

- Blood Chemistry screen is a blood test that measures the levels of several substances in the blood, such as:
  - Blood glucose
  - Cholesterol
  - Electrolytes
- Tells your doctor about your general health status
  - Can be used as preventative healthcare
  - To screen for a wide range of problems, including kidney, liver, heart, adrenal, gastrointestinal, endocrine, and neuromuscular disorders
  - Monitor people with hypertension and hypokalemia
- Can be as part of a routine physical examination or before a major medical procedure



- Three different specimens:
  - Whole blood
  - Plasma
  - Serum
- Specimen collection is dependent on the type of test requested
- Serum is the most common specimen collected



- Liquid portion of blood obtained after a serum sample tube as been allowed to clot
- Serum Separator Tubes (SST) do not have an anticoagulant but do contain a gel substance which will form an interface between the clot and the serum when the blood specimen is centrifuged. These tubes are referred to as "Tiger Tops."
- Samples should be spun 30-60 minutes at room temperature to give time to clot prior to centrifugation at 4000 rpm (revolutions/minute) for 5 minutes.



- Plasma is the liquid component of blood. It is made up of:
  - 92% water
  - 7% protein
  - 1% inorganic electrolytes
- It is collected in a lavender top collection tube
- Gently invert the sample five times immediately after collection.



- Obtained when blood is drawn into a tube containing an anti-coagulant
- It is not centrifuged.
- Gently invert sample 5 times immediately after collection.
- A whole blood sample is always used for a CBC test.



# How to Collect the Specimen



Gather supplies needed for blood collection.



Wrap a tourniquet around the arm to cut off the supply of blood.



Clean the needle sit with alcohol.



Feel for the vein.



Put the needle into the vein.



Attach a collection to the needle and fill with amount needed.



Apply a gauze pad over the needle site while removing needle.

# How to Collect the Specimen



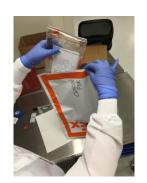
Remove tourniquet from arm.



Place test requisition form in sleeve of bag.



Dispose of needle in sharps container.



Place biohazard bag in FedEx Clinical Pak.



Apply a bandaid to site of collection.



Place Clinical Pak into FedEx Clinical box.



After collection, place specimen in biohazard bag.



Place shipping label and red dot sticker onto box and send to lab.



### Panels We Offer

- Basic Metabolic Panel (BMP)- Frequently ordered panel of 8 tests. Typically
  ordered as part of a routine health exam to check the status of a patient's
  kidneys, electrolyte and acid/base balance, as well as their blood glucose
  levels.
  - Tests in panel include: Glucose, Calcium, Sodium, Potassium, CO2, Chloride, BUN, Creatinine
- Comprehensive Metabolic Panel (CMP)- frequently ordered panel of 14 tests utilized to give a healthcare provider a better picture of patient's health status. Used to monitor kidneys and liver, electrolyte and acid/base balance as well as levels of blood glucose and blood proteins.
  - Tests in panel include: Glucose, Calcium, Albumin, Total Protein, Sodium,
     Potassium, CO2, Chloride, BUN, Creatinine, ALP, ALT, AST, Bilirubin
- Liver Panel: Used to screen for or diagnose liver disease.
  - Tests in panel include: ALP, ALT, AST, GGT, LDH, Bilirubin, Total Protein, Prothrombin time (PT)



- Renal Panel- may be used to evaluate kidney function, to help diagnose kidney-related disorders, to screen those who may be at risk of developing kidney disease or to monitor someone who has been diagnosed with kidney disease.
  - Tests in panel include: Sodium, Potassium, Chloride, CO2, Phosphorus, Calcium, Albumin, BUN, Creatinine, Glucose. Calculated Values-BUN/Creatinine ratio, eGFR, Anion Gap.
- Lipid Panel- Used to assess a patient's risk of developing Cardiovascular Disease.
  - Tests in panel include: Total Cholesterol, HDL-C, LDL-C, Triglycerides.
     Calculated values- VLDL-C, Non-HDL-C, Cholesterol/HDL ratio
- Thyroid Panel- may be used to evaluate thyroid function and/or help diagnose hypothyroidism and hyperthyroidism due to various thyroid disorders.
  - Tests in panel typically include: TSH, Free T4, total or free T3)
- Diabetes Panel- ordered to help manage a patient with diabetes.
  - Tests in panel include: HBA1C, Glucose, Insulin, C-Peptide



