



RAPID MICROWAVE TISSUE PROCESSING FOR BIOPSY SPECIMENS

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The Danbury Hospital Department of Pathology and Laboratory Medicine recently acquired a state-of-the-art Rapid Microwave Tissue Processor (RMTP). This recently developed technology allows same-day processing, interpretation, and reporting of results for selected small biopsy specimens.

Traditionally, biopsy specimens are processed in a manner similar to large surgical specimens. This procedure involves tissue fixation and overnight processing in an automated instrument. Standard overnight processing consists of dehydration of the fixed tissues and subsequent infiltration with paraffin, followed by sectioning onto glass slides, H&E staining, cover slipping and labeling of slides. This lengthy procedure does not lend itself to biopsy interpretation and reporting by the pathologist until at least 18 hours after specimen receipt in the lab.

The automated RMTP technology employs microwave energy in combination with ethanol and isopropyl alcohol treatment, and paraffin infiltration in order to drastically shorten the time for tissue processing. The processing cycle is shortened from the traditional overnight interval to 90 minutes. With the subsequent standard semi-automated slide preparation time of ~60 minutes, completed biopsy slides are available to the pathologist for interpretation and reporting within ~2 ½ hours after specimen receipt in the lab. This innovation allows for same-day turnaround time of biopsy reports.

Since the acquisition of the new Rapid Microwave Tissue Processor in May of 2007, the Danbury Hospital Anatomic Pathology section has achieved same-day turnaround of up to 70 biopsy specimens per day. Currently, this innovation has been utilized mainly for endoscopic (gastrointestinal,

bronchial, ENT, biopsies), endocervical curettage/cervical biopsies, selected core needle biopsies, and small skin biopsy specimens. Excluded are breast core needle biopsies (RMTP not standardized for hormone receptors and Her-2 antigen preservation), and prostate needle biopsies (require more lengthy slide interpretation time). Biopsies eligible for same-day RMTP must arrive to the lab prior to noon.

By enabling the more rapid availability of biopsy results via Rapid Microwave Tissue Processing technology, the Danbury Hospital Department of Pathology and Laboratory Medicine is helping to meet the Danbury Health System's Quality, Customer Satisfaction and Growth/Innovation goals, thus contributing to its overall mission of improving the health care of the community it serves.

Reminders:

From the Microbiology section:

Outpatients should not be sent to the Danbury Hospital Specimen Collection Center (Test Center) at the hospital for collection of any of the following specimens: throat cultures, specimens for influenza

virus (rapid or culture) or RSV, swabs for MRSA screening. Patients being tested for pertussis must have their specimens collected on-site at the Test Center by lab personnel. Ideally, the Microbiology section of the laboratory or the Test Center should be called by the office when the patient is being sent to minimize wait time. The Microbiology section may be reached at 203-739-7305.

All **timed laboratory tests** on outpatients that require multiple blood draws must be scheduled in advance with the Test Center. Appointments may be scheduled by calling 203-739-7731.

The laboratory has **new Supply Order Forms**. If the new forms have not been received, please call Sandi Smith at 203 -739-7800.

Specimen labeling: please do not write over the barcode on computer generated labels. Hard to read labels result in a delay in testing because instruments cannot recognize the specimen identification numbers.