

(A Unit of KOS Healthcare)



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

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

NAME : Mr. MANJEET KAUR

AGE/ GENDER : 85 YRS/MALE **PATIENT ID** : 1694344

COLLECTED BY : SURJESH REG. NO./LAB NO. :012412090023

REFERRED BY **REGISTRATION DATE** : 09/Dec/2024 11:04 AM BARCODE NO. :01522202 **COLLECTION DATE** : 09/Dec/2024 11:09AM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 09/Dec/2024 11:20AM

CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

Test Name Value Unit **Biological Reference interval**

SWASTHYA WELLNESS PANEL: 1.0 COMPLETE BLOOD COUNT (CBC)

RED BLOOD CELLS (RBCS) COUNT AND INDICES

HAEMOGLOBIN (HB) by CALORIMETRIC	9.5 ^L	gm/dL	12.0 - 17.0
RED BLOOD CELL (RBC) COUNT by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	3.41 ^L	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	30.5^{L}	%	40.0 - 54.0
MEAN CORPUSCULAR VOLUME (MCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	89.3	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	27.9	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	31.3 ^L	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	14	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	46.9	fL	35.0 - 56.0
MENTZERS INDEX by CALCULATED	26.19	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX by CALCULATED	36.72	RATIO	BETA THALASSEMIA TRAIT:<= 65.0 IRON DEFICIENCY ANEMIA: > 65.0
WHITE BLOOD CELLS (WBCS)			
TOTAL LEUCOCYTE COUNT (TLC) by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	5770	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) by automated 6 part hematology analyzer	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) %	NIL	%	< 10 %



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



by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER



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Test Name	Value	Unit	Biological Reference interval		
DIFFERENTIAL LEUCOCYTE COUNT (DLC)					
NEUTROPHILS by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	45 ^L	%	50 - 70		
LYMPHOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	44 ^H	%	20 - 40		
EOSINOPHILS by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	2	%	1 - 6		
MONOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	9	%	2 - 12		
BASOPHILS by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	0	%	0 - 1		
ABSOLUTE LEUKOCYTES (WBC) COUNT					
ABSOLUTE NEUTROPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	2597	/cmm	2000 - 7500		
ABSOLUTE LYMPHOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	2539	/cmm	800 - 4900		
ABSOLUTE EOSINOPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	115	/cmm	40 - 440		
ABSOLUTE MONOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	519	/cmm	80 - 880		
ABSOLUTE BASOPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	0	/cmm	0 - 110		
PLATELETS AND OTHER PLATELET PREDICTIVE	MARKERS.				
PLATELET COUNT (PLT) by hydro dynamic focusing, electrical impedence	279000	/cmm	150000 - 450000		
PLATELETCRIT (PCT) by hydro dynamic focusing, electrical impedence	0.24	%	0.10 - 0.36		
MEAN PLATELET VOLUME (MPV) by hydro dynamic focusing, electrical impedence	9	fL	6.50 - 12.0		
PLATELET LARGE CELL COUNT (P-LCC) by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	46000	/cmm	30000 - 90000		
PLATELET LARGE CELL RATIO (P-LCR) by hydro dynamic focusing, electrical impedence	16.4	%	11.0 - 45.0		
PLATELET DISTRIBUTION WIDTH (PDW) by hydro dynamic focusing, electrical impedence NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD	15.7	%	15.0 - 17.0		



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KOS Diagnostic Lab (A Unit of KOS Healthcare)



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Test Name Value Unit **Biological Reference interval**

REPORTING DATE



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Value Unit **Biological Reference interval Test Name**

ERYTHROCYTE SEDIMENTATION RATE (ESR)

ERYTHROCYTE SEDIMENTATION RATE (ESR)

76^H

mm/1st hr

by RED CELL AGGREGATION BY CAPILLARY PHOTOMETRY

INTERPRETATION:

- 1. ESR is a non-specific test because an elevated result often indicates the presence of inflammation associated with infection, cancer and auto-immune disease, but does not tell the health practitioner exactly where the inflammation is in the body or what is causing it.