### Panels We Offer

- Iron Panel- used to help detect deficiencies and diagnose the cause of certain anemias
  - Tests in panel include: Vitamin B12, Ferritin, Folate
- Bone Panel- used to measure the proteins, minerals and enzymes present in bone to indicate increased bone resorption that occurs in certain diseases.
  - Tests in Panel include: Calcium, Phosphorus, Vitamin D, PTH, ALP,
     Osteocalcin
- Inflammation Panel- used to detect cardiovascular disease
  - Tests in panel include: CRP, Homocysteine
- Hormone Panel- used to evaluate hormone levels in men and women
  - Male Hormone Panel includes: DHEA, Estradiol, SHBG, TSH, Cortisol, HGH, Progesterone, Prolactin, and Total Testosterone
  - Female Hormone Panel includes: DHEA, Estradiol, SHBG, TSH, Cortisol,
     HGH, Progesterone, Prolactin, FSH, and LH



- Who will be collecting the specimen?
- What is volume expectation?
- Do they have a refrigerator for specimens?
- Do they have a sharps container?
- Do they have a centrifuge?
- \*A phlebotomy chair is not needed to draw blood.





#### NEW CLIENT REGISTRATION

#### STEP ONE

If you have not done so already, please print the appropriate registration forms that require a signature and have each Physician sign them. You do not need a signature to register your Doctor for PGx testing. It is up to you whether you want to complete the paper form or not however, we do require that you complete the online registration form below and UPLOAD the "vet" signature forms for our records of acknowledgement.

#### STEP TWO

Please complete the online form and upload your signed registration form(s) below if needed. You will be able to order supplies from this form as well. You MUST upload a signed registration form for each Physician that will be sending in samples for Toxicology and Genetic Carrier Screening. (Note: if the practice is not interested in doing the carrier screen then you do not need to upload that form).

#### Supply Orders

All supply orders placed by 2:00pm CST will be shipped over night express for next day delivery. All orders submitted after 2:00pm CST will be shipped out the next business day. Please NOTE supplies will be shipped to arrive at anytime the day after shipped between 9:00pm and 3:00pm.

CLICK HERE if you do not have the toxicology signature forms that you need to upload.

CLICK HERE to print the Carrier Screen Registration form that requires a wet signature then upload it below.

**NOTE:** The individual who directed you to this registration form should have provided you with their "Distribution Group" code. If you did not receive this please find out the appropriate code to help us grounge our groups.

