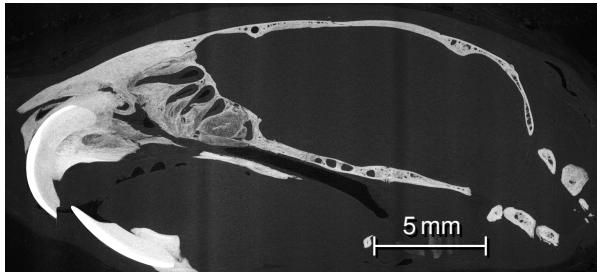


Self-test questions for the Lecture on X-ray microtomography

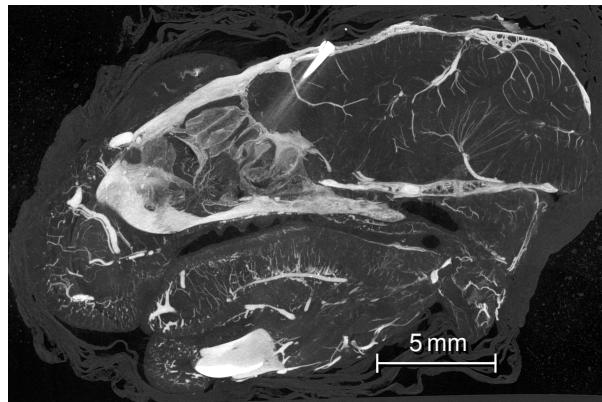
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1. Fully describe the path of the X-rays once they are emitted from the source until they are converted to an image. Can you describe all interactions with the sample and what needs to happen that we get a projection image on disk?
2. How does one change the voxel size in a desktop micro-CT scanner?
3. Why can't you see the blood vessels in Figure 1a, but see them in Figure 1b? Hint: It's not because they have been scanned on different machines or at a slightly different voxel sizes...



(a) *Mouse 1265*, which you might remember from the visualization on slide 4. Scanned on a SkyScan1172 at an isotropic voxel size of 7.96 μm . No blood vessels are visible, neither in the brain nor in the mandibles.



(b) *Mouse 5158*. Scanned on a SkyScan1272 at an isotropic voxel size of 10.5 μm . The blood vessels are nicely visible. The bright, elongated structure at the top of the skull is related to the experiment that was performed with these mice.

Figure 1: MIPs from a region of approximately 500 μm around the sagittal centerline of two different mouse heads.