

Resource Book



Dear Practitioner and Staff,

Welcome to Cleveland HeartLab! I am pleased to present you with our Customer Resource Book. Cleveland HeartLab has worked with thousands of offices across the United States and as a result created this all-in-one guide for an efficient and successful relationship. Inside you will find everything you need to get started along with tools and ongoing reference materials.

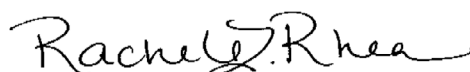
The process for getting started with Cleveland HeartLab is as follows:

1. You will receive your first set of supplies.
2. A Cleveland HeartLab Representative will review this book with you and go over any questions.
3. Send your first samples to Cleveland HeartLab.
4. We will follow up with you to make sure that you were able to access your results and to answer any further questions.

The Cleveland HeartLab Customer Support Team is available to you Monday through Friday, 8 am to 8 pm EST. We are happy to assist in any way from answering a quick question to setting up a video chat.

Our website always has the most current, up-to-date information including our test menu, billing information and access to our web portal to retrieve patient results, please visit www.clevelandheartlab.com.

Sincerely,



Rachele Rhea
Director, Customer Support
Cleveland HeartLab, Inc.
(866) 358-9828
rrhea@clevelandheartlab.com

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About Cleveland HeartLab

Cleveland HeartLab, Inc. (CHL) is a premier, next-generation clinical reference laboratory committed to advancing cardiovascular risk assessment through unique and proprietary laboratory tests. We focus on novel inflammatory and cardiovascular biomarker technologies that allow for advanced risk assessment leading to personalized treatment recommendations.

We are located in the Cleveland HealthTech Corridor in Cleveland, Ohio and receive thousands of specimens daily from across the United States. Our laboratory services are provided through our CAP-accredited and CLIA-licensed clinical laboratory.



Cleveland HeartLab is committed to Innovation:

We have a robust biomarker discovery and development program with proven success in rapid test commercialization. We have a significant pipeline of tests that are protected by exclusive intellectual property and target unmet market needs.

We maintain our relationship with the Cleveland Clinic and have an agreement which provides us with ongoing access to intellectual property developed at the Cleveland Clinic in the areas of cardiovascular and inflammatory biomarkers. We also have agreements in place with several other leading academic institutions to develop and commercialize next-generation biomarkers. These relationships provide us with the ability to expand our pipeline of proprietary and novel advanced biomarker tests.

Since commercializing our first biomarker, MPO, we have successfully commercialized several other novel and proprietary tests such as F₂-Isoprostanes, a test considered the gold standard for measuring oxidative stress. Our current menu of unique and proprietary biomarkers is protected by 26 issued patents with an additional 30 pending patents.



Cleveland HeartLab is committed to Inflammation Testing ("it"):

We offer unique and proprietary inflammation testing which provides additional and complementary insight into cardiovascular risk beyond cholesterol testing alone. Our Inflammation testing consists of several simple blood and urine tests that aid in identifying inflammatory risk across a risk spectrum. This additional information allows for targeted treatment to reduce risk over one's lifetime. While routine lipid screening plays an important role in cardiovascular risk assessment it does not provide a complete picture of your health. In fact, nearly 50% of all heart attacks and strokes occur in patients with 'normal' cholesterol levels. Recent evidence goes beyond lipids to suggest that inflammation within the artery wall is the primary contributor to this residual risk for heart attack and stroke¹.



Cleveland HeartLab is committed to Clinical Education:

We are committed to educating customers and the community on the advancements in identifying cardiovascular risk. We have team members who are dedicated to providing clinical education on the advancement of cardiovascular risk assessment. Key members of our team include:

Marc S. Penn, MD, PhD, FACC – Chief Medical Officer

Deborah H. Sun, PhD, DABCC, FACB – Vice President of Laboratory Operations

Michelle Beidelschies, PhD – Director of Education and Clinical Affairs

Lynn Cofer-Chase, MSN, CLS, FAHA, FPCNA, FNLA – Clinical Lipid Specialist/Clinical Education Manager

In addition, we offer a CME Webportal which provides a platform for scientific and medical information for practitioners across the country and worldwide. www.chlcme.com

For more information, please visit www.clevelandheartlab.com



Like us on Facebook

www.facebook.com/ClevelandHeartLab



Follow us on Twitter

[@CLEHeartLab](https://twitter.com/CLEHeartLab)



Link to us on LinkedIn

www.linkedin.com/company/cleveland-heartlab-inc-



See us on YouTube

www.youtube.com/clevelandheartlab

1. Ridker PM et al. Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med*. 2008; 359: 2195-2207.

Contact Information

ONE Phone Number for ALL Your Calls

866.358.9828

- ✓ Customer Support (Option 1)
- ✓ Technical Support (Option 1)
- ✓ Clinical/Educational Support (Option 1)
- ✓ General Information (Option 1)
- ✓ Billing Support (Option 2)

FAX Number

866.869.0148

Customer Support Hours

8:00 a.m. to 8:00 p.m. EST
Monday - Friday

Address

Cleveland HeartLab, Inc.
6701 Carnegie Avenue, Suite 500
Cleveland, OH 44103

Support E-mail

customersupport@clevelandheartlab.com

Educational E-mail

consult@clevelandheartlab.com

Billing E-mail

chlpatient@clevelandheartlab.com

Websites

www.clevelandheartlab.com

www.knowyourrisk.com

www.chlcme.com

This section outlines the four main steps you should follow to ensure a successful start-up with Cleveland HeartLab. Each of these steps will be covered in detail on the following pages.

The four steps are:

Step 1



Order Your
Collection Kit

Step 2



Fill Out
Requisition
Form

Step 3



Collect Test
Samples

Step 4



Ship Samples
& Forms

Step 1



Order Your
Collection Kit

Ordering Your Collection Kit

Cleveland HeartLab has a convenient online order form that allows you to view all the supplies that are available and place your order online.

To order sample collection kits and other supplies go to our website at www.clevelandheartlab.com/our-lab-services/order-supplies. Supplies typically arrive in 4-7 business days. You can also contact Cleveland HeartLab Customer Support at 866.358.9828 to order supplies.

Physician & Practice Information (* required info)

Is this your first time ordering from us?

☐ YES
 ☒ NO

Order Placed By * Physicians name *

Client ID Practice name *

Address of practice *

Address Line 2

City * State / Province / Region *

Zip Code * Country *

Email *

Phone * Fax

Available Kits

Cleveland HeartLab Wellness Kit for 25 Patients

Kit Includes:

- 5 Cleveland HeartLab Kits
- 25 Disposable Transfer Pipettes
- 25 Urine Collection Cups
- 25 Biohazard Bags

Wellness Kit (25 Patients)

Quantity

Step 2

Fill Out
Requisition
Form

Completing the Requisition Form

Cleveland HeartLab offers three different types of requisition forms to accommodate different office billing policies.

3rd Party Requisition Form

Utilize the 3rd Party Requisition Form when the patient has Medicare, insurance or is self-pay.

3rd PARTY REQUISITION FORM

ClevelandHeartLab
Know your risk.

6701 Carnegie Avenue | Suite 500 | Cleveland, Ohio 44103
p 866.358.9828 | f 866.869.0148
www.clevelandheartlab.com

INSTRUCTIONS

1. Please complete all highlighted areas in their entirety.
2. Please provide all specimen information (draw date/time).

PRACTITIONER INFORMATION

Client ID _____

Practitioner ID _____

Practice Name _____

Practitioner Name _____

NPI _____

Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

PATIENT INFORMATION

DOB mm / dd / _____

Last Name _____

First Name _____

Ht. ft. | in. Wt. lbs. _____

Race ☐ American Indian/Al Native ☐ White/Caucasian ☐ Other _____

☐ Patient Demographics Sheet

Address _____

City _____

State _____ ZIP _____

TEST MENU (Please fill in box completely)

Initials: _____

Client Requisition Form

Utilize the Client Requisition Form when the practitioner is billed directly for all tests ordered.

CLIENT REQUISITION FORM

ClevelandHeartLab
Know your risk.

6701 Carnegie Avenue | Suite 500 | Cleveland, Ohio 44103
p 866.358.9828 | f 866.869.0148
www.clevelandheartlab.com

INSTRUCTIONS

1. Please complete all highlighted areas in their entirety.
2. Please provide all specimen information (draw date/time).

PRACTITIONER INFORMATION

Client ID _____

Practitioner ID _____

Practice Name _____

Practitioner Name _____

NPI _____

Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

PATIENT INFORMATION

DOB mm / dd / _____

Last Name _____

First Name _____

Ht. ft. | in. Wt. lbs. _____

Race ☐ American Indian/Al Native ☐ White/Caucasian ☐ Other _____

☐ Patient Demographics Sheet

Address _____

City _____

State _____ ZIP _____

Phone _____

TEST MENU (Please fill in box completely)

Initials: _____

Client Health and Wellness
Requisition Form

The Health and Wellness requisition form was created as an option for practitioners who are billed directly for testing and would like the convenience of health and wellness panels.

CLIENT REQUISITION FORM

ClevelandHeartLab
Know your risk.

6701 Carnegie Avenue | Suite 500 | Cleveland, Ohio 44103
p 866.358.9828 | f 866.869.0148
www.clevelandheartlab.com

INSTRUCTIONS

1. Please complete all highlighted areas in their entirety.
2. Please provide all specimen information (draw date/time).

PRACTITIONER INFORMATION

Client ID _____

Practitioner ID _____

Practice Name _____

Practitioner Name _____

NPI _____

Address _____

City _____ State _____ ZIP _____

Phone _____ Fax _____

PATIENT INFORMATION

DOB mm / dd / _____

Last Name _____

First Name _____

Address _____

City _____

Phone _____

Other Patient ID _____

Ht. ft. | in. Wt. lbs. _____

Waist Circumference _____

ASSESSMENT OPTIONS

Initials: _____

Requisition Form (Example of a 3rd party requisition form)

*Please visit www.clevelandheartlab.com/our-lab-services/requisition-form to obtain a copy of the most up-to-date requisition form.

The back of our requisition forms include our test menu.

[illegible]

Completing the Requisition Form

The following 6 sections provide you detailed instructions on how to properly and completely fill out a Cleveland HeartLab requisition form. We have provided you with these instructions as missing or incomplete information may cause a delay in testing.

Section 1 Complete Practitioner Information

PRACTITIONER INFORMATION		
Client ID		
Practitioner ID		
Practice Name *		
Practitioner Name *		
NPI		
Address		
City	State	ZIP
Phone	Fax	

* Minimum required information for this section is the Practice Name and Practitioner's Name

Please let your customer support representative know if you would like a pre-filled electronic form sent to you. We can pre-fill your office information to make filling out the requisition form quick and easy.

Cleveland HeartLab Helpful Hint: Save a pre-filled requisition form to your desktop to always have an electronic version ready to complete when a patient arrives.

Completing the Requisition Form (continued)

Section 2 Fill in all Patient Information

PATIENT INFORMATION			
DOB <small>mm / dd / yyyy</small>		<input type="checkbox"/> Male <input type="checkbox"/> Female	
Last Name			
First Name		Middle Initial	
Ht. <small>ft. in.</small>	Wt. <small>lbs.</small>	BMI	Fasting? <input type="checkbox"/> Yes <input type="checkbox"/> No
Race <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/African-American <input type="checkbox"/> White/Caucasian (Non-Hispanic) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other			
<input type="checkbox"/> Patient Demographics Sheet Attached			
Address			
City	State	ZIP	
Phone			
Other Patient ID		Last Four Digits of SSN	

DOB: The patient's Date of Birth is required for two main reasons:

- DOB is often used as a unique identifier for the patient.
- Some reference ranges are based on age; without a date of birth we are unable to result these tests (ex. CBC).

GENDER: Some reference ranges are gender-specific and unless we have the proper gender, we are unable to result these tests with the reference range.

PATIENT NAME: It is important that the patient's full name (full legal name) is written clearly for identification purposes. For Medicare patients, the name must match their medicare card exactly.

ADDRESS: A patient's address must be provided when their testing is being submitted to insurance. This information must accompany any insurance claim. Without a complete address, their insurance claim may be denied.

LAST FOUR DIGITS OF SSN: This is another important unique identifier and is required for Historical Reporting. See more about Historical Reporting in the next section.

FASTING: The fasting status of your patient is not required but this information will appear on the results if indicated.

BMI: Some reference ranges are BMI specific and unless we have the patient's BMI, we are unable to report these tests with the reference range.

RACE: Some reference ranges are race specific and unless the patients race is indicated, we are unable to result these tests with the reference range.


Completing the Requisition Form (continued)

Section 5 Fill The Box of the Test(s) You Want to Order

[illegible]

- Please clearly mark the test(s) wanted for each patient. It is important to fill in the box completely so that the appropriate tests are performed.
- For a complete list of testing available please refer to the back of a current requisition form or go to www.clevelandheartlab.com/our-lab-services/tests-menu.
- Write in any additional tests under the OTHER category and make sure to fill in the box.

Good.

 Not good.

Section 6 Complete the Billing Information and Attach a Copy of the Insurance or Medicare Card

BILLING INFORMATION (Check only one billing option)

☐ **Insurance:** Please attach a copy of **BOTH** sides of patient's insurance card.

☐ **Medicare#** _____
Please attach a copy of **BOTH** sides of patient's Medicare card.

Note: A patient approved Medicare ABRN Form required for all genetic tests and all general adult medical examination diagnostic codes; otherwise testing will not be performed.

☐ **Self-Pay:** CHL, Inc. will bill the patient.

Please complete the billing information section on the requisition form indicating your patient's coverage, and attach a copy of both sides of the patient's insurance card and/or demographics page.

Historical Reporting

Please Note: Historical reporting is a feature that we offer on our results report. Historical reporting allows you to see the results of your patient's last visit alongside the current results. In order for this feature to appear on your report, you must provide the following information about your patient and it must match from visit to visit:

1. **First and Last Name**
2. **Date of Birth**
3. **Last Four Digits of Social Security Number**
4. **Practitioner's Name**

As a quality measure we will not match patients with any mismatched information. Please see a few examples of what would be considered mismatched information:

	Patient Name	DOB	Last 4 SSN	Practitioner
Visit 1	Thomas Smith	8/15/1955	5589	Dr. Jones
Visit 2	Tommy Smith	8/15/1955	5589	Dr. Jones

The patient's name is a mismatch and cannot be merged.

Visit 1	Thomas Smith	8/15/1955	5589	Dr. Jones
Visit 2	Thomas Smith	8/15/1955	55589	Dr. Jones

Typo on SSN will result in a mismatch.

Visit 1	Thomas Smith	8/15/1955	5589	Dr. Jones
Visit 2	Thomas Smith	MISSING	5589	Dr. Jones

Missing information will result in a mismatch.

If you have any questions regarding historical reporting, please contact customer support at 866.358.9828.

The Following is Our Test Menu

Please visit www.clevelandheartlab.com/our-lab-services/tests-menu for a complete listing of available tests.

The back is the test menu broken down by sample type.

Serum (Tiger Top)

Sample Handling

1. Draw.
2. Gently invert 5x (DO NOT SHAKE!).
3. Let blood clot for 30 min. at room temperature.
4. Centrifuge at 1300 rcf for 10 min.
5. Store and transport refrigerated.

Note: A minimum of 0.5 mL of serum is required.

Tests

- Adiponectin
- ADMA/SDMA
- Albumin
- Alkaline Phosphatase
- ALT
- Amylase
- ApoB
- ApoA1
- AST
- Bilirubin, Direct
- Bilirubin, Total
- BUN
- CA 125
- CA 15-3
- CA 19-9
- Calcium
- Carcinoembryonic Antigen (CEA)
- Chloride
- Cholesterol, Total
- CK-MB
- CO₂
- Coenzyme Q10
- C-Peptide
- Creatinine Kinase (CK)
- Creatinine
- Cystatin C
- Estradiol
- Ferritin
- Folate
- Folic Acid Stimulating Hormone
- Fructosamine
- Galectin-3
- Glucose
- GlucoMark®
- HDL Cholesterol, Direct
- HDL2b
- Homocysteine
- hsCRP
- Insulin, Total
- Iron
- Iron Binding Capacity
- Lactate Dehydrogenase
- LDL Cholesterol, Direct
- Lipase
- Lp(a)
- Lp-PLA₂ (The PLAC® Test)
- Luteinizing Hormone
- Magnesium
- Myoglobin
- NT-proBNP
- OGTT
- Oxidized LDL
- Parathyroid Hormone (PTH), Intact
- Potassium
- Progesterone
- PSA, Total and Free
- Protein, Total
- sdLDL

Sodium Citrate (Light Blue Top and Transport Tube)

Sample Handling

1. Draw. Must fill the tube to maximum capacity.
2. Gently invert 3-4x (DO NOT SHAKE!).
3. Centrifuge immediately at 1300 rcf for 10 min.
4. Pre-squeeze transfer pipet bulb and draw off the upper plasma layer. Aliquot plasma into labeled tightly. Discard original tube. Label the transport tube and ship to Cleveland HeartLab.
5. For same day shipping, store and transport refrigerated.
6. For next-day shipping, freeze the sample and ship.

Note: A minimum of 0.5 mL of plasma is required.

Tests

- Fibrinogen Mass

NMR Lipo Tube (Black)

Sample Handling

1. Draw.
2. Gently invert 5-10x (DO NOT SHAKE!).
3. Let blood clot for 30 min. in an upright position at room temperature.
4. Centrifuge at 1300 rcf for 15 min.
5. Store and transport refrigerated.

Tests

- NMR LipoProfile® with Lipids
- NMR LipoProfile® without Lipids



1. Draw. Must fill the tube to maximum capacity.
2. Transfer urine sample into the yellow top tube using the vacutainer system.
3. Store and transport refrigerated. Please discard the vacutainer cup system and do not ship the cup.

Note: A minimum of 1.0 mL of urine is required per test.

Tests

- AspirinWorks®
- F₂-Isoprostanes/Creat ratio
- Urinary Microalbumin/Creat ratio

*AspirinWorks® also requires a urine specimen in a cherry/yellow top tube.

Cleveland HeartLab Test Menu

For a complete listing of available tests, please visit our website at www.clevelandheartlab.com.