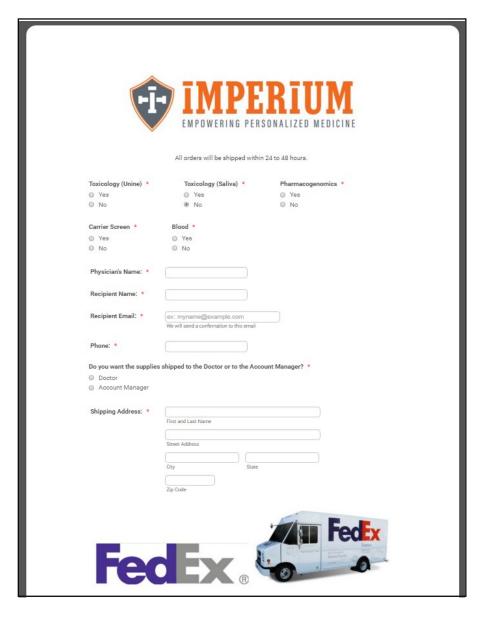
Distribution Group *		Your Group	You should hav				
Please Select			code that was o				
Please Select		Who you wo	directly contract	ted with			
ARC-PPC-303	-		iMPERIUM. If yo know the come				
ARC-PERC-3505		No. of Concession	please contact		2000000 80		
AM8-PPC-530	Account	Account MGR Pho		ccess to the	nt MGR e-mail *		
AMS-PERC-2505			registration for	n.	-	1 7 7	7
BIO-PPC-6040					mame@exam	ple.com	
BIO-PERO-2245	Arga	Phone Numi	ber				-
ERGO-PERO-816	Code						
GEN-X22-PPC							
GEN-X35-PERC							
HIO-MG-484	s are bein	0.220.00	4.4				
IMP-PPC-1540 IMP-PERC-1740	es are bein	y reques	ted.				
IMP-PERO-1740 LINK-PPO-1520							
LINK-PERC-1425							
MED-PLUS-3180	harmacogen	omics *	Blo	nd *	Carrier Sc	reen *	Toxicology (Saliva) *
PHAR-RC-235	_						
RAN-PPC-32377	YES		0	YES			YES
8HMG-PPC-30550	_ NO		0	NO	© NO		@ NO
SHMG-PERC-10503							
Name of Practice:							
Physician Name: *	First Name	Last Nami					
E-mail *		Phone N	umber *		FAX		
ex: myname@example.com	n.				1 16		
		Area	Phone Number		Area P	hone Number	
		Code			Code		
NPI Number: *	License	#		Pati	ient Volume:		Type of facility? *
				_			Private Practice
				ex:	300		
8	Optional			Mon	thly Volume		<ul> <li>Rehabilitation Cent</li> </ul>
							<ul> <li>Nursing Home</li> </ul>

If a location has not signed up for any testing services with IHR before, you will need to complete the New Client Registration Form for them.

- Distribution Group & Account Manager Information
- Practice Name, Address, Phone, Fax, and Facility Type
- Office Contact's Full Name & E-mail
- Ordering Physician(s) with NPI Numbers.
- FedEx Pick-Up Days & Times
- Practitioner Acknowledgement

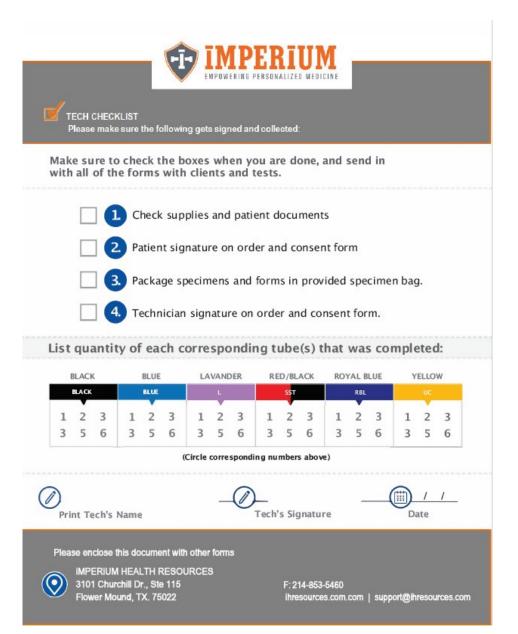


# **Supply Request Form**



- The lab will provide the following supplies based off the practice's projected tests per month:
  - Needles
  - Collection Tubes
  - Vacutainers
  - Tourniquets
  - Cohesive bandages
  - Spot bandaids
  - 2X2 Gauze
  - Alcohol Swabs
  - Shipping Supplies
- For new or existing accounts fill out the form accordingly and fax to iMPERiUM's customer service at support@ihresources.com





