

(A Unit of KOS Healthcare)



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

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

**NAME** : Mrs. RENU CHOPRA

**AGE/ GENDER** : 66 YRS/FEMALE **PATIENT ID** : 1705857

**COLLECTED BY** REG. NO./LAB NO. :012412220004

REFERRED BY **REGISTRATION DATE** : 22/Dec/2024 08:17 AM BARCODE NO. :01522798 **COLLECTION DATE** : 22/Dec/2024 08:33AM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 22/Dec/2024 08:50AM

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

**Test Name Value** Unit **Biological Reference interval** 

### **SWASTHYA WELLNESS PANEL: G COMPLETE BLOOD COUNT (CBC)**

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

HAEMOGLOBIN (HB) by CALORIMETRIC	14.4	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT by hydro dynamic focusing, electrical impedence	5.32 <sup>H</sup>	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	45.6	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	85.7	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	27.1	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	31.7 <sup>L</sup>	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	13.7	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	44	fL	35.0 - 56.0
MENTZERS INDEX by CALCULATED	16.11	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX by CALCULATED	22.1	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	11070 <sup>H</sup>	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) by AUTOMATED 6 PART HEMATOLOGY ANALYZER	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	NIL	%	< 10 %



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DR.YUGAM CHOPRA CONSULTANT PATHOLOGIST





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Test Name	Value	Unit	Biological Reference interval
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			
NEUTROPHILS by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	77 <sup>H</sup>	%	50 - 70
LYMPHOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	15 <sup>L</sup>	%	20 - 40
EOSINOPHILS by flow cytometry by sf cube & microscopy	1	%	1 - 6
MONOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	7	%	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	8524 <sup>H</sup>	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	1660	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	111	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	775	/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	501000 <sup>H</sup>	/cmm	150000 - 450000
PLATELETCRIT (PCT) by hydro dynamic focusing, electrical impedence	0.44 <sup>H</sup>	%	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	86000	/cmm	30000 - 90000
PLATELET LARGE CELL RATIO (P-LCR) by hydro dynamic focusing, electrical impedence	17.3	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) by hydro dynamic focusing, electrical impedence NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD	15.9	%	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** 



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Test Name Value Unit Biological Reference interval

#### **GLYCOSYLATED HAEMOGLOBIN (HBA1C)**

GLYCOSYLATED HAEMOGLOBIN (HbA1c): 5.1 % 4.0 - 6.4

WHOLE BLOOD

by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)

ESTIMATED AVERAGE PLASMA GLUCOSE 99.67 mg/dL 60.00 - 140.00

by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)

#### **INTERPRETATION:**

AS PER AMERICAN DIABETES ASSOCIATION (ADA):				
REFERENCE GROUP GLYCOSYLATED HEMOGLOGIB (HBAIC) in %				
Non diabetic Adults >= 18 years	<5.7			
At Risk (Prediabetes)	5.7 – 6.	4		
Diagnosing Diabetes	>= 6.5			
	Age > 19 Years			
Therapeutic goals for glycemic control	Goals of Therapy:	< 7.0		
	Actions Suggested:	>8.0		
	Age < 19 Years			
	Goal of therapy:	<7.5		

#### COMMENTS:

- 1.Glycosylated hemoglobin (HbA1c) test is three monthly monitoring done to assess compliace with therapeutic regimen in diabetic patients. 2.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 HbAlc. Converse is true for a diabetic previously under good control but now poorly controlled.
- 3. 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, targetting a goal of < 7.0% may not be appropriate.
- 4.High HbA1c (>9.0 -9.5 %) is strongly associated with risk of development and rapid progression of microvascular and nerve complications 5.Any condition that shorten RBC life span like acute blood loss, hemolytic anemia falsely lower HbA1c results.
- 6.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 gycemic control.

7. Specimens from patients with polycythemia or post-splenctomy may exhibit increse in HbA1c values due to a somewhat longer life span of the red cells.



