

Explicitet Advanced Tutorial: Create New Metadata within Explicitet

“Explicitet” is from the Latin: explain, unfold, extend, set forth, exhibit, disentangle

A brief introduction to program capabilities and functions for new users of the Explicitet software

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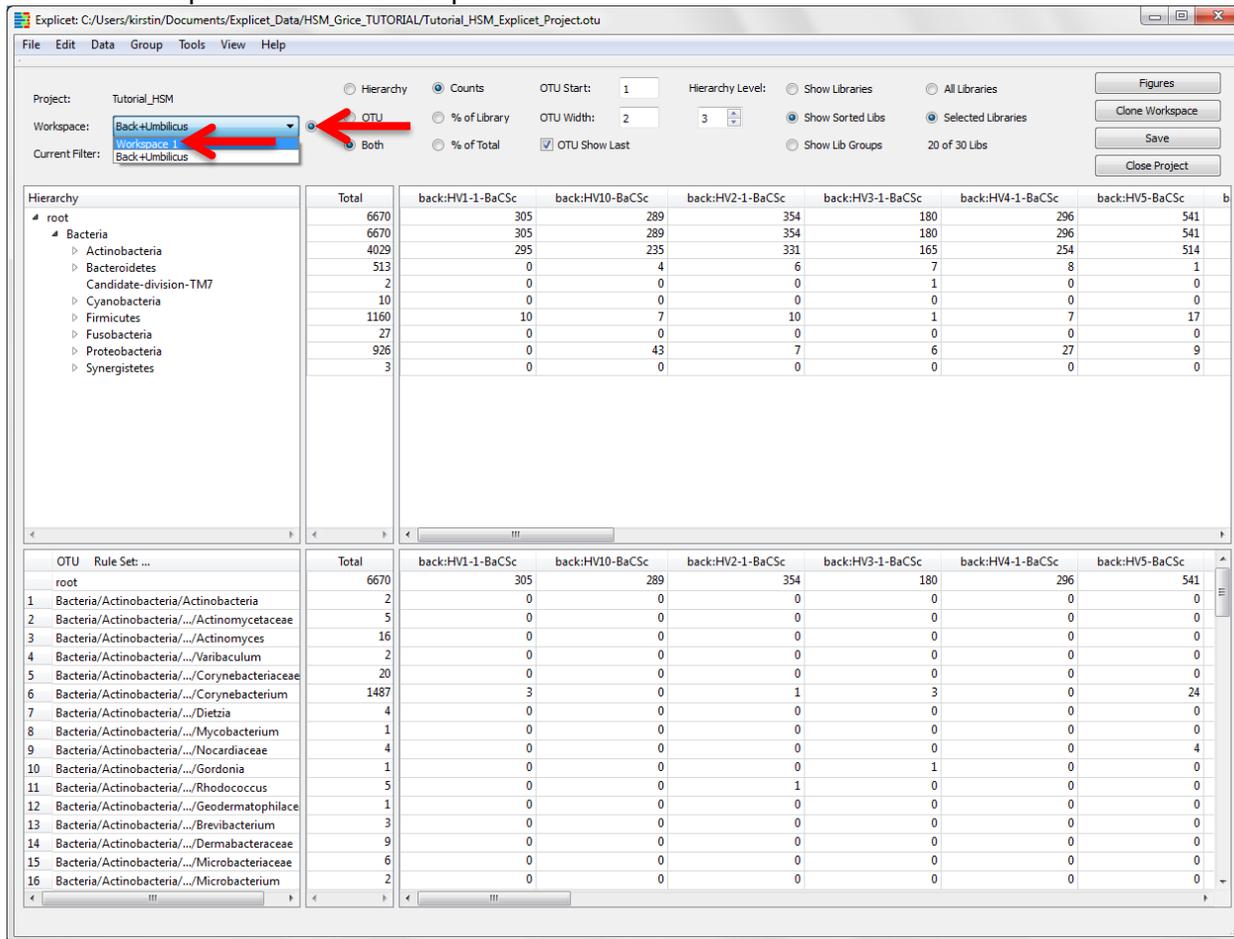
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The data used in this tutorial come from an analysis of 16S ribosomal RNA gene sequences obtained from many distinct skin sites of healthy humans (Grice EA, *et al.* (2009) Topographical and Temporal Diversity of the Human Skin Microbiome. *Science* 324(5931): 1190–1192). For the purposes of this tutorial, we will create mock metadata. Therefore, the following metadata that we will create is completely artificial and does not represent the findings of the original study.

I. Create New Metadata within Explicit

Instead of importing metadata from an outside source, the user can create new metadata within Explicit. To begin, open the Tutorial_HSM project (created in the basic tutorial) by simply double-clicking on the project file.

Go to “Workspace 1” by clicking the radio button next to the **Workspace** field
 Select “Workspace 1” from the drop down

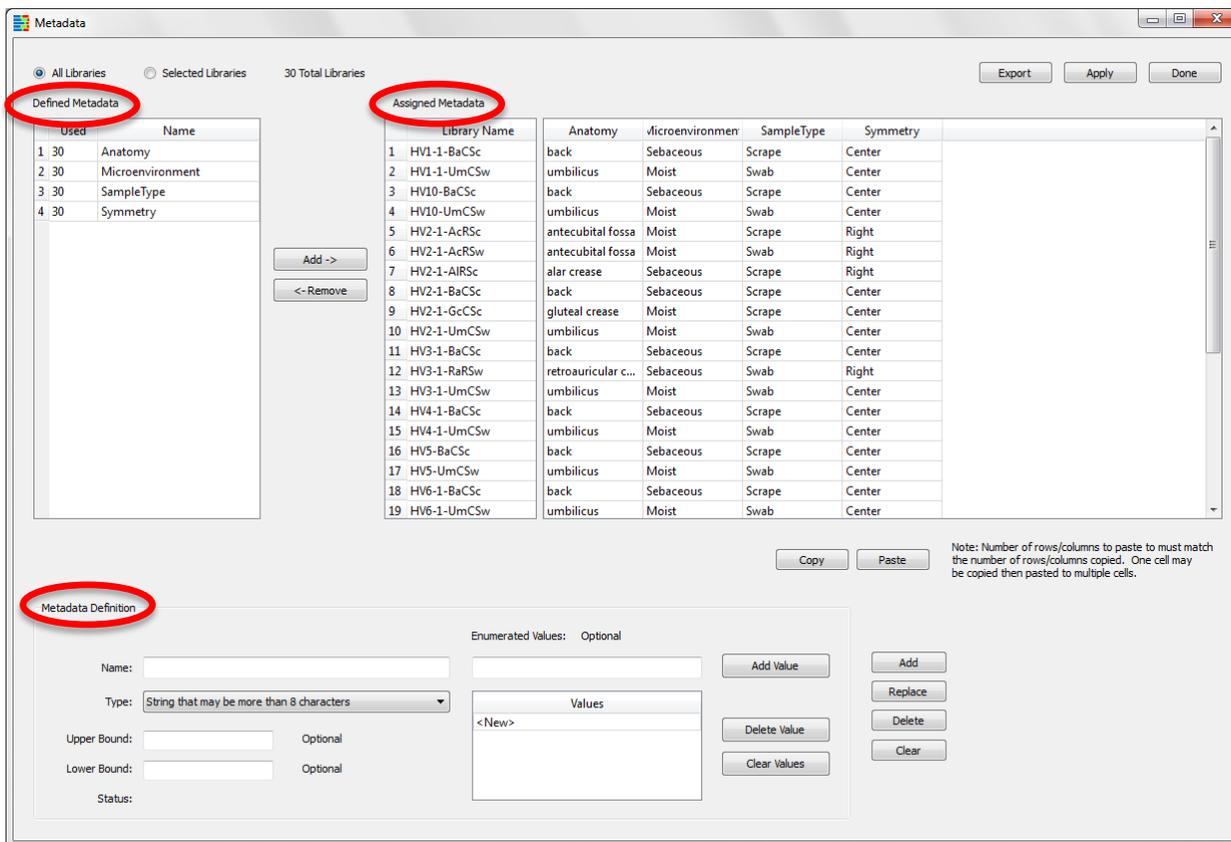


A. Open the Existing Metadata

Data → Metadata

A window with three sections will open

- The left pane: **Defined Metadata**, the right pane: **Assigned Metadata**, the bottom area: **Metadata Definition**. The bottom section, **Metadata Definition**, allows creation of new metadata fields.



Now we will create a new metadata category and assign a value to each library.

B. Create Enumerated Metadata that is 8 characters or less

For this example, we will create a new metadata category of “Sex”, and we will assign each library as derived from either a “Male” or a “Female”. Since there are only a couple, distinct metadata values for the new definition, we will enter them as enumerated.