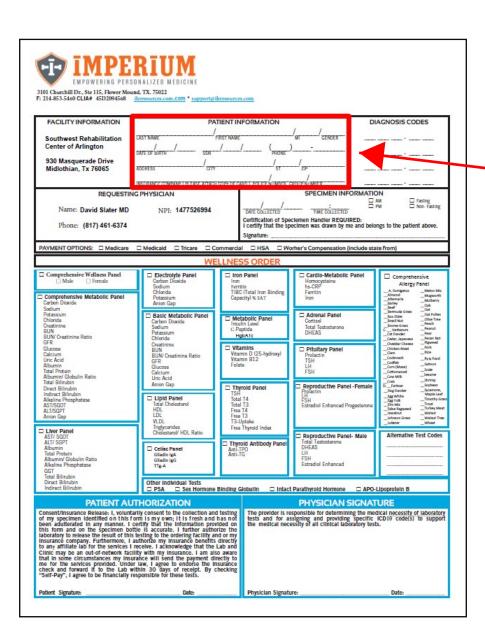
# **Blood Collection Requirements**

- Each sample must bear three unique patient identifiers.
- Tiger-top tube samples must be centrifuged after 30 to 60 minutes of collection.
- Sample should be sent to lab within 24 hours of draw or will need to be refrigerated.
- CBC HAS to be processed within 24 hours of collection.
- We will hold the sample at the lab for 7 days after the screen.
- We ask that two tiger tops and one lavender top (if CBS is ordered) is sent to the lab per patient.

