Policy Statement	Laboratory personnel are responsible for ensuring that all samples submitted are acceptable, processed and stored to keep the integrity necessary for testing.
Purpose	This procedure provides the instructions on how to handle a reference lab samples.
Scope	This procedure applies to all reference lab samples. This includes but is not limited to the departments GS, CS, HS and IR.
Responsibility	This procedure applies to all lab associates that receive reference lab samples. This group includes but is not limited to Referral Testing Technician, Lab Assistants, Medical Technologists and Lead TEchnologists.

Definitions

- Whole blood: Any unmodified collected blood.
- Plasma: The liquid component of blood, in which the blood cells are suspended. Plasma is prepared simply by spinning a tube of fresh blood that contains anticoagulant in a centrifuge until the blood cells fall to the bottom of the tube. The blood plasma is then poured or drawn off.
- Serum: Plasma without fibrinogen or the other clotting factors.
- Aliquot: A portion of a total sample that has been removed.

Information Sources

There are numerous information sources for processing a reference lab sample. The following are the appropriate sources. Information should be taken from the sources in the given order. (i.e. always check the first source before looking in other areas.)

1. Sendout Info icon – desktop icon located on designated computers in the laboratory that contains information for all of the tests that we currently reference out to other labs.
2. Online Test Search – a searchable test database located on the laboratory web page of the intranet.(www.testmenu.com/stagnes)
3. ARUP System 2000® - a computer located in the sendout area that contains a searchable database for all test offered by ARUP Laboratory.
4. ARUP Client Services (1-800-577-2787) – a customer service line that is manned 24/7 by client services at ARUP Laboratory.
5. Quest Client Services (1-800-336-3718) – a customer service line that is manned by client services at Quest Diagnostics.

Sample Assessment

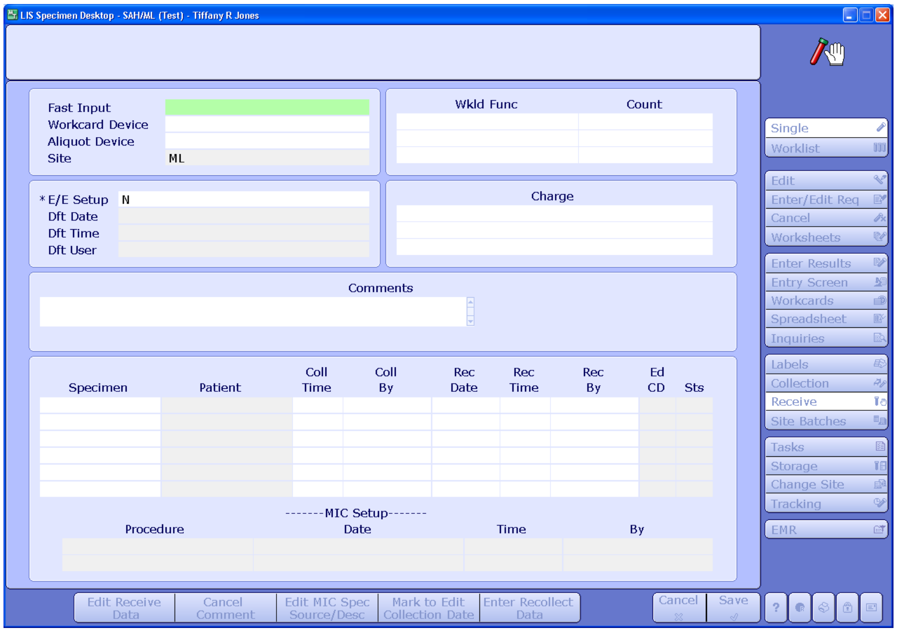
All samples must be checked for appropriate integrity. The following items must be reviewed for each sample.

1. Samples must be labeled with a specimen label or chart label.
2. All samples must be signed and timed by the person that collected the sample.
3. There should be no visible contamination on the outside of the sample container.

*Samples that do not meet the above criteria should be rejected. The patient care area must be notified that the sample is not acceptable. Cancelations need to be documented in Meditech with the name of the person notified of the cancelation.

Sample Receipt

1. Log into Meditech.
2. Choose the Laboratory application.
3. Choose the SAH facility.
4. Choose the Specimen Desktop.
5. Select Receive.
6. Choose by Specimen.
7. Go to the first available Specimen line.
8. Enter the specimen information by scanning the label or typing the information.
9. Enter the collection date that is written on the label.
10. Enter the Meditech ID for the person that collected the specimen. Enter NLP for any associate that is non-laboratory whose signature is illegible.
11. Press enter to get the next available Specimen line.
12. Repeat steps eight through ten for all samples that need to be received.
    Press F12 or click SAVE to file the sample receipt.



Sample Processing

Refer to the Sendout Info icon for information on processing each test that is listed on the label. Read all information listed for each test.

- Any test that requires serum or plasma needs to be centrifuged.
- Any test that requires whole blood should be left unmodified.
- Any sample that requires a Universal Transport Media needs to be placed in the media using a pipette.

Specimens with Additives

Some reference lab test require additive to the samples after collection. (Refer to the Sendout Info icon for specific test information.)

<u>Acid or Base Addition:</u>

1. Remove an aliquot of the original sample.
2. Add a small amount of the acid or base.
3. Use pH paper to check the new pH.
4. If the sample is at the appropriate pH save the sample.
5. If the sample is not at the appropriate pH add more acid/base to get to the correct pH. It may be necessary to add more of the original sample if too much acid/base was added initially.

Sample Aliquotting

Use the following steps for each sample that needs to be aliquotted.

