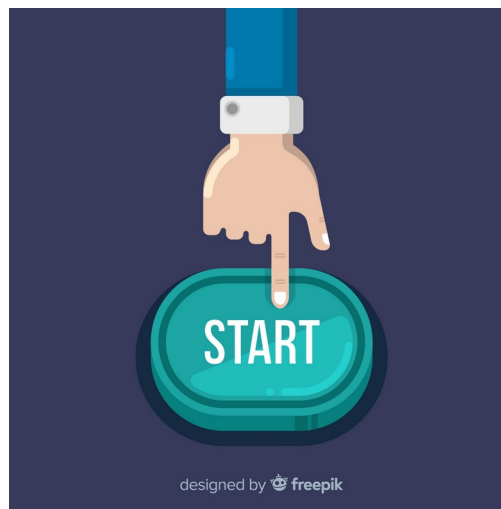




Chapter 1

Project Creation



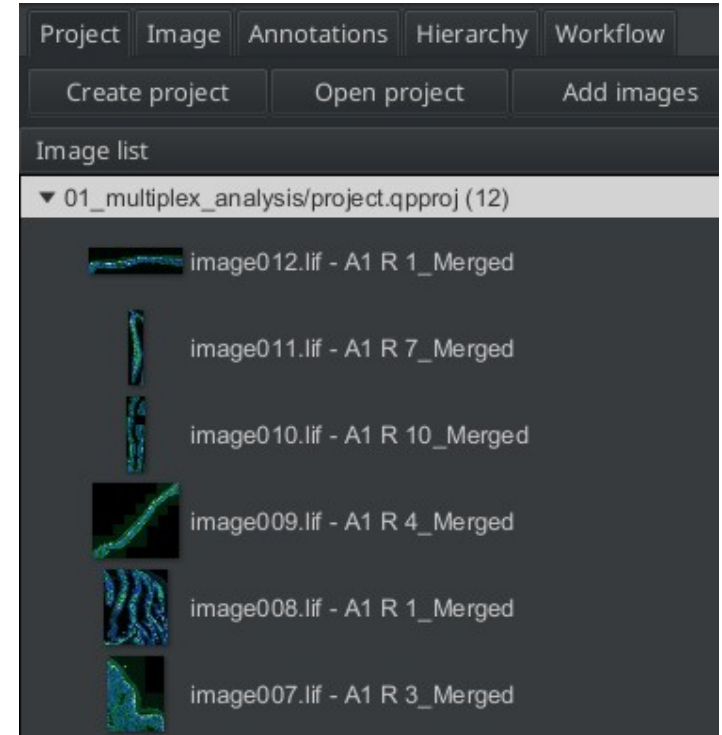
Designed by Freepik

What's in a project?

A project

- Bundles the the information belonging together
 - (Paths of the) input images
 - Annotations
 - Detections
 - Classifier
 - Scripts
 - Measurements

In QuPath, always use a project
(except if you just quickly want to watch an image)!