 2. An ESR can be affected by other conditions besides inflammation. For this reason, the ESR is typically used in conjunction with other test such
- as C-reactive protein
- 3. This test may also be used to monitor disease activity and response to therapy in both of the above diseases as well as some others, such as systemic lupus erythematosus
 CONDITION WITH LOW ESR

A low ESR can be seen with conditions that inhibit the normal sedimentation of red blood cells, such as a high red blood cell count (polycythaemia), significantly high white blood cell count (leucocytosis), and some protein abnormalities. Some changes in red cell shape (such as sickle cells in sickle cell anaemia) also lower the ESR.

NOTE:

- ESR and C reactive protein (C-RP) are both markers of inflammation.
 Generally, ESR does not change as rapidly as does CRP, either at the start of inflammation or as it resolves.
 CRP is not affected by as many other factors as is ESR, making it a better marker of inflammation.
 If the ESR is elevated, it is typically a result of two types of proteins, globulins or fibrinogen.
 Women tend to have a higher ESR, and menstruation and pregnancy can cause temporary elevations.
 Progs such as doubtern mathyldona, oral contracentives, popicillamino procesingmide, the only viling, and vitality in the orange of the contracentives.
- 6. Drugs such as dextran, methyldopa, oral contraceptives, penicillamine procainamide, theophylline, and vitamin A can increase ESR, while aspirin, cortisone, and quinine may decrease it



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Value Unit **Biological Reference interval Test Name**

CLINICAL CHEMISTRY/BIOCHEMISTRY GLUCOSE FASTING (F)

GLUCOSE FASTING (F): PLASMA 97.55 NORMAL: < 100.0 mg/dL

by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD) PREDIABETIC: 100.0 - 125.0 DIABETIC: > 0R = 126.0

INTERPRETATION
IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:

1. A fasting plasma glucose level below 100 mg/dl is considered normal.

2. A fasting plasma glucose level between 100 - 125 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prandial blood

test (after consumption of 75 gms of glucose) is recommended for all such patients.

3. A fasting plasma glucose level of above 125 mg/dl is highly suggestive of diabetic state. A repeat post-prandial is strongly recommended for all such patients. A fasting plasma glucose level in excess of 125 mg/dl on both occasions is confirmatory for diabetic state.



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Test Name	Value	Unit	Biological Reference interval
	LIPID PROFILE	: BASIC	
CHOLESTEROL TOTAL: SERUM by CHOLESTEROL OXIDASE PAP	177.28	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0
TRIGLYCERIDES: SERUM by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)	82.57	mg/dL	OPTIMAL: < 150.0 BORDERLINE HIGH: 150.0 - 199.0 HIGH: 200.0 - 499.0 VERY HIGH: > OR = 500.0
HDL CHOLESTEROL (DIRECT): SERUM by SELECTIVE INHIBITION	56.45	mg/dL	LOW HDL: < 30.0 BORDERLINE HIGH HDL: 30.0 - 60.0 HIGH HDL: > OR = 60.0
LDL CHOLESTEROL: SERUM by CALCULATED, SPECTROPHOTOMETRY	104.32	mg/dL	OPTIMAL: < 100.0 ABOVE OPTIMAL: 100.0 - 129.0 BORDERLINE HIGH: 130.0 - 159.0 HIGH: 160.0 - 189.0 VERY HIGH: > OR = 190.0
NON HDL CHOLESTEROL: SERUM by CALCULATED, SPECTROPHOTOMETRY	120.83	mg/dL	OPTIMAL: < 130.0 ABOVE OPTIMAL: 130.0 - 159.0 BORDERLINE HIGH: 160.0 - 189.0 HIGH: 190.0 - 219.0 VERY HIGH: > OR = 220.0
VLDL CHOLESTEROL: SERUM by CALCULATED, SPECTROPHOTOMETRY	16.51	mg/dL	0.00 - 45.00
TOTAL LIPIDS: SERUM by CALCULATED, SPECTROPHOTOMETRY	437.13	mg/dL	350.00 - 700.00
CHOLESTEROL/HDL RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	3.14	RATIO	LOW RISK: 3.30 - 4.40 AVERAGE RISK: 4.50 - 7.0 MODERATE RISK: 7.10 - 11.0 HIGH RISK: > 11.0



