
PATHOLOGY-FINE NEEDLE ASPIRATE (FNA)

Includes: Staining of Aspirate Smears, Pathologist's Diagnosis and Report.

Specimen Requirements:

The validity of the result is dependent upon the adequacy of the specimen. Several aspirations should be made from each lesion. For thyroid nodules, two to five passes are recommended.

Prepare one or more smears from each aspirate using clean glass slides labeled with the patient's last name. Immediately place half of the slides in Surgpath Reagent Alcohol 95% cytology transport vials while the slides are still wet. Allow the remainder of the slides to air-dry, and place them in a plastic or cardboard holder.

If a large volume of fluid is obtained, prepare several smears as above and submit the remainder of the fluid in a container of CytoLyt fixative. Label the container with the patient's name, at least one additional patient identifier such as date of birth, and source of specimen.

If lymphoid neoplasia is suspected, rinse a portion of the aspirate in a tube of Flow Media. Label the tube with the patient's name, at least one additional patient identifier such as date of birth, and source of specimen. Immediately send the specimen to St. Mary's, or refrigerate the specimen and send within 24 hours.

Complete a pathology requisition. Pathology requisitions and specimens must be labeled with identical information for positive patient identification. The following information must be included on the requisition:

1. Name of ordering practitioner.
2. Date of specimen collection.
3. Patient's full name.
4. Patient's date of birth.
5. Patient's gender.
6. Source(s) of specimen(s), e.g. "Right thyroid FNA".
7. Pertinent clinical history and/or ICD-9 code.
8. Test ordered: Check the "Fine Needle Aspirate" box at the bottom of the requisition.

For requests other than routine microscopic examination, also indicate the special request. Examples include flow cytometry and special stains such as microorganism stains.

Surgpath Reagent Alcohol 95% vials, tubes of Flow Media, and containers of CytoLyt fixative are available upon request.

Report Time: 1 business day after arrival in Laboratory.

Day(s) Set Up: Monday through Friday

CPT Code(s): Printed on report.

PATHOLOGY-TISSUE EXAMINATION

Includes: Gross Description of Specimen, Slide Preparation, Pathologist's Diagnosis and Report.

Specimen Requirements:

For routine specimens, immerse the tissue completely in a leak-proof container with 10% buffered formalin. Label the container with the patient's name, at least one additional identifier such as date of birth, and source of specimen. Multiple specimens from the same patient must be individually labeled.

If a frozen section is required for immediate diagnosis, immediately deliver the specimen to St. Mary's without fixative. Small specimens may be wrapped in saline-soaked gauze if necessary to prevent drying. Please contact the Pathology Laboratory (258-6929) if a frozen section is being sent.

If hematolymphoid malignancy is suspected, please place a portion of the specimen in a tube of Flow Media. 0.5 to 1 cubic centimeter of thinly sliced tissue is sufficient. Label the tube with the patient's name, at least one additional patient identifier such as date of birth, and source of specimen. Immediately send the specimen to St. Mary's, or refrigerate the specimen and send within 24 hours.

Complete a pathology requisition. Pathology requisitions and specimens must be labeled with identical information for positive patient identification. The following information must be included on the requisition:

1. Name of ordering practitioner.
2. Date of specimen collection.
3. Patient's full name.
4. Patient's date of birth.
5. Patient's gender.
6. Source(s) of specimen(s), e.g. "Right arm skin lesion".
7. Pertinent clinical history and/or ICD-9 code.
8. Test ordered: Check the "Biopsy Tissue" box at the bottom of the requisition for routine specimens or the "Frozen Section" box for frozen section.

For requests other than routine gross and microscopic examination, indicate the special request. Examples include flow cytometry and special stains such as microorganism stains.

Specimen containers with 10% buffered formalin and tubes of Flow Media are available upon request.

Report Time: Routine specimens: 1 business day after specimen arrival for most specimens; up to 3 business days for complicated specimens.
Frozen sections: 10-20 minutes after arrival in Laboratory.

Day(s) Set Up: Routine specimens: Monday through Friday
Frozen sections: Monday through Friday 8 AM – 5 PM. For evening or weekend frozen sections, call the Laboratory (258-6900) and ask to speak to the pathologist on call.

CPT Code(s): Printed on report.

PATHOLOGY- SLIDE CONSULTATION

Includes: Pathologist's Review of Slide(s) Submitted by Client and Pathology Report.

