

IMAGING AND QUANTITATION OF PROSTATE BIOPSIES AFTER CRYOSURGERY. Sergei Osobov, Roberto Orozco, M.D., Michael Bacus, Oklahoma City, OK (Presentation by Dr. Orozco)

INTRODUCTION AND OBJECTIVES: Prostatic cryosurgery is gaining popularity. However, availability of cryogenic technology and increased detection of prostate cancer cases have resulted in multiple technical variations of the procedure. This factor plus limitations in patient selection and lack of uniformity of pathology reporting have complicated the analysis of results. In order to improve pathology reporting and collection of data, we have developed a more uniform pathology report which incorporates tissue imaging and quantitation of pathologic findings.

METHODS: A microscope slide is inserted into a 35 mm slide scanner using a slide holder. The scanner is attached to a Microsoft Windows-based imaging workstation via an internal adapter. The entire biopsy is scanned in a single 30-second pass with a resolution of 2700 dots per inch. A custom software is used to analyze the images.

RESULTS: A segmented, labeled and measured color biopsy image is obtained for reporting and storage. The image is inserted into the pathology report to complement the microscopic description and compressed for storage or uploading to a Bulletin Board Service.

CONCLUSIONS: When the ablated organ is not removed, as happens in cryosurgery, and technical variations of the procedure are so numerous (utilization of urethral warmer, number of freezing probes, rate of freezing, etc.), a conventional surgical pathology report becomes insufficient. Then severity, location and extent of histopathologic changes obtained during a particular operation become of great importance to the surgeons. The contribution of introducing or omitting a particular technical variable to the procedure and correlation between histopathologic findings and clinico-radiologic information are better appreciated with a properly segmented, measured, and labeled biopsy image in the pathology report.