Individual Tests

Order Code	Test	CPT Code	Sample Type	Tube Color
C314	Adiponectin	83516	Serum	●
C561	ADMA/SDMA	83789	Serum	●
C109	Albumin	82040	Serum	●
C111	Alkaline Phosphatase	84075	Serum	●
C112	ALT	84460	Serum	●
C127	Amylase	82150	Serum	●
C604	ApoE Genotype	81401	EDTA Whole Blood*	●
C123	ApoB	82172	Serum	●
C122	ApoA1	82172	Serum	●
C822	AspirinWorks®	84431/82570	Urine	● and ●
C113	AST	84450	Serum	●
C115	Bilirubin, Direct	82248	Serum	●
C114	Bilirubin, Total	82247	Serum	●
C107	BUN	84520	Serum	●
C130	CA 125	86304	Serum	●
C131	CA 15-3	86300	Serum	●
C132	CA 19-9	86301	Serum	●
C102	Calcium	82310	Serum	●
C135	Carcinoembryonic Antigen (CEA)	82378	Serum	●
C106	Chloride	82435	Serum	●
C117	Cholesterol, Total	82465	Serum	●
C2138	CK-MB	82553	Serum	●
C105	CO ₂	82374	Serum	●
C311	Coenzyme Q10	83789	Serum or EDTA Plasma	● or ●
C915	Complete Blood Count w/ Differential	85025	EDTA Whole Blood	●
C917	Complete Blood Count w/o Differential	85027	EDTA Whole Blood	●
C136	C-Peptide	84681	Serum	●
C137	Creatine Kinase (CK)	82550	Serum	●
C108	Creatinine	82565	Serum	●
C603	CYP2C19 Genotype	81225	EDTA Whole Blood*	●
C307	Cystatin C	82610	Serum	●
C316	Estradiol	82670	Serum	●
C918	F ₂ -Isoprostanes/Creat ratio	83789/82570	Urine	●
C140	Ferritin	82728	Serum	●
C334	Fibrinogen Mass	85385	NaCit Plasma	●
C258	Folate	82746	Serum	●
C317	Folic Acid Stimulating Hormone	83001	Serum	●
C2164	Fructosamine	82985	Serum	●
C315	Galectin-3	82777	Serum or EDTA Plasma	● or ●
C165	GGT	82977	Serum	●
C101	Glucose	82947	Serum	●
C155	GlucoMark®	84378	Serum or EDTA Plasma	● or ●
C145	HA1c	83036	EDTA Whole Blood	●
C118	HDL Cholesterol, Direct	83718	Serum	●
C324	HDL2b	82664	Serum	●
C308	Homocysteine	83090	Serum or EDTA Plasma	● or ●
C121	hsCRP	86141	Serum or EDTA Plasma	● or ●
C146	Insulin, Total	83525	Serum	●
C147	Iron	83540	Serum	●
C273	Iron Binding Capacity	83550/83540	Serum	●
C148	Lactate Dehydrogenase	83615	Serum	●
C120	LDL Cholesterol, Direct	83721	Serum	●
C292	Lipase	83690	Serum	●
C124	Lp(a)	83695	Serum	●
C167	Lp-PLA ₂ (The PLAC® Test)	83698	Serum or EDTA Plasma	● or ●
C149	Luteinizing Hormone	83002	Serum	●

Individual Tests (Continue)

Order Code	Test	CPT Code	Sample Type	Tube Color
C150	Magnesium	83735	Serum	●
C605	MTHFR	81291	EDTA Whole Blood*	●
C133	Myeloperoxidase (MPO)	83876	EDTA Plasma	●
C2152	Myoglobin	83874	Serum	●
C907	NMR LipoProfile® with Lipids	83704/8061	Serum	●
C944	NMR LipoProfile® without Lipids	83704	Serum	●
C125	NT-proBNP	83880	Serum	●
C505	OGTT	82951	Serum	●
C402	OmegaCheck™	82541	EDTA Whole Blood	●
C335	Oxidized LDL	83516	Serum or EDTA Plasma	● or ●
C309	Parathyroid Hormone (PTH), Intact	83970	Serum	●
C104	Potassium	84132	Serum	●
C320	Progesterone	84144	Serum	●
C556	PSA, Total and Free	84154/84153	Serum	●
C154	PSA, Total	84153	Serum	●
C110	Protein, Total	84155	Serum	●
C1259	RBC Folate	82747	EDTA Whole Blood	●
C281	sdLDL	83701	Serum	●
C103	Sodium	84295	Serum	●
C156	Testosterone, Total	84403	Serum	●
C156	Testosterone, Total and Free	82040/84270/84403	Serum	●
C943	Testosterone, Total, Bio and Free	82040/84270/84403	Serum	●
C157	Thyroid Stimulating Hormone	84443	Serum	●
C142	Thyroxine (T4), Free	84439	Serum	●
C158	Thyroxine (T4), Total	84436	Serum	●
C119	Triglycerides	84478	Serum	●
C143	Triiodothyronine (T3), Free	84481	Serum	●
C144	Triiodothyronine (T3), Total	84480	Serum	●
C2159	Tropoin T	84484	Serum	●
C161	Uric Acid	84550	Serum	●
C916	Urinalysis	81001	Urine	●
C919	Urinary Microalbumin/Creat ratio	82043/82570	Urine	●
C913	The VAP® Test	83701/84478	Serum	●
C900	The VAP® Test (VAP® with VLP)	83704/84478	Serum	●
C260	Vitamin B12	82607	Serum	●
C339	Vitamin D, 25 OH	82306	Serum	●
C277	Vitamin D2/D3	82306	Serum or EDTA Plasma	● or ●

Standard Panels

Order Code	Panel	CPT Code	Sample Type	Tube Color
C906	Standard Lipid Panel (includes non-HDL cholesterol)	80061	Serum	●
C902	Basic Metabolic Panel	80048	Serum	●
C901	Comprehensive Metabolic Panel	80053	Serum	●
C903	Hepatic Function Panel	80076	Serum	●
C904	Renal Function Panel	80069	Serum	●
C905	Electrolyte Panel	80051	Serum	●

Cleveland Clinic Wellness Programs

Order Code	Program
C207	Go!® Foods for You
C208	Stress Free Now
C333	Go!® to Sleep

*A single separate tube is required for genetic tests.

● EDTA Plasma ● Transport Tube ● Serum ● Urine (without preservative) ● Urine (with preservative) ● NaCit Plasma ● EDTA Whole Blood ● NMR



Know your risk.

6701 Carnegie Ave. | Suite 500 | Cleveland, OH 44103 | p 866.358.9828 | f 866.869.0148 | www.clevelandheartlab.com | www.knowyourrisk.com

CHL-D026h

6701 Carnegie Ave. | Suite 500 | Cleveland, OH 44103 | p 866.358.9828 | f 866.869.0148 | www.clevelandheartlab.com | www.knowyourrisk.com

Step 3



Collect Test Samples

Collecting Test Samples

The following pages provide detailed instructions on how to properly collect and store samples that you are sending to Cleveland HeartLab. We are committed to providing high quality results and a key component is receiving quality samples.

The following pages outline:

- Sample Handling
- Storage Instructions
- Tube Labeling Instructions

Please Note: Be sure that the name on the requisition form exactly matches the name on their insurance card or medicare card. Each sample must have the patient's **full name** (first and last), and **date of birth**. The collection date and time must also be included on the requisition form to ensure the quality and reliability of results.

Sample Handling/Storage Instructions

- Collect blood samples using aseptic venipuncture technique.
- Check that you have enough sample to perform each test ordered.
- Cap tightly and label sample tube. All samples should be properly identified. The sample label **must** include: FULL NAME (First and Last), and DATE OF BIRTH. Specify specimen type when using a transport tube.
- Treat all samples with Universal and Standard precautions.
- Please contact Cleveland HeartLab if you have any questions related to sample stability or visit www.clevelandheartlab.com/our-lab-services/tests-menu.

Serum (Tiger Top)

Sample Handling

1. Draw.
2. Gently invert 5x (DO NOT SHAKE!).
3. Let blood clot for 30 min. at room temperature.
4. Centrifuge at 1300 rcf for 10 min.
5. Store and transport refrigerated.



Note: A minimum of 0.5 mL of serum is required per test or panel.

Tests

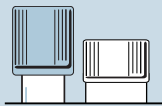
- | | | |
|----------------------------------|--|-------------------------------------|
| • Adiponectin | • Fructosamine | • Sodium |
| • ADMA/SDMA | • Galectin-3 | • Testosterone, Total |
| • Albumin | • GGT | • Testosterone, Free |
| • Alkaline Phosphatase | • Glucose | • Testosterone, Total, Bio and Free |
| • ALT | • GLYcoMARK® | • Thyroid Stimulating Hormone |
| • Amylase | • HDL Cholesterol, Direct | • Thyroxine (T4), Free |
| • ApoB | • HDL2b | • Thyroxine (T4) Total |
| • ApoA1 | • Homocysteine | • Triglycerides |
| • AST | • hsCRP | |
| • Bilirubin, Direct | • Insulin, Total | • Triiodothyronine (T3), Free |
| • Bilirubin, Total | • Iron | • Triiodothyronine (T3), Total |
| • BUN | • Iron Binding Capacity | • Troponin T* |
| • CA 125 | • Lactate Dehydrogenase | • Uric Acid |
| • CA 15-3 | • LDL Cholesterol, Direct | • The VAP® Test |
| • CA 19-9 | • Lipase | • The VAP®+ Test (VAP® with VLP) |
| • Calcium | • Lp(a) | • Vitamin B12 |
| • Carcinoembryonic Antigen (CEA) | • Lp-PLA ₂ (The PLAC® Test) | • Vitamin D, 25 OH |
| • Chloride | • Luteinizing Hormone | • Vitamin D2/D3 |
| • Cholesterol, Total | • Magnesium | • Standard Lipid Panel |
| • CK-MB | • Myoglobin | • Basic Metabolic Panel |
| • CO ₂ | • NT-proBNP | • Comprehensive Metabolic Panel |
| • Coenzyme Q10 | • OGTT | • Hepatic Function Panel |
| • C-Peptide | • Oxidized LDL | • Renal Function Panel |
| • Creatine Kinase (CK) | • Parathyroid Hormone (PTH), Intact | • Electrolyte Panel |
| • Creatinine | • Potassium | |
| • Cystatin C | • Progesterone | |
| • Estradiol | • PSA, Total and Free | |
| • Ferritin | • PSA, Total | |
| • Folate | • Protein, Total | |
| • Folicle Stimulating Hormone | • sLDL | |

*In place of step 5 above – Immediately aliquot and freeze serum at -20° C. Ship the same day on dry ice.

Sodium Citrate (Light Blue Top and Transport Tube)

Sample Handling

1. Draw. Must fill the tube to maximum capacity.
2. Gently invert 3-4x (DO NOT SHAKE!).
3. Centrifuge immediately at 1300 rcf for 10 min.
4. Pre-squeeze transfer pipet bulb and draw off approximately 2/3 of the upper plasma layer. Aliquot plasma into labeled transport tube and cap tightly. Discard original tube. Label the transport tube as NaCit Plasma and ship to Cleveland HeartLab.
5. For same day shipping, store and transport refrigerated.
6. For next-day shipping, freeze the sample and ship on dry ice.



Note: A minimum of 0.5 mL of plasma is required per test.

Tests

- Fibrinogen Mass

NMR Lipo Tube (Black)

Sample Handling

1. Draw.
2. Gently invert 5-10x (DO NOT SHAKE!).
3. Let blood clot for 30 min. in an upright position at room temperature.
4. Centrifuge at 1300 rcf for 15 min.
5. Store and transport refrigerated.



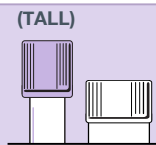
Tests

- NMR LipoProfile® with Lipids
- NMR LipoProfile® without Lipids

EDTA Plasma (Lavender Top, 6mL and Transport Tube)

Sample Handling

1. Draw.
2. Gently invert 8-10x (DO NOT SHAKE!).
3. Centrifuge immediately at 1300 rcf for 10 min.
4. Pre-squeeze transfer pipet bulb and draw off approximately 2/3 of the upper plasma layer. Aliquot plasma into labeled transport tube and cap tightly. Discard original tube. Label the transport tube as EDTA Plasma and ship to Cleveland HeartLab.
5. Store and transport refrigerated.



Note: A minimum of 0.5 mL of plasma is required per test.

Tests

- | | |
|--|-----------------|
| • Myeloperoxidase (MPO) | • Homocysteine |
| • Lp-PLA ₂ (The PLAC® Test) | • Galectin-3 |
| • hsCRP | • GlycoMARK® |
| • Oxidized LDL | • Vitamin D2/D3 |
| • Coenzyme Q10 | |

EDTA Whole Blood (Lavender Top, 4mL)

Sample Handling

1. Draw.
2. Gently invert 8-10x (DO NOT SHAKE!).
3. Do not centrifuge
4. Store and transport refrigerated.



Note: A single separate tube is required for genetic tests. A minimum of 1.0 mL of whole blood is required per genetic test.

Tests

- | | |
|---|--------------------|
| • ApoE Genotype | • CYP2C19 Genotype |
| • Complete Blood Count w/ Differential | • HbA1c |
| • Complete Blood Count w/o Differential | • MTHFR |
| | • OmegaCheck™ |
| | • RBC Folate |

Sample Handling/Storage Instructions (continued)

Urine Specimen Tube (Cherry Red/Yellow Top)

Sample Handling

1. Collect random urine into the vacutainer cup system.
2. Transfer urine sample into the cherry/yellow top tube using the vacutainer system.
3. Gently invert 8-10x (DO NOT SHAKE!).
4. Store and transport refrigerated. Please discard the vacutainer cup system and do not ship the cup.

Note: A minimum of 3.0 mL of urine is required per test.

Tests

- AspirinWorks**
- Urinalysis

*AspirinWorks® also requires a urine specimen in a yellow top tube.



Urine Specimen Tube (Yellow Top)

Sample Handling

1. Collect random urine into the vacutainer cup system.
2. Transfer urine sample into the yellow top tube using the vacutainer system.
3. Store and transport refrigerated. Please discard the vacutainer cup system and do not ship the cup.

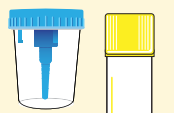
Note: A minimum of 1.0 mL of urine is required per test.

Tests

- AspirinWorks**
- Urinary Microalbumin/Creat ratio

• F₂-Isoprostanes/Creat ratio

*AspirinWorks® also requires a urine specimen in a cherry/yellow top tube.



Did you remember to:

- ☒ Check that you have collected the proper specimen types for the tests ordered.
- ☒ Check that you have collected enough sample to perform the tests ordered.
- ☒ Cap tightly and label each tube with full name, first and last and date of birth.
- ☒ Specify specimen type on each transport tube.

Sample Rejection Policy

Samples will be rejected for any of the following reasons:

- Samples were shipped on Saturday.
- Friday blood draws arrived on Monday.
- Sample types were incorrect or samples were received in damaged condition (i.e. tube open or cracked, sample not at correct temperature).
- Sample tube is not properly labeled with first and last name and date of birth.
- Requisition form is not completely filled out. First and last name, date of birth and gender are required.
- Physician signature is missing.

Preventing Sample Handling Errors

Cleveland HeartLab is a CAP-accredited and CLIA-certified clinical reference laboratory dedicated to providing high quality cardiovascular disease testing.

Filling out complete and accurate patient information will help ensure that you receive patient results in a timely manner.

The table below provides examples of commonly encountered sample handling errors that can result in an invalid test result or delays in reporting.

Sample Handling Error	Effects of the Sample Handling Error
No date of birth	Some reference ranges are based on age. If no date of birth is given we are unable to result these tests.
No gender marked on requisition form	Some reference ranges are gender-specific. If no gender is given we are unable to result these tests.
Incomplete name	A complete name on the requisition form and tubes are critical for patient and specimen identification. A complete name is also needed to file the insurance claim.
No draw date	The draw date is required per CAP/CLIA regulation; this will ensure both the quality of your samples and reliability of your results. There is a place for the draw date on the left hand side of the requisition.
Improper labeling or no label on tubes	Before you send your samples to Cleveland HeartLab, please make sure each tube is labeled with the patient's FIRST AND LAST NAME and DATE OF BIRTH. When sending a transport tube, please include the sample type on the label. Incorrect specimen type will result in erroneous results for your patients and significantly impact patient care.
No test checked off or ordered on requisition form	If a requisition form is received without a test ordered, it will be put aside and the office will be contacted to send in a new requisition form. This may result in delayed or expired samples.
Incorrect whole blood sample handling	For whole blood, draw the patient and gently invert the sample 8-10 times. Do not shake or centrifuge the sample. Do not spin down the sample and remove the plasma. Failure to follow these whole blood sample guidelines will result in erroneous results.
Not allowing the SST tube to clot for 30 minutes	The SST tube needs to sit for 30 minutes at room temperature in order for the chemical activator in the tube to initiate clot formation. Inadequate clot formation could result in: <ul style="list-style-type: none"> Invalid results due to poor serum/cell separation

It is important to properly label your tubes before sending them to Cleveland HeartLab for testing.

Tube Labeling

Last	Smith	
First	John	
DOB	11/05/55	Sample Type EDTA Plasma

Before you send your samples to Cleveland HeartLab, please make sure each tube is labeled with the patient's FIRST AND LAST NAME and DATE OF BIRTH.

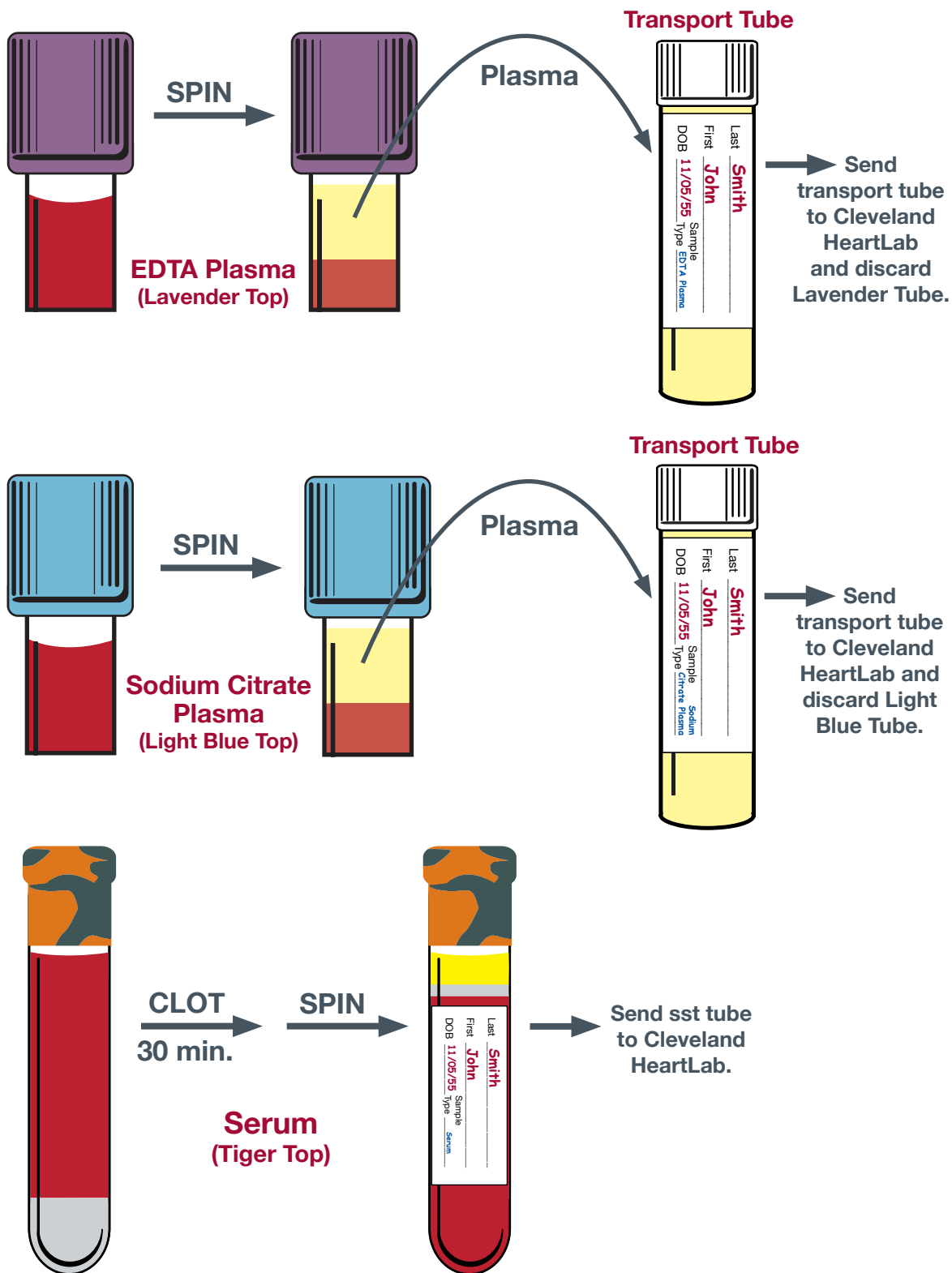
Transport Tube

Last	Smith	
First	John	
DOB	11/05/55	Sample Type EDTA Plasma

When sending a transport tube please include the sample type on the label.

Tube Labeling (continued)

For samples that require separation into a transport tube, you must label the transport tube with the sample type.