Type “Sex” into **Name** field

In **Type** drop-down, choose **String that is 8 characters or less** (words or strings of text 8 characters or less)

Enter “Female” under **Enumerated Values**

Click **Add Value**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status:

Enumerated Values: Optional

Female

Values

<New>

Add Value Add

Replace

Delete

Clear Values

Clear

“Female” now appears in the **Values** list

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status:

Enumerated Values: Optional

Female

Values

Female

Add Value Add

Replace

Delete

Clear Values

Clear

Enter “Male” under **Enumerated Values**
Click **Add Value**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status:

Enumerated Values: Optional

Male

Female

<New>

Add Value Add

Replace

Delete

Clear Values

Clear

“Female” and “Male” now appear in the **Values** list

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status:

Enumerated Values: Optional

Male

Female

Male

<New>

Add Value Add

Replace

Delete

Clear Values

Clear

Click **Add** button to the right of the **Metadata Definition** section to add “Sex” to the **Defined Metadata** list

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status:

Enumerated Values: Optional

Male

Female

Male

<New>

Add Value

Delete Value

Clear Values

Add

Replace

Delete

Clear

This category is now defined and can be edited so that it is associated with each library

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 0	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Center
4 HV10-UmCSw	umbilicus	Moist	Swab	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Female

Male

<New>

Add Value

Delete Value

Clear Values

Add

Replace

Delete

Clear

Select "Sex" in the **Defined Metadata** pane

Click **Add** button between panes

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 0	Sex

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Symmetry	
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Center	
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Center	
3 HV10-BaCSc	back	Sebaceous	Scrape	Center	
4 HV10-UmCSw	umbilicus	Moist	Swab	Center	
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Right	
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Right	
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape	Right	
8 HV2-1-BaCSc	back	Sebaceous	Scrape	Center	
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape	Center	
10 HV2-1-UmCSw	umbilicus	Moist	Swab	Center	
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Center	
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Right	
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Center	
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Center	
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Center	
16 HV5-BaCSc	back	Sebaceous	Scrape	Center	
17 HV5-UmCSw	umbilicus	Moist	Swab	Center	
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Center	
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Center	

Metadata Definition

Name: Sex
 Type: String that is 8 characters or less
 Enumerated Values: Optional
 Values: Female, Male, <New>
 Status: The Metadata 'Sex' has been added

A “Sex” column now appears alphabetically in the **Assigned Metadata** pane

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	none	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab		Center
3 HV10-BaCSc	back	Sebaceous	Scrape		Center
4 HV10-UmCSw	umbilicus	Moist	Swab		Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape		Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab		Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape		Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab		Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab		Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape		Center
17 HV5-UmCSw	umbilicus	Moist	Swab		Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab		Center

Metadata Definition

Name: Sex
 Type: String that is 8 characters or less
 Enumerated Values: Optional
 Values: Female, Male, <New>
 Status: The Metadata 'Sex' has been added

From the drop-down selector in the first cell in the column, choose “Female”

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 1	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	umbilicus	Moist	Swab	none	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Female	Center
4 HV10-UmCsw	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape		Right
6 HV2-1-AcRsw	antecubital fossa	Moist	Swab		Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCsw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape		Center
12 HV3-1-RaRsw	retroauricular c...	Sebaceous	Swab		Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab		Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape		Center
17 HV5-UmCsw	umbilicus	Moist	Swab		Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

Click on the second cell in the column
 A drop down selector will appear
 Select "Female"

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 1	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	umbilicus	Moist	Swab	none	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	none	Center
4 HV10-UmCsw	umbilicus	Moist	Swab	Female	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape		Right
6 HV2-1-AcRsw	antecubital fossa	Moist	Swab		Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCsw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape		Center
12 HV3-1-RaRsw	retroauricular c...	Sebaceous	Swab		Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab		Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape		Center
17 HV5-UmCsw	umbilicus	Moist	Swab		Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

Instead of selecting the corresponding value for each library one-by-one, “Female” can be copied and pasted into multiple cells.

C. Copy and Paste Functions

While the second cell in the “Sex” column is selected, click **Copy**

The screenshot shows the Metadata application window. At the top, there are buttons for 'Export', 'Apply', and 'Done'. Below that, there are two main sections: 'Defined Metadata' and 'Assigned Metadata'.

Defined Metadata:

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 2	Sex

Assigned Metadata:

Library Name	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCSw	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	back	Sebaceous	Scrape		Center
4 HV10-UmCSw	umbilicus	Moist	Swab		Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape		Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab		Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCSw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape		Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab		Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab		Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape		Center
17 HV5-UmCSw	umbilicus	Moist	Swab		Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab		Center

At the bottom of the window, there is a 'Metadata Definition' section for the 'Sex' metadata. It includes fields for Name, Type, Upper Bound, Lower Bound, and Status. A 'Copy' button is highlighted with a red arrow. A note at the bottom right states: "Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells."

For this tutorial, we will assume that libraries beginning with HV1, HV3, HV5, HV7, and HV8 are “Female”
 Ctrl-click the cells whose **Library Name** begins with these numbers
 Click **Paste**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 2	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
12 HV3-1-RaRsw	retroauricular c...	Sebaceous	Swab		Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab		Center
14 HV4-1-BaCsc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCsc	back	Sebaceous	Scrape		Center
17 HV5-UmCsw	umbilicus	Moist	Swab		Center
18 HV6-1-BaCsc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center
20 HV7-BaCsc	back	Sebaceous	Scrape		Center
21 HV7-BtRsc	buttock	Dry	Scrape		Right
22 HV7-PhRsc	plantar heel	Moist	Scrape		Right
23 HV7-UmCsw	umbilicus	Moist	Swab		Center
24 HV8-AcRsc	antecubital fossa	Moist	Scrape		Right
25 HV8-BaCsc	back	Sebaceous	Scrape		Center
26 HV8-EIRsc	elbow	Dry	Scrape		Right
27 HV8-TwRsc	toe web space	Moist	Scrape		Right
28 HV8-UmCsw	umbilicus	Moist	Swab	none	Center
29 HV9-BaCsc	back	Sebaceous	Scrape		Center
30 HV9-UmCsw	umbilicus	Moist	Swab		Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

“Female” now appears in each of the selected cells

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 16	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
12 HV3-1-RaRsw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCsc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCsc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCsc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center
20 HV7-BaCsc	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRsc	buttock	Dry	Scrape	Female	Right
22 HV7-PhRsc	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCsw	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRsc	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCsc	back	Sebaceous	Scrape	Female	Center
26 HV8-EIRsc	elbow	Dry	Scrape	Female	Right
27 HV8-TwRsc	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCsw	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCsc	back	Sebaceous	Scrape		Center
30 HV9-UmCsw	umbilicus	Moist	Swab		Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

To fill in the remaining empty cells with “Male”, click on the third cell in the column
 A drop-down selector will appear
 Select “Male”

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 16	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	none	Center
4 HV10-UmCsw	umbilicus	Moist	Swab	none	Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape	Female	Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCsw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values

Female

Male

<New>

Add Value

Delete Value

Clear Values

Add

Replace

Delete

Clear

Click Copy

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 17	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	umbilicus	Moist	Swab		Center
5 HV2-1-AcRSc	antecubital fossa	Moist	Scrape		Right
6 HV2-1-AcRSw	antecubital fossa	Moist	Swab		Right
7 HV2-1-AIRSc	alar crease	Sebaceous	Scrape		Right
8 HV2-1-BaCSc	back	Sebaceous	Scrape		Center
9 HV2-1-GcCSc	gluteal crease	Moist	Scrape		Center
10 HV2-1-UmCsw	umbilicus	Moist	Swab		Center
11 HV3-1-BaCSc	back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab		Center

Copy

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values

Female

Male

<New>

Add Value

Delete Value

Clear Values

Add

Replace

Delete

Clear

For this tutorial, we will assume that libraries beginning with HV10, HV2, HV4, HV6, and HV9 are "Male"
 Ctrl-click the remaining empty cells whose **Library Name** begins with these numbers
 Click **Paste**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 17	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape		Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab		Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape		Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab		Center
20 HV7-BaCSc	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRSc	buttock	Dry	Scrape	Female	Right
22 HV7-PhRSc	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCSw	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRSc	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCSc	back	Sebaceous	Scrape	Female	Center
26 HV8-EIRSc	elbow	Dry	Scrape	Female	Right
27 HV8-TwRSc	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCSw	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCSc	back	Sebaceous	Scrape		Center
30 HV9-UmCSw	umbilicus	Moist	Swab	none	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

Click **Apply** to keep the new metadata

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 30	Sex

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Male	Center
20 HV7-BaCSc	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRSc	buttock	Dry	Scrape	Female	Right
22 HV7-PhRSc	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCSw	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRSc	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCSc	back	Sebaceous	Scrape	Female	Center
26 HV8-EIRSc	elbow	Dry	Scrape	Female	Right
27 HV8-TwRSc	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCSw	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCSc	back	Sebaceous	Scrape	Male	Center
30 HV9-UmCSw	umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Sex

Type: String that is 8 characters or less

Upper Bound: Optional Lower Bound: Optional

Status: The Metadata 'Sex' has been added

Enumerated Values: Optional

Values: Female, Male, <New>

Add Value Delete Value Clear Values Add Replace Delete Clear

Each library in the project is now assigned as "Male" or "Female" for the "Sex" metadata category

Now we will create another new metadata category and assign a value to each library. For this example, we will create a new metadata category of "Age", and we will assign a variety of ages to the collection of libraries.