1. Log into Meditech.
2. Choose the Laboratory application.
3. Choose the SAH facility.
4. Choose the Specimen Desktop
5. Select Labels.
6. Choose Individual sample.
7. Enter the sample by scanning the label or typing the information manually. Repeat for all necessary samples.
8. Press F12 or click OK.
9. Press Enter to print the label.
10. Label the sample aliquot tube. The standard transport tube should be used for aliquotting unless there are specific instructions for another tube.
11. Initial the original container and the aliquot tube legibly.
12. Add the sample to the aliquot tube with a pipette or by pouring the sample. Never add a sample into an unlabeled container. Never mix sample types in one container. (i.e. serum and plasma) Never return an aliquot to the original container. **All serum and plasma samples need to be aliquotted into a tube. Do not leave samples on the cells or gel barriers.**
13. **For Urines** – Write the total sample volume on the container for all urine samples. Write “Random” for all random collections and “#### mL” for 24 hr collections. Ten mL of each 1000mL of a 24 hour urine collection received should be mixed together and retained in a 50mL conical container. In the event that more than 5000mL of urine is received, five mL for each 1000mL of urine should be retained.

Available Aliquot Tubes

The following tubes are available for sample aliquotting.

1. Standard Transport Tube
2. Amber Transport Tube
3. Trace-Free Metal/Acid Washed Tube
4. Sterile Transport Tube
5. Conical Urine Container
6. Universal Transport Media (UTM)
7. Serotonin/Vitamin C Aliquot Containers


Standard


Amber


Trace-Free


Sterile


Conical


UTM


Ser/Vit. C

Sample Storage

1. Locate the mnemonic for the test(s) that are on the label of the given sample.
2. Search for the test(s) on the Sendout Info icon on the computer desktop.
3. The minimum volume is listed. This volume does not allow for possible repeat testing at the reference lab. More sample should be supplied, if possible.
4. Read the Comments column for the test. The default storage temperature is refrigerated. If no other temperature is listed, then refrigerate the sample. If a different temperature is noted, store the sample as indicated. (e.g. Room Temperature or Freeze)
5. It is necessary to make multiple aliquot tubes if there are multiple frozen samples or if one tube is required to be saved at multiple temperatures.
6. Store all tubes in the provided racks at the appropriate temperature. Do not put samples in the courier pick-up bins.
7. All samples received during off shifts need to be initialed by the person processing the sample prior to storage.

Related Documents

SEND 6000 J Sendout Info. Icon
SEND 6000 Jb Processing Miscellaneous Quest Testing
SEND 6000 Jc Processing Oxford Diagnostics Laboratories Samples
CORE 6055 R Splitting and Aliquoting Specimens

Policy Statement	STAT reference lab testing is used for special tests in which the results could have an immediate effect on patient care.
Purpose	Associates must know how to correctly process a STAT reference lab test in order to ensure timely and accurate results.
Scope	This document establishes the proper procedure to process STAT reference lab testing. This procedure is intended for use with all of the appropriate reference laboratories including but not limited to Quest Diagnostics, Kennedy Krieger and John Hopkins Hospital.
Responsibility	It is the responsibility of the associates to ensure that these steps are completed accurately as outlined in the following procedure.
Related Documents	LADM 12022 Q Packaging and Shipping Specimens SEND 6000 R Handling a Reference Lab Specimen SEND 6010 R Shipping Specimens using a Courier

Processing a STAT Reference Lab Test

1. Receive Specimens
2. Process specimen based on requirements of the reference lab (i.e. spin, refrigerate, freeze, leave as whole blood, etc.)
3. Save all specimens in the appropriate containers (i.e. the transport vials with screw caps, the navy blue capped conical tubes, or the amber vials)
4. Complete a Handwritten Requisition. Include Date of Request, Collection Time, Collection Date, Date of Birth, Sex, Test Name and Test Number. In the comments section of the requisition include the test accession number. If there are applicable sample comments, they should be transcribed on the requisition. (e.g. JP Drain #2)
5. Attach a label on the requisition and the carbon copy. Make a copy of the requisition if it is not a carbon.
6. In the appropriate Log Book; attach a label, write your name, and the current time.
7. Call for courier pick-up (see details in Courier Contact Information section). You will be required to give your name and the account number to the representative. Ask for a Stat Pick-up. Record the confirmation number and the representative's name in the Log Book.
8. Place the specimen and the top copy of the requisition in the biohazardous transport bag. Retain a copy of the requisition in the Log Book.

9. Place the specimen in the appropriate courier pick-up area.

Instrument Downtime

In the event of an unexpected instrument downtime in the Core Lab, specimens can be sent out STAT to Johns Hopkins Hospital. The need for this service must be determined and approved by the Lead Tech or Medical Technologist in charge. All steps listed above should be followed for each specimen.

Courier Contact Information

For Quest Diagnostics:

1. Call Client Services at 1-866-697-8378, option 1, option 6 to request pickup.
2. Provide the Client Service Rep. with the account number (84562) and the STAT test code.

For Johns Hopkins Hospital (Sent via Rapid Response):

1. Call Rapid Response at 410-281-9060.
2. Give the representative the account number (STAGNS).
3. Give the representative the address that the sample is being sent.

(Johns Hopkins Customer Service, Sheikh Zayed Tower, 1800 Orleans St., Room B-1073, Baltimore MD 21287)

Policy Statement	It is the policy that Genetic Testing can be ordered on any patient as deemed necessary by the physician or pathologist.
Purpose	Associates must know how to properly request Genetic testing in order to achieve and document the appropriate results.
Scope	This document establishes the proper procedure to test request Genetic testing. This procedure is intended for use with all of the appropriate reference laboratories including but not limited to Neogenomics, Signature Genomics and Integrated Oncology/Genetics.
Responsibility	It is the responsibility of the associates in the Send Out Area to ensure that these steps are completed accurately as outlined in the following procedure.
Related Documents	SEND 6000 R Handling a Reference Lab Specimen SEND 6000 J Sendout Info. SEND 6002 R Order Entry SEND 6012 R Shipping Specimens using a Courier

Contents

Hematopathology Testing

Hematopathology is the branch of pathology which studies diseases of hematopoietic cells. Testing can be performed on peripheral blood or bone marrow. In rare cases body fluid samples are applicable for testing. All hematopathology cases are sent to Neogenomics, unless otherwise noted and approved by the Medical Director.

