

**Dr. Vinay Chopra**  
 MD (Pathology & Microbiology)  
 Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
 MD (Pathology)  
 CEO & Consultant Pathologist

<b>NAME</b>	: <b>Dr. ABHENIL MITTAL</b>	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:29PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**HAEMATOLOGY**  
**COMPLETE BLOOD COUNT (CBC)**

**RED BLOOD CELLS (RBCS) COUNT AND INDICES**

HAEMOGLOBIN (HB) <i>by CALORIMETRIC</i>	13.3	gm/dL	12.0 - 17.0
RED BLOOD CELL (RBC) COUNT <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDEANCE</i>	4.89	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	41.1	%	40.0 - 54.0
MEAN CORPUSCULAR VOLUME (MCV) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	84	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	27.1	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	32.3	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	12.8	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	40.1	fL	35.0 - 56.0
MENTZERS INDEX <i>by CALCULATED</i>	17.18	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX <i>by CALCULATED</i>	21.91	RATIO	BETA THALASSEMIA TRAIT:<= 65.0 IRON DEFICIENCY ANEMIA: > 65.0

**WHITE BLOOD CELLS (WBCS)**

TOTAL LEUCOCYTE COUNT (TLC) <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	6720	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) <i>by AUTOMATED 6 PART HEMATOLOGY ANALYZER</i>	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % <i>by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER</i>	NIL	%	< 10 %



*Chopra*

**DR. VINAY CHOPRA**  
 CONSULTANT PATHOLOGIST  
 MBBS, MD (PATHOLOGY & MICROBIOLOGY)

*Chopra*

**DR. YUGAM CHOPRA**  
 CONSULTANT PATHOLOGIST  
 MBBS, MD (PATHOLOGY)



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:29PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
<b><u>DIFFERENTIAL LEUCOCYTE COUNT (DLC)</u></b>			
NEUTROPHILS <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	50	%	50 - 70
LYMPHOCYTES <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	39	%	20 - 40
EOSINOPHILS <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	3	%	1 - 6
MONOCYTES <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	8	%	2 - 12
BASOPHILS <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	0	%	0 - 1
<b><u>ABSOLUTE LEUKOCYTES (WBC) COUNT</u></b>			
ABSOLUTE NEUTROPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	3360	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	2621	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	202	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	538	/cmm	80 - 880
ABSOLUTE BASOPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	0	/cmm	0 - 110
<b><u>PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.</u></b>			
PLATELET COUNT (PLT) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	263000	/cmm	150000 - 450000
PLATELETCRIT (PCT) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	0.22	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	8	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	36000	/cmm	30000 - 90000
PLATELET LARGE CELL RATIO (P-LCR) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	13.8	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	15.7	%	15.0 - 17.0

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD



DR. VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR. YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:29PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------




DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)



DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS , MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 01/Nov/2024 02:29AM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**GLYCOSYLATED HAEMOGLOBIN (HBA1C)**

GLYCOSYLATED HAEMOGLOBIN (HbA1c): WHOLE BLOOD <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	5.8	%	4.0 - 6.4
ESTIMATED AVERAGE PLASMA GLUCOSE <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	119.76	mg/dL	60.00 - 140.00

**INTERPRETATION:**

**AS PER AMERICAN DIABETES ASSOCIATION (ADA):**

REFERENCE GROUP	GLYCOSYLATED HEMOGLOBIN (HBA1C) in %	
Non diabetic Adults >= 18 years	<5.7	
At Risk (Prediabetes)	5.7 – 6.4	
Diagnosing Diabetes	>= 6.5	
Therapeutic goals for glycemic control	<b>Age &gt; 19 Years</b>	
	Goals of Therapy:	< 7.0
	Actions Suggested:	>8.0
	<b>Age &lt; 19 Years</b>	
	Goal of therapy:	<7.5

**COMMENTS:**

- Glycosylated hemoglobin (HbA1c) test is three monthly monitoring done to assess compliance with therapeutic regimen in diabetic patients.
- Since Hb1c reflects long term fluctuations in blood glucose concentration, a diabetic patient who has recently under good control may still have high concentration of HbA1c. Converse is true for a diabetic previously under good control but now poorly controlled.
- Target goals of < 7.0 % may be beneficial in patients with short duration of diabetes, long life expectancy and no significant cardiovascular disease. In patients with significant complications of diabetes, limited life expectancy or extensive co-morbid conditions, targeting a goal of < 7.0% may not be appropriate.
- High HbA1c (>9.0 -9.5 %) is strongly associated with risk of development and rapid progression of microvascular and nerve complications
- Any condition that shorten RBC life span like acute blood loss, hemolytic anemia falsely lower HbA1c results.
- HbA1c results from patients with HbSS, HbSC and HbD must be interpreted with caution, given the pathological processes including anemia, increased red cell turnover, and transfusion requirement that adversely impact HbA1c as a marker of long-term glycemic control.
- Specimens from patients with polycythemia or post-splenectomy may exhibit increase in HbA1c values due to a somewhat longer life span of the red cells.