Import Images into the Project

Decisions during the import

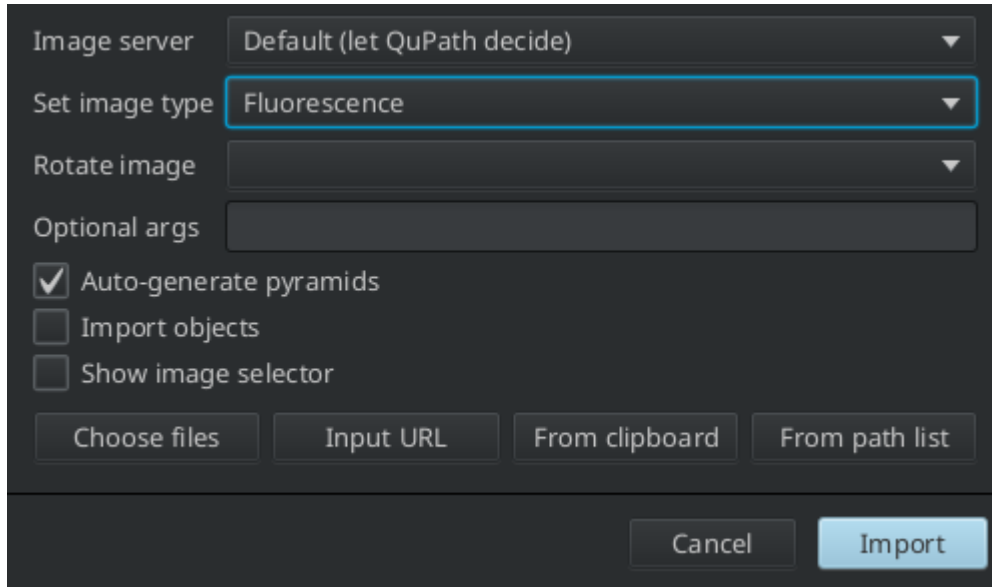


Image server: Default (let QuPath decide)

Set image type: Fluorescence

Rotate image: [Dropdown]

Optional args: [Text Field]

Auto-generate pyramids

Import objects

Show image selector

Buttons: Choose files, Input URL, From clipboard, From path list, Cancel, Import

Import objects

- Import annotations
 - For example from FIJI/ImageJ

Image Server

- Software used to open images
 - JSON server
 - ImageJ
 - OpenSlide
 - Bioformats

Set image type

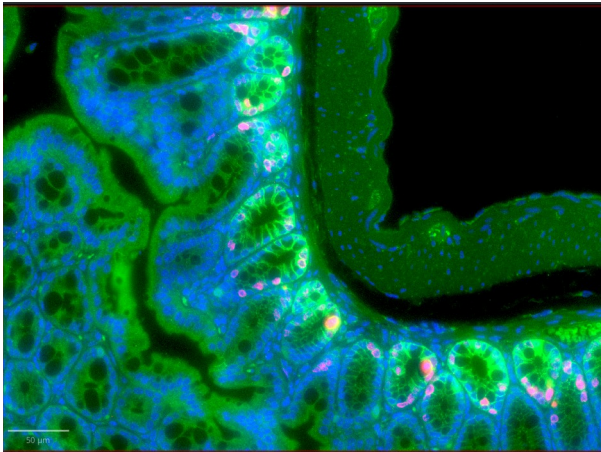
- Fluorescence
- Brightfield (H-Dab, H&E)
- Other

Auto-generate pyramids

Fluorescence vs Brightfield

Fluorescence

- Independent channels
- Dark background



Brightfield

- RGB images
- Bright background

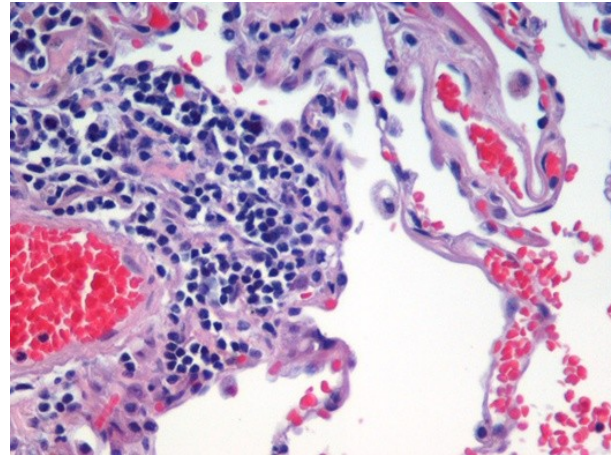


Image pyramid

Problem

- The image is big
- It does not fit entirely into the memory

Solution

- Pre-calculate pyramid of smaller resolutions
- Small zoom
 - Show large field with small resolution
- When zooming in
 - Show a smaller part of the image with a higher resolution