Specimen Requirements: Submit slide(s) and a copy of the outside Pathology Report. An additional charge will be made if additional slides must be made from the original block(s).

Complete a pathology requisition. The following information must be included on the requisition:

1. Name of ordering practitioner.
2. Patient's full name.
3. Patient's date of birth.
4. Patient's gender.
5. Source(s) of specimen(s), when appropriate.
6. Pertinent clinical history and/or ICD-9 code, including results of latest CBC for bone marrow consults.
7. Test ordered: Check the "Slide Consult" box on the requisition.

Report Time: 1 business day after slides received for most consults.

Day(s) Set Up: Monday through Friday

CPT Code(s): Printed on report.

PATHOLOGY- SLIDE PREPARATION

Includes: Sectioning of Tissue Specimen, Slide(s) Prepared and Stained; Slide(s) and Paraffin Block(s) Returned to Client.

Specimen Requirements: Immerse the tissue completely in a leak-proof container with 10% buffered formalin. Label the container with the patient's name, at least one additional identifier such as date of birth, and source of specimen. Multiple specimens from the same patient must be individually labeled. Indicate any special handling such as specimen orientation.

Complete a pathology requisition. The following information must be included on the requisition:

1. Name of ordering practitioner.
2. Patient's full name.
3. Patient's date of birth.
4. Patient's gender.
5. Source(s) of specimen(s).
6. Test ordered: Check the "Slide Prep / Rect" box on the requisition.

Report Time: N/A. Slide(s) and paraffin block(s) available in 1 business day.

Day(s) Set Up: Monday through Friday

CPT Code(s): 88399

PATHOLOGY- SPECIAL STAINS

Includes: Preparation and Staining of Slide(s) with a Specified Stain, Pathologist Interpretation, and Report.

Specimen Requirements: For external cases: Submit a paraffin block.

For St. Mary's cases: Call the Pathology Transcriptionists (258-6914) with the appropriate case number and desired special stain(s). The special stain results will appear as an addendum to the original surgical pathology report whenever possible.

Some of the special stains offered at St. Mary's include the following:

1. Many immunohistochemical stains, including *Helicobacter pylori* and estrogen/progesterone receptor stains.
2. Bacteria stain: Brown and Brenn Gram stain.
3. Fungal stains: GMS, PAS-D
4. Acid fast bacilli stains: Ziehl-Neelsen, fluorescent AFB.
5. For a full list of special stains, please contact the Pathology Laboratory (258-6929).

For external cases, complete a pathology requisition. Pathology requisitions and blocks must be labeled with identical information for positive patient identification. The following information must be included on the requisition:

1. Name of ordering practitioner.
2. Patient's full name.
3. Outside pathology case number.
4. Patient's date of birth.
5. Patient's gender.
6. Source of specimen, when appropriate.
7. Pertinent clinical history, when appropriate.
8. Test ordered: Specify the desired special stain(s).

Report Time: 1 business day for most special stains.

Day(s) Set Up: Monday through Friday

CPT Code(s): Printed on report.

PERIPHERAL BLOOD SMEAR CONSULT

Specimen Requirements: Submit 2 unstained slides with Lavender Top (EDTA) tube and pertinent clinical history. Include most recent CBC results with instrument printouts.

Note: Preliminary evaluation includes a CBC. If CBC results are not included, a CBC will be performed and charged by St. Mary's Lab.

Performed and you will be charged for a CBC and Peripheral consult.

Reference Range: Pathologist interpretation of slides and clinical information submitted.

Report Time: 48 Hours

Day(s) Set Up: Monday through Friday

CPT Code(s): 85060

pH FLUID

Specimen Requirements: 1.0 mL fluid in red top tube. Send to lab immediately on ice.

