



Laboratory Communiqué

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The Laboratory Communiqué is a quarterly publication released by Billings Clinic Laboratory Services as an informational tool for medical staff and laboratorians.

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New Tests

Syphilis Screen

Test Code: 9028

CPT Code: 86780

LOINC Code: 63464-2

Syphilis Screen Algorithm

New Tests

Syphilis Assay (SYPH)

Laboratory Services has implemented a new immunoassay for syphilis on the Siemens Advia Centaur. This is an *in-vitro* diagnostic assay for the qualitative determination of antibodies to *Treponema pallidum* in human serum. The assay is a fully automated, antigen sandwich immune assay using direct chemiluminometric technology. *T. pallidum* recombinant antigens are used in this assay to complex with the antibodies in the sample.

Diagnosis typically is made by detecting one or more antibodies provoked by the syphilis infection. There are two known types of antibodies:

1. Non-treponemal antibodies or reagin, which reacts with lipid antigens (RPR, VDRL)
2. Treponemal antibodies which react with *T. pallidum*. (Syphilis antibody assays by EIA, CIA or TP-PA)

With the previous Syphilis Algorithm, a RPR was first performed and if reactive or equivocal, the specimen was reflexed to a VDRL and sent to a reference lab for confirmation and if reactive, a TP-PA.

With the implementation of the Siemens Centaur, we now run the SYPH assay for the treponemal antibodies and reflex reactive and/or equivocal SYPH results to the in-house non-treponemal antibody test, the RPR. If the RPR is reactive, a RPR titer will be performed for determining the level of antibodies in the patient specimen. Syphilis is a reportable Communicable Disease so reactive samples will be confirmed by the Montana State Lab. If the SYPH is reactive and the RPR is negative, the sample will be sent to the State Lab to resolve the discrepant results.

Specimen: Serum

Days Run: Daily

Interpretation: Non-Reactive

Reactive (will reflex to an RPR and Titer)

Equivocal (will reflex to an RPR and Titer)

Orderables for Syphilis Testing

1. Syphilis Screen
2. Syphilis Known – Test will prompt provider to select either a RPR or a VDRL
3. RPR included in the Pre-natal Panel is unchanged

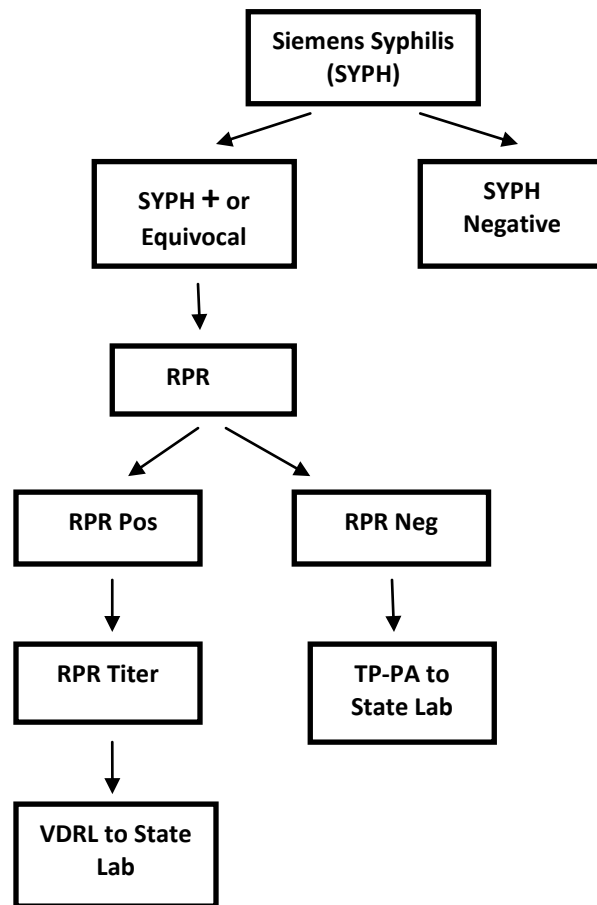
New Reference Ranges-Chemistry

Calcium
 Chloride
 ALT/SGPT
 AST/SGOT
 TSH

There are now two orderables based on patient status. If the patient has had a previous positive result and is being followed, the order is Syphilis Known. The provider will have the option of selecting a VDRL or RPR. If this is a patient with an unknown syphilis status, the Syphilis Screen should be ordered. A Syphilis Algorithm will be used and reflex testing will follow based on the initial results of the new Siemens Syphilis (SYPH) assay.