D. Create 64 bit Integer Metadata

Because there is high variability in the ages of the patients, we will not create **Enumerated Values**. Instead, the values will be entered manually for each library. This metadata category is in the format of a **64 bit Integer** (a whole number/number with no fractional part).

Click in the white space of the **Defined Metadata** pane to clear any selections

The screenshot shows the Metadata software interface. At the top, there are radio buttons for "All Libraries" (selected) and "Selected Libraries", and a label "30 Total Libraries". Below this are "Export", "Apply", and "Done" buttons. The main area is divided into two panes: "Defined Metadata" and "Assigned Metadata".

Defined Metadata:

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 30	Sex

Below this table are "Add ->" and "<- Remove" buttons. A red circle highlights the white space below the table with the text "click here".

Assigned Metadata:

Library Name	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
12 HV3-1-RaRSw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw	umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw	umbilicus	Moist	Swab	Male	Center
20 HV7-BaCSc	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRSc	buttock	Dry	Scrape	Female	Right
22 HV7-PhRSc	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCSw	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRSc	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCSc	back	Sebaceous	Scrape	Female	Center
26 HV8-EIRSc	elbow	Dry	Scrape	Female	Right
27 HV8-TwRSc	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCSw	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCSc	back	Sebaceous	Scrape	Male	Center
30 HV9-UmCSw	umbilicus	Moist	Swab	Male	Center

Below the assigned metadata table are "Copy" and "Paste" buttons. A note reads: "Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells."

Metadata Definition:

Name: Enumerated Values: Optional

Type: Add Value

Upper Bound: Optional

Lower Bound: Optional

Status:

Values:

Buttons: Add, Replace, Delete, Clear, Add Value, Delete Value, Clear Values.

Type "Age" into Name field
In Type drop-down, choose **64 bit Integer**

Click **Add** button to the right of the **Metadata Definition** section to add “Age” to the **Defined Metadata** list

The screenshot shows the Metadata software interface. On the left, the 'Defined Metadata' list contains five items: Anatomy, Microenvironment, SampleType, Symmetry, and Sex. In the center, the 'Assigned Metadata' table lists 30 libraries with their respective anatomical sites, microenvironments, sample types, and sexes. At the bottom, the 'Metadata Definition' section is active. The 'Name' field is set to 'Age', and the 'Type' is set to '64 bit Integer'. A red arrow points to the 'Add' button on the right side of the 'Metadata Definition' section.

This category is now defined and can be edited so that it's associated with each library

The screenshot shows the Metadata software interface after the 'Age' metadata item has been added. In the 'Defined Metadata' list, the 'Age' item is now listed as item 6 and is highlighted with a red circle. The 'Assigned Metadata' table remains the same. In the 'Metadata Definition' section, the 'Name' field is still 'Age', and the 'Type' is '64 bit Integer'. The status at the bottom indicates: 'The Metadata 'Age' has been added'. A red arrow points to the 'Add' button in the 'Metadata Definition' section.

Select “Age” in the **Defined Metadata** pane
Click **Add** button between panes

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Symmetry
5 30	Sex
6 0	Age

Add -> <- Remove

Assigned Metadata

Library Name	Anatomy	Microenvironment	SampleType	Sex	Symmetry
12 HV3-1-RaRsw	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw	umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw	umbilicus	Moist	Swab	Male	Center
20 HV7-BaCSc	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRSc	buttock	Dry	Scrape	Female	Right
22 HV7-PhRSc	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCsw	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRSc	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCSc	back	Sebaceous	Scrape	Female	Center
26 HV8-EiRSc	elbow	Dry	Scrape	Female	Right
27 HV8-TwRSc	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCsw	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCSc	back	Sebaceous	Scrape	Male	Center
30 HV9-UmCsw	umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

An "Age" column now appears alphabetically in the **Assigned Metadata** pane

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 0	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironment	SampleType	Sex	Symmetry
1 HV1-1-BaCSc		back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw		umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc		back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw		umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AiRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

For this tutorial, we will assume that libraries beginning with HV1 = 37 years old, HV10 = 36 yrs, HV2 = 48 yrs, HV3 = 63 yrs, HV4 = 74 yrs, HV5 = 34 yrs, HV6 = 52 yrs, HV7 = 54 yrs, HV8 = 41 yrs and HV9 = 75 yrs.

Because the ages are highly variable, it would probably be a waste of time to create **Enumerated Values**, so we will manually enter the ages and then use the **Copy/Paste** functions to fill the values down.

Enter "37" into the first cell in the "Age" column
Click **Copy**

The screenshot shows the Metadata application interface. At the top, there are buttons for 'Export', 'Apply', and 'Done'. Below this, there are two main sections: 'Defined Metadata' and 'Assigned Metadata'.

Defined Metadata:

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 0	Age

Assigned Metadata:

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCSw		umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc		back	Sebaceous	Scrape	Male	Center
4 HV10-UmCSw		umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRSw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCSw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRSw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw		umbilicus	Moist	Swab	Male	Center

Below the 'Assigned Metadata' table, there is a 'Copy' button with a red arrow pointing to it. To the right of the 'Copy' button, there is a note: "Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells."

Metadata Definition:

Name: Age
Type: 64 bit Integer
Upper Bound: [] Optional
Lower Bound: [] Optional
Status: The Metadata 'Age' has been added

Enumerated Values: Optional
Values: <New>
Buttons: Add Value, Add, Replace, Delete, Clear Values, Add, Replace, Delete, Clear

Click the other HV1 "Age" cell (in row 2)
Click **Paste**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 1	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCSw		umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc		back	Sebaceous	Scrape	Male	Center
4 HV10-UmCSw		umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRSw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCSw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRSw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

The value "37" now corresponds to all libraries whose **Library Name** begins with HV1

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 2	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCSw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc		back	Sebaceous	Scrape	Male	Center
4 HV10-UmCSw		umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRSw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCSw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRSw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Click on the third cell in the column
 Enter "36" into the third cell in the "Age" column
 Click **Copy**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 2	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw		umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

Click the other HV10 "Age" cell (in row 4)

Click Paste

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 3	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	36	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

The value "36" now corresponds to all libraries whose **Library Name** begins with HV10

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 4	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	36	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc		antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

Click on the fifth cell in the column
 Enter "48" into the fifth cell in the "Age" column
 Click **Copy**

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 4	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	36	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc	48	antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCSc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Values

<New>

Add Value Delete Value Clear Values

Add Replace Delete Clear

Shift-click the other HV2 "Age" cells (in rows 6-10)

Click Paste

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 5	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	36	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc	48	antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw		antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc		alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc		back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCsc		gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw		umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Add Value

Values

<New>

Delete Value

Clear Values

Add

Replace

Delete

Clear

The value “48” now corresponds to all libraries whose **Library Name** begins with HV2

Metadata

All Libraries Selected Libraries 30 Total Libraries

Export Apply Done

Defined Metadata

Used	Name
1 30	Anatomy
2 30	Microenvironment
3 30	SampleType
4 30	Sex
5 30	Symmetry
6 10	Age

Add -> <- Remove

Assigned Metadata

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
1 HV1-1-BaCSc	37	back	Sebaceous	Scrape	Female	Center
2 HV1-1-UmCsw	37	umbilicus	Moist	Swab	Female	Center
3 HV10-BaCSc	36	back	Sebaceous	Scrape	Male	Center
4 HV10-UmCsw	36	umbilicus	Moist	Swab	Male	Center
5 HV2-1-AcRSc	48	antecubital fossa	Moist	Scrape	Male	Right
6 HV2-1-AcRsw	48	antecubital fossa	Moist	Swab	Male	Right
7 HV2-1-AIRSc	48	alar crease	Sebaceous	Scrape	Male	Right
8 HV2-1-BaCSc	48	back	Sebaceous	Scrape	Male	Center
9 HV2-1-GcCsc	48	gluteal crease	Moist	Scrape	Male	Center
10 HV2-1-UmCsw	48	umbilicus	Moist	Swab	Male	Center
11 HV3-1-BaCSc		back	Sebaceous	Scrape	Female	Center
12 HV3-1-RaRsw		retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCsw		umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc		back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCsw		umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc		back	Sebaceous	Scrape	Female	Center
17 HV5-UmCsw		umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc		back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCsw		umbilicus	Moist	Swab	Male	Center

Copy Paste

Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition

Name: Age

Type: 64 bit Integer

Upper Bound: Optional

Lower Bound: Optional

Status: The Metadata 'Age' has been added

Enumerated Values: Optional

Add Value

Values

<New>

Delete Value

Clear Values

Add

Replace

Delete

Clear

Repeat the same process until the “Age” column is completely filled in...