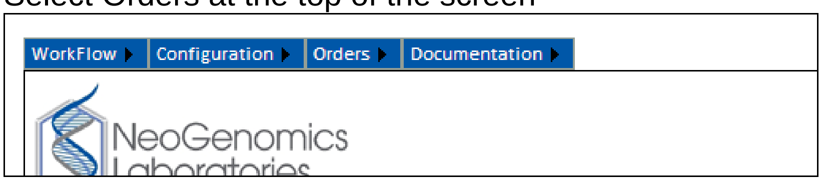
Meditech Order Entry

Associates should follow refer to the SEND 6002 R Order Entry procedure for instructions on how to order all tests in Meditech. Tests should be ordered by the mnemonics listed on SEND 6000 J Sendout Info. The testing mnemonic for interactive Flow Cytometry is iFLOW and FLOW for Flow Cytometry with interpretation. Interactive Flow Cytometry is the default order unless otherwise instructed by a pathologist.

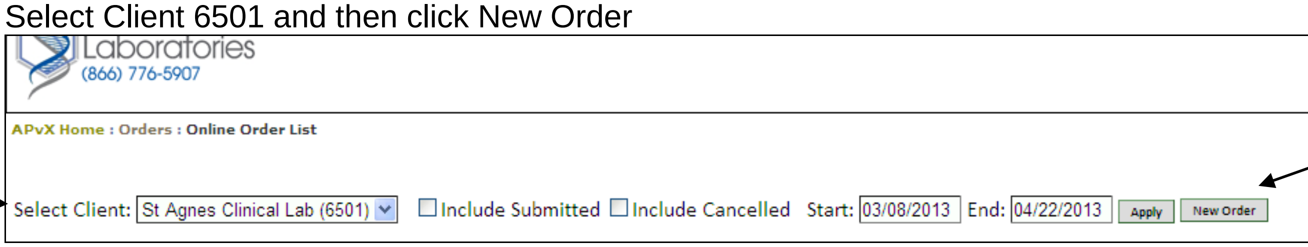
Order Entry Online

Associates are required to order all tests for Neogenomics online, unless there is an issue with the computer system. Associates should log into the online system at https://lis.neogenomics.com. The login name is tjones1.

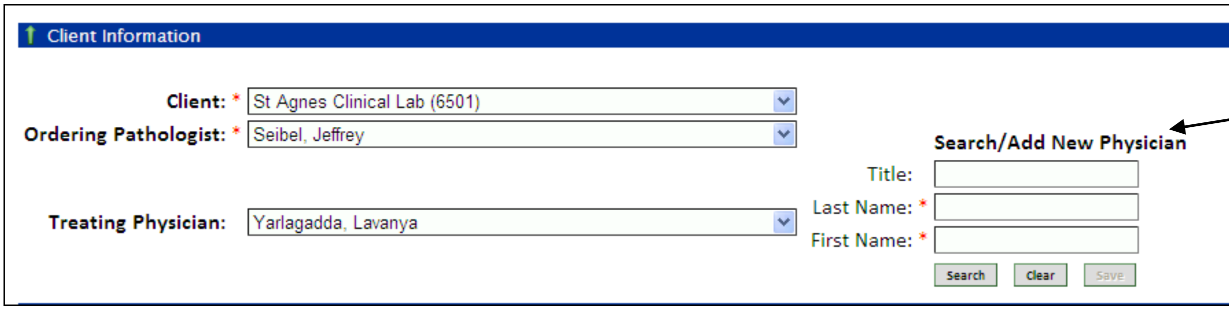
1. Select Orders at the top of the screen



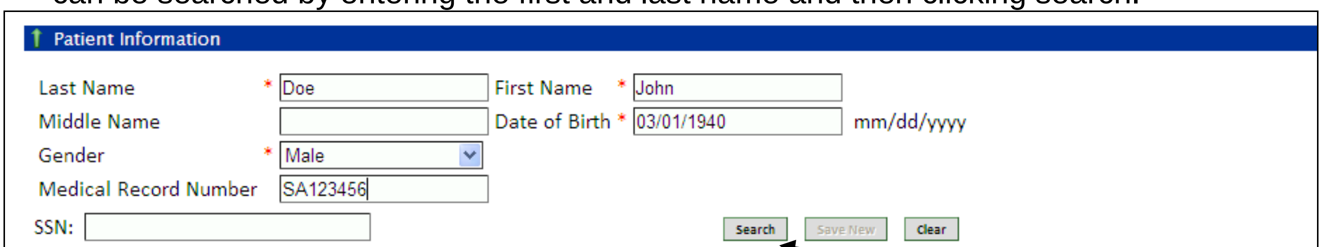
2. Select Client 6501 and then click New Order



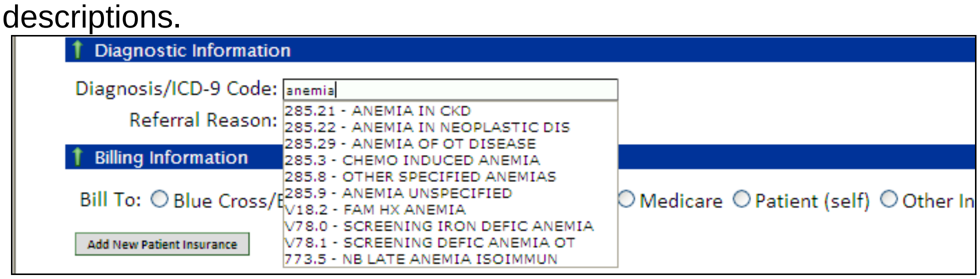
3. Enter in the Client 6501, Ordering Pathologist and Treating Physician. If the Treating Physician is not listed in the drop down menu, the information can be added in the Search/Add new Physician section.



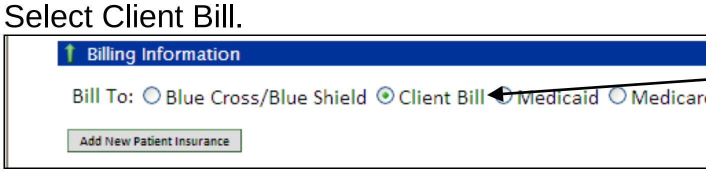
4. Enter in the patient demographics. Previous patient data is saved in the system and can be searched by entering the first and last name and then clicking search.



