Describe briefly the most recent revision made to this policy, procedure or protocol & why:
Research has shown that Hematoxylin and Eosin staining may not allow proper evaluation of birefringence properties of the crystals in a specimen. An alternative stain for anhydrous staining has been added in step #8. Information about handling of tissue specimen received in fixative has been added in step #1.

Purpose/Policy Statement:
To minimize dissolution of urate crystals in tissue specimens by limiting their exposure to aqueous solutions during sample fixation and paraffin processing.

Definitions:
• n/a

STEPS / KEY POINTS

PROCEDURE:
1. The tissue specimen shall be delivered to the Pathology Gross Room “fresh”, preferably without fixative. If the specimen is received in fixative, it shall be treated the same way. Notations on the submitted requisition form such as,
   • “CHECK FOR CRYSTALS”
   • “GOUT”,
   • “GOUTY TOFUS”,
   • “SPECIMEN FROM JOINT”,
   • “URATES”
   • “URATE CRYSTALS”,
are indicators that anhydrous processing will be required.
2. Due to the fresh nature of the sample, its gross examination will be prioritized over other formalin-fixed specimens. Immediately accession the specimen and submit to the pathologist/Certified Pathologist Assistant (CPA) accompanied by the requisition form for gross examination and description.
3. Pathologist/CPA will prepare two cytologic scrape preps and label them “TP” for touch prep. Lab assistants will enter “TP”, “H&E”, and “Anhydrous” in copath then send slides to Histology. Gout touch preps will be treated exactly as regular touch preps, but without being stained.
4. Label cassette with accession case # as well mark the cassette “ANHYDROUS”. For simultaneous fixation and dehydration, the pathologist/CPA will transfer the cassettted tissue sample to a container of 100% alcohol for a minimum of 4 hr.
5. Deliver the alcohol container labeled “ANHYDROUS” to the designated Histology Lab location.
6. The specimen will be paraffin processed on VIP Tissue Processors or Peloris using Program 5 ANHYDROUS, which will begin in clearant station known as xylene.
7. Embed routinely in paraffin. Pick up 4 μm sections on 2 slides. Label 1 for H & E control. Label 1 for anhydrous staining program #9 and place in its own rack. Avoid prolonged floating-out sections on waterbath.

8. Anhydrous Staining program #9 on Leica XL stainer:

1-4. Xylene 3 minutes
5-6. 100% alcohol 2 minutes
7. 95% alcohol 2 minutes
8. Working Eosin with phloxine 2 minutes
9. 95% alcohol 20 seconds
10-12. 100% alcohol 30 seconds
13-15. Xylene 1 minute

9. Coverslip on sakura tissue-tek.

10. Place H&E and Anhydrous together on a tray.

CALCULATIONS: N/A
CALIBRATION: N/A
QUALITY CONTROL: N/A
PROFICIENCY TESTING: College of American Pathologists HistoQIP.
RESULTS: N/A.

Equipment/Supplies (If Applicable):

SPECIMEN: Fresh tissue examination for urate crystals.

MATERIALS, REAGENTS:
Absolute Ethyl Alcohol
100% Alcohol Blend

CAUTION – FLAMMABLE LIQUID
Wear appropriate protective equipment.

INSTRUMENTATION OR EQUIPMENT:
Sakura V.I.P. Tissue Processing Instrument

Form Name & Number or Attachment Name (If Applicable):
histo02

Author Position:
Lead Histologist

Review/Revision Authority (Position Not Individual Name):
Lead Histologist

Expert Consultant Position/s (Not Individual Name/s):
N/A

References (Required for Clinical Documents):
MANUFACTURER’S PACKAGING BROCHURE/INSERT: N/A

Is there a Regulatory Requirement? Yes ☐ No ☐
If yes, insert requirement information here:

Review History (No Changes):
N/A

Revision History (Note changes in area under header):
N/A

Computer Search Words:
N/A

Policy, Procedure or Protocol Cross Reference Information:
N/A