HATP

Auto Tissue Processing System



HEALTHSKY

海世嘉

Tissue Processing



Auto Tissue Processing System

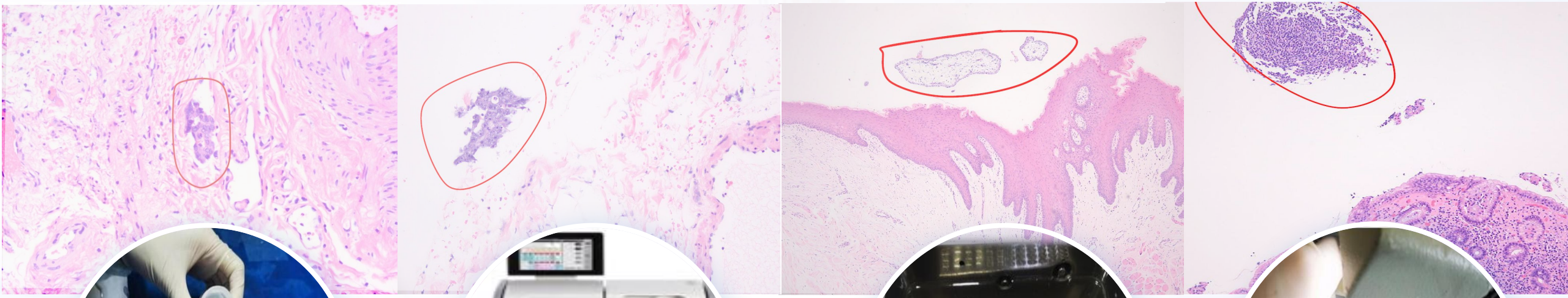
From Cassette to Block

Fully Automated, Fully Safe

Fixation → Dehyd. → Clearing → Infiltration → Embedding

Each specimen is independently processed with single-use reagents, enabling a fully automated workflow.

Tissue Processing



The combination of reagent agitation and fluid movement, together with the vacuum or pressure function, causes a significant amount of tissue fragments to be shed and remain within the reagents.

Tissue Processing

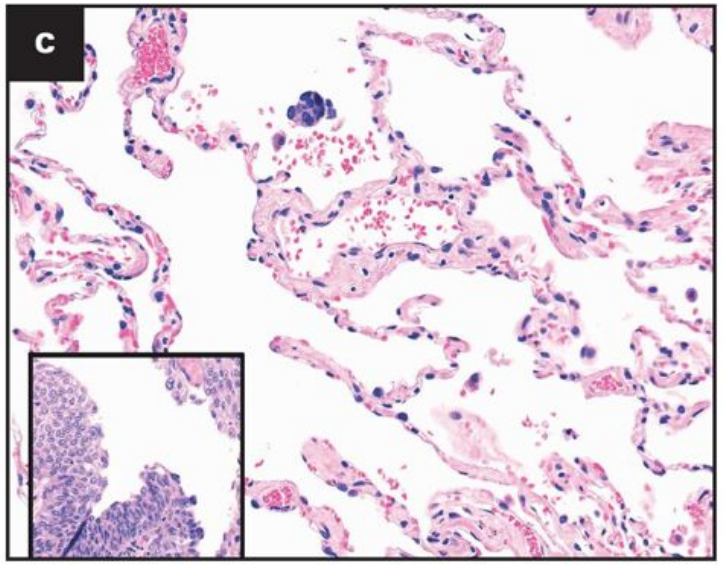
ABSTRACT

Objectives: Tissue carryovers are contaminants of surgical pathology cases in which extraneous tissue is incorporated into tissue blocks. Carryovers occur most frequently at the grossing or embedding stations, but little is published about them. We sought to analyze their transmission during transit to the histology lab.

Methods: Cassettes of friable donor tissue were mixed with cassettes of spongy recipient tissue in formalin-filled containers and agitated by shipment via pneumatic tube. The tissue cassettes were processed, embedded as blocks, and cut as usual. Liquid samples were prepared from the submission containers as well as from workstation submission containers and histology tissue processor waste.

Results: A high rate of contamination (14.9%) was observed under these artificial conditions. Friable donor tissue, including urothelium and colorectal adenocarcinoma, were promiscuous contaminants, as were placental villi. Fluid from submission containers showed viable tumor cells and fragments, which were also present in workstation submission containers and in tissue processor waste fluid.