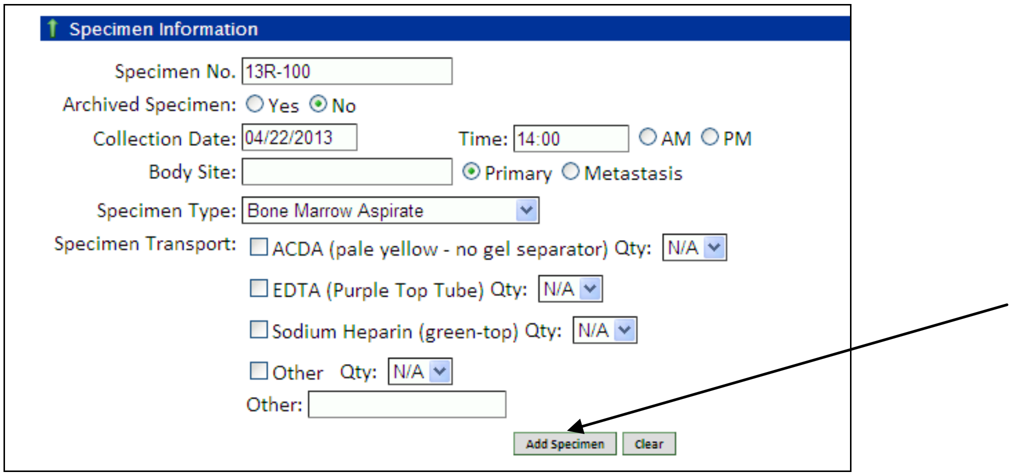
5. Enter in the Diagnostic Information. The system will search ICD-9 codes or descriptions.



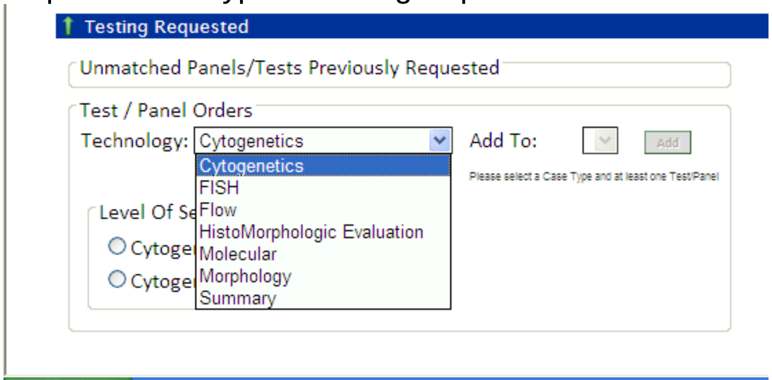
6. Select Client Bill.



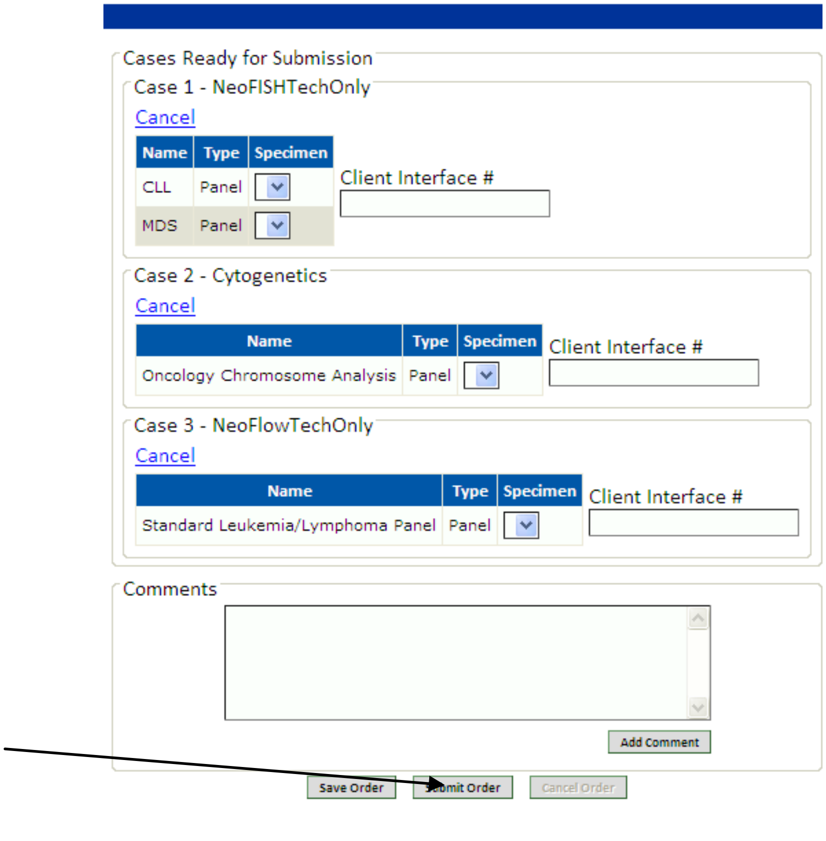
7. Enter in the Specimen Information. The Specimen No. should be the R number if applicable. If no R number is generated the HS number should be entered. Collection Date and time are required. Choose the Specimen type and then select the tube type and quantity being sent. Select Add Specimen once all information is added. If you are sending more than one type of sample repeat steps for each sample type.



8. Select the Testing Requested. Choose from Cytogenetics, FISH, Flow or Molecular. Each test type will open to additional information section. See SEND 6000J for assistance in selecting the correct test. After selecting the test click Add. Repeat steps for each type of testing required.



9. After adding all tests, review the order and then Submit. If any required information has not been entered the system will not let you submit the order.



10. Sample manifests should be printed in duplicate.
11. In the event of an issue with the computer system hand written requisitions should be utilized. All required fields should be completed.
12. Send a secure email to outside pathologist, when applicable. (See SEND 6008 J Providing Outside Pathologists Patient Information for detailed instructions.)