Step 4



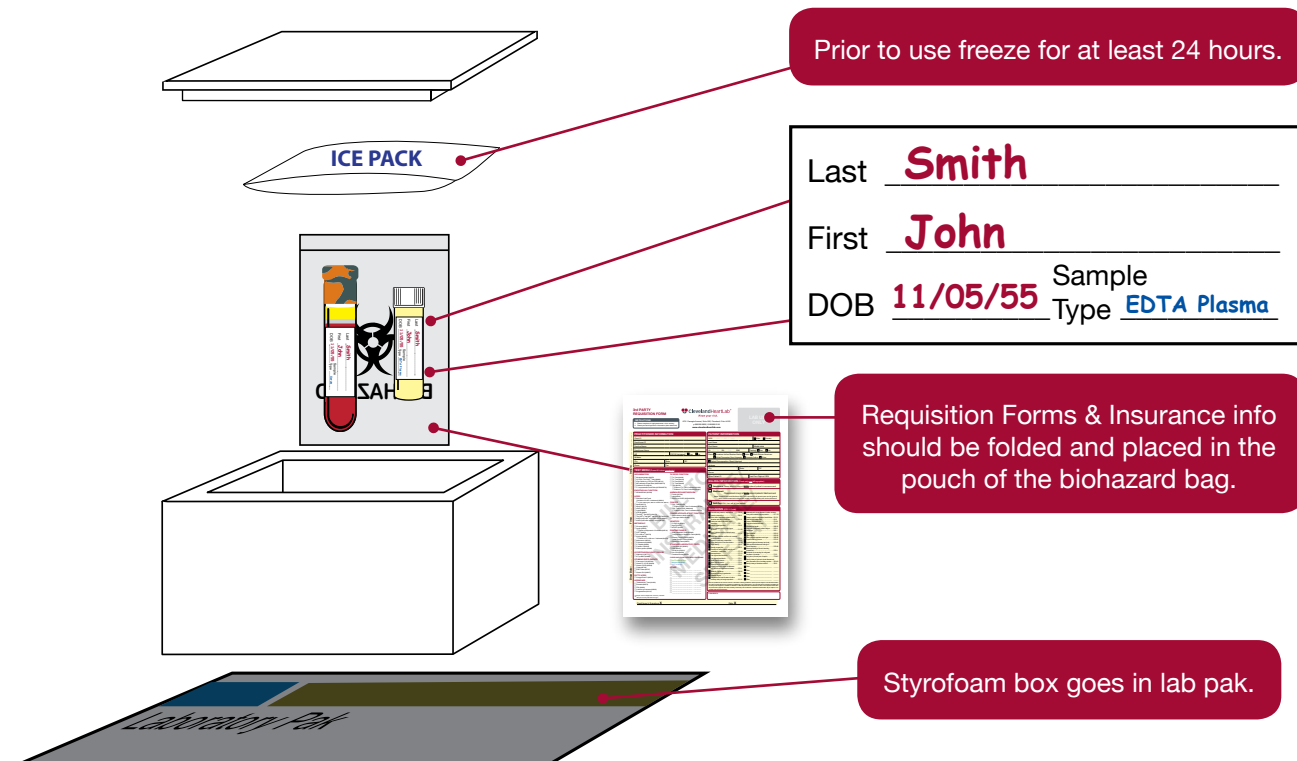
Ship Samples & Forms

Shipping Samples and Requisition Forms

Packaging Diagram

The following outlines instructions on how to:

- Package samples for shipment
- Schedule a UPS pick-up



Months with no 'R' - double the ice bricks to insure stability!
[May - August]

Office Packing

Samples should be stored at 2-8° C immediately after they are collected and processed.

- 1) Place cold or frozen sample(s) in the biohazard bags.
- 2) Place completed requisition (and insurance information if applicable) for each sample in the pouch of the biohazard bag.
- 3) Place biohazard bag (with sample(s) and requisition form) in the Styrofoam box.
- 4) Place a frozen ice pack on top of the samples in the Styrofoam box.
- 5) Place Styrofoam box into UPS Laboratory Shipping Pak.

UPS/FEDEX Pick-Up

Following these instructions will ensure that your samples arrive at Cleveland HeartLab in a timely manner.

	UPS	FedEx
Phone Number	(800) 742-5877	(800) 463-3339
Request Instructions	Ask to schedule a "RETURN SERVICE LABELED PICK-UP"	Ask to schedule a "PRE-PAY AIRBILL PICK-UP"
Have your shipping label available when calling for a pick-up.		
Ship for next day delivery (with provided label) to: Cleveland HeartLab, Inc. 6701 Carnegie Ave, Suite 500, Cleveland, OH 44103, Phone: 866-358-9828. Samples can be shipped Monday through Friday.		

- A UPS scheduled pick-up can be arranged by calling Cleveland HeartLab Customer Support at 866.358.9828.
- We recommend that you make photocopies of your shipping label or record the tracking number before shipping. This will be helpful in case there is a delay in transit and we need to try and locate your package.

Cleveland HeartLab offers three options for receiving your patients results. Your sales representative will discuss these with you during the start-up process and work with you to determine the best option and set you up accordingly. The following are the 3 options:

On-line results

- Retrieve results directly from our web portal.
- You will have real time access to your results as they are completed and released.
- You will be assigned an initial user name and password to access the system. This will be provided to you by your sales representative or customer support.

The following section of the Resource Book outlines:

- » Instructions on how to access test reports
- » Understanding the Patient Test Report
- » Example of Patient Test Report
- » Critical Results Notification

Fax Results

- Receive your patient reports via your fax machine or electronic fax once all results have been completed and released.

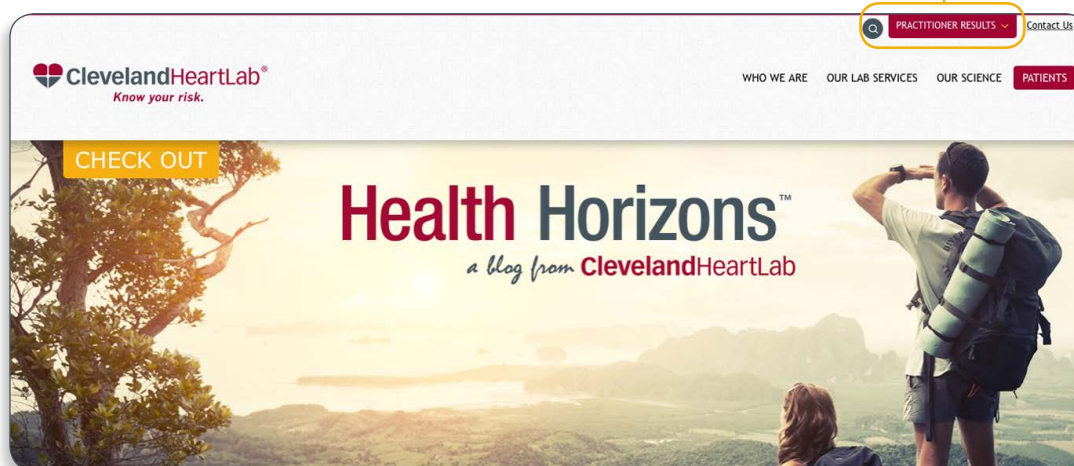
Interface/Electronic Medical Record

- Your sales representative will be able to provide you additional information and guidelines on this option.

I. Log in to Copia to view Patient Results

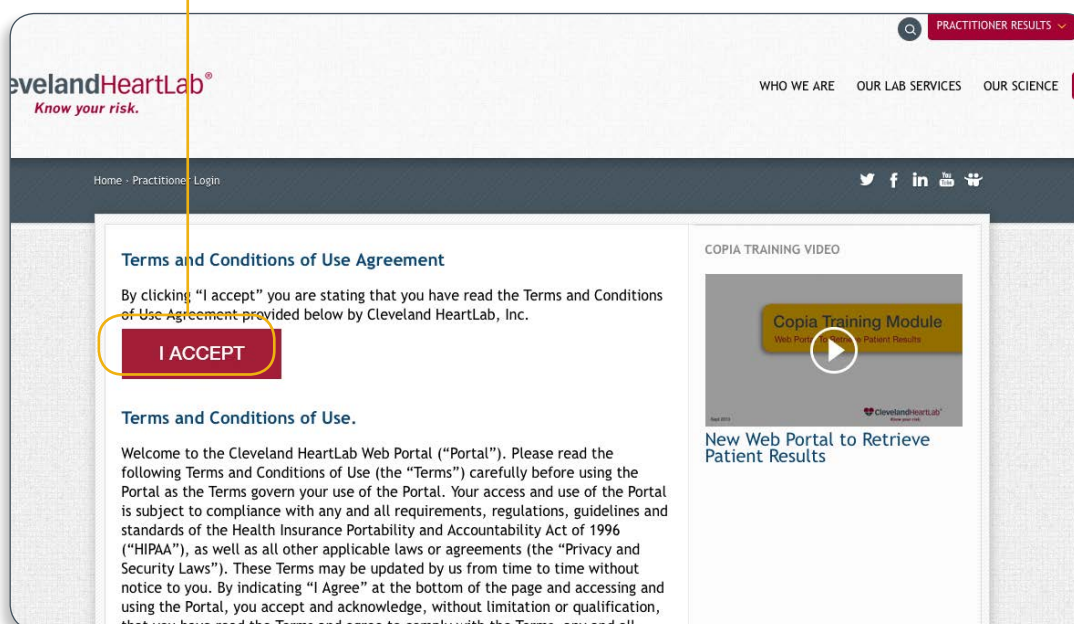
1. Go to: www.clevelandheartlab.com

2. Click on "Practitioner Results".



1. Read the Terms and Conditions.

2. Click "I ACCEPT".



This will bring you to the Copia login screen.

1. Enter your User Name and Password
2. Click "Sign In".



The login screen features the ClevelandHeartLab logo with the tagline "Know your risk." Below the logo is a row of five small tree icons. In the top right corner, there is a "Sign In" button and a help icon. A yellow box highlights the "User Name" and "Password" input fields, with a line pointing to the instructions above.

User Name

Password

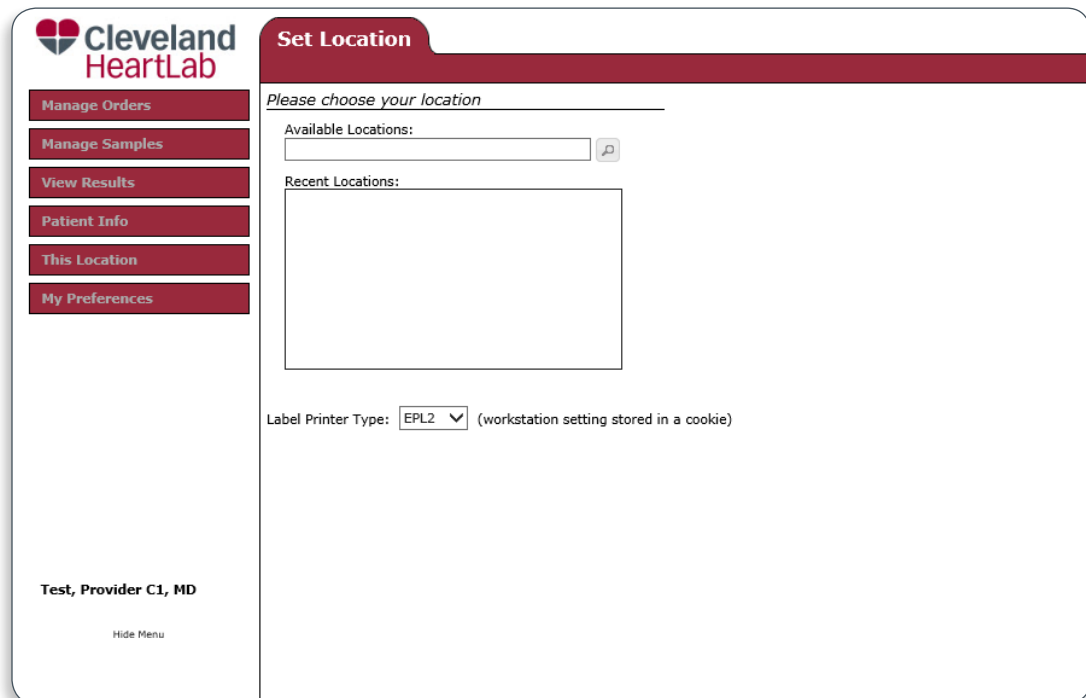
Sign In ?

ClevelandHeartLab®
Know your risk.

Orchard® Harvest™CT © 2013 Orchard Software Corporation (build: 5.0.130731.131106)

If you need your username and password please call customer support at **1-866-358-9828**.

The first time you log in, you will see this screen. You only need to choose a default location one time.



The "Set Location" screen has a left sidebar with navigation links: Manage Orders, Manage Samples, View Results, Patient Info, This Location, and My Preferences. The main content area is titled "Set Location" and prompts the user to "Please choose your location". It includes an "Available Locations" search bar, a "Recent Locations" list box, and a "Label Printer Type" dropdown menu set to "EPL2". At the bottom left, it says "Test, Provider C1, MD" and "Hide Menu".

ClevelandHeartLab

Manage Orders

Manage Samples

View Results

Patient Info

This Location

My Preferences

Set Location

Please choose your location

Available Locations:

Recent Locations:

Label Printer Type: (workstation setting stored in a cookie)

Test, Provider C1, MD

Hide Menu

Click the magnifying glass to see your location choices.

Name ²	Practice ¹
Test Location F1	Test Practice F
Test Location F2	Test Practice F
Test Location F3	Test Practice F

Choose the location you would like to set as the default.

One Practice Location: Your location should appear and you will need to choose it.

Multiple Practice Locations: Choose one location to set as your default location.

Please Note: You will be able to view any location at any time once you are logged into the system.

If you do not see an ordering location that you think should be listed please let your Cleveland HeartLab representative know or call Customer Support (866) 358-9828.

The screenshot shows the 'Set Location' page in the Cleveland HeartLab system. On the left is a sidebar with navigation links: Manage Orders, Manage Samples, View Results, Patient Info, This Location, and My Preferences. The main content area has a title 'Set Location' and a prompt 'Please choose your location'. It contains an 'Available Locations' search bar, a 'Recent Locations' list box, and a 'Label Printer Type' dropdown menu currently set to 'EPL2'. A yellow callout box with arrows pointing to the 'Recent Locations' and 'Label Printer Type' fields contains the text: 'Do not make any changes/selections/modifications to Recent Locations or Label Printer Type.'

Cleveland HeartLab

Set Location

Please choose your location

Available Locations:

Recent Locations:

Label Printer Type: **EPL2** (workstation setting stored in a cookie)

Do not make any changes/selections/modifications to Recent Locations or Label Printer Type.

Test, Provider C1, MD

II. User Inbox: Quick Glance

The user inbox lists your most recently accessioned patients. The view is defaulted to sort by SEVERITY and then STATUS.

Status of report listed.

Click to view report

You can also view or print report by:

1. Clicking order ID
2. Hover over "Lab Report"
3. Click View or Deliver

ClevelandHeartLab
Know your risk.

TEST, PATIENTA1
05/01/1944

PATIENT INFORMATION
Patient: TEST, PATIENTA1
Patient ID: 13-207-000014
DOB: 05/01/1944 Age: 69
Gender: Female Ethnicity: Caucasian
Fasting: No BMI: 28

SPECIMEN INFORMATION
Accession No: 01321000029
Collection Date: 07/09/2013
Received Date: 07/29/2013
Report Date: 07/29/2013

PHYSICIAN INFORMATION
Physician: Provider A1 Test MD
Client ID:
Address:

Hemoglobin A1C

	In Range	Out of Range	Risk	Previous Result	Date	Optimal Range	Units
Hemoglobin A1C	5.4		Low	5.4		<5.7	%
American Diabetes Association (ADA) guidelines indicate that individuals with an A1c of 5.7%-6.4% are at the higher risk for developing diabetes and cardiovascular disease. The risk of diabetes rises disproportionately as A1c rises. Accordingly, interventions should be more intensive for those with A1c levels above 6.0%. HbA1c at or greater than 6.5% is considered diagnostic of diabetes. Diabetes Care 2011;34:e75-e80.							
Estimated Average Glucose	108		Low	108		<118	mg/dL
The estimated average glucose value is an adjunct to the treatment of both Type I and Type II diabetes. It is not intended for the diagnosis or risk assessment of patients without diabetes. Nathan DM et al. Diabetes Care 2008;31:1473							

Sign Out

Older Versions | Newer Versions | Back to Index

The **Previous Entry** and **Next Entry** buttons allow you to scroll through your inbox easily.

The **Fax** button allows you to fax a patient's result to an external recipient.

ClevelandHeartLab
Know your risk.

TEST, PATIENTA1
05/01/1944

PATIENT INFORMATION
Patient: TEST, PATIENTA1
Patient ID: 13-207-000014
DOB: 05/01/1944 Age: 69
Gender: Female Ethnicity: Caucasian
Fasting: No BMI: 28

SPECIMEN INFORMATION
Accession No: 01321000029
Collection Date: 07/09/2013
Received Date: 07/29/2013
Report Date: 07/29/2013

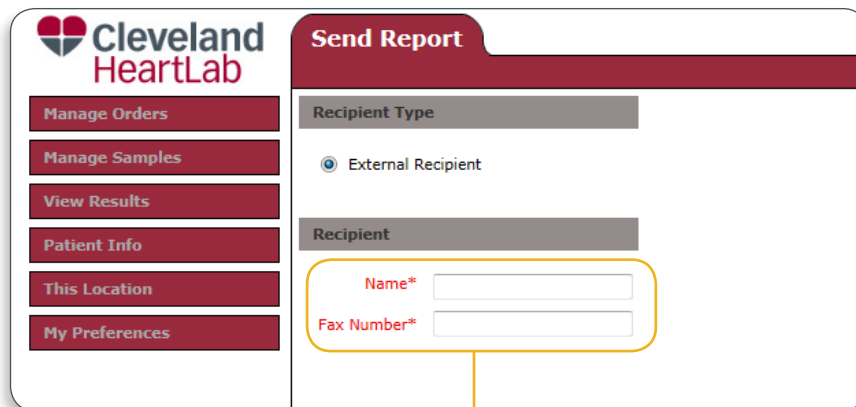
PHYSICIAN INFORMATION
Physician: Provider A1 Test MD
Client ID:
Address:

Hemoglobin A1C

	In Range	Out of Range	Risk	Previous Result	Date	Optimal Range	Units
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Sign Out

Older Versions | Newer Versions | Back to Index



Cleveland HeartLab

Send Report

Manage Orders
Manage Samples
View Results
Patient Info
This Location
My Preferences

Recipient Type

☒ External Recipient

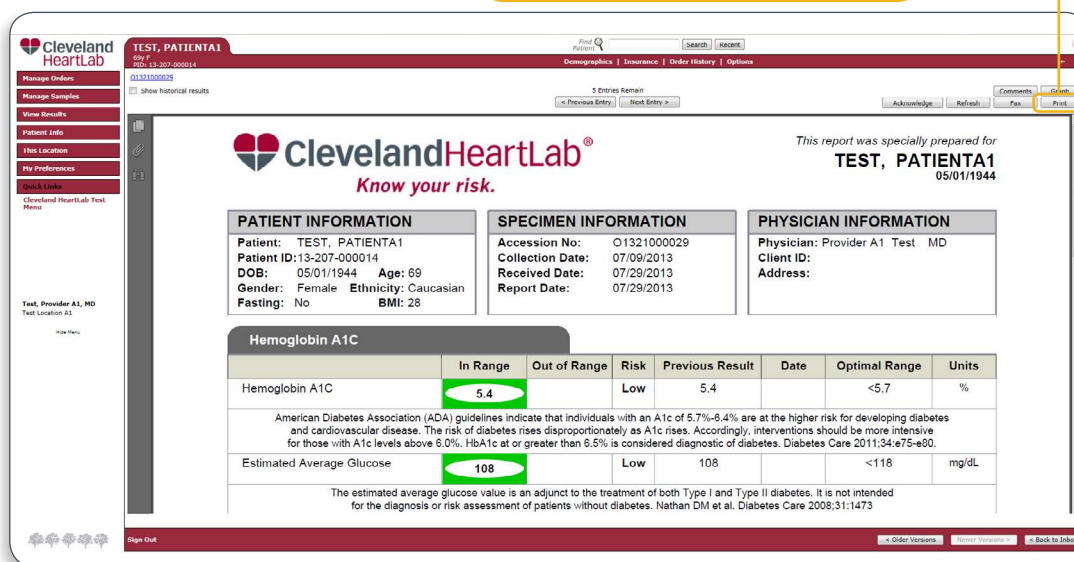
Recipient

Name*

Fax Number*

1. Type the name of the recipient.
2. Type the recipient's fax number.
(The fax will work with or without the 1 preceding the area code.)