  
DR. VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

  
DR. YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:39PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**PROTHROMBIN TIME STUDIES (PT/INR)**

PT TEST (PATIENT) <i>by PHOTO OPTICAL CLOT DETECTION</i>	13	SECS	11.5 - 14.5
PT (CONTROL) <i>by PHOTO OPTICAL CLOT DETECTION</i>	12	SECS	
ISI <i>by PHOTO OPTICAL CLOT DETECTION</i>	1.1		
INTERNATIONAL NORMALISED RATIO (INR) <i>by PHOTO OPTICAL CLOT DETECTION</i>	1.09		0.80 - 1.20
PT INDEX <i>by PHOTO OPTICAL CLOT DETECTION</i>	92.31	%	

**INTERPRETATION:-**

1. INR is the parameter of choice in monitoring adequacy of oral anti-coagulant therapy. Appropriate therapeutic range varies with the disease and treatment intensity.
2. Prolonged INR suggests potential bleeding disorder /bleeding complications
3. Results should be clinically correlated.
4. Test conducted on Citrated Plasma

**RECOMMENDED THERAPEUTIC RANGE FOR ORAL ANTI-COAGULANT THERAPY (INR)**

INDICATION	INTERNATIONAL NORMALIZED RATIO (INR)
Treatment of venous thrombosis	Low Intensity 2.0 - 3.0
Treatment of pulmonary embolism	
Prevention of systemic embolism in tissue heart valves	
Valvular heart disease	
Acute myocardial infarction	
Atrial fibrillation	
Bileaflet mechanical valve in aortic position	High Intensity 2.5 - 3.5
Recurrent embolism	
Mechanical heart valve	
Antiphospholipid antibodies <sup>+</sup>	

**COMMENTS:**



DR. VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR. YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:39PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

The prothrombin time (PT) and its derived measures of prothrombin ratio (PR) and international normalized ratio (INR) are measures of the efficacy of the extrinsic pathway of coagulation. PT test reflects the adequacy of factors I (fibrinogen), II (prothrombin), V, VII, and X. It is used in conjunction with the activated partial thromboplastin time (aPTT) which measures the intrinsic pathway.

The common causes of prolonged prothrombin time are :

- 1.Oral Anticoagulant therapy.
- 2.Liver disease.
- 3.Vit K. deficiency.
- 4.Disseminated intra vascular coagulation.
- 5.Factor 5, 7 , 10 or Prothrombin dificiency




DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)



DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS , MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 10:44PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**CLINICAL CHEMISTRY/BIOCHEMISTRY**

**LIVER FUNCTION TEST (COMPLETE)**

BILIRUBIN TOTAL: SERUM <i>by DIAZOTIZATION, SPECTROPHOTOMETRY</i>	1.09	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM <i>by DIAZO MODIFIED, SPECTROPHOTOMETRY</i>	0.22	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	0.87	mg/dL	0.10 - 1.00
SGOT/AST: SERUM <i>by IFCC, WITHOUT PYRIDOXAL PHOSPHATE</i>	19.1	U/L	7.00 - 45.00
SGPT/ALT: SERUM <i>by IFCC, WITHOUT PYRIDOXAL PHOSPHATE</i>	26.2	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	0.73	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM <i>by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL</i>	62.66	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM <i>by SZASZ, SPECTROPHOTOMETRY</i>	35.27	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM <i>by BIURET, SPECTROPHOTOMETRY</i>	7.37	gm/dL	6.20 - 8.00
ALBUMIN: SERUM <i>by BROMOCRESOL GREEN</i>	4.77	gm/dL	3.50 - 5.50
GLOBULIN: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	2.6	gm/dL	2.30 - 3.50
A : G RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	1.83	RATIO	1.00 - 2.00

**INTERPRETATION**

**NOTE:-** To be correlated in individuals having SGOT and SGPT values higher than Normal Reference Range.  
**USE:-** Differential diagnosis of diseases of hepatobiliary system and pancreas.