Conclusions: This study implicates liquid transport media as a possible avenue of contamination during submission and transportation of tissue cassettes for histologic processing. Attention should be given to the friability of submitted tissue and physical agitation of the cassettes in transit. Such contaminants may be present in the fluid in tissue submission bins and in tissue processor fluid.



Source: American Journal of Clinical Pathology (AJCP)

Hunt JL, Stolz DB. Tissue carryover at specimen dissection and in the tissue processor: a quantitative study. Am J Clin Pathol. 2004; 121(1): 11-16.

Tissue Processing



HATPS 96



DE-UNITE Macro

DE-UNITE Micro



DE-UNITE Linear



Tissue Processing



Bracket
Maintain the Orientation

Tray
Place the specimen

Base
Hold the reagents

DE-UNITE



DE-UNITE Micro

Core biopsies
Endoscopic biopsies
Small tissue specimens
Between 1.5×1.5×1.5-4×4×3 mm



DE-UNITE Linear

Prostate biopsies
GI biopsies
Needle biopsy strips
Between 1.5×1.5×1.5-5×3×18 mm



DE-UNITE Macro

Routine surgical specimens
Between 4×4×3-11×17×4.5 mm

Tissue Processing

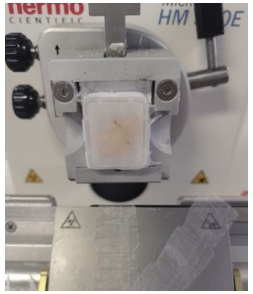
Revolution in Tissue Processing

Routine Reagents	Optimized for downstream diagnosis
Editable Protocols	Versatile for diverse specimen types
Separate Running	Flexible processing for distinct batches
Continuous Loading	Maximize workflow efficiency