The Print button allows you to print your result to a local printer.



Cleveland HeartLab
TEST, PATIENTA1
01321000029

Demographics | Insurance | Order History | Options

2 Entries Remain
Previous Entry Next Entry

Acknowledge Refresh Comments Fax **Print**

Cleveland HeartLab
Know your risk.

This report was specially prepared for
TEST, PATIENTA1
05/01/1944

PATIENT INFORMATION		SPECIMEN INFORMATION		PHYSICIAN INFORMATION	
Patient:	TEST, PATIENTA1	Accession No:	01321000029	Physician:	Provider A1 Test MD
Patient ID:	13-207-000014	Collection Date:	07/09/2013	Client ID:	
DOB:	05/01/1944 Age: 69	Received Date:	07/29/2013	Address:	
Gender:	Female Ethnicity: Caucasian	Report Date:	07/29/2013		
Fasting:	No BMI: 28				

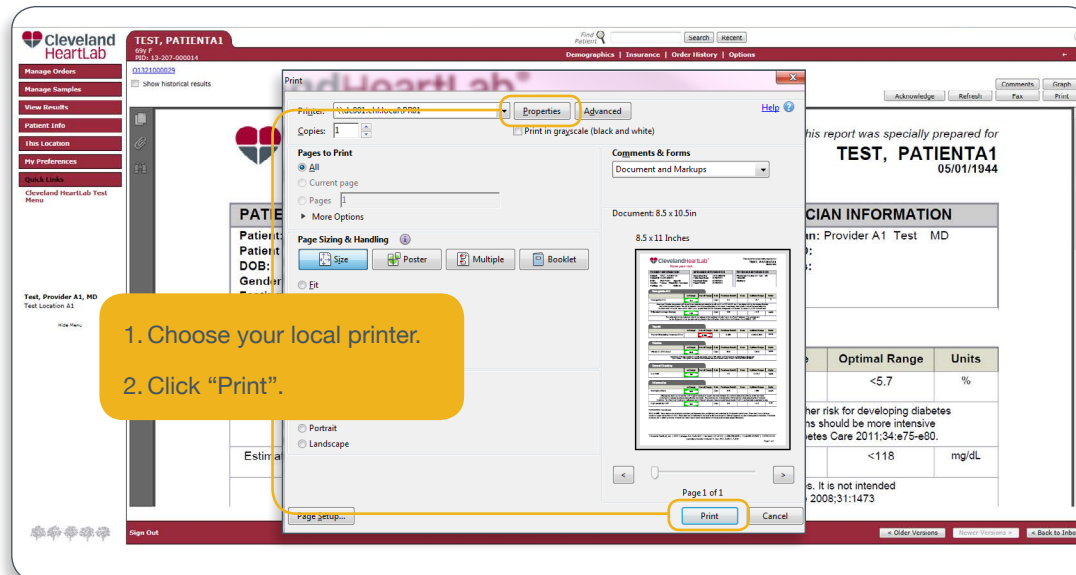
Hemoglobin A1C

	In Range	Out of Range	Risk	Previous Result	Date	Optimal Range	Units
Hemoglobin A1C	5.4		Low	5.4		<5.7	%
American Diabetes Association (ADA) guidelines indicate that individuals with an A1c of 5.7%-6.4% are at the higher risk for developing diabetes and cardiovascular disease. The risk of diabetes rises disproportionately as A1c rises. Accordingly, interventions should be more intensive for those with A1c levels above 6.0%. HbA1c at or greater than 6.5% is considered diagnostic of diabetes. Diabetes Care 2011;34:e75-e80.							
Estimated Average Glucose	108		Low	108		<118	mg/dL

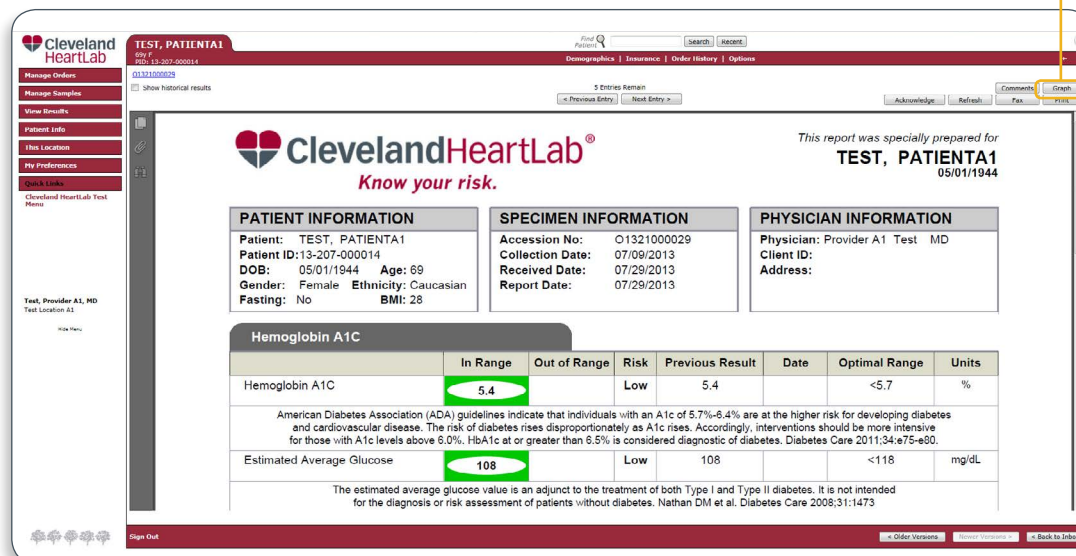
The estimated average glucose value is an adjunct to the treatment of both Type I and Type II diabetes. It is not intended for the diagnosis or risk assessment of patients without diabetes. Nathan DM et al. Diabetes Care 2008;31:1473

Sign Out

Other Versions Cancel Previous Print Back to Index



The **Graph** button allows you to view historical reporting in a line graph format (by patient and test).



Click the Graph check box to select which test you wish to view as a graph.

Cleveland HeartLab

Report Graph

Estimated Average Glucose ☐ ☐

HSCRCP ☐ Normalize Data Display 0 most recent points

Test High Sensitivity CRP ☐ ☐ Please select a test to graph.

MPO ☐ Normalize Data Display 4 most recent points

Test Myeloperoxidase ☒ ☐

MPO

Myeloperoxidase

Draw Date/Time

Test	12/10/2012 3:30PM	01/08/2013 4:00PM	04/09/2013 4:00PM	07/09/2013 4:00PM	Reference Range	Units	Stan Dev
Myeloperoxidase	553	540	465	328	<480.0	pmol/L	89.4

Sign Out

Click the "Print" button to print a hard copy.

Cleveland HeartLab

Report Graph

Test High Sensitivity CRP ☐ ☐

MPO ☐ Normalize Data Display 4 most recent points

Test Myeloperoxidase ☒ ☐

MPO

Myeloperoxidase

Draw Date/Time

Test	12/10/2012 3:30PM	01/08/2013 4:00PM	04/09/2013 4:00PM	07/09/2013 4:00PM	Reference Range	Units	Stan Dev
Myeloperoxidase	553	540	465	328	<480.0	pmol/L	89.4

Print

While you are in the patient's lab report, you have the option to view the demographics and insurance information that we have on file. You can do this by selecting Patient Info from the sidebar menu or selecting Demographics or Insurance from the top menu. Both choices will take you to the same screen.

Cleveland HeartLab
TEST, PATIENTA9
57y M
PID: 13-218-000002

Demographics | Insurance | Order History | Options

3 clicks remain
< Previous Entry | Next Entry >

Admonledge | Refresh | Go

Provider A1 Test, MD has requested this report for
TEST, PATIENTA9
04/25/1956

ClevelandHeartLab®
Know your risk.

PATIENT INFORMATION

Name: TEST, PATIENTA9
Patient: 13-218-000002
Fasting: Yes
Ethnicity: Caucasian
BMI: 29

SPECIMEN INFORMATION

Report Date: 08/06/2013

PHYSICIAN INFORMATION

Name: Provider A1 Test, MD
Client ID:
Address:

Inflammation

	In Range	Out of Range	Flag*	Relative Risk	Reference Range	Units	Previous Result	Date
Myeloperoxidase		500	H	HIGH	<480	pmol/L		

Patient Demographics

Patient Demographic information is available to view, but no changes can be made. If you see anything that needs to be changed or missing information, please call customer support and they can update this information for you.

Cleveland HeartLab
TEST, PATIENTA9
57y M
PID: 13-218-000002

Practice* Test Practice A1

Date of Birth (mm/dd/yyyy) 04/25/1956 Age

Sex Male

Last Name* TEST
First Name* PATIENTA9
Middle Name
Phone 1 (555) 555-5555
Phone 2
Other Patient ID:
Last Four Digits of SSN 4256
Address 1 1234 Mockingbird Lane
Address 2
Zip Code 44115
City CLEVELAND
State OH

Nationality
Race Caucasian
Ethnicity Caucasian
BMI 29
☐ Ignore capitalization rules
☐ Display ABN in Spanish
☒ Patient is Orderable
☐ Patient is Deceased
Test Patient ☐ Yes

Comments Alerts Encounters

* Required field

Test, Provider A1, MD
Test Location A1

Hide Menu

Patient Insurance

The Insurance tab on the right menu bar brings you to the main insurance page which provides a summary.

The screenshot shows the Cleveland HeartLab interface. On the left is a menu with options: Manage Orders, Manage Samples, View Results, Patient Info, Demographics, Insurance (highlighted with a yellow circle), Order History, This Location, My Preferences, and Quick Links. The main content area is titled 'TEST, PATIENTA9' with patient details '57y M' and 'PID: 13-218-000002'. Below this is a tabbed interface with 'Insurance Summary', 'Primary', 'Secondary', 'Tertiary', and 'Guarantor'. The 'Insurance Summary' tab is active, showing a list of insurance plans. A yellow callout box points to the tabs with the text: 'To see the details of the insurance information, just click on one of the tabs.' At the bottom, there are buttons for 'Select Different Insurance' and 'Create New Insurance'.

Looking at the primary insurance tab you can see the detailed information we have on file for your patient's primary insurance. Again, if anything is missing or incorrect please call customer support.

The screenshot shows the 'Primary' tab selected in the insurance section. The page is titled 'TEST, PATIENTA9' with patient details '57y M' and 'PID: 13-218-000002'. The 'Edit primary plan information.' section contains fields for 'Insurance Company' (MEDICARE) and 'Insurance Plan' (MEDICARE). Below this is the 'Insured Information' section with fields for Policy#, Group, Relationship to Insured (self), First Name (PATIENTA9), Middle Name, Last Name (TEST), Subscriber ID, Sex (Male), Date of Birth (04 / 25 / 1956), Phone # 1 ((555) 555-5555), Phone # 2, Address 1 (1234 Mockingbird Lane), Address 2, City (CLEVELAND), State (OH), ZIP Code (44115), Country (U.S.A.), Employment Status, and Insured SSN (4256). To the right is the 'Employer Information' section with fields for Employer, Employer ID, Employer Plan Code, Employer Phone #, Employer Address 1, Employer Address 2, Employer City, Employer State, Employer ZIP Code, and Employer Country (U.S.A.). At the bottom, there are fields for 'Insurance Effective Date' and 'Insurance Expiration Date'. A note at the bottom left states '* Required field'.

User Inbox

Find Patient Search Recent

Reports (show filter)

Acknowledge Selected Print Selected Acknowledge & Print Selected Reprint Past Print Jobs Refresh

Total rows selected: 1 Clear

Show 20 entries 1 2 3 4 5 Showing 1 to 4 of 4 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Provider	Ordering Location	Status	Selected	Ack'd
Abnormal	Q132100002	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	07/29/2013 4:30PM	07/09/2013 4:25PM	Test, Provider A1, MD	Test Location A1	Complete	<input checked="" type="checkbox"/>	
Abnormal	Q132100002	TEST, F					Location A1	Complete	<input type="checkbox"/>	
Abnormal	Q132100002	TEST, F					Location A1	Complete	<input type="checkbox"/>	
Abnormal	Q132100002	TEST, F					Location A1	Complete	<input type="checkbox"/>	

1. Click the check box in the column entitled 'Selected'.
2. Click the "Acknowledge Selected" button found at the top middle of your screen.

To archive a report and remove it from your inbox, check the selected column and acknowledge selected on top of the screen.

Please Note: Archived patients are available via the search function.

III. Search for Patient

A. Search from inbox

Click show filter

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Provider	Ordering Location	Status	Selected	Ack'd
Abnormal	01324000028	TEST, PATIENTA1	CoQ10, LPA, PDF Report, PLAC	08/28/2013 1:50PM	08/28/2013 1:29PM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000006	TEST, PATIENTA1	LPA, PDF Report, PLAC, oxLDL	08/28/2013 1:16PM	08/28/2013 9:27AM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000005	TEST, PATIENTA1	APo AB, CoQ10, MPO, PDF Report	08/28/2013 9:24AM	08/28/2013 9:15AM	Test, Provider A1, MD	Test Location A1	Partial	<input type="checkbox"/>	
Abnormal	01321800002	TEST, PATIENTA9	MPO, PDF Report	08/06/2013 12:10PM	08/06/2013 10:34AM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000029	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:18AM	07/09/2013 4:25PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000028	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:18AM	04/09/2013 4:18PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000027	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:17AM	01/08/2013 4:14PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000026	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:09AM	12/10/2012 3:54PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	

In the PATIENT search box, type in the patient's name you are looking for.

Report Recipient: Test, Provider A1, MD

Patient: [Search Box]

Ordering Location: Any

Ordering Provider: Any

Status: All

Severity: All

Priority: All

Show:

- ☒ Reports received in the past 30 days
- ☐ Days include every day of the week
- ☐ Days include only weekdays

Start: 08/30/2013 12:00 AM Now Clear

End: 08/30/2013 11:59 PM Now Clear

☐ Reports received between:

☐ All unacknowledged reports

☒ Hide Acknowledged Reports

Reports

Acknowledge Selected Print Selected Acknowledge & Print Selected Reprint Past Print Jobs Refresh

Total rows selected: 0 Clear

Showing 1 to 9 of 9 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Provider	Ordering Location	Status	Selected	Ack'd
Abnormal	01324000028	TEST, PATIENTA1	CoQ10, LPA, PDF Report, PLAC	08/28/2013 1:50PM	08/28/2013 1:29PM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000006	TEST, PATIENTA1	LPA, PDF Report, PLAC, oxLDL	08/28/2013 1:16PM	08/28/2013 9:27AM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000005	TEST, PATIENTA1	APo AB, CoQ10, MPO, PDF Report	08/28/2013 9:24AM	08/28/2013 9:15AM	Test, Provider A1, MD	Test Location A1	Partial	<input type="checkbox"/>	
Abnormal	01321800002	TEST, PATIENTA9	MPO, PDF Report	08/06/2013 12:10PM	08/06/2013 10:34AM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	

Click the patient you wish to view from the popup box and press enter. Your inbox will be limited to only that particular patient's order history.

Report Recipient: Test, Provider A1, MD

Patient: test.pa

Ordering Location: Any

Ordering Provider: Any

Status: All

Severity: All

Priority: All

Show:

- ☒ Reports received in the past 30 days
- ☐ Days include every day of the week
- ☐ Days include only weekdays

Start: 08/30/2013 12:00 AM Now Clear

End: 08/30/2013 11:59 PM Now Clear

☐ Reports received between:

☐ All unacknowledged reports

☒ Hide Acknowledged Reports

Reports

Acknowledge Selected Print Selected Acknowledge & Print Selected Reprint Past Print Jobs Refresh

Total rows selected: 0 Clear

Showing 1 to 9 of 9 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Provider	Ordering Location	Status	Selected	Ack'd
Abnormal	01324000028	TEST, PATIENTA1	CoQ10, LPA, PDF Report, PLAC	08/28/2013 1:50PM	08/28/2013 1:29PM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000006	TEST, PATIENTA1	LPA, PDF Report, PLAC, oxLDL	08/28/2013 1:16PM	08/28/2013 9:27AM	Test, Provider A1, MD	Test Location A2	Complete	<input type="checkbox"/>	
Abnormal	01324000005	TEST, PATIENTA1	APo AB, CoQ10, MPO, PDF Report	08/28/2013 9:24AM	08/28/2013 9:15AM	Test, Provider A1, MD	Test Location A1	Partial	<input type="checkbox"/>	
Abnormal	01321800002	TEST, PATIENTA9	MPO, PDF Report	08/06/2013 12:10PM	08/06/2013 10:34AM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	

B. Search by Practice Location

If your office has more than one ordering location you can take advantage of this feature. Our system separates the patient results by ordering location for ease of viewing. If you are logged in at one location and need to switch to a different location click LOCATION INBOX on the menu on the left hand side under VIEW RESULTS. The screen now contains a Location Recipient search box at the top.

Cleveland HeartLab

Location Inbox

Location Recipient: Test Location A1

Result Reports | Other Reports

Reports for Test Location A1 (show link)

Acknowledge Selected | Print Selected | Acknowledge & Print Selected | Reprint Past Print Jobs | Refresh

Total rows selected: 0 | Clear

Show 20 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Provider	Recipient	Status	Selected	Ack'd
Abnormal	01324500024	TEST, PATIENTA1	APO AB, CoQ10, GLU, MPO, PDF Report	09/05/2013 5:11PM	09/05/2013 2:37PM	Test, Provider A1, MD	Test Location A1	Partial	<input type="checkbox"/>	
Abnormal	01324500005	TEST, PATIENTA1	APO AB, CoQ10, MPO, PDF Report	08/30/2013 12:23PM	08/28/2013 9:15AM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321800002	TEST, PATIENTA9	MPO, PDF Report	08/30/2013 4:52PM	08/06/2013 10:34AM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000029	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:18AM	07/09/2013 4:25PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000028	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:18AM	04/09/2013 4:18PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000027	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:17AM	01/08/2013 4:14PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
Abnormal	01321000026	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	08/23/2013 9:09AM	12/10/2012 3:54PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	
-	01322400064	TEST, PATIENTA1	BMP, CBC, F2CORE, HSCRP, HACRAT, MPO, PDF Report, PLAC, UCREAT	08/12/2013 4:45PM	08/12/2013 2:39PM	Test, Provider A1, MD	Test Location A1	Complete	<input type="checkbox"/>	

Show 20 entries

Showing 1 to 8 of 8 entries

Sign Out

Test, Provider A1, MD
Test Location A1
Hide Menu

Click "Location Inbox".

Cleveland HeartLab

Location Inbox

Location Recipient:

Result Reports | Reports for Test Location A1

Search

Test Location A1
Test Location A2

Ack

Show 20 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations
Abnormal	01321800002	TEST, PATIENTA9	MPO, PDF Report
Abnormal	01321000029	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD
Abnormal	01321000028	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD
Abnormal	01321000027	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD
Abnormal	01321000026	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD

Click the magnifying glass to view your location choices.

Cleveland HeartLab

Location Inbox

Location Recipient

Result Reports Search

Reports for Test Location A1

Test Location A2

Show 20 entries

Choose the location that you would like to view.