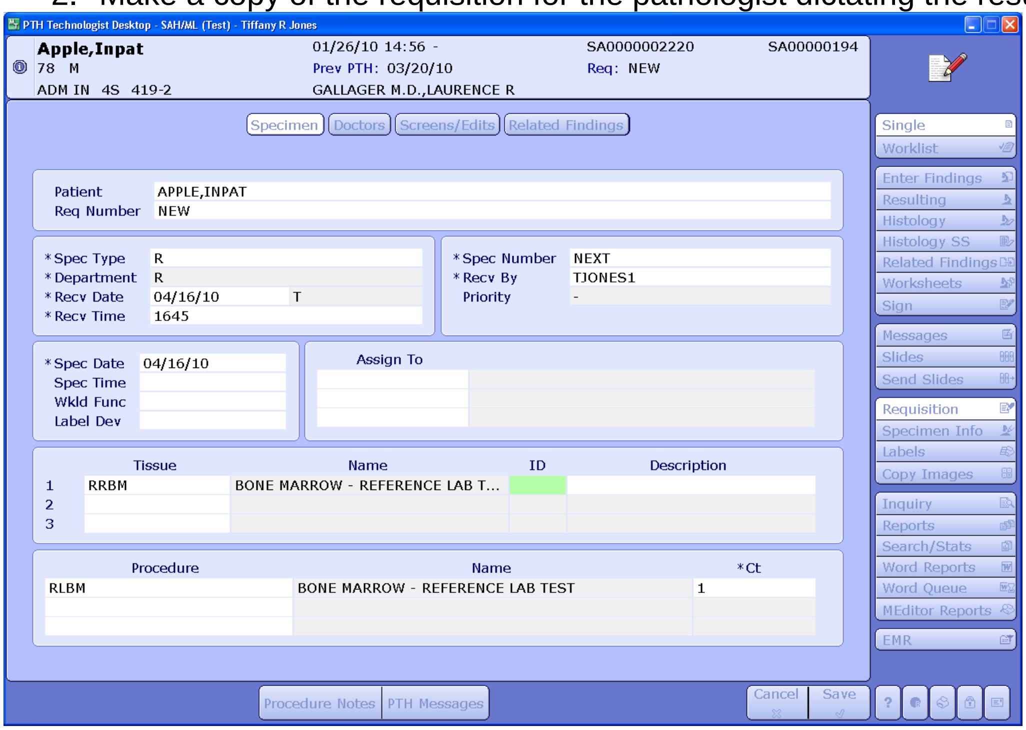
Additional Requirements for Interactive Flow Cytometry Testing

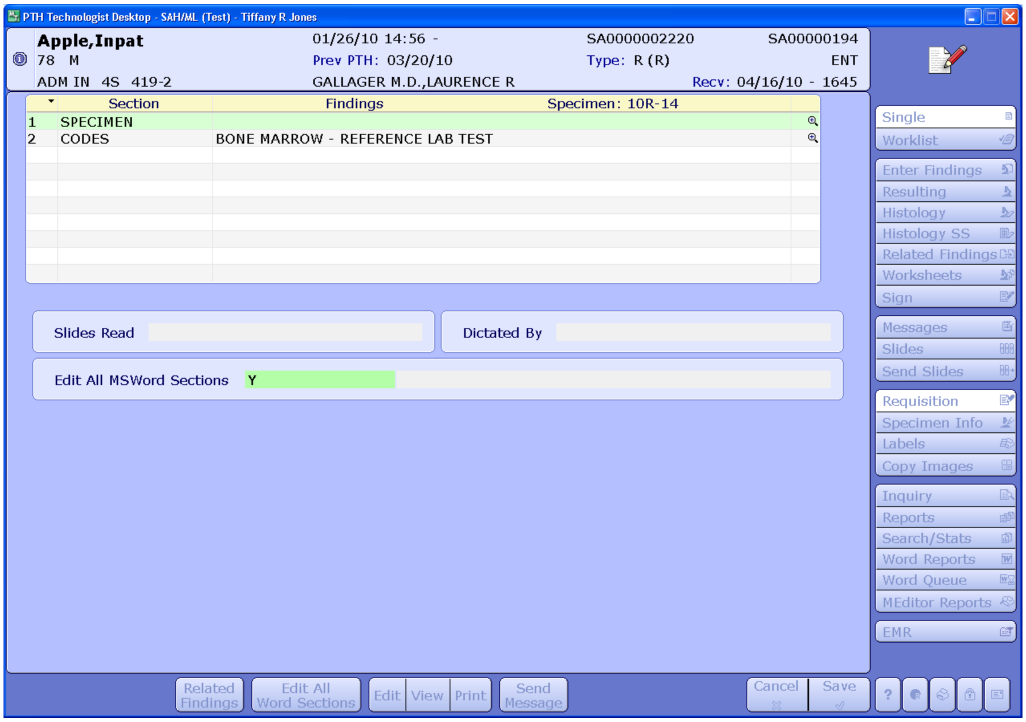
The following steps should be followed for every sample for Interactive Flow Cytometry.

1. <u>Enter a PTH (Pathology) Requisition</u>
    a. Go to Enter/Edit PTH Requisition on the Lab Application menu.
    b. Enter the patient's name, account number, or medical record number.
    c. Let REQ # Default to "NEW."
    d. At Sp Type enter "R."
    e. At Dept enter "R".
    f. At Spec Date enter Today's Date or "T."
    g. At Tissue 1 enter:

b. RRBM for Bone Marrow
c. RRBLD for Peripheral Blood
d. RRURN for Urine
e. RRAMN for Amniotic Fluid
f. RRCSF for Cerebrospinal Fluid
a. Press F12 or click on SAVE.
b. At the next screen, make sure that specimen is highlighted and click on Edit all Microsoft Word Findings.
c. At the next screen press F12.
d. Once the Microsoft Word Window pops type in a description for the test that you are ordering. (i.e. Bone Marrow for Chromosomes, Peripheral Blood for Chromosomes, etc.)
e. F12 to save Microsoft Word findings.
f. F12 to save PTH Req.

2. Make a copy of the requisition for the pathologist dictating the results.





Specimen Packaging and Transportation

All hematopathology samples should be packaged in the designated Neogenomics kits. All kits should be packaged with the sample, manifest or handwritten requisition and the cool pack. Prepared kits should be left in the designated area in Specimen Processing to be picked up by the courier.