FACILITY INFORMATION	PA		DIAGNOSIS CODES				
Southwest Rehabilitation	DAST NAME FIRST NAME			MI GENDER			
Center of Arlington	NATE OF BIRTH SSN	1	/ ()	-			
930 Masquerade Drive	/	/					
Midlothian, Tx 76065	ADDRESS CITY	ZIP					
	INSURANCE COMPANY ( PLEASE ATTACK	COPY OF CA	ORD 7 POLICY NUMBER C	CALCULATION OF THE PARTY OF THE			
REQUESTIN	IG PHYSICIAN		, ,	SPECIMEN INFORMA	☐ AM ☐ Easting		
Name: David Slater MD	NPI: 1477526994		DATE COLLECTED TIME COLLECTED PM Non-Fasting				
Phone: (817) 461-6374			Certification of Specific Certify that the specific	clemen Handler REQUIRED: ecimen was drawn by me and b	elongs to the patient above.		
Charles and Control of the Control o			Signature:				
PAYMENT OPTIONS:   Medicare	☐ Medicaid ☐ Tricare ☐ C	ommercia	I DHSA DWo	riter's Compensation (include	state from)		
	WE	LLNES	S ORDER				
☐ Comprehensive Wellness Panel	☐ Electrolyte Panel Carbon Dioxide	□ Iron	n Panel	☐ Cardio-Metabolic Panel Homocysteine	☐ Comprehensive		
□ Make □ Petitake	Sodium Chloride	Forti	tin C(Total Iron Binding	hs-CRP Ferritin	Allergy Panel _A. RumigutusMelon Mi		
☐ Comprehensive Metabolic Panel Carbon Dioxida	Potassium Anion Gao	Capa	ecity) % SAT	Iron	_AlmondMugworth		
Sodium Potassium	E Basis Malaballa Basis			☐ Adrenal Panel	Barley		
Chlorida Creatinine	Carbon Dioxide Insu Sodium C-Po		tabolic Panel In Level	Cortisol Total Testesterone	Brazil NutCilius Tree Brome GrassPeach		
BUN/ Creatinine Ratio			ptide phA1c	DHEAS	CHerbarumPeanut _Cat DanderPear Gedar, JapanesePecan Not		
GFR Glucose	Creatinine BUN	□ VIta	emins	☐ Pituitary Panel	_Cheddar CheeceRgueed _Chicken MestRork ClamRice		
Calcium Uric Acid	BUN/ Creatinine Ratio GFR	Vitar Vitar Folat	nin D (25-hydroxy) nin B12	Prolactin TSH	_CockroachRy e Food		
Albumin Total Protein	Glucose Calcium	Folar	te	LH FSH	Corn (Masse)Scale		
Albumin/ Globulin Ratio Total Bilirubin	Uric Acid Anion Gap		and Breed	☐ Reproductive Panel -Fema	CrabShrimp		
Direct Billirubin Indirect Billirubin	☐ Lipid Panel	TSH Total	rold Panel	Profactin	Dog DanderSecamore Egg White Maple Le		
Alkaline Phosphatase AST/SGOT	Total Cholesterol   Total   HDL   Free   LDL   Free   VI DI   T3_LI   T3_LI		T3	FSH Estradiol Enhanced Progestero	Clim Mily Trout		
ALT/SGPT Anion Gap					False Ragweed Turkey M Hazelnut Walnut Johnson Grass Walnut Ti Lobster Wheat		
□ Liver Panel	Triglycerides Cholesterol/ HDL Ratio		Thyroid Index		Alternative Test Code		
AST/ SGOT ALT/ SGPT		□ Thyr	old Antibody Panel	☐ Reproductive Panel- Male Total Testosterone DUCAS	Alternative Test Code		
Albumin Total Protein	☐ Celiac Panel Gliadin IgA	Anti-T Anti-T	PO G	LH FSH			
Albumin/ Globulin Ratio Alkaline Phosphatase	Gliadin IgG TTg-A		200	Estradiol Enhanced			
GGT Total Bilinubin	-0.00						
Direct Billirubin Indirect Billirubin	Other Individual Tests  ☐ PSA ☐ Sex Hormone	Binding G	Slobulin 🗆 Intact	Parathyroid Hormone   A	PO-Lipoprotein B		
PATIENT AU	THORIZATION			PHYSICIAN SIGN	ATURE		
		d testing	The provider is re				
Consent/Insurance Release: I, volunts of my specimen identified on this f been adulterated in any manner. I this form and on the specimen bot	orm is my own; it is fresh and certify that the information pro-	nas not vided on	tests and for as the medical nece	sponsible for determining the signing and providing specifi essity of all clinical laboratory	tests.		
this form and on the specimen bot	ttle is accurate. I further author testing to the ordering facility as	orize the nd or my					
laboratory to release the result of this		directiv					
Insurance company. Furthermore, I to any affiliate lab for the services I	authorize my Insurance benefits receive. I acknowledge that the	Lab and					
laboratory to release the result of this Insurance company. Furthermore, I to any affiliate lab for the services I Clinic may be an out-of-network faci	litty with my insurance. I am als	ensware oz					
Insurance company. Furthermore, I to any affiliate lab for the services I Clinic may be an out-of-network facilities.	litty with my insurance. I am als	ensware oz					
laboratory to release the fesuit of this insurance company. Furthermore, I to any affiliate lab for the services I Clinic may be an out-of-network fact that in some circumstances my insur- um for the services provided. Unde check and forward it to the Lab w "Self-Pay", I agree to be financially r	litty with my insurance. I am als	ensware oz					

- For every sample submitted, an individual requisition form must be included.
- The patient demographics and insurance information must also be submitted with the requisition form to begin the blood screening process.
- If we are missing any necessary information, our lab will make 3 attempts to contact the physician's office. If we cannot obtain this information, the sales rep will be contacted as a last resort to obtain it before the sample is rejected.





The following information is required on the test requisition form:

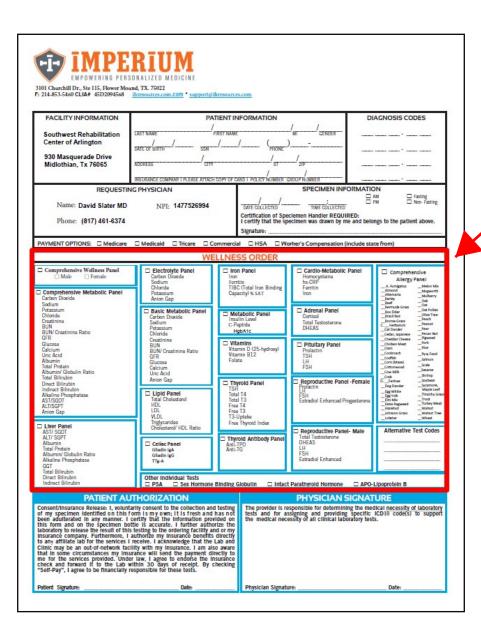
### Patient Information

- Patient's Full Name
- Address
- DOB
- Gender
- Primary Payer Group

#### Provider Information

- Provider's Name
- Address
- Ordering Physician's Full Name
- Time and Date of Collection