Reference Range: No normals established
Report Time: 48 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 83986

pH GASTRIC

Specimen Requirements: 0.5 mL fluid in a leak proof container. (red top is adequate)
Reference Range: 0.9 - 1.5
Report Time: 48 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 83986

pH VENOUS

Specimen Requirements: One 3 mL green top tube, unopened and unspun. Unspun PST is also acceptable. **Deliver on ice within 4 hrs.**
Reference Range: 7.30 - 7.40
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 82800

PHENCYCLIDINE SCREEN

Specimen Requirements: 2 mL urine
Reference Range: None Detected
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 80101

PHENOBARBITAL

Specimen Requirements: 0.5 mL serum (red). **Do not use SST.**
Reference Range: Therapeutic: 15.0 - 40.0 ug/mL
Report Time: 24 Hours
Day(s) Set Up: Monday through Sunday
CPT Code(s): 80184

PHENYTOIN (DILANTIN)

Specimen Requirements: 0.5 mL serum (red). **Do not use SST.**

Reference Range: Therapeutic: 10.0 - 20.0 $\mu\text{g/mL}$

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 80185

PHOSPHORUS

Specimen Requirements: 1.0 mL plasma (green or PST). Fasting preferred. **Avoid hemolysis.**

Reference Range: 2.2 - 4.3 mg/dL
Refer to Addendum #5 for additional reference ranges.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 84100

PLATELET COUNT AUTO (REV 08/05/08)

Specimen Requirements 1 lavender top tube or 1 EDTA microtainer and 2 labeled blood smears.
See "Specimen handling - Hematology specimens"

Reference Range: 150 - 450 X 10³/ uL

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code: 85032

POTASSIUM

Specimen Requirements 1.0 mL plasma (green or PST). **Avoid hemolysis.**

Reference Range: 3.5 – 5.1 mmol/L

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code: 84132

POTASSIUM URINE RANDOM

Specimen Requirements 10 mL of random urine.

Reference Range: No reference ranges established.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code: 84133

POTASSIUM URINE TIMED

Specimen Requirements: 10 mL aliquot of a 24 hour urine collected without preservatives, **refrigerate during collection.** Record 24 hr. volume on requisition.

Reference Range: 25 - 100 mmol/24 hrs.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 84133

PREALBUMIN

Specimen Requirements: 1 mL serum (red or SST). Avoid hemolysis and lipemia.
Reference Range: 18-38 mg/dL
Report Time: 24 - 96 Hours
Day(s) Set Up: Monday through Friday
CPT Code(s): 84134

PROLACTIN

Specimen Requirements: 1 mL serum (red or SST). Collect 3-4 hours after patient has awakened. **Freeze if stored longer than 48 hours.**
Can only be frozen once.

Reference Range:

Males:		2.1 - 17.7 ng/mL
Females:	Nonpregnant	2.8 - 29.2 ng/mL
	Pregnant	9.7 - 208.5 ng/mL
	Post menopausal	1.8 - 20.3 ng/mL

Report Time: 24 - 96 Hours
Day(s) Set Up: Monday through Friday
CPT Code(s): 84146

PROSTATIC SPECIFIC ANTIGEN (PSA)

Specimen Requirements: 1 mL serum (red). **Avoid hemolysis. Freeze if stored longer than 24 hours.** Can be frozen only once.

AGE (yrs)	PSA upper limit (ng/mL)
40-49	<1.6
50-54	<2.4
55-59	<3.1
60-64	<3.3
65-69	<4.3
70-74	<5.3
75-79	<6.0
80+	<5.9

Report Time: 48 Hours
Day(s) Set Up: Monday , Wednesday, Friday
CPT Code(s): 84153

PROSTATIC SPECIFIC ANTIGEN (PSA) SCREEN

Specimen Requirements: 1 mL serum (red). **Avoid hemolysis. Freeze if stored longer than 24 hours.** Can be frozen only once.

AGE (yrs)	PSA upper limit (ng/mL)
40-49	<1.6
50-54	<2.4
55-59	<3.1
60-64	<3.3
65-69	<4.3
70-74	<5.3
75-79	<6.0
80+	<5.9

Report Time: 48 Hours
Day(s) Set Up: Monday, Wednesday, Friday
CPT Code(s): G0103

PROTEIN CSF

Specimen Requirements: 0.5 mL CSF. **Deliver within 6 hours.**
Reference Range: 12 - 60 mg/dL protein
Report Time: 24 Hours
Day(s) Set UP: Monday through Sunday
CPT Code(s): 84157

PROTEIN ELECTROPHORESIS

Specimen Requirements: 1.5 mL serum (red top/ SST). Fasting preferred. **Avoid hemolysis.**
Reference Range: Included with report.
Report Time: 24 - 96 hours
Day(s) Set Up: Monday, Wednesday, Friday
CPT Code(s): 84165

PROTEIN ELECTROPHORESIS CSF PANEL INCLUDES OLIGOCLONAL BANDING

Specimen Requirements: 3 mL CSF (minimum) and 1 mL serum (red top/ SST). **Avoid hemolysis.**
Reference Range: Included with report.
Report Time: 24 - 96 hours

Day(s) Set Up: Monday through Friday
CPT Code(s): Protein electrophoresis 84166
Oligoclonal bands 83916

PROTEIN ELECTROPHORESIS URINE

Includes Bence-Jones protein

Specimen Requirements: 20 mL aliquot of a 24 hour urine collected without preservatives. Refrigerate during collection. Record 24 hour urine volume on Requisition.