**INCREASED:**

DRUG HEPATOTOXICITY	> 2
ALCOHOLIC HEPATITIS	> 2 (Highly Suggestive)
CIRRHOSIS	1.4 - 2.0
INTRAHEPATIC CHOLESTASIS	> 1.5



DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



**Dr. Vinay Chopra**  
 MD (Pathology & Microbiology)  
 Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
 MD (Pathology)  
 CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 10:44PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

HEPATOCELLULAR CARCINOMA & CHRONIC HEPATITIS		> 1.3 (Slightly Increased)	
--	--	----------------------------	--

**DECREASED:**

1. Acute Hepatitis due to virus, drugs, toxins (with AST increased 3 to 10 times upper limit of normal)
2. Extra Hepatic cholestasis: 0.8 (normal or slightly decreased).

**PROGNOSTIC SIGNIFICANCE:**

NORMAL	< 0.65
GOOD PROGNOSTIC SIGN	0.3 - 0.6
POOR PROGNOSTIC SIGN	1.2 - 1.6



  
 DR.VINAY CHOPRA  
 CONSULTANT PATHOLOGIST  
 MBBS, MD (PATHOLOGY & MICROBIOLOGY)

  
 DR.YUGAM CHOPRA  
 CONSULTANT PATHOLOGIST  
 MBBS , MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 10:44PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**KIDNEY FUNCTION TEST (COMPLETE)**

UREA: SERUM <i>by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)</i>	31.5	mg/dL	10.00 - 50.00
CREATININE: SERUM <i>by ENZYMATIC, SPECTROPHOTOMETRY</i>	0.95	mg/dL	0.40 - 1.40
BLOOD UREA NITROGEN (BUN): SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	14.72	mg/dL	7.0 - 25.0
BLOOD UREA NITROGEN (BUN)/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	15.49	RATIO	10.0 - 20.0
UREA/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	33.16	RATIO	
URIC ACID: SERUM <i>by URICASE - OXIDASE PEROXIDASE</i>	3.67	mg/dL	3.60 - 7.70
CALCIUM: SERUM <i>by ARSENAZO III, SPECTROPHOTOMETRY</i>	9.71	mg/dL	8.50 - 10.60
PHOSPHOROUS: SERUM <i>by PHOSPHOMOLYBDATE, SPECTROPHOTOMETRY</i>	4.27	mg/dL	2.30 - 4.70

**ELECTROLYTES**

SODIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	138.7	mmol/L	135.0 - 150.0
POTASSIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	4.13	mmol/L	3.50 - 5.00
CHLORIDE: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	104.03	mmol/L	90.0 - 110.0

**ESTIMATED GLOMERULAR FILTRATION RATE**

**INTERPRETATION:**

To differentiate between pre- and post renal azotemia.

**INCREASED RATIO (>20:1) WITH NORMAL CREATININE:**

1. Prerenal azotemia (BUN rises without increase in creatinine) e.g. heart failure, salt depletion, dehydration, blood loss) due to decreased glomerular filtration rate.
2. Catabolic states with increased tissue breakdown.
3. GI haemorrhage.
4. High protein intake.
5. Impaired renal function plus
6. Excess protein intake or production or tissue breakdown (e.g. infection, GI bleeding, thyrotoxicosis, Cushing's syndrome, high protein diet,



DR. VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR. YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



TEST PERFORMED AT: KOS DIAGNOSTIC LAB, AMBALA CANTT.

**Dr. Vinay Chopra**  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: <b>Dr. ABHENIL MITTAL</b>	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 10:44PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

burns, surgery, cachexia, high fever).

- Urine reabsorption (e.g. ureter colostomy)
- Reduced muscle mass (subnormal creatinine production)
- Certain drugs (e.g. tetracycline, glucocorticoids)

**INCREASED RATIO (>20:1) WITH ELEVATED CREATININE LEVELS:**

- Postrenal azotemia (BUN rises disproportionately more than creatinine) (e.g. obstructive uropathy).
- Prerenal azotemia superimposed on renal disease.

**DECREASED RATIO (<10:1) WITH DECREASED BUN :**

- Acute tubular necrosis.
- Low protein diet and starvation.
- Severe liver disease.
- Other causes of decreased urea synthesis.
- Repeated dialysis (urea rather than creatinine diffuses out of extracellular fluid).
- Inherited hyperammonemias (urea is virtually absent in blood).
- SIADH (syndrome of inappropriate antidiuretic hormone) due to tubular secretion of urea.
- Pregnancy.

**DECREASED RATIO (<10:1) WITH INCREASED CREATININE:**

- Phenacimide therapy (accelerates conversion of creatine to creatinine).
- Rhabdomyolysis (releases muscle creatinine).
- Muscular patients who develop renal failure.

