



Fig. 3. Using EGS-Ray for visualization of Monte Carlo calculations, the distribution of scatter radiation during CT fluoroscopy can be graphically visualized with the patient (red), the CT gantry (light blue), and the primary radiation/central beam (red line). The lines to the right and left of the phantom's body in the bottom image represent the lead drape wrapped around the phantom. Scatter radiation is demonstrated by lines of various colors (Compton radiation, blue and red dotted lines; Raleigh radiation, orange lines). In the top image, there is scatter radiation in all directions without the use of a lead drape around the phantom. In the bottom image, there is markedly reduced scatter radiation caudally to the central plane with the lead drape in place.

shield is more effective with the long needle holder than with the short needle holder. Radiation protection gloves resulted in a 76.6% dose reduction. The combination of lead drapes, protective gloves, and long needle holder decreased the dose rates by 99.6%.

Monte Carlo Simulation

Figure 3 shows graphically the scatter radiation during CT fluoroscopy by means of a Monte Carlo simulation. In the top image, without the use of a lead drape, scatter radiation in all directions around the phantom is seen. The interventional radiologist standing next to the gantry is exposed to a marked amount of scatter radiation from the phantom's body. In the bottom image, with the lead drape wrapped

around the patient, there is markedly reduced scatter radiation caudally to the central plane where the radiologist stands.

Discussion

Sonography, conventional X-rays, conventional CT, CT fluoroscopy, and magnetic resonance imaging (MRI) are available for percutaneous radiological interventional procedures. CT is superior to the other methods because it can be applied to soft tissue, fluid- and air-filled structures, as well as bones. Furthermore, CT provides good reproducibility, a large variable image field with high geometric precision, and easy patient access. In conventional methods,

TABLE DRAPE

Model: See Chart Below.

The Table Drape features a saddlebag design allowing a secure fit to any style imaging table. The shadow-box assembly of the panels protects staff against scatter radiation of the lower extremities while allowing unobstructed position of the C-arm. Optional anesthesia panel is also available for complete 3 sided protection. Choose from the single sided (pictured) or double sided. Available in any color nylon material.

Protection: 0.50mm

Sizes and ordering information is listed below.



TS 48241	TS 48242	TS 48281	TS 48282	TS 48361	TS 48362	TS 36241	TS 36242	TS 36281	TS 36282	TS 36361	TS 36362
Single Sided 48x24	Double Sided 48x24	Single Sided 48x28	Double Sided 48x28	Single Sided 48x36	Double Sided 48x36	Single Sided 36x24	Double Sided 36x24	Single Sided 36x28	Double Sided 36x28	Single Sided 36x36	Double Sided 36x36

<i>ANESTHESIA FRONT PANEL</i>		
TS 2224FP	TS 2228FP	TS 2236FP
22 x 24	22 x 28	22 x 36