Abnormal	ID	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	PDF Report
Abnormal	Q1321000029	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	
Abnormal	Q1321000028	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	
Abnormal	Q1321000027	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	
Abnormal	Q1321000026	TEST, PATIENTA1	HBA1C, HSCRP, MPO, PDF Report, TSH, URIC, VITD	

IV. Linked Documents

Documents can be attached to each patient order or your user account. Completed requisitions, and accompanying documents, such as insurance information will be linked to your patient's order. This will allow you to have access to view your requisition forms online once they are attached, should you need to refer back to them. From your User Inbox click on the patient that you wish to view and then select Linked Documents.

User Inbox

Find Patient

Reports (show filter) Acknowledge Selected Print Selected Acknowledge

Show 20 entries

Severity ¹	Order ID	Patient	Order Choice Abbreviations	Results Received	Order Date ²	Ordering Prov
Abnormal	O1321800002	Review Order	Report	08/06/2013 12:10PM	08/06/2013 10:34AM	Test, Provider
Abnormal	O1321000029	Samples		7/29/2013 4:30PM	07/09/2013 4:25PM	Test, Provider
Abnormal	O1321000028	Labels		7/29/2013 4:26PM	04/09/2013 4:18PM	Test, Provider
Abnormal	O1321000027	Requisition		7/29/2013 4:24PM	01/08/2013 4:14PM	Test, Provider
Abnormal	O1321000026	Change Log		7/29/2013 4:10PM	12/10/2012 3:54PM	Test, Provider
		Lab Report				
		Linked Documents				

Linked Documents

File to link Browse...

Description

☒ Link Result Documents
☐ Link Order Documents
☐ Link Patient Documents

Linked Result Documents: Order choice(s) to link the document to

☐ Myeloperoxidase * * C1321800002
 No documents have been linked to this order choice

☐ PDF Report * * O1321800002
 08/06/2013 12:10PM [Document ID10961](#) * (Normal)

Linked Order Documents: Documents to link to this order

08/08/2013 5:25PM [Document ID11103](#) * File attached via order attachment file path.

Linked Patient Documents: Documents to link to TEST, PATIENTA9

No documents have been linked to this patient

This will take you to any documents that were linked to this patient order.

 **ClevelandHeartLab®**
Know your risk.

Understanding the Patient Test Report

Demographic/Specimen Information

- An extensive demographics section will be provided on the first page of each report.
- In order to ensure these sections are populated appropriately, please fill out the requisition form in its entirety.

Report Status

- The report status will appear at the top of all pages within the report
- There are 4 types of reports:
 - Complete:** Final results
 - Complete (Amended):** Final results that have one or more amendments
 - Partial:** Incomplete results due to one or more test results pending
 - Partial (Amended):** Same as "Partial", but one of more results have been amended



COMPLETE REPORT

DOCTOR TEST, M.D. has requested this report for
TEST, PATIENT
04/07/1967

Report Customization

- This is an added feature that adds more personalization to the test report and provides easy identification of the patient.

Test Headers

- All tests offered by CHL will be placed under unique headers associated with the type of test.
- For example:
 - Inflammation
 - Lipids
 - Metabolic
 - Genetics

In Range/Out of Range Reporting

- All test results will fall under an In Range or Out of Range category.
- Tests reported as Out of Range will either be colored yellow (for tests associated with a moderate relative risk) or red (for tests that are associated with a high relative risk or simply to denote that they are Out of Range).

Test Result Comments

- Some test results may have educational comments associated with the results.

PATIENT INFORMATION		SPECIMEN INFORMATION		PRACTITIONER INFORMATION	
Name	TEST, PATIENT	Age	47	Name	DOCTOR TEST, M.D.
Patient ID		Gender	Male	Client ID	10001 CLEVELAND HEARTLAB
Fasting Status	DOB	04/07/1967		Address	6701 CARNEGIE AVE, SUITE 500 CLEVELAND, OH, 44103
Ethnicity	BMI	26			
	Report Date/Time	04/21/2014, 1:48 PM			

INFLAMMATION		In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
Myceloperoxidase (MPO)			520		HIGH	<420	pmol/L	472	04/21/2013
Based on a recent study of a high risk population, defined as stable patients without acute coronary syndrome who underwent elective diagnostic coronary angiography ¹ , Cleveland HeartLab has defined the following cut-offs for MPO: A cut-off of <420 pmol/L defines an "apparently healthy" population at low risk for a cardiovascular event, 420-479 pmol/L defines a population at intermediate risk for a cardiovascular event, and ≥480 pmol/L defines a high risk population based on the 97.5%ile.* (Reference: 1-Tang et al. Am J Cardiol. 111:465-70, 2013).									
Lp-PLA ₂ (The PLAC [®] Test)		185			LOW	≤ 200	ng/mL	180	04/21/2013
High-sensitivity CRP			1.5		MOD	<1.0	mg/L	1.2	04/21/2013
Microalbumin/Creatinine ratio		4.5			LOW	<30.0	mg/g	12.9	04/21/2013
Persistent Microalbumin/Creatinine ratios of 30-300 mg/g has been shown to be an early indicator of diabetic nephropathy (1). A 3-fold increase in CVD has been found in men with Microalbumin/Creatinine ratios >=3.9 mg/g and in women with values >=7.5 mg/g in the Framingham Heart Study (2). (References: 1. Diabetes Care 2011;34:S33A; 2. Arnlöv et al. Circulation 2005;112:969).									
Microalbumin		4.2					mg/L	12.1	04/21/2013
Creatinine, Urine		94.1				20.0-300.0	mg/dL	94.1	04/21/2013
OxLDL (4)		34			LOW	<60	U/L	45	04/21/2013
Please note new Reference Range of <60 U/L, effective 1/7/2014. This Reference Range to replace <45 U/L. Based on a recent study of an "apparently healthy" and non-metabolic syndrome population ¹ , the following cut-offs have been defined for OxLDL: A cut-off of <60 U/L defines a population with a low relative risk of developing metabolic syndrome, a range of 60-69 U/L defines a population with a moderate relative risk (2.8 fold) and ≥70 U/L defines a population with a high relative risk (3.5-fold).# (Reference: 1-Holvoet et al. JAMA. 2008; 299: 2287-2293).									
F ₂ -Isoprostane/Creatinine Ratio (1)		0.58			LOW	<0.86	ng/mg	0.62	04/21/2013
F ₂ -Isoprostane		0.55					ng/mL	0.58	04/21/2013
Creatinine, Urine		94.1				20.0-300.0	mg/dL	94.1	04/21/2013

Relative Risk

- Tests associated with a relative risk will have the word "LOW", "MOD" or "HIGH".

(Note: "MOD" is short for moderate)

Flags

- Tests associated with a reference range will be flagged as "H" for Out of Range High, or "L" for Out of Range Low.

Critical Results

- Critical results will be identified with a CL (Critical Low) or CH (Critical High)
- A statement will appear below the test result that confirms that the result was verified by repeat testing, and a designee from the office was notified by CHL.

**Flags: H = Out of Range High; L = Out of Range Low; CH = Critical High; CL = Critical Low

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Laboratory Director: Deborah H. Sun, PhD, DABCC, FACB

Page 1 of 3

Flags Key

- A key is provided at the base of each report page to distinguish the different types of Flags you may see within the report.


Historical Results

- Historical results are reported as a convenience so long as the following are provided:
 - The patient's **first and last name**
 - The patient's **DOB**
 - The last 4 digits of the patient's **SSN**
 - The ordering **practitioner's name**
- All information must be matching. For example, the same patient entered into our system as Tom Smith and Tommy Smith will not match, and therefore historical results will not be provided.

Understanding the Patient Test Report (continued)

Demographic/Specimen Information

- An abbreviated demographics section will be provided on all subsequent pages of a report.


ClevelandHeartLab®
Know your risk.

This report was specially prepared for
TEST, PATIENT
 04/07/1967

COMPLETE REPORT

Patient TEST, PATIENT	Order ID 1411100041	Collection Date/Time 04/21/2014, 1:40 PM	Ordering Practitioner DOCTOR TEST, M.D.
---------------------------------	-------------------------------	--	---

	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
Triglycerides	140			LOW	<150	mg/dL		
Non-HDL Cholesterol	110			LOW	<130	mg/dL		
Apolipoprotein A1	135			LOW	>120	mg/dL	135	04/21/2013
Apolipoprotein B	59			LOW	<100	mg/dL	59	04/21/2013
<small>Per the ACC and ADA recommendation, the goal ApoB level for high risk patients is <90 mg/dL and <80 mg/dL for very high risk patients, respectively. (Reference: Brunzell et al. J Am Cardiol 2008;51:1512).</small>								
ApoB/ApoA Ratio	0.44			LOW	<0.75		0.44	04/21/2013
sdLDL ⁽³⁾	25.1			LOW	≤40.0	mg/dL		
Lp(a)		35		HIGH	<30	mg/dL		

METABOLIC

	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
OxLDL ⁽⁴⁾	34			LOW	<60	U/L	45	04/21/2013

Please note new Reference Range of <60 U/L, effective 1/7/2014. This Reference Range to replace <45 U/L. Based on a recent study of an 'apparently healthy' and non-metabolic syndrome population-1, the following cut-offs have been defined for OxLDL: A cut-off of <60 U/L defines a population with a low relative risk of developing metabolic syndrome, a range of 60 to 69 U/L defines a population with a moderate relative risk (2.8 fold) and ≥70 U/L defines a population with a high relative risk (3.5-fold).# (Reference: 1-Holvoet et al. JAMA. 2008; 299: 2287-2293.)

OUT OF RANGE RESULTS SUMMARY

	Result	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
INFLAMMATION							
Myeloperoxidase	520		HIGH	<420	pmol/L	472	04/21/2013
High-sensitivity CRP	1.5		MOD	<1.0	mg/L	1.2	04/21/2013
LIPIDS							
Lp(a)	35		HIGH	<30	mg/dL		

Comments

(1) This test was developed and its performance was established and confirmed by Cleveland HeartLab. This test is not cleared or approved by the U.S. F.D.A. The test is not intended to be used as the sole means for clinical diagnosis or patient management decisions. Cleveland HeartLab is authorized under Clinical Laboratory Improvement Amendments (CLIA) to perform high-complexity testing.

(2) Although the test is performed by a U.S. F.D.A. approved/cleared reagent, the manufacturer has not determined the efficacy of this test when performed on EDTA plasma. The performance characteristics of this test were determined by the Cleveland HeartLab. Cleveland HeartLab is authorized under Clinical Laboratory Improvement Amendments (CLIA) to perform high-complexity testing.

**Flags: H = Out of Range High; L = Out of Range Low; CH = Critical High; CL = Critical Low

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 Laboratory Director: Deborah H. Sun, PhD, DABCC, FACB

Page 2 of 3

Out of Range Results Summary

- This section is provided as a convenience and the header is colored red in order to stand out from the test result sections
- This section provides a comprehensive overview of all abnormal results outside of an In Range or Out of Range grouping.

Reference Range Changes

- Notifications of a reference range change will appear below the test result, and will remain there for approximately 3-6 months from date of the change.

Comments

- When necessary, comments will appear at the very end of the test report (the last page of the report).
- Comments include any educational statements or information about how a test is performed.

Patient Test Report (Example of a patient test report)



Provider A1 Test, MD has requested this report for

TEST, PATIENTA1
05/01/1944

PATIENT INFORMATION		SPECIMEN INFORMATION		PRACTITIONER INFORMATION	
Name TEST, PATIENTA1	Age 68	Order ID O1321000028		Name Provider A1 Test, MD	
Patient ID	Gender Female	Collection Date 04/09/2013		Client ID	
Fasting Status No	DOB 05/01/1944	Received Date 07/29/2013		Address	
Ethnicity Caucasian	BMI 30	Report Date 07/29/2013			

INFLAMMATION							Previous Result	Date
	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units		
Myeloperoxidase	465			LOW	<480	pmol/L	540	01/08/2013
Although the test is performed by a FDA approved/cleared reagent, the manufacturer has not determined the efficacy of this test when performed on certain specimen type/collection device/etc. The performance characteristics of this test were determined by the Cleveland HeartLab. The Cleveland HeartLab is authorized under Clinical Laboratory Improvement Amendments (CLIA) to perform high-complexity testing.								
High-sensitivity CRP		2.3	H	MOD	<1.0	mg/L	3.1	01/08/2013

METABOLIC							Previous Result	Date
	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units		
HbA1c		5.7	H	MOD	<5.7	%	5.7	01/08/2013
American Diabetes Association (ADA) guidelines indicate that individuals with an A1c of 5.7%-6.4% are at the higher risk for developing diabetes and cardiovascular disease. The risk of diabetes rises disproportionately as A1c rises. Accordingly, interventions should be more intensive for those with A1c levels above 6.0%. HbA1c at or greater than 6.5% is considered diagnostic of diabetes. Diabetes Care 2011;34:e75-e80.								
Estimated Average Glucose	117			LOW	<118	mg/dL	117	01/08/2013
The estimated average glucose value is an adjunct to the treatment of both Type I and Type II diabetes. It is not intended for the diagnosis or risk assessment of patients without diabetes. Nathan DM et al. Diabetes Care 2008;31:1473								

VITAMINS/SUPPLEMENTS							Previous Result	Date
	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units		
Vitamin D, 25 Hydroxy		22.8	L	MOD	>29.9	ng/mL	6.2	01/08/2013
Incidence of 25-OH Vitamin D toxicity increases above 100 ng/mL and the majority of individuals with toxicity have values >150 ng/mL. Increased total calcium may be present. Jones G Am J Clin Nutr 2008;88:582S								

GENERAL CHEMISTRY							Previous Result	Date
	In Range	Out of Range	Flag**	Relative Risk	Reference Range	Units		
Uric Acid	4.8				2.4-5.7	mg/dL	5.4	01/08/2013

**Flags: H = Out of Range High; L = Out of Range Low; CH = Critical High; CL = Critical Low

Cleveland HeartLab, Inc. | 6701 Carnegie Ave. Suite 500 | Cleveland, OH 44103 | p 866-358-9828 | CLIA#36D1032987 | CAP#7190119
Laboratory Director: Deborah H. Sun, PhD, DABCC, FACB

Page 1 of 3

Patient Test Report (continued)



This report was specially prepared for

TEST, PATIENTA1

05/01/1944

Patient
TEST, PATIENTA1Order ID
O1321000028Collection Date
04/09/2013Ordering Practitioner
Provider A1 Test, MD

ABNORMAL RESULTS SUMMARY

	Result	Flag**	Relative Risk	Reference Range	Units	Previous Result	Date
INFLAMMATION							
High-sensitivity CRP	2.3	H	MOD	<1.0	mg/L	3.1	01/08/2013
METABOLIC							
HbA1c	5.7	H	MOD	<5.7	%	5.7	01/08/2013
VITAMINS/SUPPLEMENTS							
Vitamin D, 25 Hydroxy	22.8	L	MOD	>29.9	ng/mL	6.2	01/08/2013
THYROID FUNCTION							
Thyroid Stimulating Hormone (TSH)	7.454	H		0.400-4.500	uU/mL	8.310	01/08/2013

Comments

**Flags: H = Out of Range High; L = Out of Range Low; CH = Critical High; CL = Critical Low

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Page 3 of 3

Critical Results

A critical result is defined as a test result that represents a patient status at such variance with normal (expected values) as to be life threatening unless something is done promptly and for which some corrective action could be taken.

Please contact customer support at **866.358.9828** or send an e-mail inquiry to customersupport@clevelandheartlab.com for information on our critical values.

We understand that billing can be a complex and confusing process and may generate some questions. We are committed to helping you and your patients through the billing process and to assist with answering any questions. Patient Advocates, that are experts in our billing process as well as navigating the claims process, are available to assist you and your patients. Do not hesitate to contact us or have your patients contact our Patient Advocates at 866.358.9828, option 2.

The billing section of the Resource Book provides guidelines and information on our billing policies in the following areas:

- **Client Billing** – Client billing is implemented when a Client Requisition form is used to order testing. The cost of testing is billed directly to the ordering practitioner.
- **Third Party Billing** – Third party billing is implemented when a 3rd party requisition form is used to order testing. Medicare and/or insurance information is required on the requisition form. We will use this information to file a claim on behalf of the patient to their respective coverage carrier. The patient will also receive an easy pay (co-payment) invoice from Cleveland HeartLab that is their financial responsibility.
- **Patient Self-Pay Billing** – If the requisition form indicates the patient is responsible for the cost of testing, the patient will be billed directly.
- **Methods of Payment** – We outline the different payment options for both clients and patients.

Client Billing

This requisition form is for physician offices that would like to be billed directly (i.e. the physician is billed for services provided)

CLIENT REQUISITION FORM

INSTRUCTIONS


1. Please complete all highlighted areas in their entirety.
2. Please provide all specimen information (draw date/time).

PRACTITIONER INFORMATION

Client ID	
Practitioner ID	
Practice Name	
Practitioner Name	
NPI	
Address	

PA

DOB	
Last	
First	
Ht.	
Rac	



6701 Carnegie Avenue | Suite 500 |
p 866.358.9828 | f 866
www.clevelandheartlab.com


If you are ordering tests on the **client requisition form**, this is the process we will follow to invoice your office:

1. Cleveland HeartLab will invoice your office once a month for all the tests that were performed that month.
(Example 1)
2. The invoice will contain tests ordered through the 24th of each month.
(Example 1a)
3. You will also receive a detailed list of the patients who were tested that supports the invoice.
(Example 1a)
4. If there is an outstanding balance, we will send you a statement indicating what is past due.
(Example 2)

Note: Please see **Examples 1, 1a and 2** for a sample of the client bill.

Client Billing (continued)

Example 1: Sample Client Billing



ClevelandHeartLab®
Know your risk.