Image pyramid

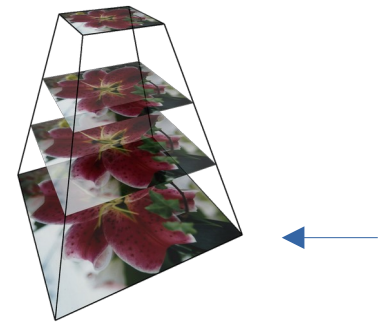
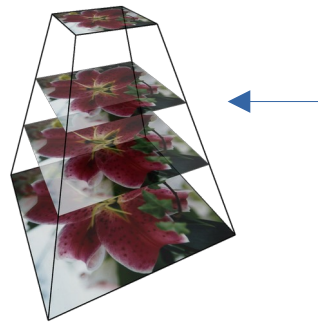
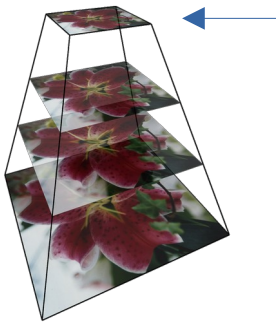
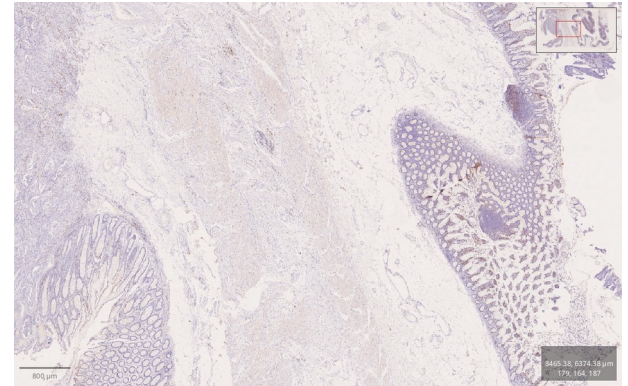
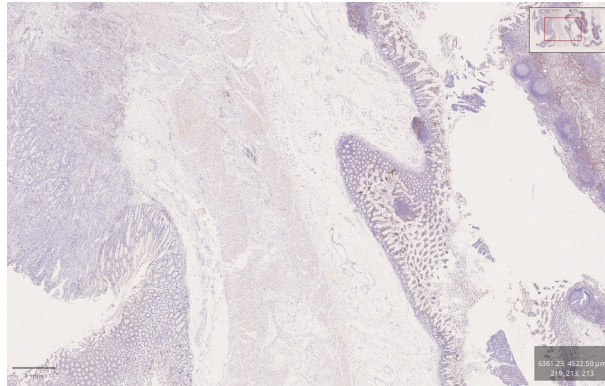
