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Salisbury Performs GPS-Guided Needle Tracking Biopsy

By Jeff Melvin
VISN 6 public affairs

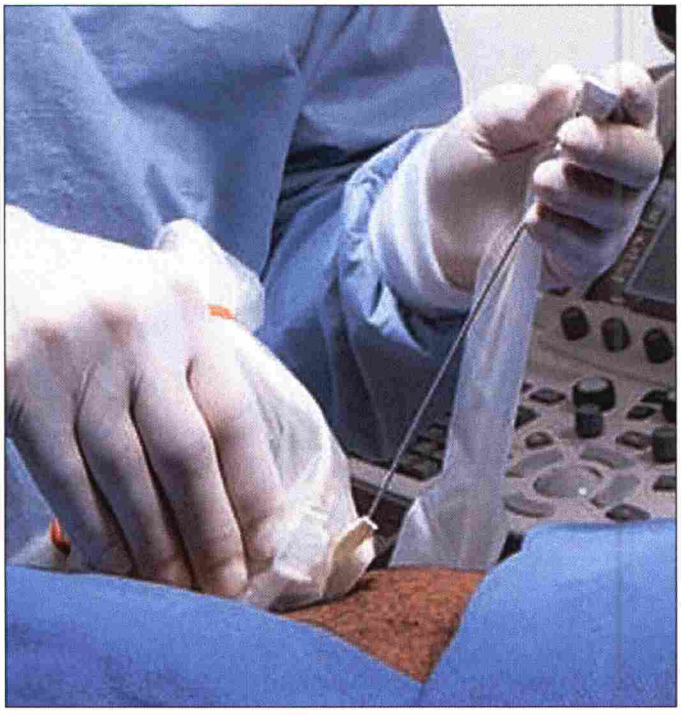
In another example of Veterans receiving the "Best Care Anywhere," the Salisbury VA Imaging Service performed the first ultrasound-guided volume navigation GPS needle tracking biopsy in a VA facility in the state of North Carolina, March 14.

"We are the first site in the state of North Carolina (and among the first VA medical centers in the country) to perform a biopsy with the GPS needle tracking since completion of the testing phase," said Dr. Corinne Deurdulian, chief of imaging services, Salisbury VAMC. "We are excited to be able to deliver this cutting-edge technology to our Veterans. The goal of this technology is to help guide the trajectory for lesions that are difficult to biopsy with conventional ultrasound."

The radiologist said the advanced needle tracking system employs a sensor within the needle that uses GPS technology to help guide the biopsy for difficult lesions. "The needle's real time position and trajectory are displayed in graphics and overlaid on the ultrasound images of the respective anatomy," Dr. Deurdulian said.

The new technology is available through the GE LOGIQ® E9 Ultrasound system, of which the network purchased two last year on behalf of the Salisbury medical center.

The particular application that makes the GPS needle tracking guidance possible is called fusion imaging or volume navigation. GPS needle tracking capability along with fusion imaging allow ultrasound images to be fused with CT, MRI, and PET images to help visualize the lesion better during an ultrasound-guided biopsy.



According to Dr. Deurdulian, the new procedure will be used mainly for liver and deep abdominal biopsies, which are generally harder to visualize. The technology may also be used in the operating room to help localize lesions for surgery.

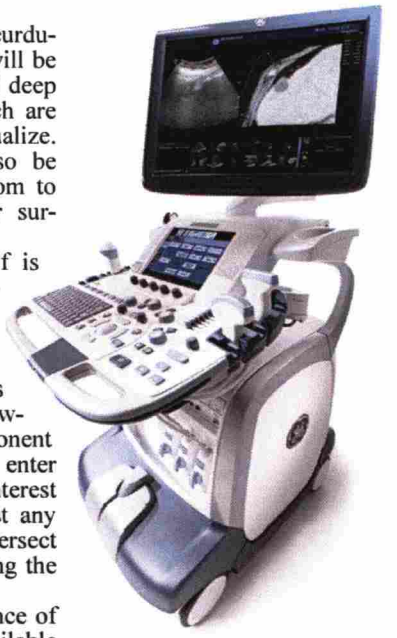
"The procedure itself is almost exactly the same as any other ultrasound-guided needle biopsy. The radiologist holds the transducer and guides the needle," she said. "However, the new GPS component allows the radiologist to enter the organ or region of interest with the needle at almost any entry point and then intersect the targeted lesion utilizing the tracking software.

Giving further evidence of the high quality care available to Veterans through the VA, the radiologist cited two other firsts for the Salisbury VAMC, the use of Eovist and Gadavist.

"Salisbury was the first VA in the country to use Eovist, a liver-specific contrast agent used to help identify and characterize various types of liver tumors on MRI," Deurdulian said. "Many of our protocols and methods of practice that we implemented early on in the usage of this agent have been shown to be optimal in research and medical practice. Salisbury was also the first VA in the country to use Gadavist, an MRI contrast agent currently with the highest safety profile, and now FDA approved for neurologic MR imaging."

VISN 6 is working to purchase ultrasounds with GPS needle tracking and fusion imaging capabilities for Beckley, Durham Fayetteville, Richmond and Salem VAMCs.

(Story idea submitted by Carol Waters, Salisbury VAMC.)



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