This study compares the size of aneurysms when measured on standard 2D DSA in comparison with 3D volume rendered DSA. This is important because 3D imaging is increasingly recognized as useful for both aneurysm detection and therapy planning. As a result, the authors found that the aneurysms appear larger when measured on the 3D images in relation to the surrounding arteries. While it is not clear which of the methods (2D or 3D) shows the ‘truth’ the study clearly demonstrates the main problem that we still have with 3D imaging. There are no standards for how to use MIP, volume rendering, surface shading, and so on. Thus it is likely that the same study would lead to completely different results when another hardware or workstation for post-processing is used. It is well known that the size of (arterial) structures will vary when thresholds are changed. Increasing the lower threshold will lead to a decrease in size of the arteries and tiny structures will disappear soon while bigger structures like aneurysms will keep their ‘size’ on volume rendered images even with higher thresholds. This fact may explain the result of this study. Modern workstations provide wonderful tools to create realistic 3D models from CT or MR data in excellent quality. However, as long as 3D imaging still relies on the user-dependent interaction with a workstation there will be no reproducible results. Therefore, the main task for the near future is the definition of standard procedures for 3D imaging to create reproducible results that are independent of workstations and users. As long as this is not guaranteed one must be aware that 3D imaging is not a defined method that has to be evaluated in each single institution.

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