**INAPPROPRIATE RATIO:**

- Diabetic ketoacidosis (acetoacetate causes false increase in creatinine with certain methodologies, resulting in normal ratio when dehydration should produce an increased BUN/creatinine ratio).
- Cephalosporin therapy (interferes with creatinine measurement).

**ESTIMATED GLOMERULAR FILTRATION RATE:**

CKD STAGE	DESCRIPTION	GFR ( mL/min/1.73m2 )	ASSOCIATED FINDINGS
G1	Normal kidney function	>90	No proteinuria
G2	Kidney damage with normal or high GFR	>90	Presence of Protein , Albumin or cast in urine.
G3a	Mild decrease in GFR	60 -89	
G3b	Moderate decrease in GFR	30-59	
G4	Severe decrease in GFR	15-29	
G5	Kidney failure	<15	



*Chopra*  
**DR. VINAY CHOPRA**  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

*Chopra*  
**DR. YUGAM CHOPRA**  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 10:44PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**COMMENTS:**

1. Estimated Glomerular filtration rate (eGFR) is the sum of filtration rates in all functioning nephrons and so an estimation of the GFR provides a measure of functioning nephrons of the kidney.
2. eGFR calculated using the 2009 CKD-EPI creatinine equation and GFR category reported as per KDIGO guideline 2012
3. In patients, with eGFR creatinine between 45-59 ml/min/1.73 m2 (G3) and without any marker of Kidney damage, It is recommended to measure eGFR with Cystatin C for confirmation of CKD
4. eGFR category G1 OR G2 does not fulfill the criteria for CKD, in the absence of evidence of Kidney Damage
5. In a suspected case of Acute Kidney Injury (AKI), measurement of eGFR should be done after 48-96 hours of any Intervention or procedure
6. eGFR calculated by Serum Creatinine may be less accurate due to certain factors like Race, Muscle Mass, Diet, Certain Drugs. In such cases, eGFR should be calculated using Serum Cystatin C
7. **A decrease in eGFR implies either progressive renal disease, or a reversible process causing decreased nephron function (eg, severe dehydration).**

**ADVICE:**  
KDIGO guideline, 2012 recommends Chronic Kidney Disease (CKD) should be classified based on cause, eGFR category and Albuminuria (ACR) category. GFR & ACR category combined together reflect risk of progression and helps Clinician to identify the individual who are progressing at more rapid rate than anticipated



DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS , MD (PATHOLOGY)



**Dr. Vinay Chopra**  
 MD (Pathology & Microbiology)  
 Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
 MD (Pathology)  
 CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 01/Nov/2024 12:59AM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**IMMUNOPATHOLOGY/SEROLOGY**

**HEPATITIS C VIRUS (HCV) ANTIBODY: TOTAL**

HEPATITIS C ANTIBODY (HCV) TOTAL: SERUM <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i>	0.09	S/CO	NEGATIVE: < 1.00 POSITIVE: > 1.00
HEPATITIS C ANTIBODY (HCV) TOTAL RESULT <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i>	Non reactive		

**INTERPRETATION:-**

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE/NOT - DETECTED
> =1.00	REACTIVE/ASYMPTOMATIC/INFECTIVE STATE/CARRIER STATE.

Hepatitis C (HCV) is an RNA virus of Favivirus group transmitted via blood transfusions, transplantation, injection drug abusers, accidental needle punctures in healthcare workers, dialysis patients and rarely from mother to infant. 10 % of new cases show sexual transmission. As compared to HAV & HBV , chronic infection with HCV occurs in 85 % of infected individuals. In high risk population, the predictive value of Anti HCV for HCV infection is > 99% whereas in low risk populations it is only 25 %.

- USES:**
- Indicator of past or present infection, but does not differentiate between Acute/ Chronic/Resolved Infection.
  - Routine screening of low and high prevalence population including blood donors.

- NOTE:**
- False positive results are seen in Auto-immune disease, Rheumatoid Factor, HYpergammaglobulinemia, Paraproteinemia, Passive antibody transfer, Anti-idiotypes and Anti-superoxide dismutase.
  - False negative results are seen in early Acute infection, Immunosuppression and Immuno—incompetence.
  - HCV-RNA PCR recommended in all reactive results to differentiate between past and present infection.