(Reminder: For this tutorial, we will assume that libraries beginning with HV1 = 37 years old, HV10 = 36 yrs, HV2 = 48 yrs, HV3 = 63 yrs, HV4 = 74 yrs, HV5 = 34 yrs, HV6 = 52 yrs, HV7 = 54 yrs, HV8 = 41 yrs and HV9 = 75 yrs.)

When finished filling in the ages for each **Library Name**, click **Apply** to keep the new metadata

The screenshot shows the Metadata application interface. At the top, there are radio buttons for "All Libraries" (selected) and "Selected Libraries", and a label "30 Total Libraries". On the right, there are "Export" and "Apply" buttons, with a red arrow pointing to the "Apply" button.

The main area is divided into two sections: "Defined Metadata" and "Assigned Metadata".

Defined Metadata:

Used	Name	
1	30	Anatomy
2	30	Microenvironment
3	30	SampleType
4	30	Sex
5	30	Symmetry
6	30	Age

Buttons: "Add ->" and "<- Remove"

Assigned Metadata:

Library Name	Age	Anatomy	Microenvironmen	SampleType	Sex	Symmetry
12 HV3-1-RaRsw	63	retroauricular c...	Sebaceous	Swab	Female	Right
13 HV3-1-UmCSw	63	umbilicus	Moist	Swab	Female	Center
14 HV4-1-BaCSc	74	back	Sebaceous	Scrape	Male	Center
15 HV4-1-UmCSw	74	umbilicus	Moist	Swab	Male	Center
16 HV5-BaCSc	34	back	Sebaceous	Scrape	Female	Center
17 HV5-UmCSw	34	umbilicus	Moist	Swab	Female	Center
18 HV6-1-BaCSc	52	back	Sebaceous	Scrape	Male	Center
19 HV6-1-UmCSw	52	umbilicus	Moist	Swab	Male	Center
20 HV7-BaCSc	54	back	Sebaceous	Scrape	Female	Center
21 HV7-BtRSc	54	buttock	Dry	Scrape	Female	Right
22 HV7-PhRSc	54	plantar heel	Moist	Scrape	Female	Right
23 HV7-UmCSw	54	umbilicus	Moist	Swab	Female	Center
24 HV8-AcRSc	41	antecubital fossa	Moist	Scrape	Female	Right
25 HV8-BaCSc	41	back	Sebaceous	Scrape	Female	Center
26 HV8-EIRSc	41	elbow	Dry	Scrape	Female	Right
27 HV8-TwRSc	41	toe web space	Moist	Scrape	Female	Right
28 HV8-UmCSw	41	umbilicus	Moist	Swab	Female	Center
29 HV9-BaCSc	75	back	Sebaceous	Scrape	Male	Center
30 HV9-UmCSw	75	umbilicus	Moist	Swab	Male	Center

Buttons: "Copy" and "Paste"

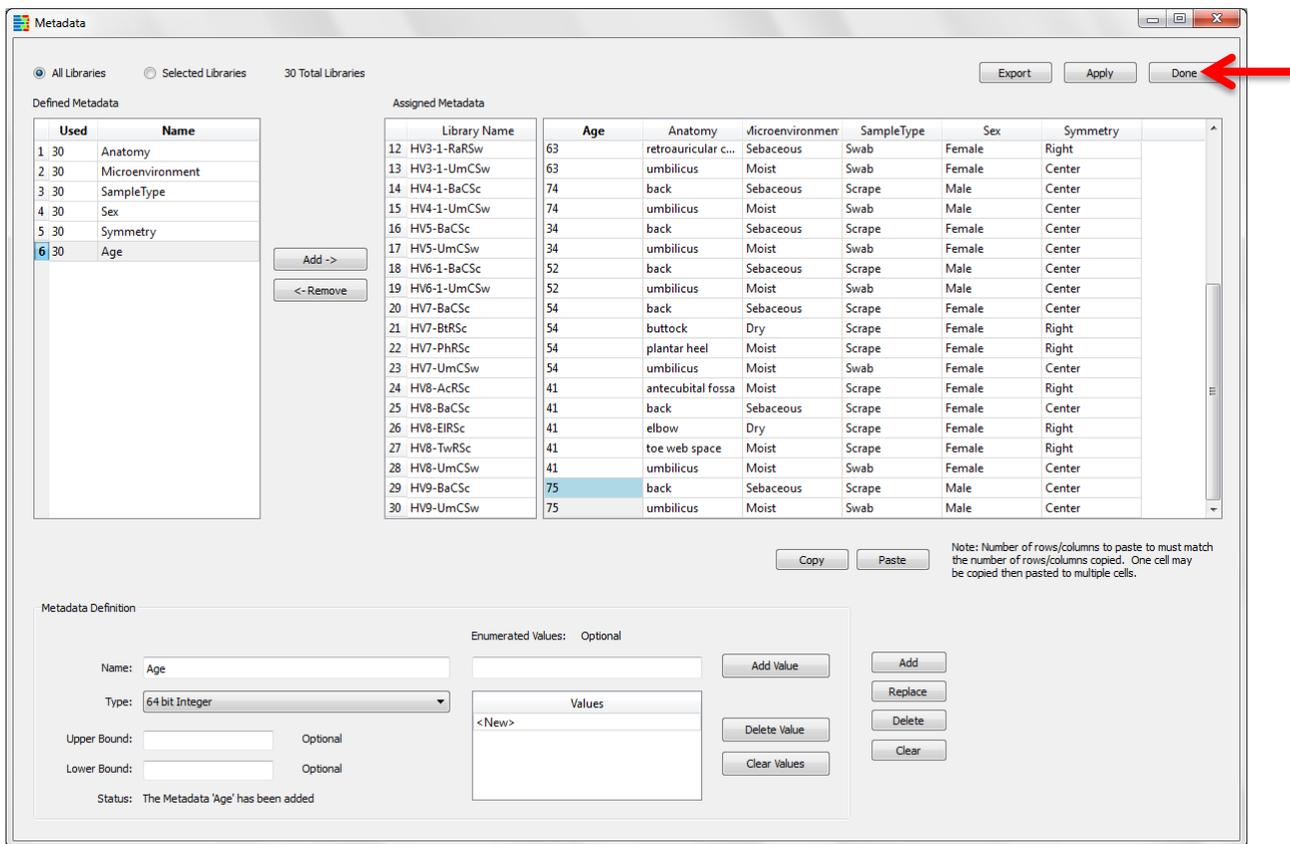
Note: Number of rows/columns to paste to must match the number of rows/columns copied. One cell may be copied then pasted to multiple cells.

