Info for Husbandry notes will display in the Notes section of the Husbandry module.

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Preliminary Examination

This is where the initial details of the biopsy report are collected along with possible diagnosis and interpretations.

The screenshot shows the 'Edit Biopsy' window with the 'Preliminary Examination' tab selected. The 'Biopsy Info' section includes 'Gross Examination By' (Adrienne Miller) and 'Report Written Date'. The 'Biopsy Tissue / Description' section is empty. The 'Preliminary Diagnosis' section is empty. The 'Images / Photos / Radiographs' section contains a green plus sign icon and the text 'Upload Images'.

There is a free text box for recording a description of the tissue. The Preliminary Diagnosis screens allow you to enter a diagnosis as well as generate standardized terms just like the Necropsy Diagnosis. Remember to use commas between the plain

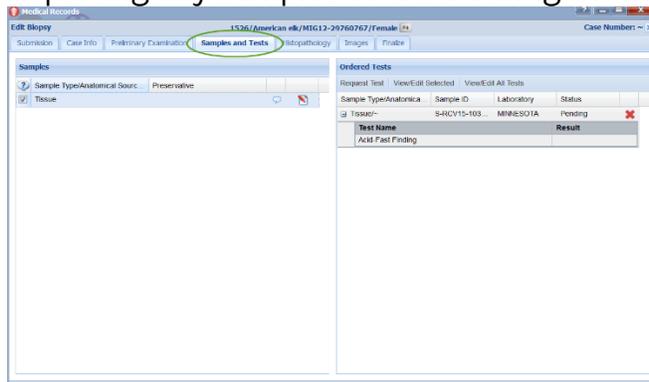
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text values entered to help the system in generating standardized terms for use in the diagnosis recording. Alternately, you can search the Standardized Terms for values you know to be present and select them to be added to the Diagnosis. You can upload copies of Images related to the biopsy case. Images attached here will display on the Images tab. The institutional limit to the amount of image space available applies here and if this limit is reached, contact Support@Species360.org to discuss increasing your limit.

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Biopsy Samples and Tests

Reporting any samples created during the biopsy and requesting tests on them.

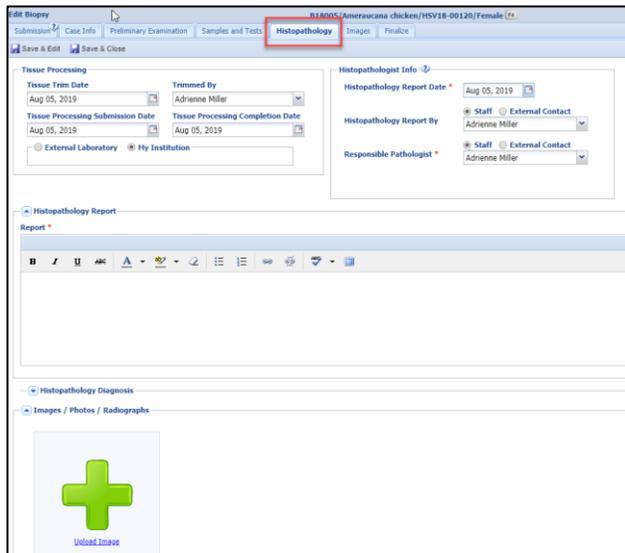


The Sample will be sourced from the Submissions tab. You can request a test(s) from the Sample by selecting the Request Test button. For more details, Samples are covered here [samples](#) and Tests are covered here [request test](#)

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Biopsy Histopathology

Tracking tissue specific analysis completed in conjunction with a biopsy record.

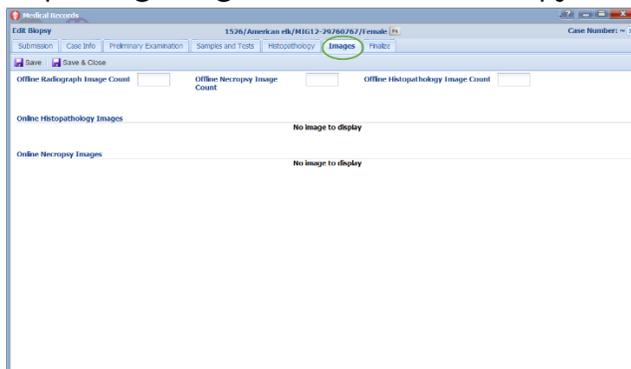


The Report is a free text field. The Histopathology Diagnosis functions as Diagnosis does in the previous fields and allows you to record your Diagnosis and search for standard terms if desired. You can also attach Images here.

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Biopsy Images

Capturing Images related to the Biopsy.



Images added under Preliminary Examination and Histopathology tab show here, along with the ability to note the number of additional offline images that are related but not attached to the ZIMS record.