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Test Name	Value	Unit	Biological Reference interval
LDL/HDL RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.85	RATIO	LOW RISK: 0.50 - 3.0 MODERATE RISK: 3.10 - 6.0 HIGH RISK: > 6.0
TRIGLYCERIDES/HDL RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.46 ^L	RATIO	3.00 - 5.00

INTERPRETATION:

1. Measurements in the same patient can show physiological analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL & LDL Cholesterol.

2. As per NLA-2014 guidelines, all adults above the age of 20 years should be screened for lipid status. Selective screening of children above the age of 2 years with a family history of premature cardiovascular disease or those with at least one parent with high total cholesterol is recommended.

3. Low HDL levels are associated with increased risk for Atherosclerotic Cardiovascular disease (ASCVD) due to insufficient HDL being available

to participate in reverse cholesterol transport, the process by which cholesterol is eliminated from peripheral tissues.

4. NLA-2014 identifies Non HDL Cholesterol (an indicator of all atherogeniclipoproteins such as LDL, VLDL, IDL, Lpa, Chylomicron remnants) along with LDL-cholesterol as co- primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL &Non

5. Additional testing for Apolipoprotein B, hsCRP,Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement



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Test Name Value Unit Biological Reference interval

LIVER FUNCTION TEST (COMPLETE)

BILIRUBIN TOTAL: SERUM by DIAZOTIZATION, SPECTROPHOTOMETRY	0.26	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM by DIAZO MODIFIED, SPECTROPHOTOMETRY	0.09	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM by CALCULATED, SPECTROPHOTOMETRY	0.17	mg/dL	0.10 - 1.00
SGOT/AST: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	10.1	U/L	7.00 - 45.00
SGPT/ALT: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	1.4	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	7.21	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM by Para nitrophenyl phosphatase by amino methyl propanol	124.71	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM by SZASZ, SPECTROPHTOMETRY	2.75	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM by BIURET, SPECTROPHOTOMETRY	6.5	gm/dL	6.20 - 8.00
ALBUMIN: SERUM by BROMOCRESOL GREEN	3.73	gm/dL	3.50 - 5.50
GLOBULIN: SERUM by CALCULATED, SPECTROPHOTOMETRY	2.77	gm/dL	2.30 - 3.50
A: GRATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.35	RATIO	1.00 - 2.00

INTERPRETATION

NOTE:- To be correlated in individuals having SGOT and SGPT values higher than Normal Referance 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 CHOLESTATIS	> 1.5
HEPATOCELLULAR CARCINOMA & CHRONIC HEPATITIS	> 1.3 (Slightly Increased)



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DECREASED:

CLIENT CODE.