Metadata Definition:

Name: Age
 Type: 64 bit Integer
 Upper Bound: [] Optional
 Lower Bound: [] Optional
 Status: The Metadata 'Age' has been added

Enumerated Values: Optional
 Values: <New>
 Buttons: Add Value, Add, Replace, Delete, Clear Values, Add, Replace, Delete, Clear

Each library in the project is now assigned a number for the "Age" metadata category
 Click **Done** to return to the "Workspace 1" window



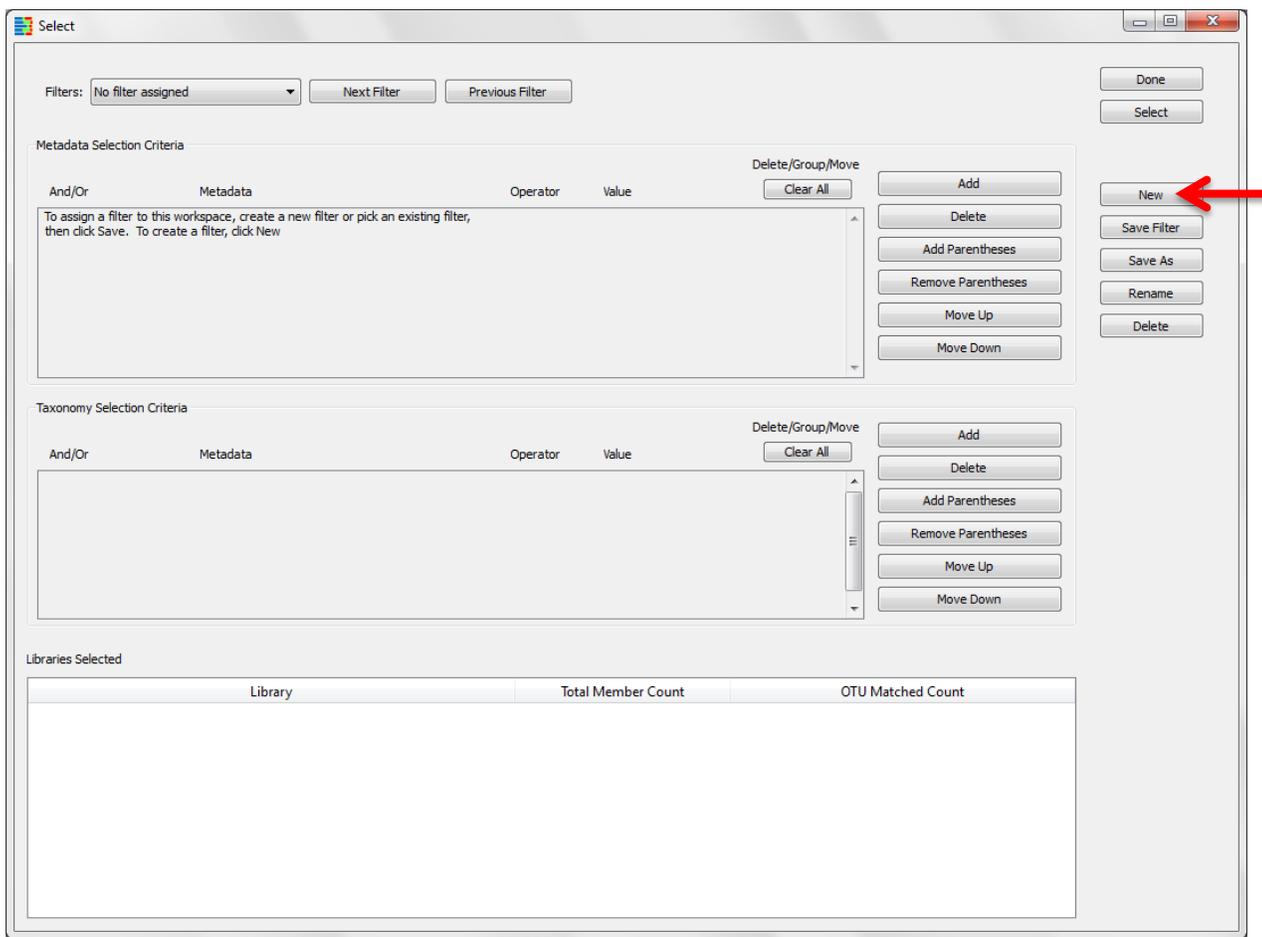
II. Create a Filter with the New Metadata Categories

The newly created metadata categories, “Sex” and “Age”, function exactly as the previously imported (see the basic tutorial) metadata. To demonstrate this, we will create a filter to **Select Libraries**.

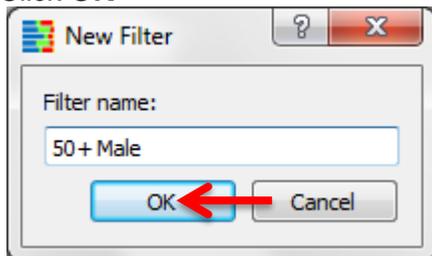
A. Create a Filter

Data → Select Libraries

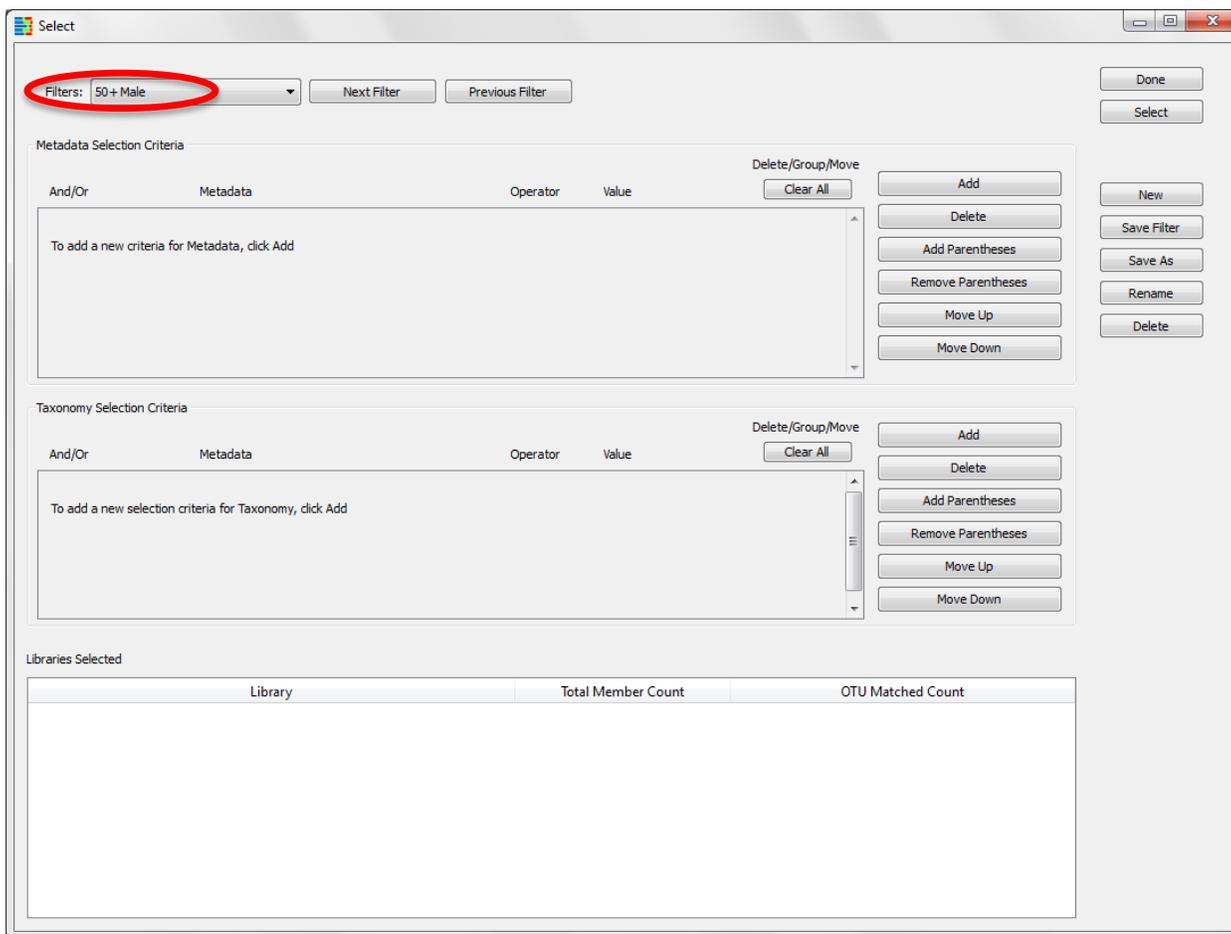
New pop-up window appears for creation of filters
Click **New** on far right side of window



