



AccuCT™

Release Notes Version 1.0

1. Summary

This document provides notes on AccuCT 1.0 that are not covered in the user manual or other documentation. This release serves as the initial release of this advanced μ CT analysis software for use with data from Quantum FX and Quantum GX instruments. The software is fully supported on 64-bit Windows 7 SP1, 8.1 and 10.

2. System Requirements

Windows 10 is recommended, and Windows 7 SP1 and Windows 8.1 are supported. Additional minimum requirements include:

- 16 GB RAM (more for larger data)
- OpenGL 4.0 support required. CAD- or gaming-quality NVidia card highly recommended
- Intel i7 processor or better

3. User Manual Updates

Detect Bones settings

The Detect Bones workflow step has two settings that are not documented in the User Manual. The Minimum Threshold setting enables the user to set the lowest HU value that will be allowed in the bone mask. This can be especially useful with noisier data where soft tissue has larger than normal values. The Boundary Hardness setting enables fine control over the hardness of tissue at the boundary of the bone mask. Lower values will include more soft tissue in the mask, while higher values will restrict the mask to higher HU values. Lowering this setting can enable inclusion of more trabecular bone, especially in cases where the size of the trabeculae are comparable to the voxel size and therefore partial volume effects are significant. It does this, however, at the expense of potentially also including excess soft tissue from around the cortex.

ROIs outside of the bone will cause computation to fail

If an ROI is positioned such that none of the bone of interest is contained within the ROI, the subsequent measurement step will fail. To ensure that the measurement can be computed successfully, make sure at least some part of the ROI includes the bone mask.

4. Known Issues

“Separate Bones” may return an empty volume with a low Sensitivity setting

For some scans, certain values of the Sensitivity setting may cause an empty volume to be displayed after computation completes. This generally indicates that the Sensitivity setting is too low to properly segment the bones from one another. Increasing the value of that setting will usually enable appropriate segmentation of bones, which will then be displayed.

IVIS shuttle and FMT cassette cause problems with Detect Bones

Quantum scans of mice in the IVIS imaging shuttle or FMT cassette may fail the Detect Bones step using the default step settings.

Long load times

Vox files can take a long time to load, as much as 5-10 seconds, depending on system resources. DICOM folders with modified HU calibration can also demonstrate the same behavior.