1. Acute Hepatitis due to virus, drugs, toxins (with AST increased 3 to 10 times upper limit of normal)

2. Extra Hepatic cholestatis: 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



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Test Name	Value	Unit	Biological Reference interval				
KIDNEY FUNCTION TEST (COMPLETE)							
UREA: SERUM by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)	30.83	mg/dL	10.00 - 50.00				
CREATININE: SERUM by ENZYMATIC, SPECTROPHOTOMETERY	0.83	mg/dL	0.40 - 1.40				
BLOOD UREA NITROGEN (BUN): SERUM by CALCULATED, SPECTROPHOTOMETRY	14.41	mg/dL	7.0 - 25.0				
BLOOD UREA NITROGEN (BUN)/CREATININE RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	17.36	RATIO	10.0 - 20.0				
UREA/CREATININE RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	37.14	RATIO					
URIC ACID: SERUM by URICASE - OXIDASE PEROXIDASE	3.69	mg/dL	3.60 - 7.70				
CALCIUM: SERUM by ARSENAZO III, SPECTROPHOTOMETRY	9.72	mg/dL	8.50 - 10.60				
PHOSPHOROUS: SERUM by PHOSPHOMOLYBDATE, SPECTROPHOTOMETRY	3.48	mg/dL	2.30 - 4.70				
ELECTROLYTES							
SODIUM: SERUM by ISE (ION SELECTIVE ELECTRODE)	141	mmol/L	135.0 - 150.0				
POTASSIUM: SERUM by ISE (ION SELECTIVE ELECTRODE)	4.41	mmol/L	3.50 - 5.00				
CHLORIDE: SERUM by ISE (ION SELECTIVE ELECTRODE)	105.75	mmol/L	90.0 - 110.0				
ESTIMATED GLOMERULAR FILTERATION RATE	ESTIMATED GLOMERULAR FILTERATION RATE						

ESTIMATED GLOMERULAR FILTERATION RATE 85.8

(eGFR): SERUM by CALCULATED 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.



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Test Name Value Unit **Biological Reference interval**

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, burns, surgery, cachexia, high fever).

7. Urine reabsorption (e.g. ureter colostomy)

8. Reduced muscle mass (subnormal creatinine production)

9. Certain drugs (e.g. tetracycline, glucocorticoids)

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

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

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

- 1. Acute tubular necrosis.
- 2. Low protein diet and starvation.
- 3. Severe liver disease.
- 4. Other causes of decreased urea synthesis.
- 5. Repeated dialysis (urea rather than creatinine diffuses out of extracellular fluid).
- 6. Inherited hyperammonemias (urea is virtually absent in blood).
- 7. SIADH (syndrome of inappropiate antidiuretic harmone) due to tubular secretion of urea.
- 8. Pregnancy.

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

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

INAPPROPIATE RATIO:

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

2. Cephalosporin therapy (interferes with creatinine measurement). **ESTIMATED GLOMERULAR FILTERATION RATE**:

EOTHER DE OLONIERO D'ALTRE L'EURTHONIA IL E						
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				



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



KOS Central Lab: 6349/1, Nicholson Road, Ambala Cantt -133 001, Haryana



(A Unit of KOS Healthcare)



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

NAME : Mr. MANJEET KAUR

AGE/ GENDER : 85 YRS/MALE **PATIENT ID** : 1694344

COLLECTED BY : SURJESH REG. NO./LAB NO. :012412090023

REFERRED BY **REGISTRATION DATE** : 09/Dec/2024 11:04 AM BARCODE NO. :01522202 **COLLECTION DATE** : 09/Dec/2024 11:09AM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE :09/Dec/2024 12:37PM

CLIENT ADDRESS : 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 creating between 45-59 ml/min/1.73 m2 (G3) and without any marker of Kidney damage, It is recommended to measure

4. eGFR category G1 OR G2 does not fullfill 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).

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



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CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

Value Unit **Biological Reference interval Test Name**

IMMUNOPATHOLOGY/SEROLOGY **C-REACTIVE PROTEIN (CRP)**

C-REACTIVE PROTEIN (CRP) QUANTITATIVE: 3.52 0.0 - 6.0mg/L

by NEPHLOMETRY

INTERPRETATION:

C-reactive protein (CRP) is one of the most sensitive acute-phase reactants for inflammation.

2. CRP levels can increase dramatically (100-fold or more) after severe trauma, bacterial infection, inflammation, surgery, or neoplastic

3. CRP levels (Quantitative) has been used to assess activity of inflammatory disease, to detect infections after surgery, to detect transplant rejection, and to monitor these inflammatory processes.

4. As compared to ESR, CRP shows an earlier rise in inflammatory disorders which begins in 4-6 hrs, the intensity of the rise being higher than ESR and the recovery being earlier than ESR. Unlike ESR, CRP levels are not influenced by hematologic conditions like Anemia, Polycythemia etc., 5. Elevated values are consistent with an acute inflammatory process.