Prenatal/Neonatal Testing

Prenatal Testing

Prenatal Testing is testing for diseases or conditions in a fetus or embryo before it is born. The aim is to detect birth defects, chromosome abnormalities, genetic diseases and other conditions. Testing can be performed on fetal, maternal and paternal samples. Sample types include peripheral blood, amniotic fluid or chorionic villus samplings. The default reference laboratory for prenatal testing is Signature Genomics. In rare cases samples are sent to Integrated Genetics. These cases will be arranged with the genetics counselor.

Neonatal Testing

Neonatal Testing is testing for diseases or conditions in a neonate. The aim is to detect birth defects, chromosome abnormalities, genetic diseases and other conditions. The sample type is peripheral blood. The default reference laboratory for prenatal testing is

Signature Genomics. In rare cases testing can be performed on children up to the age 18.

Prenatal/Neonatal Requisitions
All tests must be order in Meditech. See Hematopathology Meditech Order Entry section. A handwritten requisition must be completed for every patient. In some cases the prenatal requisitions will come with the sample, pre-filled by the genetics counselor. In all other cases, complete a handwritten requisition including the following information:

- Date of Birth
- Patient Name
- Patient Sex
- Accession Number
- Ordering Physician*
- Ordering Physician Information*
- Genetic Counselor*
- Genetic Counselor Contact Information*
- Indication for testing
- Sample Information
- Test(s) Requested
- Billing Information*

*Information is pre-printed on the Saint Agnes requisitions.

Specimen Packaging and Transportation
All prenatal/neonatal samples should be packaged in the designated Signature Genomics kits. All kits should be packaged with the sample and handwritten requisition. Prepared kits should be packaged for shipment using FedEx and left in the designated area in Specimen Processing to be picked up by the courier.

Miscellaneous Testing

In all cases that do not fit in the above scenario, samples should be sent to Integrated Genetics. Associates must review SEND 6000 J for test mnemonics. See the Meditech Order Entry section for detailed instructions. Requisitions should be completed and samples should be transported as described in the Prenatal/NeonatalSpecimen section. There is a designated courier for Integrated Genetics.

Specimen Paperwork

For all specimen types, a copy of the requisition should be retained in the appropriate log book. The original physician requisition and any other pertinent information should be retained, when applicable.

Specimen Results

The laboratory does not have an interface with any of the genetic testing reference laboratories; therefore all results will need to be entered manually into Meditech.

Flow Cytometry Results:
Flow Cytometry tests will be dictated into the assigned pathology requisition. Once the requisition has been signed out, the order in the lab module should be resulted. Only tests that have the interpretation completed by the reference lab (FLOW) will be scanned into the patient's EMR.

All Other Test Results:
Once tests are complete the sample should be resulted in Meditech with the result ";$REFR2." (Producing the result comment – A detailed report from the reference lab performing the test will be scanned into the electronic medical record (EMR)). Upon completion, all reports will be scanned into the patient's EMR. See SEND 2000 Q Document Scanning for the appropriate form ID.

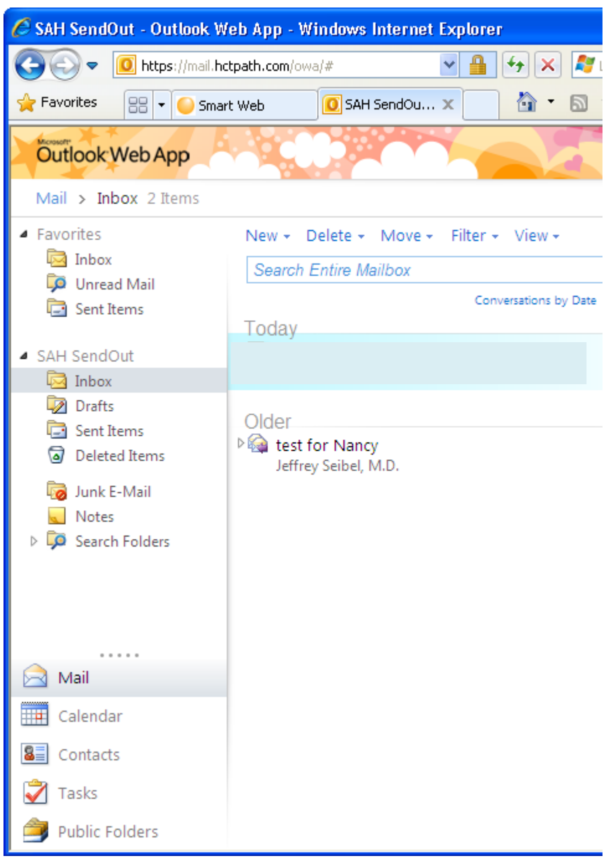
Alert Values
The reference laboratories determine which results are considered an alert value. Once informed of an alert value, the associate must communicate the result to the patient care area. This communication must be document in Meditech with the result. See LADM 6005Q Alert Value List and Notification process for details.

Individual tests results can be faxed to the physician if a request is made.