Cleveland Heartlab Inc.
6701 Carnegie Ave., Suite 500
Cleveland, OH 44103
866-358-9828
866-449-0960 Fax

INVOICE

BILL TO:

Invoice Date: 04/30/2013
 Invoice No:
 Customer #
 Payment Terms Net 30

Item #	Description	QTY	Unit Price US DOLLARS	Extd Price US DOLLARS
C108	CREATININE	86	XX.XX	XXXX.XX
C121	HSCRIP	86	XX.XX	XXXX.XX
C133	MYELOPEROXIDASE	86	XXX.XX	XXXXX.XX
C139	D-DIMER	86	XX.XX	XXXX.XX
C145	HEMOGLOBIN A1C	86	XX.XX	XXXX.XX
C146	INSULIN	86	XX.XX	XXXX.XX
C334	FIBRINOGEN MASS	86	XX.XX	XXXX.XX
C906	LIPID PANEL	86	XX.XX	XXXX.XX
C918	F2-ISOPROSTANE/CREATININE RATIO	85	XX.XX	XXXX.XX

<p>Remit Payment To:</p> <p>Cleveland Heartlab Inc. - CHL B2B Dept. CH19534 Palatine, IL 60055-9534</p>	<p>Credit Card Payments</p> <p>Visa / Mastercard / Discover / American Express</p> <p>Visit: www.clevelandheartlab.com/paymybill</p>	<table style="width: 100%;"> <tr> <td>Sales Total:</td> <td style="text-align: right;">XX,XXX.XX</td> </tr> <tr> <td>Sales Tax:</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Freight:</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Less:</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Other Charges:</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Invoice Total (USD):</td> <td style="text-align: right; border-top: 1px solid black;">XX,XXX.XX</td> </tr> </table>	Sales Total:	XX,XXX.XX	Sales Tax:	0.00	Freight:	0.00	Less:	0.00	Other Charges:	0.00	Invoice Total (USD):	XX,XXX.XX
Sales Total:	XX,XXX.XX													
Sales Tax:	0.00													
Freight:	0.00													
Less:	0.00													
Other Charges:	0.00													
Invoice Total (USD):	XX,XXX.XX													

Client Billing (continued)**Example 1a: Detailed Patient Information to Support Invoice**

Client:

Ordered Test: C133 Myeloperoxidase

Patient	Collection Date	DOB	Accession
Test Patient 1	4/9/2013	2/5/1969	LB3100509
Test Patient 2	3/27/2013	5/31/1957	LB3100501
Test Patient 3	4/11/2013	9/28/1956	LB3100483
Test Patient 4	4/4/2013	11/18/1945	LB3100484
Test Patient 5	4/5/2013	6/7/1986	LB3100475
Test Patient 6	4/10/2013	3/11/1952	LB3100471
Test Patient 7	4/4/2013	4/6/1954	LB3100478
Test Patient 8	3/27/2013	12/30/1971	LB3100502
Test Patient 9	4/3/2013	5/16/1947	LB3100500
Test Patient 10	4/4/2013	3/27/1956	LB3100473
Test Patient 11	3/28/2013	3/29/1960	LB3100499
Test Patient 12	4/3/2013	11/26/1955	LB3100498
Test Patient 13	4/3/2013	7/20/1958	LB3100493
Test Patient 14	4/4/2013	2/7/1977	LB3100479
Test Patient 15	4/4/2013	1/17/1991	LB3100469
Test Patient 16	3/29/2013	1/3/1955	LB3100497
Test Patient 17	4/10/2013	6/28/1979	LB3100486
Test Patient 18	3/29/2013	9/8/1967	LB3100492
Test Patient 19	4/4/2013	12/4/1959	LB3100472
Test Patient 20	4/10/2013	2/25/1981	LB3100474
Test Patient 21	4/5/2013	12/30/1956	LB3100470
Test Patient 22	4/4/2013	7/8/1987	LB3100476
Test Patient 23	4/11/2013	6/19/1952	LB3100485
Test Patient 24	3/27/2013	5/12/1988	LB3100494
Test Patient 25	4/11/2013	4/10/1983	LB3100490
Test Patient 26	4/11/2013	9/3/1971	LB3100482
Test Patient 27	4/11/2013	1/31/1978	LB3100489
Test Patient 28	4/10/2013	9/7/1960	LB3100481
Test Patient 29	4/10/2013	4/10/2013	LB3100477
Test Patient 30	3/27/2013	12/21/1974	LB3100495
Test Patient 31	3/27/2013	6/5/1986	LB3100491
Test Patient 32	4/11/2013	1/31/1978	LB3100488
Test Patient 33	3/29/2013	9/11/1977	LB3100496
Test Patient 34	4/5/2013	3/3/1958	LB3100468
Test Patient 35	4/12/2013	12/19/1951	LB3100480
Test Patient 36	4/12/2013	6/13/1956	LB3100487
Test Patient 37	3/22/2013	7/26/1954	LB3100445
Test Patient 38	3/6/2013	5/27/1961	LB3100463
Test Patient 39	3/5/2013	8/17/1958	LB3100464
Test Patient 40	3/25/2013	4/12/1976	LB3100446
Test Patient 41	3/11/2013	4/3/1954	LB3100466
Test Patient 42	4/15/2013	7/11/1960	LB3100507
Test Patient 43	3/25/2013	8/31/1957	LB3100443

Thursday, April 25, 2013

Client Billing (continued)**Example 2: Statement Outlining any Past Due Amount**

CLEVELAND HEARTLAB
6701 CARNEGIE AVENUE
SUITE 500
CLEVELAND OH
44103 USA

Page: 1
Statement Date: 05/02/2013

STATEMENT
US DOLLARS


Bill To: Customer ID:

Transaction Date	Due Date	Reference Number	Total Amount	Applied Amount	Remaining Balance
04/30/2013	05/30/2013	INV # 0000001161	XX,XXX.XX		XX,XXX.XX

Past Due -

1-30:	0.00	Current:	XX,XXX.XX
31-60:	0.00	On Hold:	0.00
OVER 60:	0.00	Unapplied Cash:	0.00
Unapplied Cash/Credit:	0.00	Total Amount Past Due:	0.00
YTD Service Charges:	0.00	Total Amount Due:	XX,XXX.XX

Third Party Billing

3rd PARTY REQUISITION FORM		 ClevelandHeartLab® <i>Know your risk.</i>	
INSTRUCTIONS 1. Please complete all highlighted areas in their entirety. 2. Please provide all specimen information (draw date/time).		6701 Carnegie Avenue Suite 500 Cleveland, Ohio 44103 p 866.358.9828 f 866.869.0148 www.clevelandheartlab.com	
PRACTITIONER INFORMATION		PATIENT INFORMATION	
Client ID		DOB mm / dd / yyyy	
Practitioner ID		Last Name	

The **Third Party Requisition** form is used for ordering tests that will be reimbursed by Medicare, insurance or directly by the patient. Check the appropriate payer at the bottom of the requisition to indicate the responsible payer. Accurate and complete information are critical for a smooth and efficient process.

The following summary and examples are provided to insure that you and your patients understand Cleveland HeartLab's billing processes. Do not hesitate to contact our Patient Advocates with any questions, as they have ready access to both this requisition and the claim/invoice to the payer.

Medicare

Cleveland HeartLab is an approved provider to Medicare. Please qualify your patient's coverage. If the patient only has Part A coverage, then lab tests will not be reimbursed by Medicare and the patient will be responsible for payment. An ABN form may be requested for test that are not covered by Medicare and/or frequently denied for reimbursement. You will receive advance notification of any tests that require an ABN.

Insurance

The claim will be filed timely with the provided insurance company and Cleveland HeartLab will make every effort to ensure the payment process goes smoothly.

- To address the patient's co-pay responsibility, Cleveland HeartLab designed the **EasyPay** to provide predictability and reflects our good faith estimate of the likely coinsurance after the insurance remittance. Your patient will receive an invoice for the EasyPay/co-pay amount ~30 days after testing date. Your sales representative or the Patient Advocate will provide you more information on EasyPay.

Note: Please see Example 3a for a sample EasyPay invoice.

- Process Exceptions:
 - Payment to the Patient:** Some insurance companies send payment to the patient vs. to Cleveland HeartLab. Given the high frequency of Blue Cross Blue Shield sending payment to the patients, Cleveland HeartLab proactively provides a letter to BCBS patients alerting them to the possibility that payment may be received by them and requesting their support to forward payment to Cleveland HeartLab.

Third Party Billing (continued)


Example 4 shows this letter.

- b. Coverage Denied: When Cleveland HeartLab receives notification that the patient's coverage was denied, we first contact your office to obtain the missing and/or incorrect information. If unsuccessful, then we will send a letter to the patient. With new/additional information, Cleveland HeartLab will resubmit the insurance claim. See Example 5 – Missing Information Letter.
- c. Final Step to Secure Payment: If after the above actions, there is no response and/or acceptance of the patient's coverage by the insurance company, then we consider the patient liable for payment. This step is taken after 30-45 days with no response. The patient will then receive a Patient Self-Pay Invoice, as noted in the Self-Pay Billing section, and shown in Example 6 on page 41.

Third Party Billing (continued)

Example 3a: Easy Pay Invoice

Page 1 of 1



STATEMENT INFORMATION

Patient Name: John Doe
Statement Date: 02/09/15
Amount Due: \$9.14

Patient Statement

Account Number: LH16541

INSURANCE INFORMATION

Primary: Easy Pay
Subscriber Name: John Doe
CERT#: 0000
GRP#: None On File
Secondary: None On File

Cleveland HeartLab has filed a claim with the insurance provider which was included in your physician's order for lab testing. The statement represents our EasyPay Program which reflects an estimate of a patient's co-insurance or co-payment for the test. Cleveland HeartLab accepts the payment by your insurance company and your payment of this EasyPay statement amount as full settlement for the testing services that you received. Please contact our Patient Advocates at 866-358-9828, option 2 with any questions or concerns.

Date	Procedure	Description Of Service	Charges	Payments & Adjustments	Billed To Insurance	Patient Amount Due
16541		Ordering Physician: James Smith				
02/03/15	80053	Comprehensive Metabolic Panel	\$4.49			
02/03/15	81001	Urinalysis	\$1.34			
02/03/15	85025	Complete Blood Count W/ Diff	\$3.31			
						\$9.14
PAY THIS AMOUNT						\$9.14

PAYMENT OPTIONS

To pay by credit card, visit www.knowyourrisk.com/patient-services and use access code **LH16541**


To pay by check, return the lower portion with your payment.

QUESTIONS

For billing inquiries, call 866-358-9828 Option 2 8:30-5:30 PM EST.

For questions about tests and results, contact the **Ordering Physician** listed under Description of Service

PLEASE DETACH AND RETURN LOWER PORTION WITH YOUR PAYMENT TO ENSURE PROPER CREDIT



6701 Carnegie Ave. Suite 500
Cleveland, OH 44103


ADDRESS SERVICE REQUESTED

☐ Check here if your address or insurance has changed, completing form on reverse side.

Account Number:	LH16541
Due Date:	03/02/15
Amount Due:	\$9.14
Amount Enclosed:	
Make Checks Payable To: Cleveland HeartLab, Inc. Please include your account number on check.	
To pay by credit card, visit www.knowyourrisk.com/patient-services and use access code LH16541	
Do not send credit card information by mail.	

To remit payment:
LH
CLEVELAND HEARTLAB INC.
PO BOX 8587
CAROL STREAM, IL 60197-8587

LH/E1503600865/00003354



Third Party Billing (continued)

Example 4: Payment to Patient Letter



February 23, 2015

Patient Name: **John Doe**

Account Number/Access Code: **LH-999999**

Account Balance: **\$9.14**

Place Of Service: Cleveland HeartLab Inc.

Referring Doctor: **Dr. John Smith**

Date of Service: **02/23/2015**

Dear **John Doe**

Subject: Insurance Claim Process

Cleveland HeartLab (CHL) is a premier clinical reference laboratory committed to advancing cardiovascular risk assessment through novel diagnostic tests. We recently performed laboratory tests which were ordered by your physician. In addition to providing the lab results to your physician, we filed a claim on your behalf with the insurance information which was included in the order for lab testing. We have not received payment or a response from your insurance company. Frequently, your insurance company forwards payments directly to you, the patient, instead of Cleveland HeartLab.

PLEASE COMPLETE ONE OF THE FOLLOWING:

1. **You HAVE RECEIVED payment from your Insurance Company**
 - a. Endorse the check from the insurance company to Cleveland HeartLab Inc. and mail to the address provided below along with the Explanation of Benefits.
 - b. Mail us a check along with a copy of the Explanation of Benefits showing the amount paid to you.
 - c. Contact us to arrange payment by credit card with your Explanation of Benefits available for review at phone number 866-358-9828, (option 2).
2. **You HAVE NOT RECEIVED payment from your Insurance Company**

Contact us to review the Explanation of Benefits you received from your insurance company so we can determine next steps. IF we do not hear from you or your insurance company, the services provided will be re-classified as "patient responsibility" and you will be invoiced the full amount of the Account Balance noted above.

If you have questions or need to review your Explanation of Benefits, please contact one of our Patient Advocates at 866-358-9828 (option 2) or by email at patientadvocate@clevelandheartlab.com

Thank you in advance for your timely response.

Cleveland HeartLab, Inc.
Billing Department

6701 Carnegie Ave. | Suite 500 | Cleveland, OH 44103 | p 866.358.9828 | f 866.869.0148 | www.knowyourrisk.com | www.clevelandheartlab.com

Third Party Billing (continued)

Example 5: Coverage Denied: Missing Information Letter



February 23, 2015

Patient Name: **John Doe**

Account Number/Access Code: LH-999999

Account Balance: **\$9.14**

Place Of Service: Cleveland HeartLab Inc.

Referring Doctor: **Dr. John Smith**

Date of Service: **02/23/2015**

Dear **John Doe**

Cleveland HeartLab (CHL) is a premier clinical reference laboratory committed to advancing cardiovascular risk assessment through novel diagnostic tests. We recently performed laboratory tests which were ordered by your physician. We have filed a claim on your behalf with the insurance information included in your physician's order for lab testing. The claim was rejected due to missing or incorrect information.

IMPORTANT: You must provide your updated insurance information within 30 days so we are able to re-submit a claim on your behalf.

You have three convenient options to update your information:

1. Submit the corrected insurance information on line by going to www.knowyourrisk.com/patient-services/pay-your-bill/. You will need the access code noted above to access your account.
2. Contact a CHL patient advocate at 866-358-9828 (Option 2) or by email at patientadvocate@clevelandheartlab.com
3. Fill out the below section and mail back to us at the following address:

**Cleveland HeartLab, Inc.
PO Box 8587
Carol Stream, IL 60197-8587**

Please call our patient advocates with any questions. It is important that we receive the updated insurance information within 30 days. If you do not respond, we will be unable to re-file a claim which will result in your account being re-classified as "patient responsibility" and you will be invoiced the full amount of the Account Balance noted above.

Updated Insurance Information

Insurance Company Name: _____ Phone (____) _____

Is your insurance part of the Multi-Plan Network? _____ (Y) Yes or (N) No

Address: _____ City: _____ State: _____ Zip: _____


Insured's Name (as it appears on insurance card): _____

Relationship to Patient: _____ Policy/ID Number: _____

Group Number: _____ Other: _____

6701 Carnegie Ave. | Suite 500 | Cleveland, OH 44103 | p 866.358.9828 | f 866.869.0148 | www.knowyourrisk.com | www.clevelandheartlab.com

Self-Pay Billing

3rd PARTY REQUISITION FORM		 ClevelandHeartLab® <i>Know your risk.</i>	
INSTRUCTIONS 1. Please complete all highlighted areas in their entirety. 2. Please provide all specimen information (draw date/time).		6701 Carnegie Avenue Suite 500 Cleveland, Ohio 44103 p 866.358.9828 f 866.869.0148 www.clevelandheartlab.com	
PRACTITIONER INFORMATION		PATIENT INFORMATION	
Client ID		DOB mm / dd / yyyy	
Practitioner ID		Last Name	

Patient Self-Pay

If the requisition indicates that the patient is responsible, then the patient will receive an invoice that reflects Cleveland HeartLab's standard test prices. Discounts are offered to reflect likely market pricing. We recognize the invoice prices may cause concerns so encourage your patients to contact Cleveland HeartLab's Patient Advocate with any questions and/or to discuss a discount. See Example 6 for Patient Self-Pay Invoice.

If you are ordering tests on the **third party requisition form and the patient is a self-pay patient**, Cleveland HeartLab will send an invoice to the patient for the testing performed. Discounts are offered for prompt payment.

Note: Please see **Example 6** for a sample invoice.














Important: Make sure to include patient's address when submitting requisition form.

Patient Assistance Program

For those patients with financial hardships, we provide a program to assist with medical expenses. Please call 1.866.358.9828, option 2 to speak with one of our Patient Advocates who can give you more information about this program or any other questions you may have about billing and payment options.

Self-Pay Billing (continued)

Example 6: Self-Pay Invoice

ACCOUNT NUMBER	DATE OF STATEMENT	PAYMENTS AFTER THIS DATE WILL APPEAR ON YOUR NEXT STATEMENT	000001	BALANCE	AMOUNT DUE								
PATIENT NAME	04/01/2013	<div style="border: 1px solid red; padding: 5px;"> <p>YOUR DOCTOR'S INSTRUCTIONS SHOW NO INSURANCE COVERAGE AND YOU ARE RESPONSIBLE FOR PAYMENT. THE AMOUNT DUE CAN BE REDUCED 50% FOR PROMPT PAYMENT.</p> </div>											
<p>Invoice for Laboratory Services: As ordered by your healthcare provider, Cleveland HeartLab performed the lab test(s) as detailed below and results were returned to your doctor. Timely resolution of payment is appreciated.</p>			<p>Place of Service: CLEVELAND HEARTLAB INC Referring Doctor:</p>										
			<p>MAKE CHECKS PAYABLE TO: CLEVELAND HEARTLAB, INC. Dept. CH19545 Palatine, IL 60055 - 9545 866/358-9828</p>										
SEE REVERSE SIDE FOR IMPORTANT BILLING INFORMATION					Page 1 of 1								
Date	Doctor	Qty	Code	Description	Amount								
09/18/2012		1	83520	Galectin-3	XX.XX								
09/18/2012		1	82491	Coenzyme Q10	XXX.XX								
09/18/2012		1	83789	MASS/TANDEM SPECTROMETRY	XXX.XX								
09/18/2012		1	82570	CREATININE; OTHER SOURCE	XX.XX								
09/18/2012		1	82043	ALBUMIN; URINE, MICROALBUMIN,	XX.XX								
09/18/2012		1	83698	LIPOPROTEIN-ASSOCIATED PHOSPHO	XXX.XX								
09/18/2012		1	83876	MYELOPEROXIDASE MPO	XXX.XX								
Pay or Access account at http://www.PerYourHealth.com ID:5065-00101675 Access Key:VYEEGJ													
<p>For questions call, 866/358-9828 and when prompted enter your identification number as follows OPERATOR AVAILABLE 8:30AM - 7:00 PM EST</p> <p>PLEASE DETACH AND RETURN THE BOTTOM PORTION WITH PAYMENT</p>													
 ClevelandHeartLab® <i>Know your risk.</i>		<table border="1"> <tr> <td>ACCOUNT NUMBER</td> <td>PATIENT NAME</td> </tr> <tr> <td>STATEMENT DATE</td> <td>AMOUNT DUE</td> </tr> <tr> <td>04/01/2013</td> <td>\$XXX.XX</td> </tr> <tr> <td colspan="2"> <div>     </div> </td> </tr> </table>				ACCOUNT NUMBER	PATIENT NAME	STATEMENT DATE	AMOUNT DUE	04/01/2013	\$XXX.XX	<div>     </div>	
ACCOUNT NUMBER	PATIENT NAME												
STATEMENT DATE	AMOUNT DUE												
04/01/2013	\$XXX.XX												
<div>     </div>													
6701 CARNEGIE AVENUE, SUITE 500 CLEVELAND, OH 44103 Temp-Return Service Requested		<p>To make credit card payments: www.peryourhealth.com (see statement detail for account number and password) or call 866/358-9828</p>											
<p>MAKE CHECKS PAYABLE AND REMIT TO:</p> <p>CLEVELAND HEARTLAB, INC. Dept. CH19545 Palatine, IL 60055 - 9545</p>													

Methods of Payment

We always encourage you or your patient to contact Cleveland HeartLab's Patient Advocates with questions or concerns regarding payment; these specialists have ready access to the complete details of the Client and Third Party Requisition Forms, our lab's records and the Medicare/insurance claim history to review. You can reach our Patient Advocates by phone 1-866-358-9828, option 2 or e-mail chlpatient@clevelandheartlab.com.