NOTE:

1. Elevated C-reactive protein (CRP) values are nonspecific and should not be interpreted without a complete clinical history.

2. Oral contraceptives may increase CRP levels.



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Test Name Value Unit Biological Reference interval

CLINICAL PATHOLOGY URINE ROUTINE & MICROSCOPIC EXAMINATION

PHYSICAL EXAMINATION

QUANTITY RECIEVED 10 ml

COLOUR AMBER YELLOW PALE YELLOW

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

TRANSPARANCY HAZY CLEAR

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

SPECIFIC GRAVITY 1.01 1.002 - 1.030 by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

CHEMICAL EXAMINATION

REACTION ACIDIC

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY
PROTEIN Trace NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

SUGAR Negative NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

pH 6 5.0 - 7.5

BILIRUBIN Negative NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

NITRITE Negative NEGATIVE (-ve)

NITRITE Negative NEGATIVE (-ve

UROBILINOGEN Normal EU/dL 0.2 - 1.0

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

KETONE BODIES

Negative

NEGATIVE (-ve)

KETONE BODIES Negative NEGATIVE (-ve)
by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

BLOOD 3+ NEGATIVE (-ve)
by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

ASCORBIC ACID NEGATIVE (-ve) NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

MICROSCOPIC EXAMINATION

by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT

RED BLOOD CELLS (RBCs) 20-25 /HPF

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0 - 3



CLIENT CODE.

KOS Diagnostic Lab

(A Unit of KOS Healthcare)



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:09/Dec/2024 12:18PM

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REFERRED BY **REGISTRATION DATE** : 09/Dec/2024 11:04 AM **COLLECTION DATE** BARCODE NO. :01522202 : 09/Dec/2024 11:09AM

: KOS DIAGNOSTIC LAB **CLIENT ADDRESS** : 6349/1, NICHOLSON ROAD, AMBALA CANTT

Test Name	Value	Unit	Biological Reference interval
PUS CELLS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	12-15	/HPF	0 - 5
EPITHELIAL CELLS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	2-4	/HPF	ABSENT
CRYSTALS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
CASTS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
BACTERIA by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
OTHERS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
TRICHOMONAS VAGINALIS (PROTOZOA) by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	ABSENT		ABSENT

REPORTING DATE



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Test Name Value Unit Biological Reference interval

SPECIAL INVESTIGATIONS

PROTEIN ELECTROPHORESIS: SERUM

TOTAL PROTEINS: SERUM by MIGRATION GEL ELECTROPHORESIS	7.04	gm/dL	6.20 - 8.00
ALBUMIN: SERUM by MIGRATION GEL ELECTROPHORESIS	3.49 ^L	gm/dL	3.50 - 5.50
GLOBULIN: SERUM by MIGRATION GEL ELECTROPHORESIS	3.55 ^H	gm/dL	2.30 - 3.50
A: GRATIO: SERUM by MIGRATION GEL ELECTROPHORESIS	0.98 ^L	RATIO	1.00 - 2.00
ALPHA 1 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.32	gm/dL	0.11 - 0.40
ALPHA 2 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.87	gm/dL	0.43 - 1.03
BETA 1 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.39	gm/dL	0.30 - 0.59
BETA 2 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.27	gm/dL	0.20 - 0.53
GAMMA GLOBULIN by MIGRATION GEL ELECTROPHORESIS	1.69	gm/dL	0.75 - 1.80
MYELOMA (M) BAND/SPIKE by MIGRATION GEL ELECTROPHORESIS	M BAND SEEN IN GAMMA REGION	gm/dL	
ADVICE	ADVICE IMMUNOFIX	ATION STUDIES	

INTERPRETATION:

