

AbstractID: 9724 Title: 3D rotational X-ray - technology and application

Since the introduction in 1998 of 3D rotational angiography, the concept of using X-ray projection imaging techniques to acquire 3D datasets has gained widespread adoption. The application started for neuro-angiography systems, where 3D has become the standard of care for performing complex interventions. With the introduction of the flat panel detector, the potential for 3D acquisition was enhanced even further. By 2008 the usage of 3D has expanded to a broad range of clinical applications, including peripheral interventional radiology, cardiology, oncology, surgery, orthopedics and gastro-intestinal.

This talk will explain the principles behind 3D acquisition, and give examples of where 3D X-ray imaging provided clinical added value. The associated X-ray dose of these acquisition techniques will be discussed. The talk will close with a brief outlook on what is on the horizon for 3D X-ray.

Educational Objectives

1. Understand the principles of 3D reconstruction using a large area detector
2. Understand how 3D X-ray relates to CT , and which clinical applications benefit most from this technique
3. Understand the trade offs between dose and image quality for 3D X-ray.

Disclosure: presenter is employee of Philips Healthcare