Patients

- 1. Online Credit Card Payment:** Your patients can make a secure online payment to Cleveland HeartLab by going to www.knowyourrisk.com/pay-your-bill.
 - a. The patient name, account number, invoice number and payment amount will need to be entered to make on online payment.
 - b. We accept VISA, MasterCard, Discover and American Express at no additional cost to the patient.
- 2. By Phone Credit Card Payment:** Your patients can make a credit card payment by phone by speaking with one of our billing specialists at 1-866-358-9828, option 2. We accept VISA, MasterCard, Discover and American Express at no additional cost to the patient.
- 3. Payment by Mail:** Your patients can make a payment by mail by sending a remittance advice with a check to the following address:

Cleveland HeartLab Inc.
Dept. CH19545
Palatine, IL 60055-9545

Clients

- 1. Online Credit Card Payment:** You can make a secure online payment to Cleveland HeartLab by going to www.clevelandheartlab.com/paymybill.
 - a. The client name, account number, invoice number and payment amount will need to be entered to make on online payment.
 - b. We accept VISA, MasterCard, Discover and American Express at no additional cost to you.
- 2. By Phone Credit Card Payment:** You can make a credit card payment by phone by speaking with one of our billing specialists at 1-866-358-9828, option 2. We accept VISA, MasterCard, Discover and American Express at no additional cost to you.
- 3. Payment by Mail:** You can make a payment by mail by sending a remittance advice with a check to the following address:

Cleveland HeartLab Inc.
Dept. CH19534
Palatine, IL 60055-9534

Available Physician Education Materials

To support our commitment to education we offer education materials on our key biomarkers. We also have a comprehensive practitioners guide and key resources to help you "get started" with Cleveland HeartLab. Reference materials are available to download on our website at www.clevelandheartlab.com/our-science/educational-materials

Physician Education Materials

F₂-Isoprostanes

Oxidized LDL



hsCRP



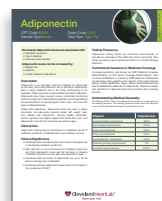
Urinary Microalbumin



MPO



The PLAC® Test



Adiponectin



Apolipoprotein E



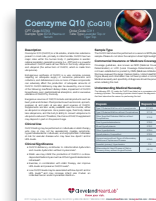
CYP2C19



MTHFR



AspirinWorks®



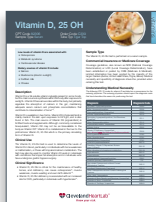
Coenzyme Q10



GLYCOMARK®



Thyroid Stimulating Hormone



Vitamin D, 25 OH



Galectin-3

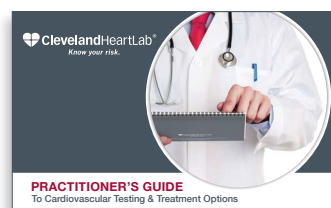


HDL2b

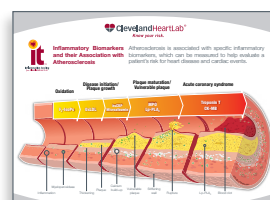


OmegaCheck™

Practitioners Guide



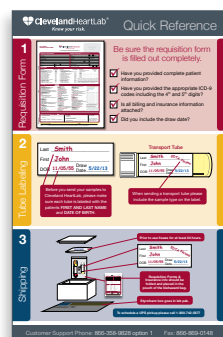
Artery Wall



Wellness Program



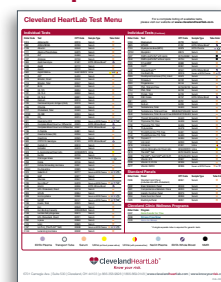
Customer Service Poster



Resource Book



Sample Quick Reference



Clinical References

The following is a summary of clinical references that support our key biomarkers. It should be noted that there are over 100+ published studies in support of the clinical utility of MPO testing.

Inflammation Testing ("it")

Myeloperoxidase

Karakas M et al. Myeloperoxidase is associated with incident coronary heart disease independently of traditional risk factors: Results from the MONICA/KORA Augsburg study. *J Intern Med*. 2012; 271:43-50.

- Population-Patients with CAD
- MPO levels in apparently healthy, middle-aged subjects predicted future coronary events independently of the lipid profile, traditional cardiovascular risk factors, markers of endothelial dysfunction, and other inflammatory markers.

Ndrepepa G et al. Impact of therapy with statins, beta-blockers and angiotensin-converting enzyme inhibitors on plasma myeloperoxidase in patients with coronary artery disease. *Clin Res Cardiol*. 2011; 100: 327-333.

- Population-Patients with CAD
- In subjects with angiographically confirmed CAD, lower plasma levels of MPO occurred at the time of hospital admission in subjects on either statin, BBs, or ACE inhibition therapies.
- The beneficial effect of these three classes of drugs on MPO levels occurred almost exclusively in subjects diagnosed with ACS.

Heslop et al. Myeloperoxidase and C-reactive protein have combined utility for long-term prediction of cardiovascular mortality after coronary angiography. *J Am Coll Cardiol*. 2010; 55: 1102-1109.

- Population-Patients with CAD
- This study was the first to demonstrate the benefit and value of MPO, compared to both traditional risk factors and CRP, for long-term prediction of cardiovascular mortality in subjects with stable CAD.
- Also for the first time, the complementary value of the addition of MPO to CRP for identifying patients at risk for future cardiovascular mortality was revealed. These subjects may well benefit from more aggressive cardiovascular risk reducing therapies in order to improve CAD outcomes.

Wong et al. Myeloperoxidase, subclinical atherosclerosis, and cardiovascular disease events. *J Am Coll Cardiol Img*. 2009; 2: 1093-1099.

- Population-Healthy individuals
- Using MPO and CAC measurements together may identify persons with vulnerable plaque who are at increased risk for CV events.
- In those with elevated CAC scores which imply a greater amount of plaque, adding MPO as a marker to help identify those with active vs. stable plaque may improve risk stratification and allow for earlier implementation of treatment to reduce the likelihood of CV events.

Tang et al. Usefulness of myeloperoxidase levels in healthy elderly subjects to predict risk of developing heart failure. *Am J Cardiol*. 2009; 103: 1269-1274.

- Population-Healthy individuals
- In apparently healthy elderly subjects, increased MPO levels were independently associated with the development of heart failure, beyond traditional risk factors and myocardial infarction.

Ndrepepa et al. Myeloperoxidase level in patients with stable coronary artery disease and acute coronary syndromes. *Eur J Clin Invest*. 2008; 38: 90-96.

- Population-Patients with CAD and/or ACS
- Subjects with CAD have higher levels of MPO than subjects without CAD.
- MPO levels increase with the progressive severity of CAD.
- Subjects with stable CAD have lower MPO levels compared to those with non-ST-segment acute coronary syndrome, while subjects with ST-segment myocardial infarction have the highest MPO levels.

Brevetti et al. Myeloperoxidase, but not C-reactive protein, predicts cardiovascular risk in peripheral arterial disease. *Eur Hear J*. 2008; 29: 224-230.

- Population-Patients with PAD
- MPO levels strongly predicted MI and stroke in subjects with PAD whereas CRP did not.
- MPO measures predicted MI and stroke independently from ABI, the most powerful marker currently used to predict risk in PAD.
- ABI and MPO together are better at predicting cardiovascular risk than ABI alone and may help to identify subjects who would benefit from more aggressive therapeutic interventions.

Clinical References (continued)

Mocatta et al. Plasma concentrations of myeloperoxidase predict mortality after myocardial infarction. *J Am Coll Cardiol.* 2007; 49: 1993-2000.

- Population-Patients post-MI
- Elevated MPO levels independently predict mortality in subjects post MI over a 5 year follow-up period.
- Measuring MPO levels post MI could assist in determining the prognosis and improve risk stratification of patients, especially if used in conjunction with LVEF and NT-proBNP.

Tang WHW et al. Prognostic value and echocardiographic determinants of plasma myeloperoxidase levels in chronic heart failure. *J Am Coll Cardiol.* 2007; 49: 2364-2370.

- Population-Patients with heart failure.
- Elevated MPO levels are associated with progression of heart failure in subjects with chronic systolic heart failure at baseline.
- MPO levels in subjects with chronic systolic heart failure can be used to predict future adverse clinical events after adjusting for traditional cardiovascular risks, BNP levels, and left ventricular ejection fraction.

Cavusoglu E et al. Usefulness of baseline plasma myeloperoxidase levels as an independent predictor of myocardial infarction at two years in patients presenting with acute coronary syndrome. *Am J Cardiol.* 2007; 99: 1364-1368.

- Population-Patients with ACS
- There is a strong, independent association between increased baseline levels of MPO and development of MI in the following 24 months in patients with ACS.
- The ability of MPO levels to predict future MI was independent of the extent of CAD.
- MPO was predictive for total MI, as well as nonfatal MI.
- MPO was a significant predictor of MI in patients with troponin-negative ACS.

Meuwese et al. Serum myeloperoxidase levels are associated with the future risk of coronary artery disease in apparently healthy individuals: the EPIC-Norfolk Prospective Population Study. *J Am Coll Cardiol.* 2007; 50: 159-165.

- Population-Healthy individuals
- MPO levels, in a primary prevention setting, were associated with future risk for CAD in an apparently healthy population.
- This study showed that elevations in both CRP and MPO precede the onset of CAD by years.

Exner M et al. Myeloperoxidase predicts progression of carotid stenosis in states of low high-density lipoprotein cholesterol. *J Am Coll Cardiol.* 2006; 47: 2212-2218.

- Population-Patients with CAD
- Elevated levels of MPO (i.e. above the median) were associated with increasing amounts of carotid atherosclerotic disease in subjects with HDL-C levels <49 mg/dL.

Vita et al. Serum myeloperoxidase levels independently predict endothelial dysfunction in humans. *Circulation.* 2004; 110: 1134-1139.

- Population-Patients with CAD
- This study in humans is consistent with previous animal model studies demonstrating that MPO consumes nitric oxide thereby inducing endothelial dysfunction.
- MPO levels strongly and independently predict endothelial dysfunction in humans.
- The impairment of endothelial function observed with increasing MPO levels is consistent with other studies that suggest a direct role of MPO in the pathogenesis of cardiovascular disease.
- These findings suggest that MPO induces endothelial dysfunction and may be a link between oxidation, inflammation, and cardiovascular disease.

Baldus S. et al. Myeloperoxidase serum levels predict risk in patients with acute coronary syndromes. *Circulation.* 2003; 108: 1440-1445.

- Population-Patients with ACS
- MPO is a powerful predictor of the risk of future cardiac events in subjects with ACS.
- In subjects with low CRP levels, elevated MPO levels can be used to identify those with unstable plaque prior to evidence of atherosclerotic occlusion.
- Results suggest that myocardial injury occurs after the release of MPO.

Brennan M-L et al. Prognostic value of myeloperoxidase in patients with chest pain. *N Engl J Med.* 2003; 349:1595-1604.

- Population-Patients with chest pain

Clinical References (continued)

- A single measurement of MPO can independently predict early risk of MI as well as the risk for MACE (e.g., MI, the need for revascularization, reinfarction, and death) in the 30 day and 6 month timeframes following admission for chest pain suspected from coronary etiology.
- In subjects admitted with chest pain who had no evidence of myocardial necrosis, CRP, CK-MB isoform, and troponin T levels did not identify future risk for MACE whereas elevated MPO levels suggested the presence of vulnerable plaque and imminent risk for MACE in these subjects.

Zhang R et al. Association between myeloperoxidase levels and risk of coronary artery disease. *JAMA*. 2001;286:2136-2142.

- Population-Patients with CAD
- Elevated levels of MPO, whether measured by leukocyte- or blood-MPO, are associated with the presence of CAD as determined by angiography.
- The authors suggest that this study supports a potential role for utilizing MPO as an inflammatory marker to help identify patients with CAD who may be missed by traditional risk assessment methodologies.

Lp-PLA₂

Ballantyne CM et al. Lipoprotein-associated phospholipase A₂, high sensitivity C-reactive protein, and risk for incident ischemic stroke in middle-aged men and women in the Atherosclerosis Risk in Communities (ARIC) study. *Arch Intern Med*. 2005; 165: 2479-2484.

- Population-Patients with ischemic stroke
- Increased Lp-PLA₂ and hsCRP levels are associated with an increased risk of ischemic stroke.
- The addition of Lp-PLA₂ and hsCRP levels to traditional risk factors may identify more middle-aged individuals at risk of ischemic stroke.

Ballantyne CM et al. Lipoprotein-associated phospholipase A₂, high-sensitivity C-reactive protein, and risk for incident coronary heart disease in middle-aged men and women in the Atherosclerosis Risk in Communities (ARIC) study. *Circulation*. 2004; 109: 837-842.

- Population-Healthy individuals
- The current study demonstrates that Lp-PLA₂ and hsCRP may be useful to identify individuals at increased CHD risk who have low LDL-C (<130 mg/dL) and who are not targeted for drug therapy by current guidelines.

Urinary Microalbumin

Arnlov J et al. Low-grade albuminuria and incidence of cardiovascular disease events in nonhypertensive and nondiabetic individuals: The Framingham Heart Study. *Circulation*. 2005; 112: 969-975.

- Population-Non-diabetic, non-hypertensive individuals
- Low-grade urinary albumin excretion below the current diagnostic threshold is associated with increased risk of CVD and mortality in apparently healthy individuals, and may be a marker for subclinical vascular damage that predisposes to future CVD events

Gerstein HC et al. Albuminuria and risk of cardiovascular events, death, and heart failure in diabetic and nondiabetic individuals. *JAMA*. 2001; 286: 421-426.

- Population-Diabetic and non-diabetic individuals
- Microalbuminuria is a strong independent risk factor for cardiovascular events due to its ability to identify underlying vascular disease.
- The ACR may help estimate cardiovascular risk in individuals with or without DM, and the relationship between the ACR and cardiovascular disease extends to values well below the currently accepted screening threshold.

High-sensitivity C-reactive Protein

Ridker PM et al. Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med*. 2008; 359: 2195-2207.

- Population-Healthy individuals
- Rosuvastatin reduced the rates of a first major cardiovascular event and death from any cause in apparently healthy men and women without hyperlipidemia but with elevated hsCRP levels.
- The study underscores the inflammatory hypothesis of atherothrombosis and warrants the development of targeted anti-inflammatory drugs for the reduction of vascular events.

Clinical References (continued)

Ridker PM. et al. Comparison of C-reactive protein and low-density lipoprotein cholesterol levels in the prediction of first cardiovascular events. *N Engl J Med*. 2002; 347: 1557-1565.

- Population-Healthy individuals
- C-reactive protein is a stronger biomarker of cardiovascular risk than LDL cholesterol levels, even after adjustment for other risk factors.

Ridker PM et al. Inflammation, aspirin, and the risk of cardiovascular disease in apparently healthy men. *N Engl J Med*. 1997; 336: 973-979.

- Population-Healthy individuals
- Baseline levels of CRP can predict risk of first MI and stroke in apparently healthy men.
- The efficacy of aspirin treatment in reducing the risk of MI declines with decreasing concentrations of CRP.

Oxidized LDL

Bays HE et al. Chitin-glucan fiber effects on oxidized low-density lipoprotein: A randomized controlled trial. *Eur J Clin Nutr*. epub ahead of print 5 September 2012.

- Population-Hypercholesterolemic individuals
- OxLDL levels can be significantly reduced by supplementation with CG. This reduction occurred without a concomitant reduction in F2-isoprostanes levels, suggesting that these markers can be modulated independently.

Rao VS et al. Association of inflammatory and oxidative stress markers with metabolic syndrome in Asian Indians in India. *Cardiol Res Pract*. 2010 Dec 28;2011:295976.

- Population-Individuals with metabolic syndrome
- The presence of metabolic syndrome is associated with an increase in inflammatory and oxidative stress biomarkers, indicating the presence of an atherogenic environment.
- OxLDL levels can predict the presence of metabolic syndrome independent of other inflammatory and oxidative stress biomarkers in Asian Indians.

Holvoet P et al. Association between circulating oxidized low-density lipoprotein and incidence of the metabolic syndrome. *JAMA*. 2008; 299: 2287-2293.

- Population-Individuals with metabolic syndrome
- Increased levels of OxLDL are associated with an increased risk of developing metabolic syndrome and also with various individual components of metabolic syndrome including high fasting glucose levels, high triglycerides and abdominal obesity.

F₂-Isoprostanes

Shishehbor MH et al. Systemic elevations of free radical oxidation products of arachidonic acid are associated with angiographic evidence of coronary artery disease. *Free Radic Biol Med*. 2006; 41: 1678-1683.

- Population-Patients with CAD
- Levels of F₂-Isoprostanes and 9-HETE correlated significantly with the presence of angiographically-defined CAD.
- The association remained significant even after adjustment for known cardiac risk factors.
- F₂-Isoprostanes appear to be superior to other lipid peroxidation products tested in determining CAD risk defined by angiography.

Schwedhelm E et al. Urinary 8-iso-prostaglandin F_{2a} as a risk marker in patients with coronary heart disease: A matched case-control study. *Circulation*. 2004; 109: 843-848.

- Population-Patients with CHD
- This study demonstrates that oxidative stress, as measured by urinary excretion of 8-iso-PGF_{2α}, is a cumulative risk factor for CHD.
- Additionally, increased urinary 8-iso-PGF_{2α} levels are a strong and independent risk factor for CHD.

Lipid Testing

Standard Lipid Panel

Third report of the National Cholesterol Education Program (NCEP). Expert panel on detection, evaluation and treatment of high blood cholesterol in adults (Adult Treatment Panel III). National Cholesterol Education Program. National Heart, Lung, and Blood Institute. National Institutes of Health. September 2002. *NIH Publication No.* 02-5215.

Clinical References (continued)

Apolipoprotein B (ApoB), Apolipoprotein A (ApoA1), and ApoB/ApoA1 ratio

Walldius G et al. High apolipoprotein B, low apolipoprotein A-1, and improvement in the prediction of fatal myocardial infarction (AMORIS study): A prospective study. *Lancet*. 2001; 358: 2026-2033.

- Population-Healthy individuals
- ApoB levels and the ApoB/ApoA ratio are strong and independent risk factors for fatal myocardial infarctions, while elevated ApoA levels were protective.
- Increasing ApoB and decreasing ApoA levels contribute to increased risk irrespective of total cholesterol and triglyceride levels.
- ApoB levels can be used to determine risk of a fatal myocardial infarction in individuals with low to normal levels of LDL cholesterol.

Yusuf S. et al. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART Study): Case-control study. *Lancet*. 2004; 364: 937-952.

- Population-Patients with MI and matched controls
- An elevated ApoB/ApoA ratio is a strong and independent risk factor for acute myocardial infarction, with an impact similar to that of smoking.
- The relationship between the ApoB/ApoA ratio and the occurrence of an acute myocardial infarction was graded, without an apparent threshold.
- An elevated ApoB/ApoA ratio and smoking account for approximately 2/3 of the population attributable risk for acute myocardial infarction.

Walldius G et al. Stroke mortality and the ApoB/ApoA-1 ratio: Results of the AMORIS prospective study. *J Intern Med*. 2006; 259: 259-266.

- Population-Healthy individuals
- An elevated ApoB/ApoA ratio is associated with an increased risk of stroke, particularly ischemic stroke.
- Low ApoA levels were the strongest contributor to a low ApoB/ApoA ratio and risk of all stroke types.
- An abnormal cholesterol balance, as indicated by an elevated ApoB/ApoA ratio, is a strong marker of all ischemic events.

Small Dense LDL (sdLDL)

Rosensen RS et al. Relations of lipoprotein subclass levels and low-density lipoprotein size to progression of coronary artery disease in the Pravastatin Limitation of Atherosclerosis in the Coronary Arteries (PLAC-I) trial. *Am J Cardiol*. 2002; 90: 89-94.

- Population-Patients with CAD
- Baseline levels of sdLDL particles are associated with CAD progression, even after adjustment for traditional risk factors and lipid levels.
- Individuals with the highest levels of sdLDL particles had the greatest rates of disease progression.

Koba S et al. Significance of small dense low-density lipoproteins and other risk factors in patients with various types of coronary heart disease. *Am Heart J*. 2002; 144: 1026-1035.

- Population-Patients with CHD
- An LDL phenotype characterized by sdLDL particles was an independent risk factor for the development of CHD in both diabetic and non-diabetic individuals, but was unrelated to the severity and extent of coronary lesions.
- The findings suggest that sdLDL are involved in the initiation, but not progression, of CHD.

St-Pierre AC et al. Comparison of various electrophoretic characteristics of LDL particles and their relationship to the risk of ischemic heart disease. *Circulation*. 2001; 104: 2295-2299.

- Population-Patients with ischemic heart disease
- Increased levels of sdLDL particles, and the amount of cholesterol within the particles, are risk factors for the development of IHD in initially healthy men.
- Lipoprotein subclass determination can improve the prediction of cardiovascular disease risk beyond that provided by traditional risk factors.

Austin MA et al. Atherogenic lipoprotein phenotype. A proposed genetic marker for coronary heart disease risk. *Circulation*. 1990; 82: 495-506.

- Population-Healthy individuals
- Pattern B, with a predominance of small dense LDL particles, is associated with an atherogenic lipoprotein profile including elevated triglyceride and LDL-C levels and reduced HDL-C levels.

Clinical References (continued)

Lipoprotein(a) [Lp(a)]

Kamstrup PR et al. Genetically elevated lipoprotein(a) and increased risk of myocardial infarction. *JAMA*. 2009; 301: 2331-2339.