- 1. Serum protein electrophoresis is commonly used to identify patients with multiple myeloma and disorders of serum proteins.
- 2. Electrophoresis is a method of separating proteins based on their physical properties. the pattern of serum protein electrophoresis results depends on the frations of 2 types of protein: albumin and globulin (alpha 1 alpha 2, beta and gamma.)
- 3.A homogeneous spike-like peak in a focal region of the gamma-globulin zone indicates a monoclonal gammopathy.
- 4.Monoclonal gammopathies are associated with a clonal process that is malignant or potentially malignant, including multiple myeloma, Waldenstrom macroglobulinemia, solitary plasmacytoma, smoldering multiple myeloma, monoclonal gammopathy of undetermined significance, plasma cell leukemia, heavy chain disease, and amyloidosis.
- 5.M-protein (in the gamma region) level greater than 3 g/dL should be interpreted along with other radiologic and haematological findings to arrive at a diagnosis of Multiple myeloma and must not be considered in isolation.
- 6.Occasionally M protein may appear as a narrow spike in the beta or alpha2 regions also.
- 7.Up to one fifth of patients with Myeloma may have an M-protein spike of less than 1 g /dL.
- 8. Hypogammaglobulinemia on serum protein electrophoresis occurs in about 10% of patients with multiple myeloma who do not have a serum



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Test Name Value Unit Biological Reference interval

M-protein spike

9.Most of these patients have a large amount of Bence Jones protein (monoclonal free kappa or lambda chain) in their urine, wherein urine protein electrophoresis should be performed. Monoclonal gammopathy is present in up to 8 percent of healthy geriatric patients.

NOTE:

The following conditions require serum immunofixation to confirm monoclonality or to differentiate monoclonal and polyclonal disoders.

1.A well defined "M" band.

2.Faint band

3. Chronic inflammatory pattern (decreased albumin, increased alpha, increased gamma fractions)

4. Isolated increase in any region with an otherwise normal pattern.

5. Shouldering of albumin peak along anodal or cathodal side may be seen with lipoproteins, drugs, bilirubin or radiological contrast.

*** End Of Report ***



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Ms. MANJEET KAUR

PID NO: P33724537009665

Age: 85 Year(s) Sex: Female



Reference: DR.VINAY CHOPRA

Sample Collected At:
DR VINAY KUMAR CHOPRA
DR VINAY KUMAR CHOPRA KOS
Diagnostic Lab 6349/I Nicholson Road
Ambala Cantt HRY 133001. 06-HR 13
Sample Processed At: Metropolis
Healthcare Ltd E-21, B1 Mohan Co-op Ind
Estate New Delhi-110044

VID: 240111108838192

Registered On: 10/12/2024 08:27 AM Collected On: 09/12/2024 8:26AM Reported On: 10/12/2024 03:53 PM

Investigation

Observed Value

Unit

Biological Reference Interval

PROTEIN ELECTROPHORESIS

Name: MANJEET KAUR

Sample : **18**

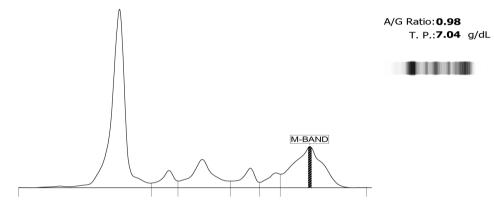
Sex:

M-BAND

3.3

Date: **12/10/2024** ID: **0528134668**

Age : **85**



Fractions	%		Ref. %	Conc.	Ref. Conc.
Albumin	49.6	<	55.8 - 66.1	3.49	3.57 - 5.42
Alpha 1	4.6		2.9 - 4.9	0.32	0.19 - 0.40
Alpha 2	12.4	>	7.1 - 11.8	0.87	0.45 - 0.96
Beta 1	5.5		4.7 - 7.2	0.39	0.30 - 0.59
Beta 2	3.9		3.2 - 6.5	0.27	0.20 - 0.53
Gamma	24.0	>	11.1 - 18.8	1.69	0.71 - 1.54
Peaks	%		g/dl		

0.23

Signature

Page 3 of 4

Dr. Chakshu Bansal M.D (Pathology) (DMC Reg. No. - 66994)