



Improving Operating Room Procedures

How a specimen radiography system can improve image acquisition and procedure workflow during breast biopsies and breast conserving surgeries

Whether Dr. Abhishek Chatterjee, Chief of Breast Surgery at Tufts Medical Center, is performing a breast biopsy or an oncoplastic surgery, clear imaging and fast results are crucial to ensuring a successful procedure. After trialing two specimen radiography systems, Dr. Chatterjee ultimately adopted Faxitron[®] Trident[®] HD specimen radiography system because of its ease of use and contributions to improving the surgical workflow.



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Enhanced Patient Experience Due to Improved Workflow

At Tufts Medical Center, Dr. Chatterjee performs procedures in a separate building floor from the pathology department, resulting in the need to send specimens away for processing. Runners would occasionally get lost and there were multiple events where specimens were delayed in reaching the pathology department.

“Pathology processing time could occasionally take over an hour because we were transporting the specimen to another location,” said Dr. Chatterjee. “Faxitron Trident HD has a huge impact on patient care. I prefer Trident HD system because of its contributions to patient safety, as it reduces time under anesthesia, does not require me to leave the room, and helps my decision making.”

Trident HD system can improve workflow by providing instant verification of results from the OR and eliminating the need to wait for margin confirmation, which can reduce overall procedure time. Clinicians can compare the specimen image with the original mammogram or biopsy on one screen. Additionally, the intuitive user interface and software-driven control eliminate steps at the point of care while simplifying staff communication.

“If the biopsy specimen is missing a marker clip or if the surgical specimen margin has malignant calcifications approaching one edge, where an additional shave may be needed for better margin control, you can

make an appropriate surgical decision within seconds with Trident HD in the operating room,” said Dr. Chatterjee.



Ease of Use

The system is intuitively and ergonomically designed to improve the provider experience. Trident HD system's user-friendly control panel and software interface provides clinicians with a robust toolset, including the ability to annotate, measure, zoom, and more. Additionally, the touchpad controls encourage more intuitive movements during specimen review.

“The team loved that Trident HD system is so simple to use,” said Dr. Chatterjee. “You want less buttons and steps when you are trying to quickly examine a sample. The system allows us to work more intuitively.”

Health centers can easily integrate the system into their facilities and improve a team's collaboration. Trident HD system can send images to PACS systems, enabling image review across a variety of locations and improving communications. "We want to easily communicate with our teams during a procedure and now we can," added Dr. Chatterjee.

To maximize space in the operating room, Trident HD system's ergonomic design is 37% smaller than the original system. Clinicians can easily maneuver the system around the operating room. This smaller footprint also includes an imaging area that is 71% larger, in turn accommodating a wider range of excisions.



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Having previously trialed a competitive specimen imager, Dr. Chatterjee shared that he preferred Trident HD system. "Our focus as surgeons is to get the cancer out. I need a system that helps see calcifications, clips, and masses clearly," said Dr. Chatterjee. "It is very rare in my practice to see subtle calcifications coming to the edge. I don't see the additive advantage of time taken for 3D X-rays versus the 2D X-rays to change my decision making that much where I will get a negative margin."

Trident HD system features a 16-centimeter-by-18-centimeter imaging tray that allows samples of various sizes can be imaged directly in the operating room. "My specimens are large. Since they are oncoplastic, they sometimes include skin. I have found Trident HD imaging area to be sufficient to handle these specimens," added Dr. Chatterjee. "I like the simplicity of the imaging experience. I use the bottom tray for most of my oncoplastics, the middle tray for moderate oncoplastics, and the top tray for biopsies and small partial mastectomy specimens."

The system also boasts automatic exposure control, optimized for breast excisions and core biopsies, allowing clinicians to take

quality images as it provides a consistent optical density and signal-to-noise ratio between images.¹ Clinicians can clearly view markers and margins directly in the procedure room and can make informed clinical decisions on the spot thanks to the system's image uniformity.

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Exceptional Imaging Experience

Designed for use in the operating room, Trident HD specimen radiography system captures sharp and highly detailed images of surgically removed breast samples to provide a clear visual of clips, margins, and lesions. It is the only system utilizing amorphous selenium direct capture imaging – the same technology used on the 3Dimensions[®] Mammography System – to generate crisp, clear, high-resolution images.

"It's a beautiful image, and the contrast is gorgeous," said Dr. Chatterjee. "You can clearly see calcifications, masses, and biopsy clips, and I've used the images to determine if I need to make an additional shave on the

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Trident HD specimen radiography system delivers exceptional imaging and a more efficient workflow, in turn expediting diagnosis and treatment for patients. "It's a simple and easy machine to use, and the tools are what you need for 90% of clinically busy surgeons out there," said Dr. Chatterjee. "Trident HD system gets the job done."

Faxitron[®]
Trident[®] HD
Specimen Radiography System

¹ Vajuhudeen Z, Jones J, Feger J, et al. Automatic exposure control. Reference article, Radiopaedia.org (Accessed on 17 Feb 2023) <https://doi.org/10.53347/rID-79836>