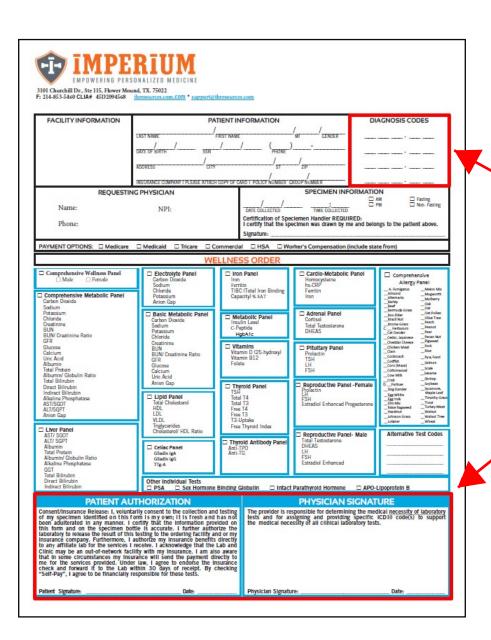




- The physician must select which tests he would like performed on each requisition form.
- The physician may choose from a complete panel and/or order tests individually.
  - To choose a complete panel, check the circle next to panel name.
  - To choose an individual test, check the check box next to the analyte you would like tested.

\*Please note, if a physician is ordering the renal panel, Gender and Race MUST be provided.





### **Diagnosis Codes:**

- The physician is required to write in all applicable ICD-10 codes that best describes the reasons for performing each test
- The physician and patient are both required to sign the test requisition form.



#### David V. Kon, M.D. Medical Director RT: VAN NUY AGE SEX ACCOUNT NUMBER COMPLETE WELLNESS , PANEL 0000020 000000003130519 14:46 4/19/16 4/19/16 4/19/16 DOB: TEL: Other ID: CHEMISTRY ALBUMIN 3.5-5.5 SGOT (AST) 1-40 10 15 IU/L SGPT (ALT) 5-45 BILIRUBIN, TOTAL mg/dL 0.1-1.4 BILIRUBIN, DIRECT 0.0-0.3 BILIRUBIN, INDIR. (Calc.) mg/dL 0.2-1.1 CALCIUM mg/dL 8.5 8.3-10.5 INORGANIC PHOSPHORUS mg/dL 2.0-4.9 CHLORIDE 97 mEq/L 96-110 16 15-35 mEq/L 002 SODIUM 135-155 136 mEq/L POTASSIUM 3.5-5.5 4.5 mEq/L ANION GAP (Calc.) 23 0-25 mg/dL MAGNESTUM 1.5-2.6 mg/dL 6-25 mg/dL CREATININE 0.5-1.3 BUN/CREATININE (Calc.) 12 7-30 Ratio U/L AMVIASE 50 29-103 CARDIAC RISK STUDIES mg/dL 135-200 CHOLESTEROL HDL CHOLESTEROL 45 CHOL/HDL RISK RATIO (Calc.) Reference Ranges for Chol/HDL Risk Ratio: Female: 3.7-5.7 LDL (Calc.) 71 mg/dL <100 Values for "Calculated LDL" are invalid for Triglycerides over 400 mg/dL mg/dL VLDL (Calc.) 20 0-40 TRIGLYCERIDES 100 <150 APOLIPOPROT. A-1 mg/dL 115-220 APOLIPOPROT. B 55 mg/dL 50-155 LIPOPROTEIN (a) 25 mg/dL <30 SERUM PROTEIN ELECTROPHORESIS g/dL 6.5 6.0-8.3

# **Comprehensive Report**





#### **BILLING INFORMATION**

Your provider has chosen flag for their diagnostic testing services. At the request of your physician, we ran a comprehensive test that will assist them in providing you the most effective treatment plan possible.