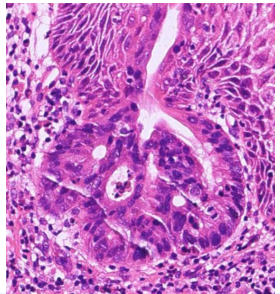












Tissue Processing

Paraffin Dispenser



Paraffin Tank：3L



Pipetting





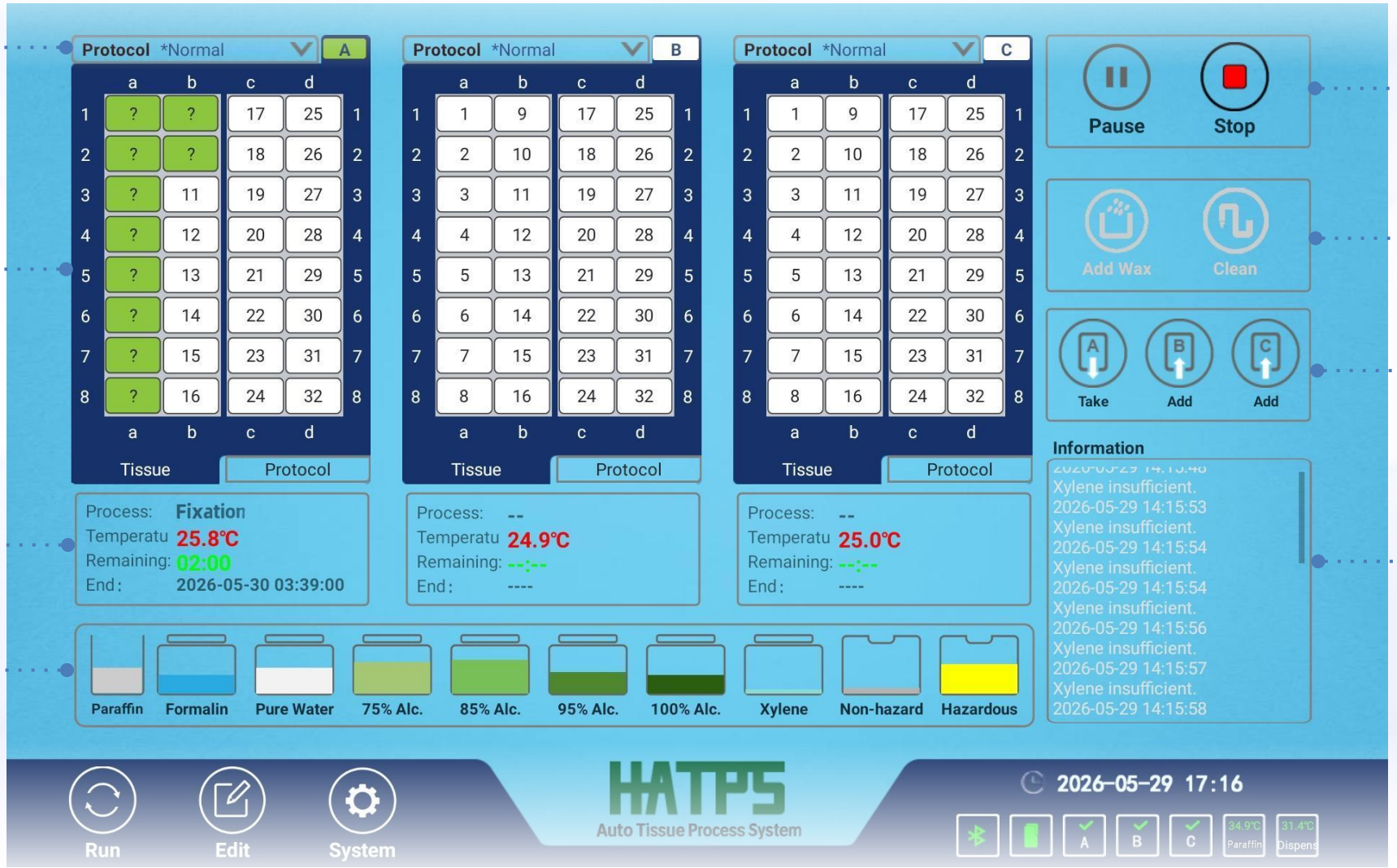
Reagent Station: 2.8L*7



Waste: 5L(Formalin, Xylene)

Waste: 5L(Alcohol, water)

Tissue Processing



Protocol List

Cassette Loading

Process

Reagent Volume

Run/Pause/Stop Protocol

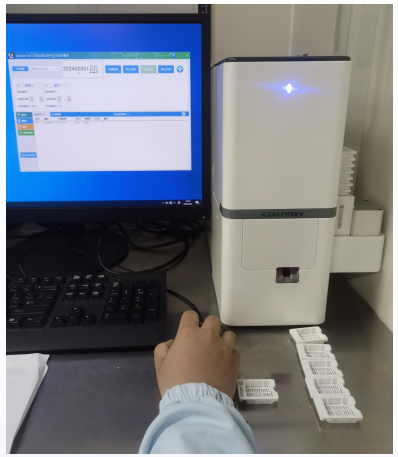
Add Wax Pipeline Clean

Continuous Loading

Info Bar

Main Interface

Tissue Processing



Labelling



Grossing

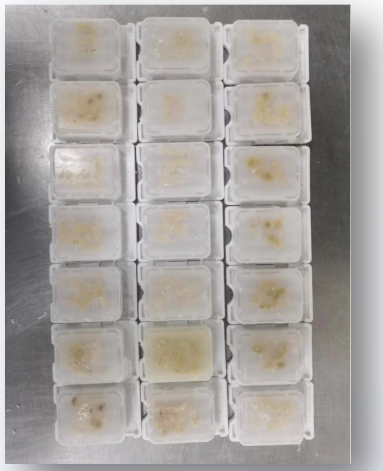
Place the specimens centrally and close together, with the cutting face facing down.



