## **Step-by-Step Manual**

Follow these steps to use the pipeline to generate matching slices for all patients or a specific subset:

- 1. Prepare Image Data: Place .tif image files in the designated folder (e.g., processed\_images). Ensure that each patient has images for all three stains (H&E, Melanin, Sox10).
- 2. Choose Full or Subset Processing:
  - For All Patients: Place all images in the same processed\_images directory.
  - For a Subset of Patients: Separate patient image files into their own folders within processed\_images (e.g., processed\_images/patient1, processed\_images/patient2).
- 3. Run the Pipeline:
  - Run match\_pipeline.py. A GUI will prompt you to select the directory containing the images.
  - Open NoahsMatching.ipynb in Jupyter Notebook and execute cells in sequence.
- 4. Process and Review Matches:
  - Upon execution, the pipeline will preprocess, extract contours, and match images, saving results in the matches folder. Images will be organized by patient, with matched slices grouped in subfolders.