Enter desired filter name in the pop-up window
Click **OK**



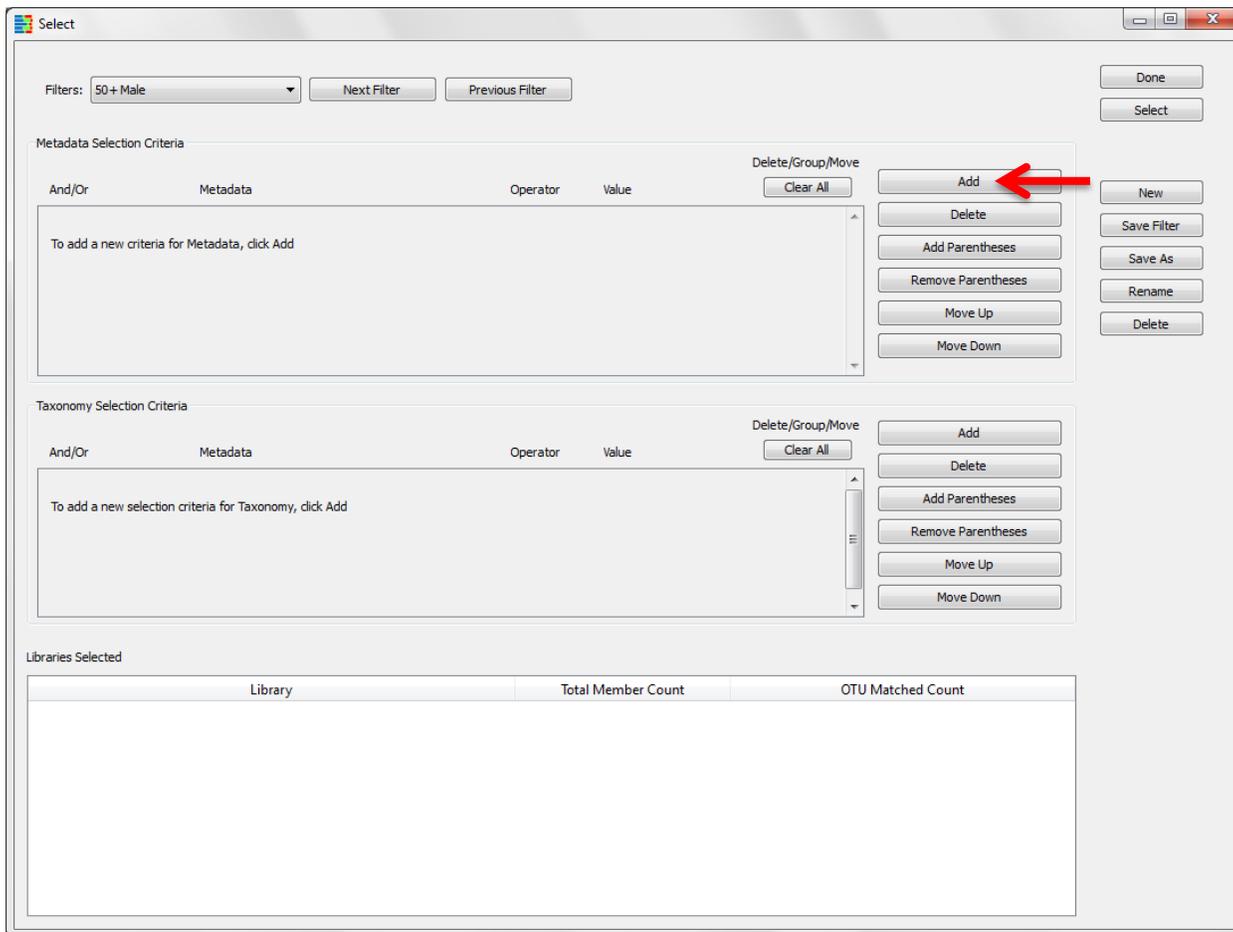
The filter name will appear in upper left corner of window



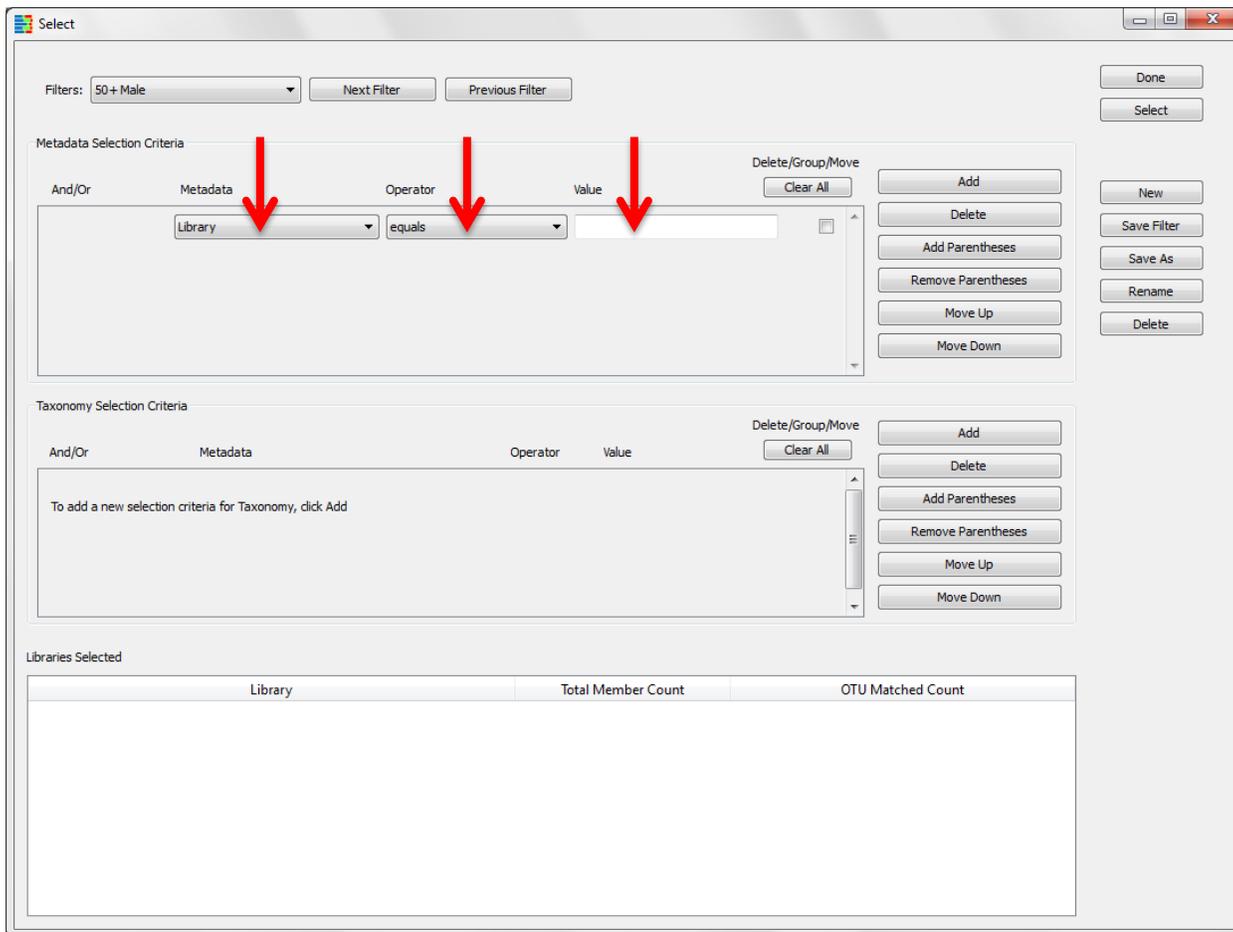
Now that we have created a new filter, we need to set up the parameters to filter by. We will select for all libraries that were sampled from a “Male” older than “50”.