Loading

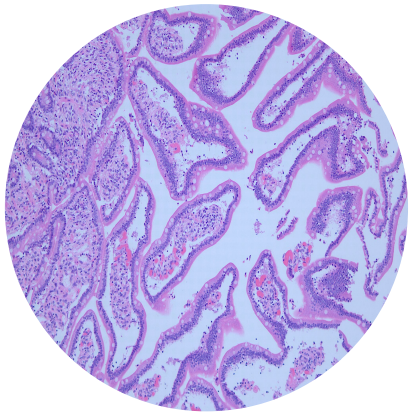


Processing

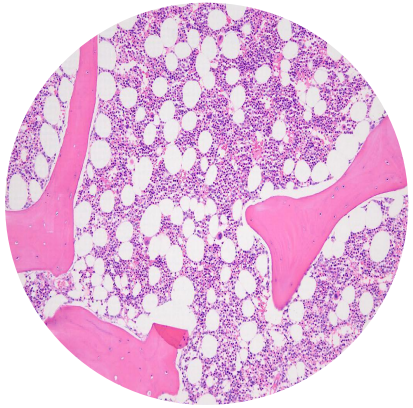


Block

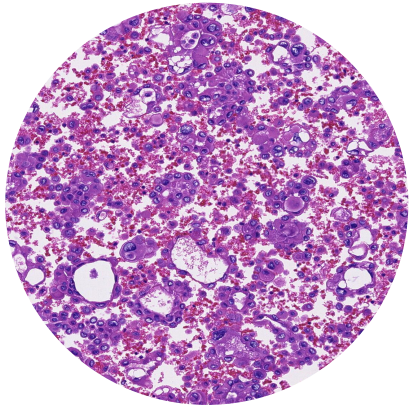
Tissue Processing



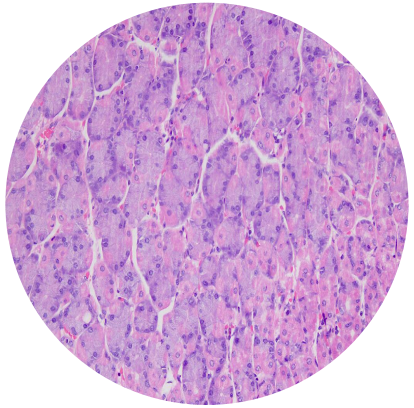
Routine Tissue



Bone Marrow



Cell Block



Rapid Biopsy

Tissue Processing

Routine Tissue Processing Protocol (12.8 hours)

Step	Reagent	Temp.	Duration
Fixation	Formalin	Room Temp.	60 mins
Rinse	DI Water	Room Temp.	10 mins
Dehydration	75% Ethanol	41℃	60 mins
Dehydration	85% Ethanol	41℃	60 mins
Dehydration	95% Ethanol	41℃	60 mins
Dehydration	100% Ethanol	41℃	60 mins
Dehydration	100% Ethanol	41℃	60 mins
Dehydration	100% Ethanol	41℃	60 mins
Clearing	Xylene	41℃	30 mins
Clearing	Xylene	41℃	45 mins
Clearing	Xylene	60℃	15 mins
Infiltration	Paraffin	68℃	30 mins
Infiltration	Paraffin	68℃	30 mins
Infiltration	Paraffin	68℃	180 mins
Embedding	Paraffin	4℃	10 mins

Tissue Processing

Bone Marrow Processing Protocol (12 hours+12 hours)

Step	Reagent	Temp.	Duration
Decalcifying	EDTA Decalcifier	45℃	6h × 2
Rinse	DI Water	Room Temp.	10 mins
Dehydration	75%Ethanol	41℃	60 mins
Dehydration	85%Ethanol	41℃	60 mins
Dehydration	95%Ethanol	41℃	60 mins
Dehydration	100%Ethanol	41℃	60 mins
Dehydration	100%Ethanol	41℃	60 mins
Dehydration	100%Ethanol	41℃	60 mins
Clearing	Xylene	41℃	30 mins
Clearing	Xylene	41℃	45 mins
Clearing	Xylene	60℃	15 mins
Infiltration	Paraffin	68℃	45 mins
Infiltration	Paraffin	68℃	180 mins
Embedding	Paraffin	4℃	30 mins

Tissue Processing

Cell Block Processing Protocol








Step	Reagent	Temp.	Duration
Fixation	Formalin	35℃	90 mins
Rinse	DI Water	RT	10 mins
Dehydration	75% Ethanol	38℃	35 mins
Dehydration	75% Ethanol	38℃	35 mins
Dehydration	75% Ethanol	38℃	30 mins
Dehydration	95%Ethanol	38℃	25 mins
Dehydration	95%Ethanol	38℃	25 mins
Dehydration	95%Ethanol	38℃	20 mins
Dehydration	95%Ethanol	38℃	20 mins
Dehydration	95%Ethanol	38℃	30 mins
Dehydration	95%Ethanol	38℃	35 mins
Dehydration	100%Ethanol	41℃	35 mins
Dehydration	100%Ethanol	41℃	35 mins
Dehydration	100%Ethanol	41℃	40 mins
Clearing	Xylene	41℃	20 mins
Clearing	Xylene	41℃	25 mins
Clearing	Xylene	60℃	25 mins
Heating	-	70℃	35 mins
Infiltration	Paraffin	75℃	180 mins
Infiltration	Paraffin	72℃	1 mins
Embedding	Paraffin	4℃	30 mins