NOTE: The RPR test included in the Pre-Natal Panel is not affected by the new Siemens SYPH assay. Due to the bundled CPT codes and price reimbursement regulations, the RPR test included in this panel will not be replaced with the SYPH test.

Billings Clinic Laboratory Syphilis Screen Algorithm (Not for known syphilis cases)



Reference Range Changes

Chemistry Tests

In accordance with upgrades to our chemistry instrumentation in the laboratory, we are continuing to make reference range changes. As reference range studies are completed, we will roll out new or

Coming-New Instrumentation

INOVA BioFlash for Autoimmune testing

January Blood Donor Month

Donate Today

revised ranges, so additional reference range changes will be occurring throughout the next year.

Below is a table of reference range changes that are effective now. The first column contains our old reference range and the second column contains the new reference range.

Analyte	Old Reference Range	New Range (effective 12-14-16)
Calcium	7.3 - 9.6 mg/dL	7.3 – 9.8 mg/dL
Chloride	98 – 107 mEq/L	98 – 110 mEq/L
ALT	Males: 16 – 61 U/L	Males: 6 – 61 U/L
ALT	Females: 13 – 56 U/L	Females: 6 – 56 U/L
AST	15 – 37 U/L	3 – 37 U/L
TSH	0.36 – 3.74 µIU/mL	0.36 – 5.93 µIU/mL

Questions may be forwarded to Dr. Jeffrey Smith, MD at 406-657-4072.

New Instrumentation Coming



Autoimmune Chemiluminescent Analyzer

Coming soon will be new instrumentation to replace our DiaSorin ETI-MAX instrument which is currently performing our autoimmune ELISA testing. With the addition of the INOVA Diagnostics Bio-Flash instrument, we will move from the batched ELISA technology to a random access, rapid-response chemiluminescence technology for the following testing:

- ANA Panel (Ro52, Ro60, SSB, Sm, RNP, Scl-70, Jo-1, ds-DNA)
- Anticardiolipin Panel (ACL IgG, ACL IgM, B2GP-1 IgG, B2GP-1 IgG)
- CCP-3
- ANCA Panel (MPO, PR-3)

Plans for additional new testing will include chemiluminescent assays for Celiac Disease (tTG IgA, tTG IgG, DGP IgA, DGP IgG).



Billings Clinic

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A new year is upon us. It's time to make lifesaving a habit in 2017. Here's your chance.

January is National Blood Donor Month, an opportunity for first-time and regular donors to make a difference in their communities. January is usually a difficult month for blood centers across the country due to fewer people donating during the holidays, poor weather, and more people getting sick. Usage is higher while turnout is lower which can put blood inventory at a critically low level. At our laboratory blood bank we average the use of about 450 units packed RBCs, 60 Single Donor Platelets, 250 units Fresh Frozen Plasma and 200 units of Cryoprecipitate PER MONTH!

The local blood supplier is United Blood Services and we work closely with them to provide the products needed to support patients during surgery, trauma, cancer treatment and other severe health issues. Our Blood Bank maintains an inventory of readily available products such as packed red blood cells, fresh frozen plasma and cryoprecipitate. A limited number of single donor platelet concentrates are kept in house for specific surgeries but additional units are just a phone call away from United Blood Services. Our Blood Bank staff has a clear understanding of the supply and demand for blood products so please donate blood and encourage others to do the same! You never know whose live you'll save.

For more information about Billings Clinic Laboratory please call (406) 657-4060. www.billingsclinic.com

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