B. Set Up the Filter Parameters

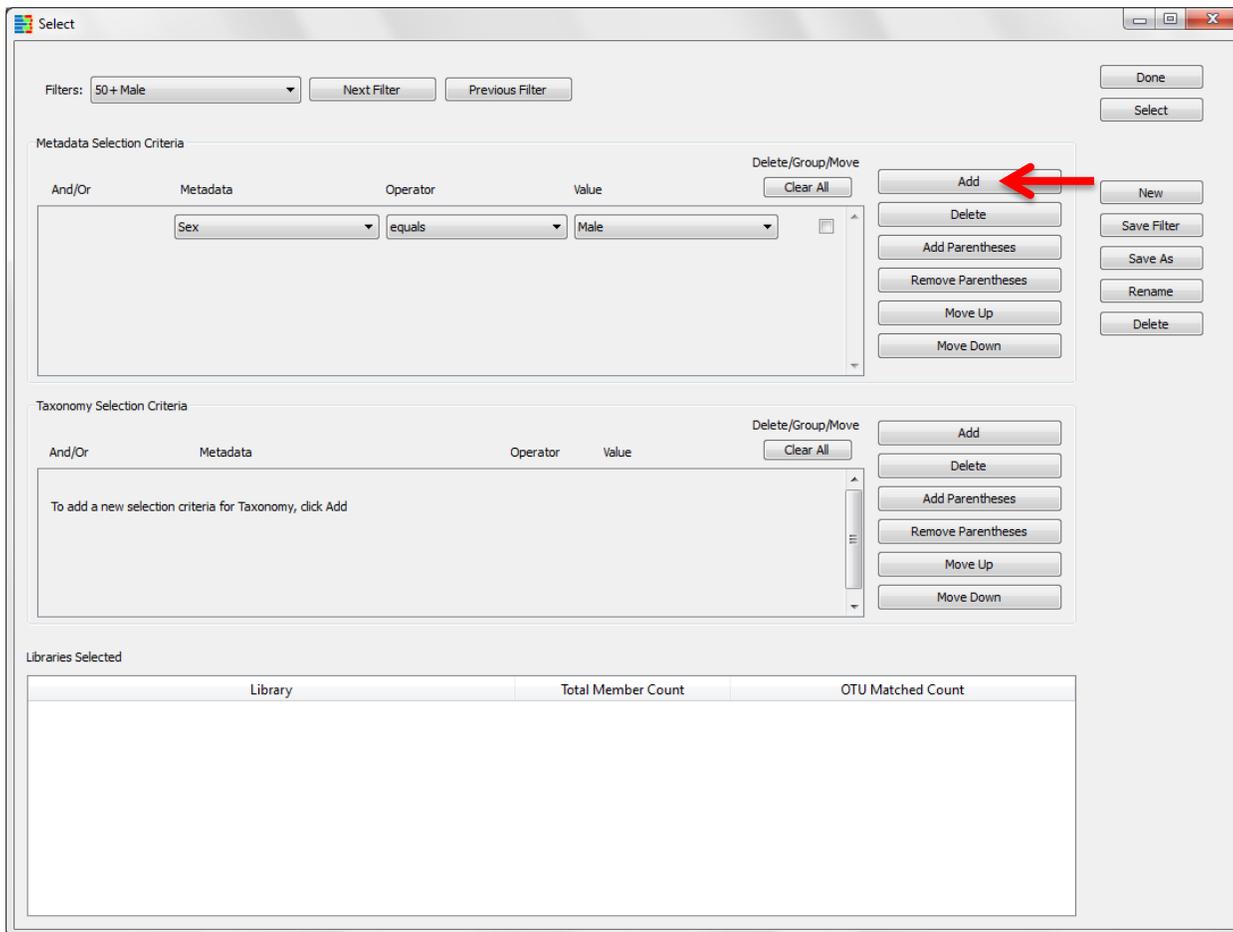
Click **Add** in the **Metadata Criteria** pane



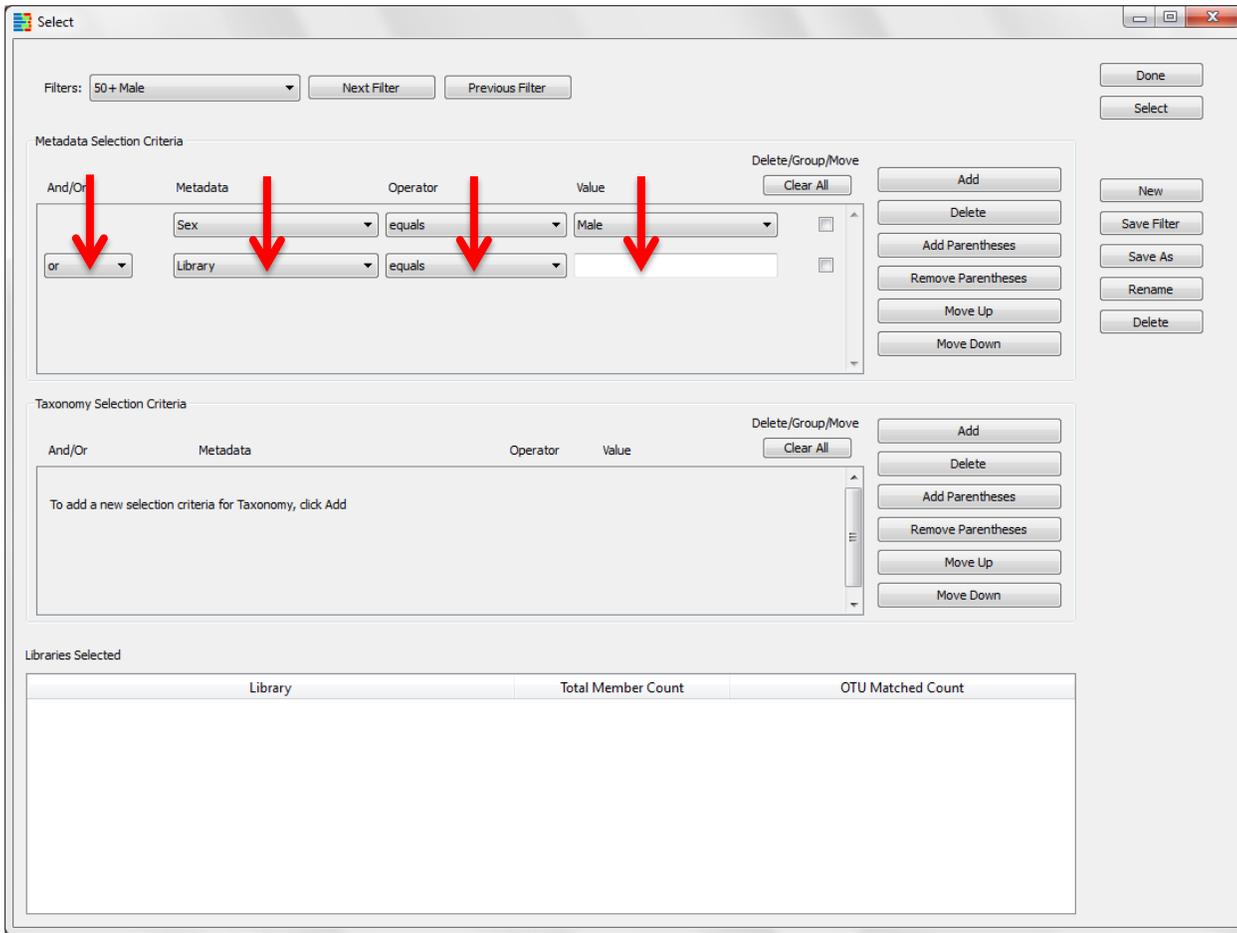
Use the first pull-down menu to select “Sex” (**Metadata** to filter by)
Use the second pull-down menu to select “equals” (filter **Operator**)
Enter “Male” into **Value**



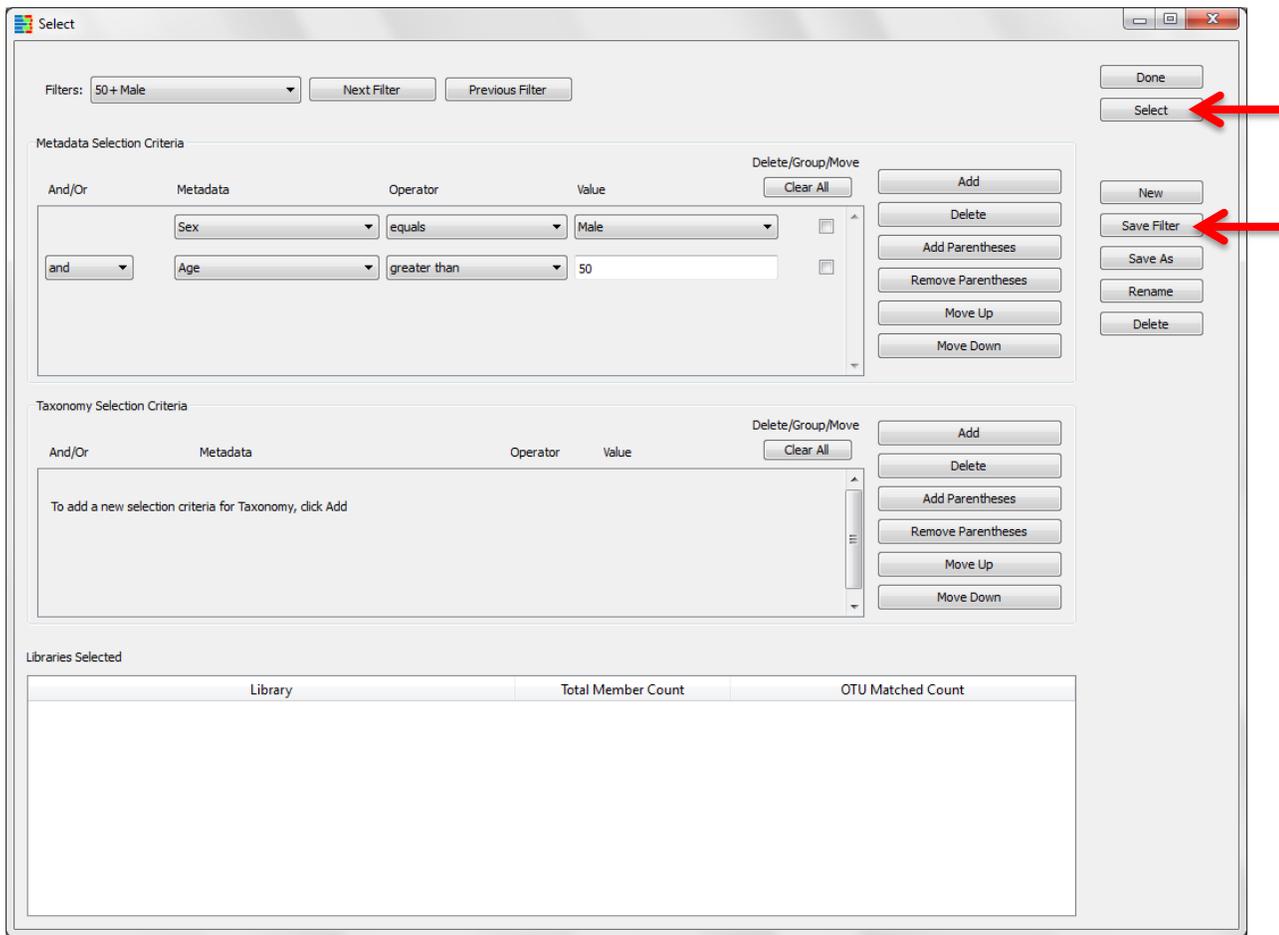
Click **Add** in the **Metadata Criteria** pane