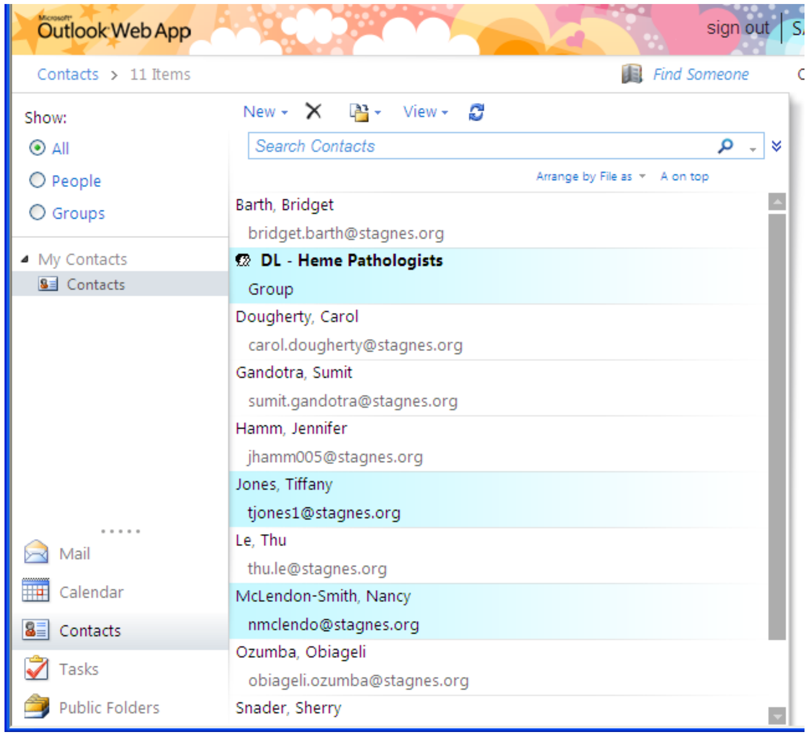
Providing Outside Pathologists Patient Information

The following steps must be completed in order to provide outside pathologists with the need patient information for result interpretation. These steps should be followed for any testing that is interpreted by a SAH or HCT pathologist in the absence of Dr. Seibel.

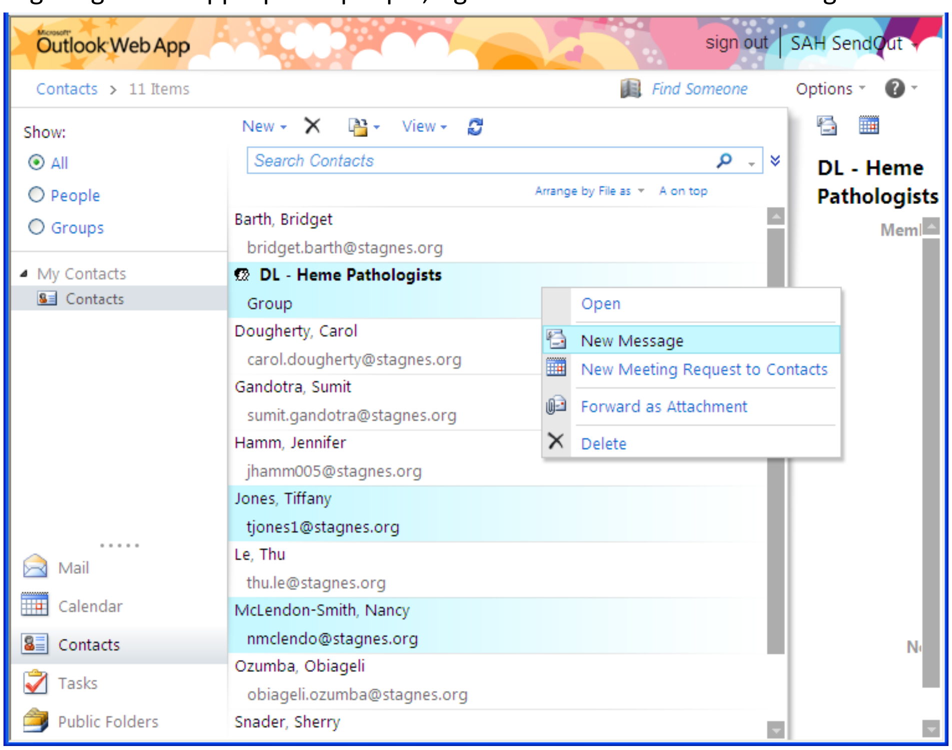
1. Order and process the samples as required by the reference laboratory.
2. Complete the HCT Hematopathology Consult Form. This form is found on the computer desktop in the Hemepath folder.
3. After completing the form, save the document in the Hemepath folder using the format Last name, Specimen number and test ordered (*e.g.* Jones 13R-27 flow).
4. Log into the HCT Web Email Server https://mail.hctpath.com/owa using the user name Sahsendout.
5. Select Contacts on the bottom left side of the screen.



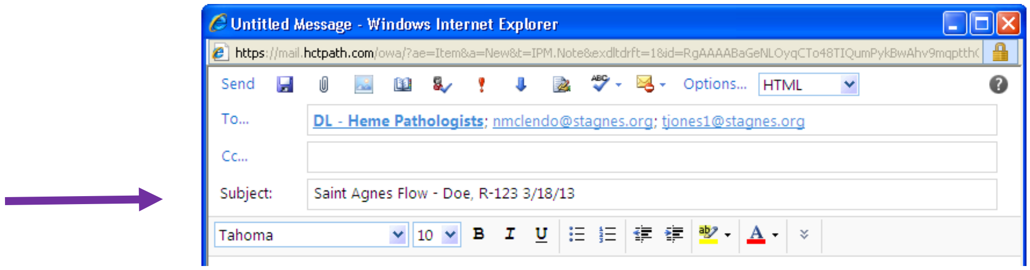
6. Select the following contacts by holding the CTRL key and clicking the names. They should all be highlighted.
    a. DL – Heme Pathologists
    b. Jones, Tiffany
    c. The technologists working the next day



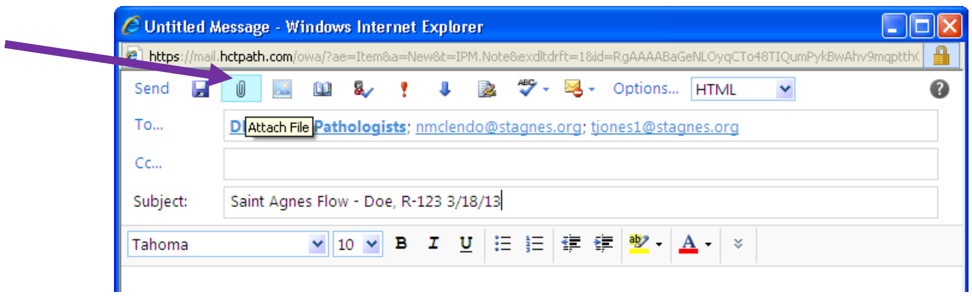
7. After highlighting all the appropriate people, right click and select New Message