The information below will help you understand what to expect from your insurance carrier and RML with respect to your medical claim and potential financial responsibility.

- will perform the tests ordered by your physician.
- will send the appropriate lab report to your physician.
- will send a claim to your insurance company.
- Your insurance carrier may send you one or more Explanation of Benefits (EOB) during the claim settlement process. The EOB is not a bill. The EOB is a statement that shows medical tests, services and costs to the insurance company. You should NOT pay for the EOB received, even if the insurance company indicates you do or may owe an amount. You should wait until you have received a bill from RML before considering payment.
- 5. You may receive a letter or other information from your insurance company indicating the services are not covered or indicating additional information is required from our physician before the claim can be settled. ...... would also have received that letter and we will work directly with your physician to obtain any required information. You do not have to do anything.
- If your insurance company covered the services performed and left you with an out of pocket coinsurance or deductible, you may receive a bill from
- If you receive a bill from ...... please contact our billing department directly to discuss your options, which could include discount and/or payment arrangements.

In the event you receive a check from your insurance company for the services provided please follow one of the three steps below.

- 1. Deposit the check and mail a personal check to RML
- 2. Deposit the check and contact RML to provide credit card information
- 3. Endorse the back of the insurance check and mail it to RML

For questions or assistance with your EOB or bill, please contact DRS (our third party billing company) before calling your physician. You may also contact DRS with any additional questions you may have about the billing process.

# Billing Information

- Our third party billing company can answer any questions a patient/physician may have regarding an EOB or bill.
- These patient handout cards will be included within the shipment.
- It is our goal for the implementation of diagnostic testing to be as seamless as possible. Our third party billing company can answer all questions to ensure that it does not interrupt the work flow of the office



## Frequently Asked Questions

### Q: What are the most common Blood Chemistry Panels?

**A:** Basic Metabolic Panel (BMP)- contains 8 tests of which are found in the Comprehensive Metabolic Panel. It provides information about the current status of a person's kidneys and respiratory system as well as electrolyte and acid/base balance and level of blood glucose

Comprehensive Metabolic Panel (CMP)- includes 14 tests includes the same information as BMP, but with additional information on the function of the liver and important blood proteins

Lipid Panel- used to evaluate a person's risk for developing cardiovascular disease

Renal Panel- used to evaluate kidney function

Thyroid Function Panel- used to measure Thyroid function and diagnose Thyroid disorders



# Q: Can the physician order additional tests?

**A:** As of today we can only run the comprehensive wellness panel along with the other panels found on the REQ Form.

# Q: Do you provide allergy testing?

**A:** We are not set up to any allergy tests at the moment but we will make it available soon.

# Q: Will a patient need to fast before a blood screen?

A: Fasting is dependent on the specific panel being tested.

# Q: How old should the specimen be?

**A:** Must be within one week from date of collection. Tiger top tubes should be centrifuged 30-60 minutes after collection. If sample cannot be shipped to lab within 24 hours of collection, it **must** be refrigerated. CBC must be processed within 24 hours.

## Frequently Asked Questions

Q: Can the office use the centrifuge they currently have?

**A:** Yes, the office may use the centrifuge they have.

Q: When will results be available?

**A:** Results will be available 72 hours after we receive the sample.

Q: Does my client have to pay for shipping and handling?

A: No. We will always provide all necessary shipping supplies and packaging.

Q: How long does IHR keep the blood samples?

**A:** IHR keeps each sample for 7 days after processing.



# **Customer Service**

# If you have any questions, please contact support:

support@ihresources.com