Use the first pull-down menu to select “And”
 Use the second pull-down menu to select “Age” (**Metadata** to filter by)
 Use the third pull-down menu to select “greater than” (filter **Operator**)
 Enter “50” into **Value**



To apply filter, click **Select** in upper right corner of window
Click **Save Filter** on far right side of window to keep the filter



We now see that there are 6 libraries in our project which were sampled from males over the age of 50, and if desired, we can continue running mini-experiments on this subset of the libraries (as demonstrated in the basic tutorial).

Select

Filters: 50+ Male Next Filter Previous Filter

Done
Select

Metadata Selection Criteria

And/Or	Metadata	Operator	Value	Delete/Group/Move
	Sex	equals	Male	<input type="checkbox"/>
and	Age	greater than	50	<input type="checkbox"/>

Clear All

Add
Delete
Add Parentheses
Remove Parentheses
Move Up
Move Down

New
Save Filter
Save As
Rename
Delete

Taxonomy Selection Criteria

And/Or	Metadata	Operator	Value	Delete/Group/Move
To add a new selection criteria for Taxonomy, click Add				

Clear All

Add
Delete
Add Parentheses
Remove Parentheses
Move Up
Move Down

6 Libraries Selected 30 Total Libraries

Library	Total Member Count	OTU Matched Count
HV4-1-BaCSc	296	
HV4-1-UmCSw	304	
HV6-1-BaCSc	334	
HV6-1-UmCSw	322	
HV9-BaCSc	263	
HV9-UmCSw	336	
Totals	1855	0

Click **Done** to return to the "Workspace 1" window

Select

Filters: 50+ Male Next Filter Previous Filter

Done 

Select

Metadata Selection Criteria

And/Or	Metadata	Operator	Value	Delete/Group/Move
	Sex	equals	Male	<input type="checkbox"/>
and	Age	greater than	50	<input type="checkbox"/>

Clear All Add Delete Add Parentheses Remove Parentheses Move Up Move Down

New Save Filter Save As Rename Delete

Taxonomy Selection Criteria

And/Or	Metadata	Operator	Value	Delete/Group/Move
To add a new selection criteria for Taxonomy, click Add				

Clear All Add Delete Add Parentheses Remove Parentheses Move Up Move Down

6 Libraries Selected 30 Total Libraries

Library	Total Member Count	OTU Matched Count
HV4-1-BaCSc	296	
HV4-1-UmCSw	304	
HV6-1-BaCSc	334	
HV6-1-UmCSw	322	
HV9-BaCSc	263	
HV9-UmCSw	336	
Totals	1855	0

Remember to always click **Save** to keep the changes to the project!

Explicit: C:/Users/kirstin/Documents/Explicit_Data/HSM_Grice_TUTORIAL/Tutorial_HSM_Explicit_Projectotu

File Edit Data Group Tools View Help

Project: Tutorial_HSM
 Workspace: Workspace 1
 Current Filter: 50+ Male

Hierarchy Counts OTU Start: 1 Hierarchy Level: Show Libraries All Libraries
 OTU % of Library OTU Width: 2 3 Show Sorted Libs Selected Libraries
 Both % of Total OTU Show Last Show Lib Groups 30 Libs

Hierarchy	Total	HV1-1-BaCSc	HV1-1-UmCSw	HV10-BaCSc	HV10-UmCSw	HV2-1-AcrSc	HV2-1-AcrSw	HV2-1-AIRSc	HV2-1-B
root	100%	100%	100%	100%	100%	100%	100%	100%	100%
Bacteria	100%	100%	100%	100%	100%	100%	100%	100%	100%
Acidobacteria	0.02%	0%	0%	0%	0%	0%	0%	0%	0%
Actinobacteria	51.50%	96.72%	7.92%	81.31%	96.81%	10.53%	12.21%	83.88%	
Bacteroidetes	10.88%	0%	15.51%	1.38%	0%	36.18%	28.38%	1.32%	
Candidate-division-TM7	0.02%	0%	0%	0%	0%	0%	0%	0%	
Chloroflexi	0.03%	0%	0%	0%	0%	0%	0%	0%	
Cyanobacteria	0.30%	0%	0%	0%	0%	1.32%	0%	0.33%	
Firmicutes	15.28%	3.28%	68.98%	2.42%	3.19%	2.30%	15.84%	9.21%	
Fusobacteria	0.35%	0%	4.62%	0%	0%	0%	0%	0%	
Gemmatimonadetes	0.03%	0%	0%	0%	0%	0%	0%	0%	
Nitrospirae	0.05%	0%	0%	0%	0%	0%	0%	0%	
Planctomycetes	0.07%	0%	0%	0%	0%	0%	0%	0%	
Proteobacteria	21.41%	0%	1.98%	14.88%	0%	49.67%	43.56%	5.26%	
Synergistetes	0.03%	0%	0.99%	0%	0%	0%	0%	0%	
Verrucomicrobia	0.02%	0%	0%	0%	0%	0%	0%	0%	

OTU Rule Set: ...	Total	HV1-1-BaCSc	HV1-1-UmCSw	HV10-BaCSc	HV10-UmCSw	HV2-1-AcrSc	HV2-1-AcrSw	HV2-1-AIRSc	HV2-1-B
root	100%	100%	100%	100%	100%	100%	100%	100%	100%
1 Bacteria/Acidobacteria/.../Candidatus-Chloraci	0.02%	0%	0%	0%	0%	0%	0%	0%	0%
2 Bacteria/Actinobacteria/.../Acidimicrobiales	0.01%	0%	0%	0%	0%	0%	0%	0%	0%
3 Bacteria/Actinobacteria/.../Acidimicrobiaceae	0.03%	0%	0%	0%	0%	0%	0%	0%	0%
4 Bacteria/Actinobacteria/Actinobacteria	0.03%	0%	0%	0%	0%	0%	0%	0.33%	
5 Bacteria/Actinobacteria/.../Actinomycetaceae	0.05%	0%	0%	0%	0%	0%	0%	0%	0%
6 Bacteria/Actinobacteria/.../Actinomycetes	0.28%	0%	1.32%	0%	0%	0%	0.33%	0.33%	
7 Bacteria/Actinobacteria/.../Mobiluncus	0.02%	0%	0%	0%	0%	0%	0%	0%	0%
8 Bacteria/Actinobacteria/.../Varibaculum	0.02%	0%	0.33%	0%	0%	0%	0%	0%	0%
9 Bacteria/Actinobacteria/.../Corynebacteriaceae	0.48%	0%	0.99%	0%	0%	0%	0%	0%	0%
10 Bacteria/Actinobacteria/.../Corynebacterium	18.25%	0.98%	5.28%	0%	96.81%	2.63%	2.97%	8.55%	
11 Bacteria/Actinobacteria/.../Dietzia	0.04%	0%	0%	0%	0%	0%	0%	0%	0%
12 Bacteria/Actinobacteria/.../Mycobacterium	0.01%	0%	0%	0%	0%	0%	0%	0%	0%
13 Bacteria/Actinobacteria/.../Nocardiaceae	0.04%	0%	0%	0%	0%	0%	0%	0%	0%
14 Bacteria/Actinobacteria/.../Gordonia	0.02%	0%	0%	0%	0%	0%	0%	0%	0%
15 Bacteria/Actinobacteria/.../Rhodococcus	0.11%	0%	0%	0%	0%	0%	0%	0.66%	
16 Bacteria/Actinobacteria/.../Geodermatophilaceae	0.01%	0%	0%	0%	0%	0%	0%	0%	0%

Ready