Reference Range: Included with report.

Report Time: 24 - 96 hours

Day(s) Set Up: Monday, Wednesday, Friday

CPT Code(s): 84166

PROTEIN FLUID

Specimen Requirements: 3 mL fluid in green or red top.
Specimens cannot be analyzed if too viscous.

Reference Range: No reference range established

Report Time: 24 Hours

Day(s) Set UP: Monday through Sunday

CPT Code(s): 84157

PROTEIN TOTAL

Specimen Requirements: 1.0 mL plasma (green or PST). Fasting preferred.
Avoid hemolysis.

Reference Range: 6.3 - 8.5 gm/dL
Refer to Addendum #5 for additional reference ranges.

Report Time: 24 Hours

Day(s) Set UP: Monday through Sunday

CPT Code(s): 84155

PROTEIN URINE RANDOM

Specimen Requirements: 10 mL aliquot of random urine.

Reference Range: No reference range established.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code: 84156

PROTEIN URINE TIMED

Specimen Requirements: 10 mL aliquot of a 24 hr. urine. **During collection refrigerate or add 1.5 gm boric acid. Record 24 hr. volume on requisition.**

Reference Range: < 0.165 gm/24 hrs.

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 84156

PTH INTACT (PARATHYROID HORMONE)

Specimen Requirements: 1.5 mL serum (SST or Red). Freeze if stored longer than 48 hrs.

Reference Range: PTH Intact: 14-72 pg/mL
Calcium: 8.6-10.2 mg/dL

Interpretation:	<u>iPTH</u>	<u>Calcium</u>
Normal Parathyroid Function	14-72	Normal
Hypoparathyroidism	<28	Low
Primary Hyperparathyroidism	>65	High
Secondary Hyperparathyroidism	>65	Normal or Low
Non-Parathyroid Hypercalcemia	<28	High

Report Time: 1-3 Days

Day(s) Set Up: Monday through Friday

CPT Code(s): 83970

PT-INR

Specimen Requirements: 1 mL citrated plasma (blue). **Samples in citrate tubes are acceptable when refrigerated, unopened, and unspun for 24 hours. If testing will not be completed within 24 hours, centrifuge at 2500-3000 RPM for 10 minutes. Carefully separate plasma. Label tube "citrate plasma" and Freeze. Note: Anticoagulant: Blood ratio must be adjusted for hematocrits > 55%. See "Specimen Handling-Citrated Plasma".**

Reference Range: INR: 0.89 - 1.11

Therapeutic Range: INR: 2.0 - 3.0
2.0 - 3.5 (for patients with prosthetic heart valves)

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): 85610

PT PTT

Specimen Requirements: 1 mL citrated plasma (blue). **Centrifuge immediately at 2500-3000 RPM for 10 minutes. Separate plasma. Label tube "citrate plasma". Deliver on ice within 4 hours. Freeze if stored longer than 4 hrs. Note:Anticoagulant: Blood ratio must be adjusted for hematocrits > 55%. See "Specimen Handling - Citrated Plasma".**

Reference Range: INR 0.89 - 1.11
PTT 26 - 40 seconds

Therapeutic Range: INR 2.0 - 3.0
2.0 - 3.5 (for patients with prosthetic heart valves)

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday

CPT Code(s): PT 85610
PTT 85730

PTT

Specimen Requirements: 1 mL citrated plasma (blue). **Centrifuge immediately at 2500-3000 RPM for 10 minutes. Carefully separate plasma. Label tube "citrate plasma". Deliver on ice within 4 hours. Freeze if stored longer than 4 hours. Note: Anticoagulant: Blood ratio must be adjusted for hematocrits > 55 %. See "Specimen Handling-Citrated Plasma".**

Reference Range: 26- 40 seconds

Report Time: 24 Hours

Day(s) Set Up: Monday through Sunday
CPT Code: 85730