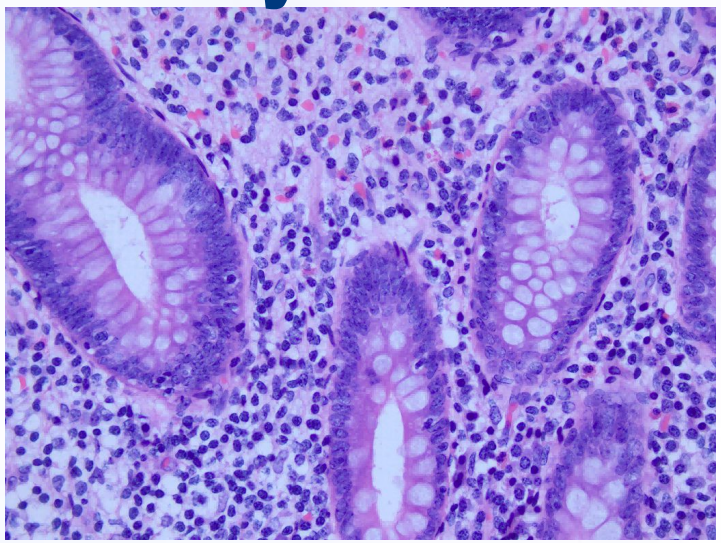
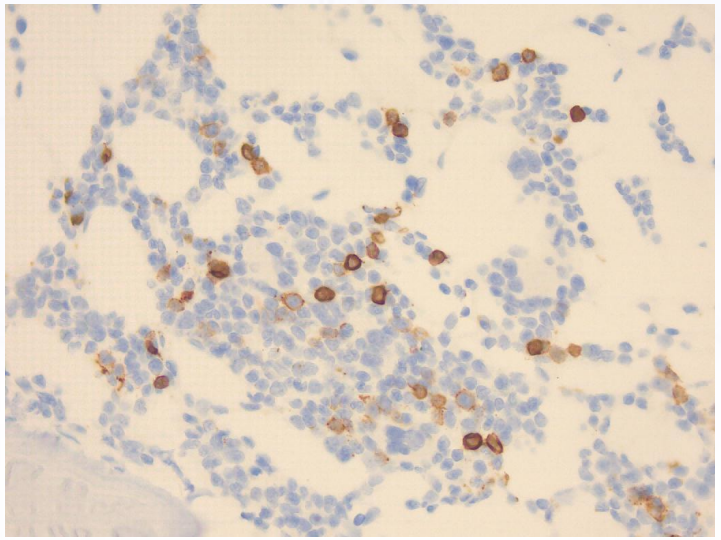
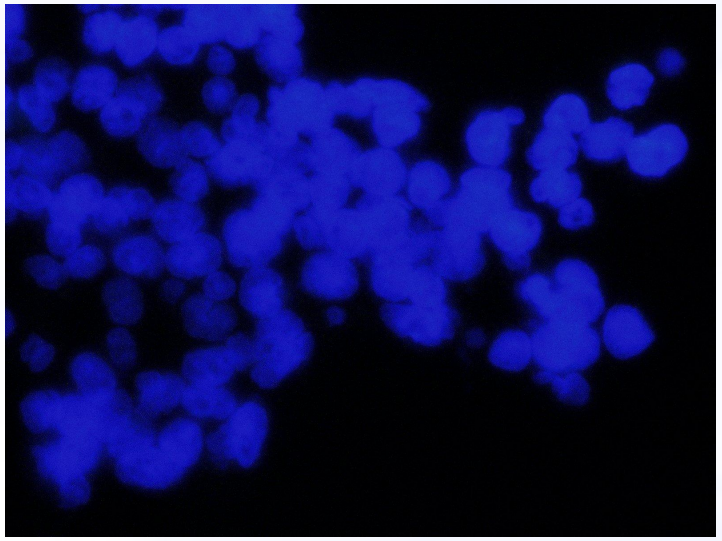
Tissue Processing

Rapid Biopsy Processing Protocol (2 hours)

