

Video Procurement: An Essential Educational Tool for Obtaining Quality Research Specimens

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Introduction

Procurement technicians were previously trained with written or photo standard operating procedures (SOPs) and hand-outs, which did not capture the architectural details of disease types and specific tumor types. Pictorial hand-outs do show fine detail of specimens, but do not create discussion to accurately train the procurement technician of the gross evaluation of the entire sample. One-on-one training with Certified Pathologist Assistants was another method used, resulting in verbal techniques that were passed from one technician to another. To ensure consistency in training and procurement of specimens, we have developed a method to utilize all of these tools by implementing training via video procurements. With these videos accessible to all new and current staff, errors will be reduced and quality of tissues procured will be escalated. The objective of the procurement videos is to provide a visual aid in training novice bio-banks and procurement technicians on how to provide high-quality research specimens.

Materials and Methods

Electronic medical records are used extensively in donor selection. Pertinent information such as possible infectious agents, neo-adjuvant therapies, and relevant clinical histories are used to determine if the donor is appropriate for research. Imaging studies performed are reviewed for tumor size/location and biopsy information is noted for preliminary diagnosis. Data such as age, sex, and race is provided to the investigator from the patient history. This clinical information extracted is not available with a simple photo-SOP or hand-out.

Procurement videos are filmed in the procurement lab/Surgical Pathology suite. The technician then demonstrates multiple processes of tissue procurement: snap-freezing with liquid nitrogen upon collection to ensure RNA quality, creating paraffin embedded blocks, and procuring fresh tissues.

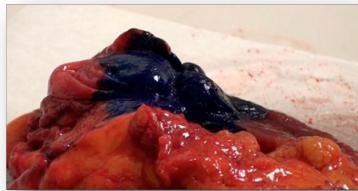
The videos enlist a Certified Pathologist Assistant or pathology resident to display the methods used when a specimen is received in surgical pathology and the proper method for giving research tissues. After all tissue preparations have been completed, the technician shows how to properly clean the work area and sterilize instruments. The goal in filming these techniques from beginning to end is to provide concise instruction on how to collect and procure quality samples for research. Subsequent training of new staff is easily completed with these visual training tools for reference. An important use of these videos is at marketing booths during bio-repository meetings to show potential investigators the techniques used by research personnel to obtain and procure samples.

CHTN-WD Complete Training Model



By using video tutorials in the complete training process, CHTN-WD is able to create a holistic approach to training that is effective for a wider range of learning styles and learners. These tools used together create an educational environment and a constant resource for employees to use when needed. These resources serve to reduce error rates, improve employee satisfaction, and promote and support continuity in procurement.

Results

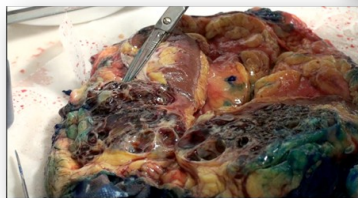


Serosal Puckering

Research Tissue Aliquots



Exposed Colon Tumor



Bi-valved Kidney Revealing Renal Cell Carcinoma



A major goal of both the Lean Six Sigma initiative, which inspired this project, and the project itself is the avoidance of errors and properly identifying solutions before mistakes occur. Identifying errors made during the gross examination or by the procurement technician is imperative to training new staff. By pointing out these discrepancies from previously filmed procurements, subsequent videos are enhanced with standardized techniques and attention to detail, and the room for error is reduced by being able to demonstrate a mistake without actually having to repeat it. This process improvement will be utilized by all current and future staff in training endeavors.

The video training model can be used for a multitude of purposes, all working together to improve both CHTN-WD operations and the bio-banking community at large. These videos have improved training in the following ways:

Training current and future staff on best procurement procedures

Training current and future staff in all aspects of CHTN-WD operations

Providing an additional resource for staff to reference along with written SOPs and pictorial hand-outs

Providing novice bio-banks valuable learning tools through video instruction

Creating innovative and technologically advanced methods for standardizing bio-banking operations to consistently produce high quality tissue samples

Educating new and current pathology residents on proper gross examination techniques for providing high quality research tissue

Conclusion

Procurement videos provide efficient and affordable training information to bio-repositories and tissue procurement technicians. The videos appeal to different learning styles; visual and auditory learners will benefit greatly with the instruction the filmed procurements offer. The videos display the potential to expand the bio-banking community by achieving their objective, offering direction on procuring high quality research specimens. The implication is that if more bio-banks implemented the training videos there would be a higher percentage of quality tissue given for research purposes. Research endeavors would benefit by receiving high quality tissue at a more constant rate which would positively affect results.

Discussion

1. What new innovations can we foresee in bio-banking training techniques?
2. How do these improvements encourage standardized practices in tissue procurement and bio-banking operations?

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