  
 DR.VINAY CHOPRA  
 CONSULTANT PATHOLOGIST  
 MBBS, MD (PATHOLOGY & MICROBIOLOGY)

  
 DR.YUGAM CHOPRA  
 CONSULTANT PATHOLOGIST  
 MBBS , MD (PATHOLOGY)



Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 01/Nov/2024 12:59AM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**ANTI HUMAN IMMUNODEFICIENCY VIRUS (HIV) DUO ULTRA WITH (P-24 ANTIGEN DETECTION)**

HIV 1/2 AND P24 ANTIGEN: SERUM <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i>	0.08	S/CO	NEGATIVE: < 1.00 POSITIVE: > 1.00
HIV 1/2 AND P24 ANTIGEN RESULT <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i>	Non reactive		

**INTERPRETATION:-**

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE
> = 1.00	PROVISIONALLY REACTIVE

Non-Reactive result implies that antibodies to HIV 1/ 2 have not been detected in the sample . This means that patient has either not been exposed to HIV 1/ 2 infection or the sample has been tested during the "window phase" i.e. before the development of detectable levels of antibodies. Hence a Non Reactive result does not exclude the possibility of exposure or infection with HIV 1/ 2.

**RECOMMENDATIONS:**

1. Results to be clinically correlated
2. Rarely falsenegativity/positivity may occur.



DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS , MD (PATHOLOGY)



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: <b>012410310044</b>
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 01/Nov/2024 12:59AM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**HEPATITIS B SURFACE ANTIGEN (HBsAg) ULTRA**

HEPATITIS B SURFACE ANTIGEN (HBsAg): 0.29 S/CO NEGATIVE: < 1.0  
SERUM POSITIVE: > 1.0  
*by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*

HEPATITIS B SURFACE ANTIGEN (HBsAg) NON REACTIVE  
RESULT  
*by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*

**INTERPRETATION:**

RESULT IN INDEX VALUE	REMARKS
< 1.30	NEGATIVE (-ve)
>=1.30	POSITIVE (+ve)

Hepatitis B Virus (HBV) is a member of the Hepadna virus family causing infection of the liver with extremely variable clinical features. Hepatitis B is transmitted primarily by body fluids especially serum and also spread effectively sexually and from mother to baby. In most individuals HBV hepatitis is self limiting, but 1-2 % normal adolescent and adults develop Chronic Hepatitis. Frequency of chronic HBV infection is 5-10% in immunocompromised patients and 80 % neonates. The initial serological marker of acute infection is HBsAg which typically appears 2-3 months after infection and disappears 12-20 weeks after onset of symptoms. Persistence of HBsAg for more than 6 months indicates carrier state or Chronic Liver disease.



DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY)



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

Dr. Vinay Chopra  
MD (Pathology & Microbiology)  
Chairman & Consultant Pathologist

Dr. Yugam Chopra  
MD (Pathology)  
CEO & Consultant Pathologist

<b>NAME</b>	: Dr. ABHENIL MITTAL	<b>PATIENT ID</b>	: 1658234
<b>AGE/ GENDER</b>	: 33 YRS/Male	<b>REG. NO./LAB NO.</b>	: 012410310044
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 31/Oct/2024 09:11 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 31/Oct/2024 09:12PM
<b>BARCODE NO.</b>	: 01519883	<b>REPORTING DATE</b>	: 31/Oct/2024 09:39PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
-----------	-------	------	-------------------------------

**VDRL**

VDRL	NON REACTIVE		NON REACTIVE
------	--------------	--	--------------

by IMMUNOCHROMATOGRAPHY

**INTERPRETATION:**

- Does not become positive until 7 - 10 days after appearance of chancre.
- High titer (>1:16) - active disease.**
- Low titer (<1:8) - biological falsepositive test in 90% cases or due to late or late latent syphilis.**
- Treatment of primary syphilis causes progressive decline tonegative VDRL within 2 years.
- Rising titer (4X) indicates relapse, reinfection, or treatment failure and need for retreatment.
- May benonreactive in early primary, late latent, and late syphilis (approx. 25% ofcases).
- Reactive and weakly reactive tests should always be confirmedwith FTA-ABS (fluorescent treponemal antibody absorptiontest).**

**SHORTTERM FALSE POSITIVE TEST RESULTS (<6 MONTHS DURATION) MAY OCCURIN:**

- Acute viral illnesses (e.g., hepatitis, measles, infectious mononucleosis)
- M. pneumoniae; Chlamydia; Malaria infection.
- Some immunizations
- Pregnancy (rare)

**LONGTERM FALSE POSITIVE TEST RESULTS (>6 MONTHS DURATION) MAY OCCUR IN:**

- Serious underlying disease e.g., collagen vascular diseases, leprosy ,malignancy.
- Intravenous drug users.
- Rheumatoid arthritis, thyroiditis, AIDS, Sjogren's syndrome.
- <10 % of patients older thanage 70 years.
- Patients taking some anti-hypertensive drugs.

\*\*\* End Of Report \*\*\*



DR.VINAY CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA  
CONSULTANT PATHOLOGIST  
MBBS , MD (PATHOLOGY)



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.