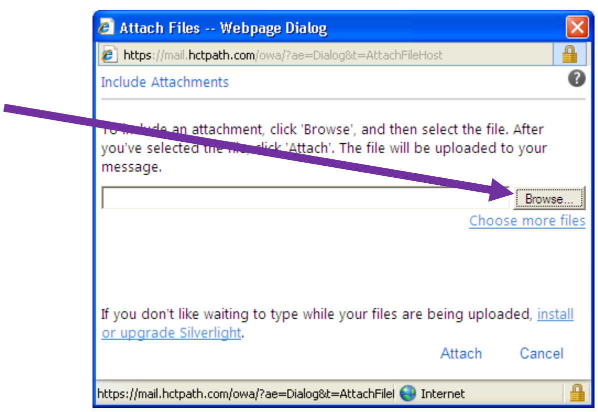
8. The subject line should say Saint Agnes [test type] – Patient Last Name, Accession Number and Todays' date

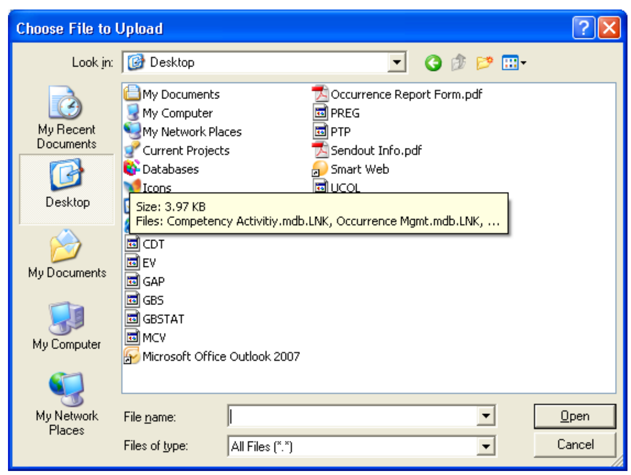


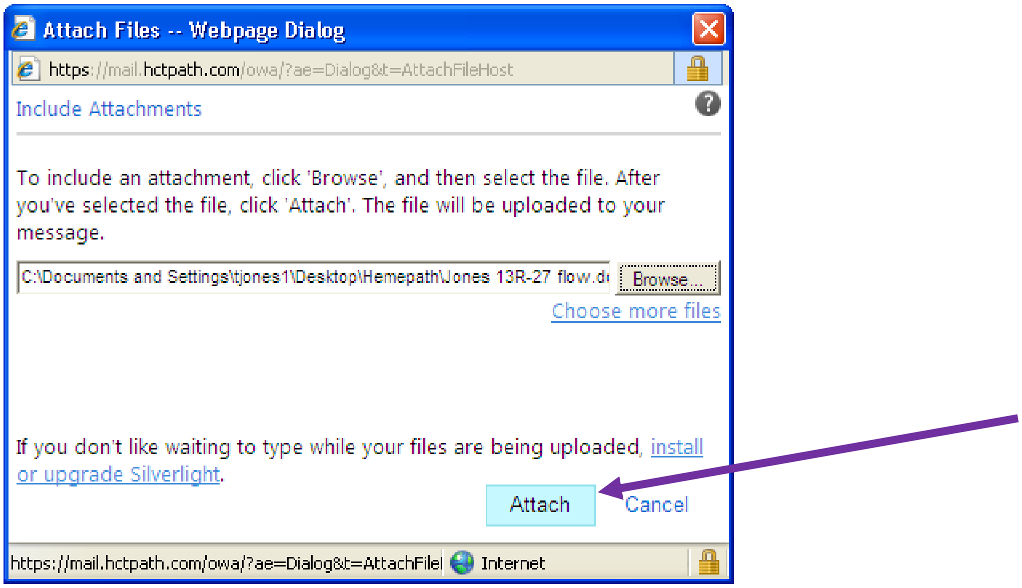
9. Click on the paperclip to attach your consultation form.



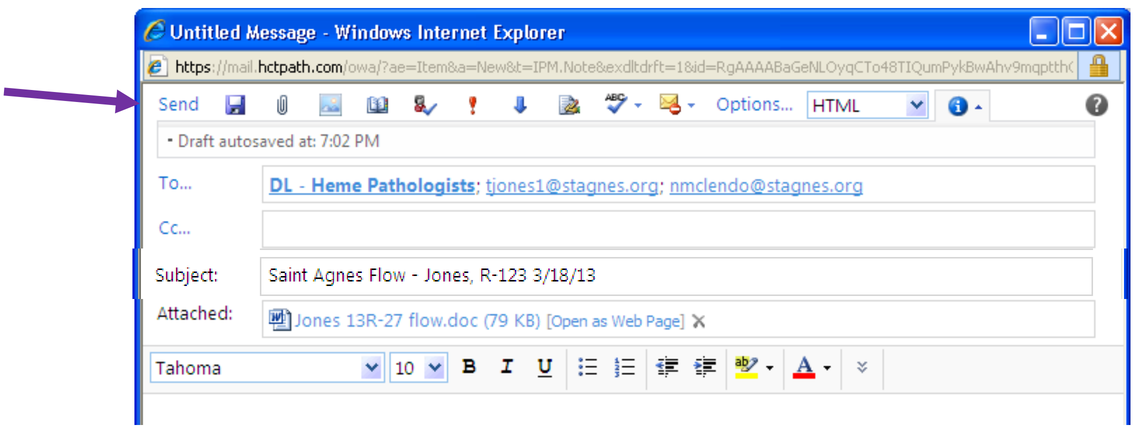
10. Click on Browse and find the Hemepath folder on the desktop. Identify the file that you created and double click and then click Attach.







11. The file will display on the screen. Click Send.



12. The email account should be reviewed often during the day to check to see if additional information is required or if the testing/interpretation is complete.
13. The completed interpretation will be sent back through email. Print out the Adobe file and give the report to the pathologist covering Dr. Seibel. (Usually Dr. Reed or Dr. Colandrea.)
14. Normal result verification and scanning procedures should be followed after the above steps are completed.