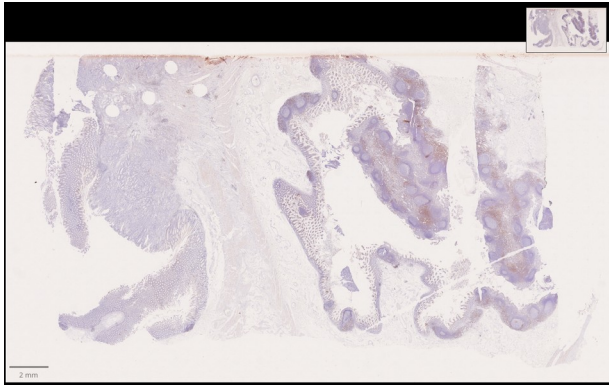
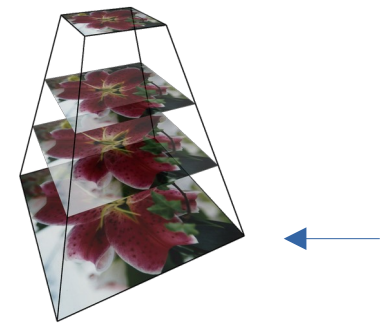
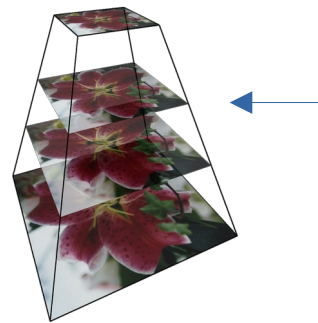
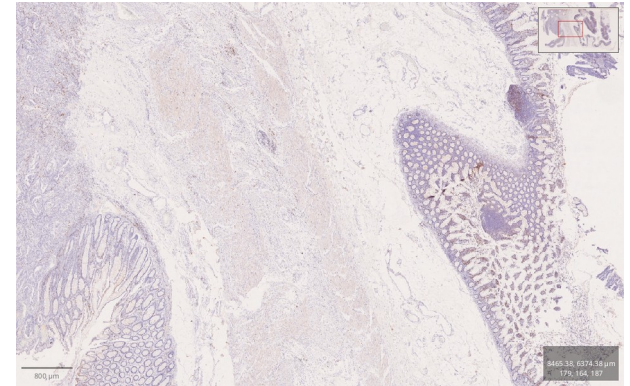
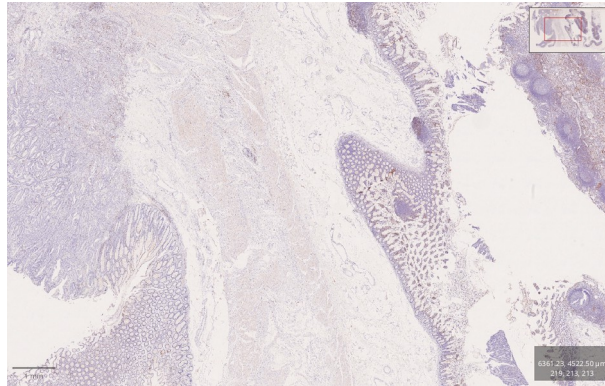
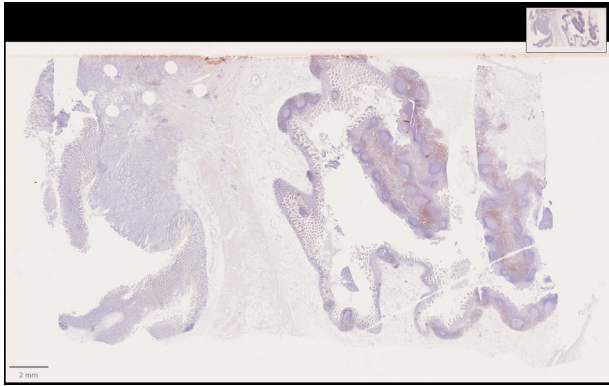