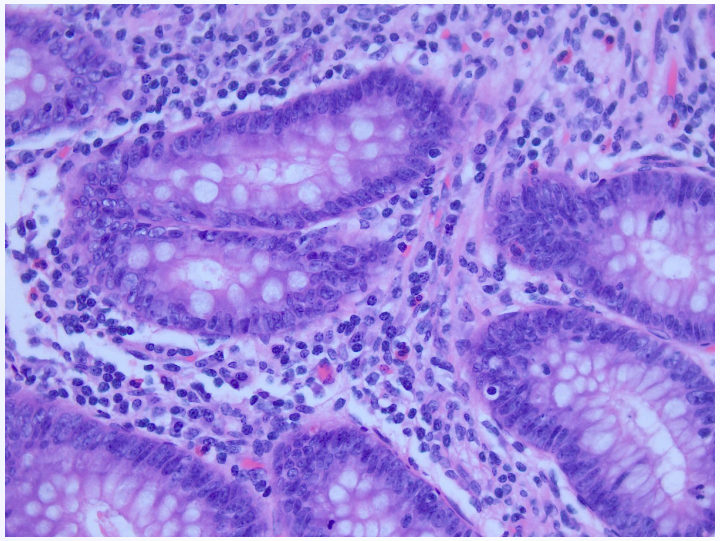
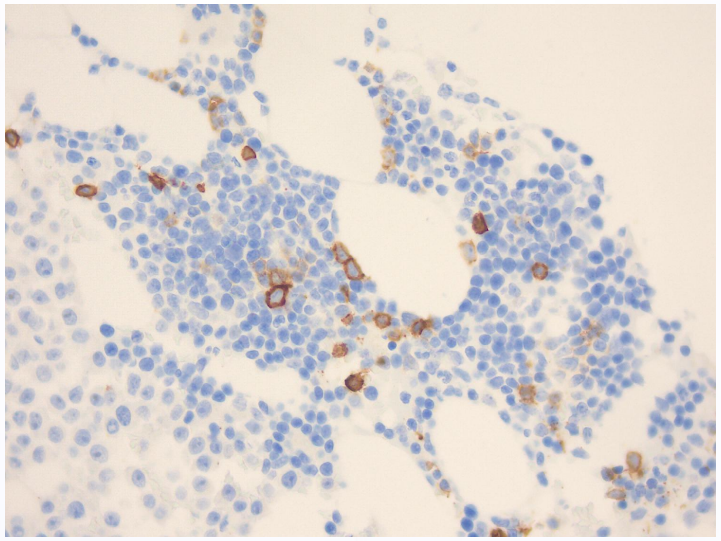
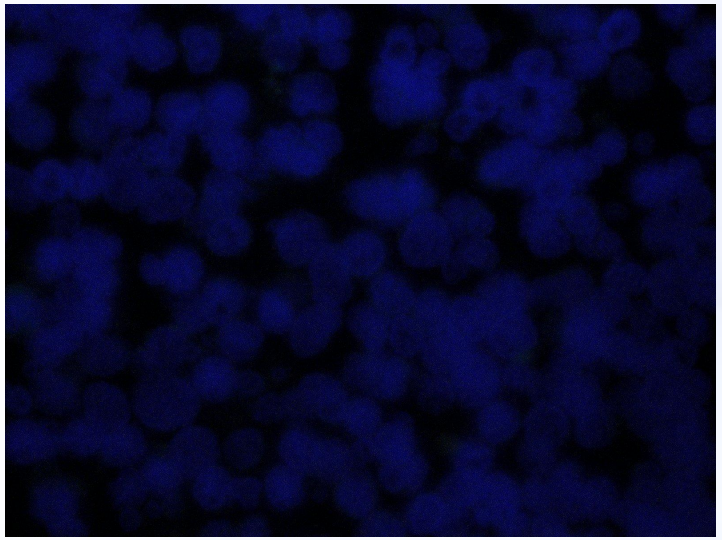
Step	Reagent	Temp.	Duration
Fixation	Formalin	50℃	10 mins
Rinse	DI Water	Room Temp.	1 mins
Dehydration	75%Ethanol	50℃	10 mins
Dehydration	85%Ethanol	50℃	10 mins
Dehydration	95%Ethanol	50℃	10 mins
Dehydration	100%Ethanol	50℃	10 mins
Dehydration	100%Ethanol	50℃	10 mins
Dehydration	100%Ethanol	50℃	10 mins
Clearing	Xylene	50℃	10 mins
Clearing	Xylene	60℃	10 mins
Infiltration	Paraffin	68℃	10 mins
Infiltration	Paraffin	68℃	10 mins
Infiltration	Paraffin	68℃	10 mins
Embedding		4℃	1 mins

Tissue Processing

HealthSky

Leica

Your Trusted Partner in Pathology

Looking forward to working with you!

INNOVATION | RESPECT | INTEGRITY | SUSTAINABILITY