- Population-Healthy individuals
- Elevated levels of Lp(a), either measured in the plasma or determined by genotyping the KIV-2 repeat, are significantly associated with an increased risk of myocardial infarction.

Other Advanced Cardiovascular and Metabolic Tests

Coenzyme Q10

Toyama K et al. Rosuvastatin combined with regular exercise preserves coenzyme Q10 levels associated with a significant increase in high-density lipoprotein cholesterol in patients with coronary artery disease. *Atherosclerosis*. 2011; 217: 158-164.

- Population-Patients with CAD
- The combination of rosuvastatin and exercise significantly preserved CoQ10 levels with an increase in HDL-C levels in patient with CAD as compared to patients receiving atorvastatin.

Caso G et al. Effect of coenzyme Q10 on myopathic symptoms in patients treated with statins. *Am J Cardiol*. 2007; 99: 1409-1412.

- Population-Patients with myopathic symptoms
- CoQ10 supplementation may be beneficial in decreasing muscle pain associated with statin treatment and improving the interference of pain in daily living activities.

Mabuchi H et al. Effects of CoQ10 supplementation on plasma lipoprotein lipid, CoQ10 and liver and muscle enzyme levels in hypercholesterolemic patients treated with atorvastatin: A randomized double-blind study. *Atherosclerosis*. 2007; 195: e182-e189.

- Population-Hypercholesterolemic individuals
- CoQ10, HDL-C, and ApoA1 levels are reduced in individuals taking atorvastatin for management of hypercholesterolemia.
- CoQ10 supplementation restores CoQ10, HDL-C, and ApoA1 levels without affecting the lipid-lowering properties of atorvastatin.

AspirinWorks®

Eikelboom JW et al. Aspirin-resistant thromboxane biosynthesis and the risk of myocardial infarction, stroke, or cardiovascular death in patients at high risk for cardiovascular events. *Circulation*. 2002; 105:1650-1655.

- Population-Individuals at high risk of cardiovascular disease
- Aspirin resistance, as measured by the presence of elevated levels of 11-dehydrothromboxane B2 after aspirin consumption, is associated with an increased risk of myocardial infarction or cardiovascular death in individuals at high risk of cardiovascular events.
- A simple measurement of urinary 11-dehydrothromboxane B2 levels may identify at-risk individuals who require higher doses of aspirin or other anti-thrombotic medications.

Vitamin D, 25 OH

Wang TJ et al. Vitamin D deficiency and risk of cardiovascular disease. *Circulation*. 2008; 117: 503-511.

- Population-Healthy individuals
- Moderate to severe vitamin D deficiency is associated with an increased risk of cardiovascular disease, particularly among individuals with hypertension.

NT-proBNP

Bettencourt P et al. N-terminal-pro-brain natriuretic peptide predicts outcome after hospital discharge in heart failure patients. *Circulation*. 2004; 110: 2168-2174.

- Population-Patients with heart failure
- Elevated NT-proBNP levels at discharge in individuals hospitalized for heart failure are a strong and independent predictor of risk of hospital readmission and death within 6 months of discharge.

Available Patient Education Materials

To support our commitment to education we provide patient information for our key biomarkers. These patient education materials are available to download on our website at www.clevelandheartlab.com/our-science/educational-materials

Patient Education Materials

F₂-Isoprostanes

Oxidized LDL



hsCRP



Urinary Microalbumin



MPO



The PLAC® Test



Adiponectin



Apolipoprotein E



CYP2C19



MTHFR



Coenzyme Q10



GLYcoMARK®



Galectin-3



AspirinWorks®

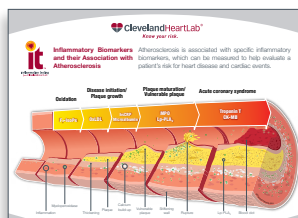


HDL2b



OmegaCheck™

Additional Pieces

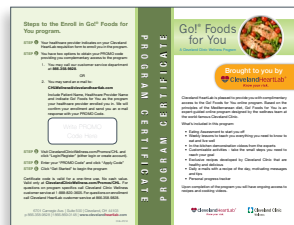


Artery Wall

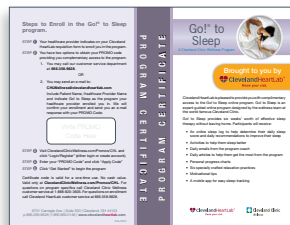


Patient "it" Brochure

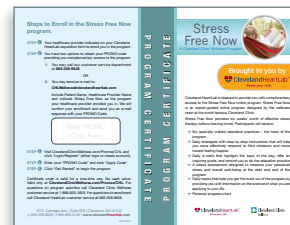
Wellness Program



Go! Foods for You



Go! To Sleep



Stress Free Now

www.knowyourrisk.com

inflammation testing
from ClevelandHeartLab

Know Your Risk

My mom is diabetic, is she at risk for heart disease?
My doctor says I'm overweight, should I be concerned?
My father died of heart disease at 45, what is my risk?
My cholesterol is normal, am I at risk for heart disease?

2200 PEOPLE DIE FROM HEART DISEASE IN THE U.S. EACH DAY
43 secs. SOMEONE IN THE U.S. HAS A HEART ATTACK EVERY
50% OF PATIENTS WHO HAVE A HEART ATTACK OR STROKE HAVE NORMAL CHOLESTEROL LEVELS
\$312 bil. EVERY YEAR HEART DISEASE AND STROKE COST THE NATION

ABOUT HEART DISEASE

We all want to age well, but far too many young Americans are having heart attacks or strokes and many are life-ending events. In fact, someone in the U.S. has a heart attack every 43 seconds.

Heart disease and stroke are not only the leading causes of death but can make it impossible for some adults to return to work and enjoy their favorite activities. According to the Center for Disease Control, there are more people under age 65 who are dying from preventable heart disease and strokes than there were over 65 years. Once thought to be a "man's disease," heart attacks and strokes kill more women each year than the next four causes of death combined, including cancer.

CLICK for "The Science" on how a heart attack happens.

UNDERSTANDING YOUR RISK

The inner lining of your arteries are damaged by things like smoking, diabetes, high blood pressure, and poor lifestyle habits. This damage allows cholesterol in your blood to more easily enter the walls of your arteries, leading to disease.

The cholesterol enters the inside of the artery wall and your body tries to get rid of it in the same way it does a splinter in your finger. As you know, the inflammation that forms around the splinter can cause a painful, red sore. When cholesterol enters the wall of the artery, a sore forms inside the artery wall. When enough cholesterol accumulates, it may cause inflammation to the point it triggers a heart attack or stroke. Your doctor has probably tested your cholesterol levels to see if you are at risk for heart attack. If you have normal cholesterol levels you may assume you are not at risk for a heart attack or stroke. This is not always true. Approximately 50% of patients who experience a heart attack or stroke have normal cholesterol levels. So, what is driving these events to still happen? Researchers now understand that heart attacks and strokes happen because of inflammation in the artery. Measuring cholesterol without inflammation may only tell part of the story. Cholesterol testing provides part of the picture. Inflammation testing helps provide a more complete picture of YOUR RISK for heart disease.

INFLAMMATION AND HEART DISEASE

Cleveland HeartLab's inflammation tests can help YOU and your doctor have a better understanding of YOUR RISK of heart attack or stroke.

Watch the Know Your Risk Video™ to learn more about how simple blood and urine tests help doctors assess inflammation so they have a more complete picture of your individual risk for a heart attack and stroke. Understand how doctors identify which patient is at risk based on inflammation test results.

PATIENTS CAN TAKE ACTION TO REDUCE THEIR RISK OF HEART ATTACKS AND STROKES

ClevelandHeartLab
Know your risk.

Home page:

Knowyourrisk.com is a resource which you can refer your patients to regarding CHL's inflammation tests. This site provides information on the link between heart disease and inflammation, CHL's inflammation testing and an overview of how to lower risk.

Slide 1 - About Heart Disease:

Provides a brief overview of heart disease and the "inside story" of how a heart attack happens.

Slide 2 - Understanding Your Risk:

Discusses why inflammation testing provides a more complete picture of an individual's risk for heart disease than cholesterol testing alone.

Slide 3 - Inflammation & Heart Disease:

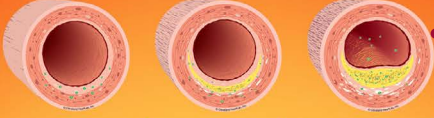
Consumer video which will help your patients understand the link between inflammation and heart disease.

www.knowyourrisk.com (continued)

INFLAMMATION TESTING

Cholesterol testing provides part of the picture. Inflammation testing provides a more complete picture of **YOUR RISK** for heart disease.

Cleveland HeartLab offers simple blood and urine testing that provides you and your doctor information that may be used to help evaluate your risk for heart disease. These tests can be used alongside cholesterol testing to provide a more complete picture of **YOUR RISK** for heart disease.



The following tests may help to identify your early risk for disease:

F₂-isoprostanes (F₂isps) is a "stable marker" that measures the amount of oxidation in your body that can damage your endothelium. Eating too much red meat, smoking or not exercising enough can increase your F₂isoprostanes levels and increase your risk for future heart disease.

Homocysteine (Hcy) is a marker that measures the amount of LDL - or "bad cholesterol" - that has been damaged due to oxidation. Your Hcy levels can increase your CHDL levels and increase your risk for pre-diabetes.

[CLICK for "The Science" of Inflammation](#)

The following tests may help to identify the presence of disease:

hsCRP is a general marker of inflammation. The presence of a cold may increase hsCRP levels over the short term (days to weeks). However, the accumulation of cholesterol in the artery wall may result in increased hsCRP levels over the long-term (years to decades).

Interleukin-6 (IL-6) is a marker of endothelial damage in your arteries. If the endothelium is damaged in your arteries then it is more damaged in other parts of your body including your arteries. Increased levels of urinary microalbumin may identify the presence of diabetes or heart disease.

[CLICK for "The Science" of Inflammation](#)

The following tests may help to identify the presence of disease:

Lp-PLA₂ (the PLAC² test) is a marker that measures the active buildup of cholesterol inside your arteries. Your risk for a heart attack or stroke increases as Lp-PLA₂ levels increase.

Monocyte chemoattractant protein-1 (MCP-1) is a marker that measures the body's response to a damaged endothelium that has become inflamed, eroded and ultimately unstable due to cholesterol accumulation and inflammation. Your risk for a heart attack increases as your MCP-1 levels increase.

[CLICK for "The Science" of Inflammation](#)

inflammation testing™
from Cleveland HeartLab

F₂-isoprostanes Information about the inflammation test for F ₂ -isoprostanes (F ₂ isps)	OxLDL Information about the inflammation test for Oxidized LDL (oxLDL)	hsCRP Information about the inflammation test for high-sensitivity C-reactive protein (hsCRP)
Microalbumin Information about the inflammation test for urinary Microalbumin	MPO Information about the inflammation test for Monocyte chemoattractant protein-1 (MCP-1)	Lp-PLA₂ Information about the inflammation test for the PLAC ² test (Lp-PLA ₂)

Know Your Risk Patient Brochure
Information about Inflammation Testing from Cleveland HeartLab

ARE YOU AT RISK?

Often the first symptom of heart disease is a heart attack.

Ultrasound and imaging tests help doctors identify patients at risk for a heart attack but they cannot be done everywhere and are too expensive to be done on everyone. Fortunately there are new blood and urine tests that are easy to do in your doctor's office. These simple tests can help you and your doctor know your risk for a heart attack or stroke. When you **KNOW YOUR RISK** of a heart attack or stroke, you can work with your doctor to **REDUCE YOUR RISK**.

The American Heart Association (AHA) has identified the following risk factors for developing heart disease:

- ☐ **Age** - Your risk increases as you get older.
- ☐ **Gender** - Men are at higher risk if over 45 years of age and women if over 55 years of age.
- ☐ **Family History** - Your risk is higher if members of your family have had cardiovascular disease (heart attack, bypass surgery, a stent, or stroke) at a young age; before age 55 years for men or before age 65 years for women.
- ☐ **High Blood Pressure** - Know your blood pressure. Ideally it should be less than 120/80 mm Hg when you are at rest, although sometimes higher levels are often OK with your doctor when you're older.
- ☐ **High Blood Cholesterol** - Your risk for heart attack is lower if your LDL cholesterol is less than 100 mg/dL, and your non-HDL cholesterol is less than 130 mg/dL.
- ☐ **Physical Inactivity** - Sitting for long periods of time increases your risk. Even moving around for 5-10 minute periods throughout the day can lower heart attack risk.
- ☐ **Obesity and Overweight** - Risk for disease is related to those extra pounds around your waist line. Losing 5-10% of your body weight reduces health risk.
- ☐ **Smoking** - Research has shown that every 5 cigarettes a day smoked increases heart attack risk. Quitting smoking reduces heart attack risk immediately.
- ☐ **Diabetes** - It is very important to **KNOW** your blood sugar level. Normal blood sugar levels are under 100 mg/dL.

LOWER YOUR RISK NOW

If you are at RISK FOR DISEASE

What can I do to help lower my F₂isps/hsCRP levels?

You can make changes in your diet that can lower your F₂isps/hsCRP levels.

- ☐ Reducing the amount of red meat and increasing the amount of fish and vegetables you eat can help lower your F₂isps/hsCRP levels.
- ☐ Your F₂isps/hsCRP levels may also be lowered by increasing the amount you exercise.
- ☐ CIP you consider, quitting will lower your F₂isps/hsCRP levels.

If you have PRESENCE OF DISEASE

What can I do to help lower my oxidized LDL levels?

Identify changes in the diet options to help lower your oxidized LDL levels.

- ☐ CIP you consider, quitting will lower your oxidized LDL levels.
- ☐ Adjust your diet to include foods low in saturated fat and those with zero trans fat. Fruits and vegetables are also great options as they contain antioxidants.
- ☐ Talk with your medical provider about over-the-counter supplements containing antioxidants.
- ☐ Discuss your amount of physical activity.

If you have ACTIVE DISEASE

What can I do to help lower my oxidized LDL levels?

Identify changes in the diet options to help lower your oxidized LDL levels.

- ☐ CIP you consider, quitting will lower your oxidized LDL levels.
- ☐ Adjust your diet to include foods low in saturated fat and those with zero trans fat. Fruits and vegetables are also great options as they contain antioxidants.
- ☐ Talk with your medical provider about over-the-counter supplements containing antioxidants.
- ☐ Discuss your amount of physical activity.

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Slide 4 - Inflammation Testing:

The artery wall represents a graphical depiction of the inside of an artery and provides insight of what the artery wall looks like at various stages of the inflammation risk spectrum. It also identifies which CHL tests can be used across the spectrum.

Slide 5 - Are You At Risk?:

Discusses the importance of patients knowing if they are at risk so they are able to take steps to lower their risk.

Slide 6 - Lower Your Risk Now:

Provides basic information on what can be done to help lower an individual's risk for heart attack and stroke. Refers them back to you for an individualized treatment plan.

General

How do I order supplies (sample collection kits, patient education, etc.)?

We have made ordering supplies very easy by offering them in an a la carte fashion. This allows you to receive only the items and amounts you need for your office. Visit our website at www.clevelandheartlab.com/our-lab-services/order-supplies to see a list of supplies available and place an order.

How can I schedule a reoccurring supply order?

To schedule reoccurring supplies, please contact our customer support department at 866.358.9828. They can help you determine the volume of supplies needed and will get you set up with an appropriate shipment schedule.

How do I schedule a UPS pick-up?

Call UPS at 1.800.742.5877 to schedule a “return service labeled” pick-up. You will then need to provide your contact information and the tracking number that is on your return label.

What should I do if UPS does not pick up our sample?

If you have a reoccurring UPS scheduled pick-up, or scheduled a one-time pick-up and UPS does not pick-up, please contact Cleveland HeartLab immediately at 866.358.9828.

How can I track my samples to make sure they arrived at Cleveland HeartLab?

To verify that your samples have made it to Cleveland HeartLab, please keep a copy of your shipping label which contains the tracking number. The tracking number will allow you to track your packages and see when they arrived at Cleveland HeartLab.

What should I do if I want to add a test that is not on the requisition form?

For a complete list of tests that we perform, visit www.clevelandheartlab.com/our-lab-services/tests-menu. Please write in the test you would like performed in the “other” section of the requisition form and mark the test as ordered.

How soon will I get test results back?

Our turnaround time varies by the type of test being ordered. For turn around time information please visit our test menu on www.clevelandheartlab.com/our-lab-services/tests-menu.

General (continued)

What will happen if my patient has a critical value show up on their report?

Federal statutes require that Cleveland HeartLab notify the patient's care provider or referring laboratory when critical limits of specified test results are exceeded and/or critical results are obtained.

To assure that you receive critical value results in a timely fashion, please complete the critical results notification form provided in this welcome kit and return to Cleveland HeartLab. Cleveland HeartLab will only call you if there is a critical value result on a test.

Please go to www.clevelandheartlab.com/our-lab-services/critical-values to view a list of reportable critical values or see the 'Results and Reporting' section of this book.

What if I have a question about my patient's results?

If you would like further explanation about a patient's results, please contact us at 866.358.9828 and we can assist you with better understanding, interpretation and treatment.

What should I do if I have trouble accessing my patient's results online?

Please refer to the web portal log-in instructions provided in this resource book if you are having difficulty accessing or viewing your patient's results on the web. For any additional questions please contact us at 866.358.9828.

Why are my results still pending?

Pending results will occur if the sample is still in the testing process. The turn-around time for receiving patient results varies depending on the test requested. If your test result is pending outside of the turn-around time, Cleveland HeartLab will contact you.

Billing

We understand that patients may come to you with billing questions. We therefore wanted to provide the most commonly asked questions and answers so that you can help assist them when necessary. For other additional questions or comments please have your patient contact us at 866.358.9828.

What insurance providers do you accept?

We accept most major insurance providers.

My insurance sent me a check. What should I do with it?

One option is to deposit that check from the insurance company and pay Cleveland HeartLab with a personal check or credit card. The second option is to endorse the check over to Cleveland HeartLab directly. Please be sure to keep a copy of all payments for personal records.

Patient Payments can be sent to:

Cleveland HeartLab
Dept. CH19545
Palatine, IL 60055-9545

Client Payments can be sent to:

Cleveland HeartLab
Dept. CH19534
Palatine, IL 60055-9534

Do you take payments over the phone?

Yes, to make a payment over the phone, please call 866.358.9828, option 2.

Can I make a payment online?

Yes, you can make a secure online payment to Cleveland HeartLab by going to www.clevelandheartlab.com.

- Patients can make payments online by going to:
www.knowyourrisk.com/pay-your-bill/
- Clients can make payments online by going to:
www.clevelandheartlab.com/paymybill

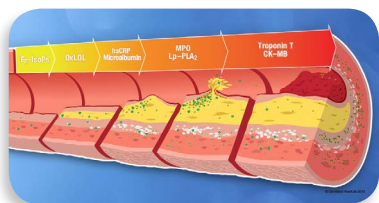
www.clevelandheartlab.com

The Cleveland HeartLab website provides quick, easy access to the resources and tools you are looking for when working with Cleveland HeartLab. The website offers the following areas located on the tabs of the main menu:



Our Lab Services

- Services We Provide
- Getting Started
- Test Menu
- Requisition Form
- Order Supplies
- FAQs
- Critical Values
- Insurance and Billing
- Pay My Bill



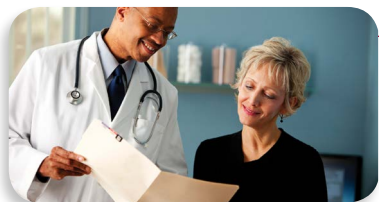
Our Science

- Our Story
- Inflammation Testing
- Advanced Lipid Testing
- Educational Materials
- Educational Videos
- Clinical References



Patients

- This tab links to our patient website located at www.knowyourrisk.com.



Practitioner Results - located on the right of the page

- This tab provides access to our online portal to retrieve patient results.



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