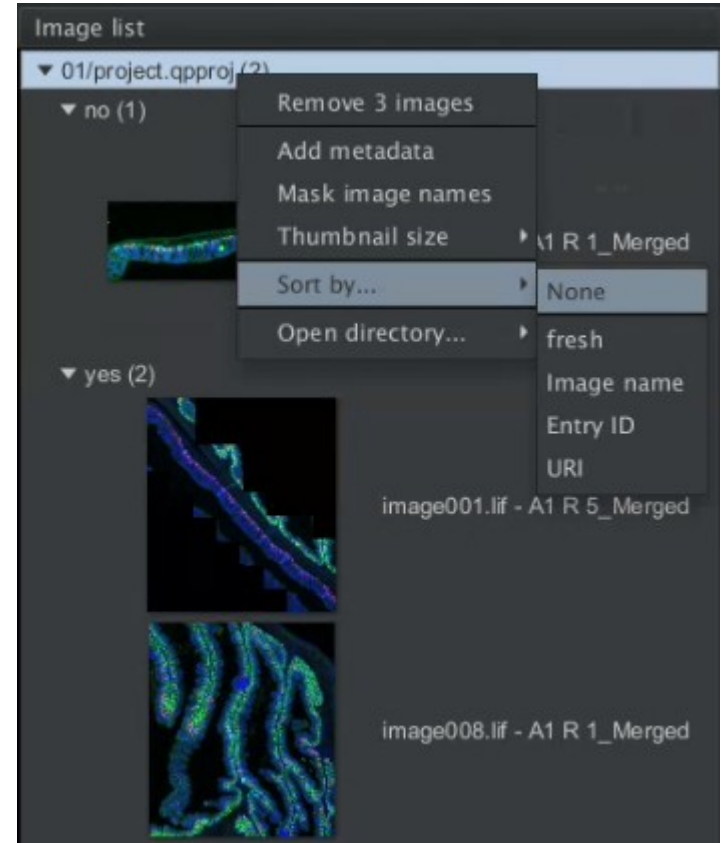
Image pyramid



The project view

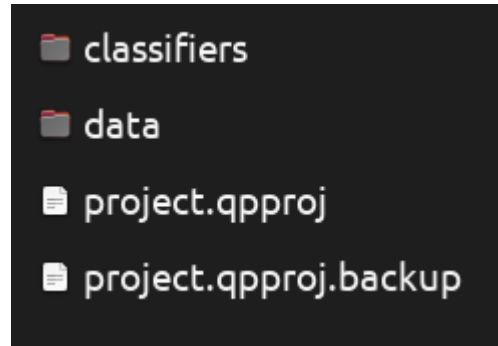
Project view

- Name
- List of images
- Right-click on name
 - Change thumbnail size
 - Sort images by metadata field
 - Add metadata as key-value pairs

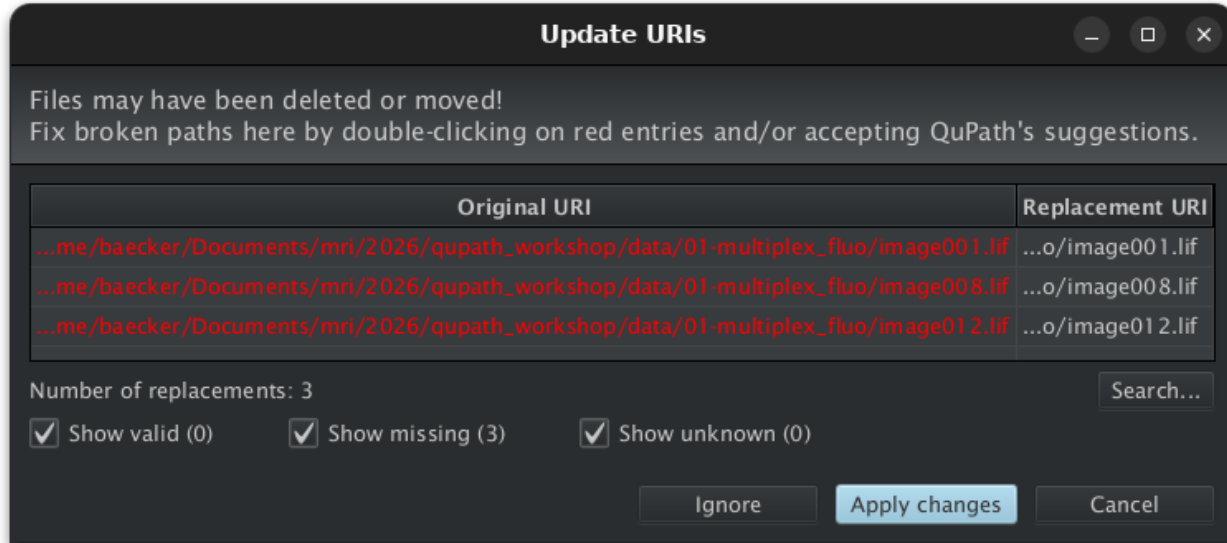


The Project folder

- Project Folder
 - contains the information of the project
 - **it does usually not contain the input images!**
- Project File (.qproj)
 - contains the image paths and image metadata
 - open the project file to open an existing project
- Backup Project File
 - contains the version of the project file, before the last change
 - if something goes wrong, you can replace the project file it



Sharing Projects



- Zip the project folder and send it to someone
- The image must be shared independently
- On the new machine the paths are different
 - QuPath does not find the images
 - You can point QuPath to the new image folder