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Finalization of the Biopsy Record

Completing the biopsy case, confirming final diagnosis and closing (protecting) the record from further editing.

Diagnosis	Standardized Diagnosis	Type
failure, liver	Failure,Liver	

There is a grid of related diagnosis sourced from the Preliminary Examination and Histopathology tabs. Additionally, there are two notes grids, one called Final Summary that contains the physicians final case notes and the Biopsy Case Info for Husbandry Staff which is sourced from the Case Info tab and can be updated with final notes.

Date	Note	Reported By
Aug 06, 2019	New notes can be added here even after the record has been locked.	Adrienne Miller

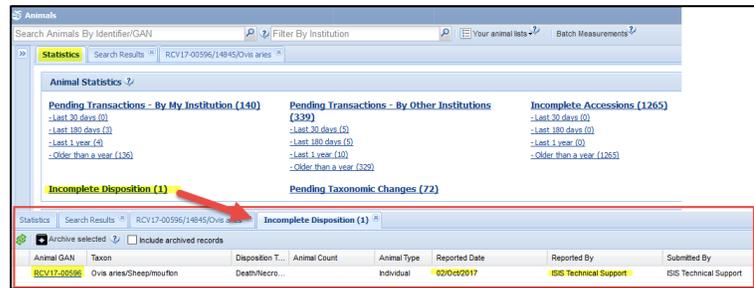
When you select to Sign Off on the record, all tabs and data entered are locked and cannot be edited or deleted. Signing Off activates the Addendum and Audit Trail. Notes can be added to the Addendum even after a record is locked. Unlocking a biopsy record can only occur by Medical Admin (Species360) role holders in ZIMS. The Audit Trail will show the actions of locking/unlocking along with the dates and responsible parties.

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Incomplete Dispositions

When a necropsy is started on the ZIMS Medical side, and a Death not yet recorded in the Husbandry module, an Incomplete Disposition is created on the Animal Statistics page. The Incomplete Disposition must be processed (Accepted/Rejected) in the My Transactions tab to finalize the death:



On the My Transactions – Death Record:

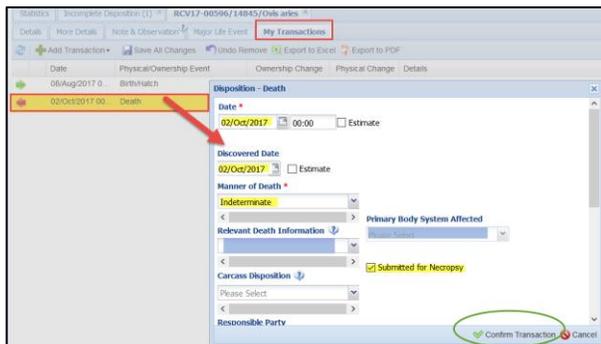
- Date
- Discovered Date
- Manner of Death
- Submitted for Necropsy

Are sourced from the Necropsy Submission tab – permissions can be granted to JUST the submission tab to non-medical staff in the Medical Roles

From the Finalize tab in Necropsy:

- Primary Body System
- Relevant Death Info

If this information is changed in Husbandry or Medical, it changes in both locations.

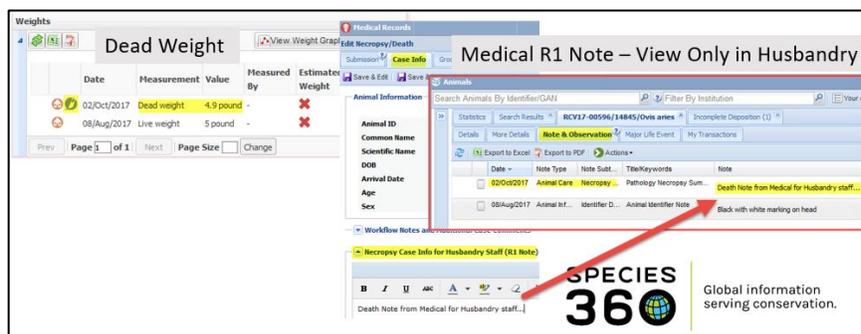


What is Visible Outside of Medical ZIMS?

- When Incomplete Disposition is accepted, and death transaction added, global status changes to 'dead' – this is managed separately from the Medical record

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- Dead animal weights are visible in the Weights grid. These are ‘read only’ and visibility in Husbandry can be disabled from view under the Institutional Preferences menu
- Notes added under the “Husbandry Staff R1 Note” box edited under Case Info and Finalize Case Info tabs in Medical will be ‘read only’ visible in the Husbandry Notes



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Additional Documents:

[2009 - Pathology](#)

[2001 - Incomplete Accessions and Dispositions](#)

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