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**Value** Unit **Biological Reference interval Test Name** 

#### **ERYTHROCYTE SEDIMENTATION RATE (ESR)**

ERYTHROCYTE SEDIMENTATION RATE (ESR)

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 mathyddona, 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 91.79 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	213.17 <sup>H</sup>	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0
TRIGLYCERIDES: SERUM by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)	79.8	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	58.04	mg/dL	LOW HDL: < 30.0 BORDERLINE HIGH HDL: 30.0 - 60.0 HIGH HDL: > OR = 60.0
LDL CHOLESTEROL: SERUM by CALCULATED, SPECTROPHOTOMETRY	139.17 <sup>H</sup>	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	155.13 <sup>H</sup>	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	15.96	mg/dL	0.00 - 45.00
TOTAL LIPIDS: SERUM by CALCULATED, SPECTROPHOTOMETRY	506.14	mg/dL	350.00 - 700.00
CHOLESTEROL/HDL RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	3.67	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	2.4	RATIO	LOW RISK: 0.50 - 3.0 MODERATE RISK: 3.10 - 6.0 HIGH RISK: > 6.0
TRIGLYCERIDES/HDL RATIO: SERUM by CALCULATED. SPECTROPHOTOMETRY	1.37 <sup>L</sup>	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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#### **LIVER FUNCTION TEST (COMPLETE)**

BILIRUBIN TOTAL: SERUM by DIAZOTIZATION, SPECTROPHOTOMETRY	0.53	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM by DIAZO MODIFIED, SPECTROPHOTOMETRY	0.14	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM by CALCULATED, SPECTROPHOTOMETRY	0.39	mg/dL	0.10 - 1.00
SGOT/AST: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	19.3	U/L	7.00 - 45.00
SGPT/ALT: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	11.3	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM  by CALCULATED, SPECTROPHOTOMETRY	1.71	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL	101.1	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM by SZASZ, SPECTROPHTOMETRY	12.18	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM by BIURET, SPECTROPHOTOMETRY	8.21 <sup>H</sup>	gm/dL	6.20 - 8.00
ALBUMIN: SERUM by BROMOCRESOL GREEN	4.33	gm/dL	3.50 - 5.50
GLOBULIN: SERUM by CALCULATED, SPECTROPHOTOMETRY	3.88 <sup>H</sup>	gm/dL	2.30 - 3.50
A: G RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.12	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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**Test Name Value** Unit **Biological Reference interval** 

#### **DECREASED:**

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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KIDNI	EY FUNCTION T	EST (COMPLETE)	
UREA: SERUM by urease - glutamate dehydrogenase (gldh)	22.6	mg/dL	10.00 - 50.00
CREATININE: SERUM by ENZYMATIC, SPECTROPHOTOMETERY	0.91	mg/dL	0.40 - 1.20
BLOOD UREA NITROGEN (BUN): SERUM by CALCULATED, SPECTROPHOTOMETRY	10.56	mg/dL	7.0 - 25.0
BLOOD UREA NITROGEN (BUN)/CREATININE RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	11.6	RATIO	10.0 - 20.0
UREA/CREATININE RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	24.84	RATIO	
URIC ACID: SERUM by URICASE - OXIDASE PEROXIDASE	2.79	mg/dL	2.50 - 6.80
CALCIUM: SERUM by ARSENAZO III, SPECTROPHOTOMETRY	10.14	mg/dL	8.50 - 10.60
PHOSPHOROUS: SERUM by PHOSPHOMOLYBDATE, SPECTROPHOTOMETRY	3.93	mg/dL	2.30 - 4.70
<u>ELECTROLYTES</u>			
SODIUM: SERUM by ISE (ION SELECTIVE ELECTRODE)	141.5	mmol/L	135.0 - 150.0
POTASSIUM: SERUM by ISE (ION SELECTIVE ELECTRODE)	4.58	mmol/L	3.50 - 5.00
CHLORIDE: SERUM by ISE (ION SELECTIVE ELECTRODE)	106.13	mmol/L	90.0 - 110.0
ESTIMATED GLOMERULAR FILTERATION RATE			

ESTIMATED GLOMERULAR FILTERATION RATE 69.6

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

**NAME** : Mrs. RENU CHOPRA

AGE/ GENDER : 66 YRS/FEMALE **PATIENT ID** : 1705857

**COLLECTED BY** REG. NO./LAB NO. :012412220004

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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**:

ECTIVISTIES CECTALICES IN THE LEGISTICITY IN THE				
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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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** 

#### **MICROBIOLOGY**

#### CULTURE AEROBIC BACTERIA AND ANTIBIOTIC SENSITIVITY: URINE

#### **CULTURE AND SUSCEPTIBILITY: URINE**

DATE OF SAMPLE 22-12-2024 SPECIMEN SOURCE URINE INCUBATION PERIOD 48 HOURS by AUTOMATED BROTH CULTURE

**GRAM NEGATIVE (-ve) GRAM STAIN** by MICROSCOPY

**CULTURE** POSITIVE (+ve)

by AUTOMATED BROTH CULTURE

ESCHERICHIA COLI (E.COLI) **ORGANISM** 

by AUTOMATED BROTH CULTURE

#### **AEROBIC SUSCEPTIBILITY: URINE**

SENSITIVE AMOXICILLIN+CLAVULANIC ACID by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8/4 µg/mL

**AMPICILLIN** RESISTANT

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8 µg/mL

AMPICILLIN+SULBACTUM SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8/4 µg/mL

**CHLORAMPHENICOL SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8 µg/mL

**CIPROFLOXACIN** SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI Concentration: 1 µg/mL

DOXYCYCLINE **SENSITIVE** 

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REPORTING DATE

Concentration: 4 µg/mL

CLIENT CODE.

RESISTANT NALIDIXIC ACID

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16 µg/mL

**GENTAMICIN SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI Concentration: 16 µg/mL

**NITROFURATOIN** RESISTANT

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16 µg/mL

**SENSITIVE NORFLOXACIN** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 4 µg/mL

**MINOCYCLINE SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 4 µg/mL

**TOBRAMYCIN SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 4 µg/mL

**SENSITIVE AMIKACIN** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16 µg/mL

**AZETREONAM SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI Concentration: 4 µg/mL

CEFAZOLIN **SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16 µg/mL

**CEFIXIME SENSITIVE** 

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by AUTOMATED BROTH MICRODILUTION, CLSI

**CEFOXITIN** SENSITIVE by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8 µg/mL

**CEFTAZIDIME SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 4 µg/mL

**CEFTRIAXONE SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

**FOSFOMYCIN** SENSITIVE by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 64 µg/mL

**LEVOFLOXACIN SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 2 µg/mL

**NETLIMICIN SULPHATE SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 8 µg/mL

PIPERACILLIN+TAZOBACTUM SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16/4 µg/mL

TICARCILLIN+CLAVULANIC ACID **SENSITIVE** by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 16/2 µg/mL

TRIMETHOPRIM+SULPHAMETHAZOLE **SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 2/38 µg/mL

**CEFIPIME** SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI Concentration: 2 µg/mL



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**DORIPENEM** SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 1 µg/mL

**IMIPINEM SENSITIVE** 

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 1 µg/mL

**MEROPENEM** SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 1 µg/mL

**COLISTIN** SENSITIVE

by AUTOMATED BROTH MICRODILUTION, CLSI

Concentration: 0.06 µg/mL

#### **INTERPRETATION:**

1. In urine culture and sensitivity, presence of more than 100,000 organism per mL in midstream sample of urine is considered clinically significant. However in symptomatic patients, a smaller number of bacteria (100 to 10000/mL) may signify infection.

2. Colony count of 100 to 10000/ mL indicate infection, if isolate from specimen obtained by suprapubic aspiration or "in-and-out" approach to the total country of the properties of the total country of the total country of the properties of the total country of th

catheterization or from patients with indwelling catheters.

#### SUSCEPTIBILITY:

1. A test interpreted as **SENSTITIVE** implies that infection due to isolate may be appropriately treated with the dosage of an antimicrobial agent

recommended for that type of infection and infecting species, unless otherwise indicated..

2. A test interpreted as **INTERMEDIATE** implies that the" Infection due to the isolate may be appropriately treated in body sites where the drugs are

physiologically concentrated or when a high dosage of drug can be used".

3.A test interpreted as **RESISTANT** implies that the "isolates are not inhibited by the usually achievable concentration of the agents with normal dosage, schedule and/or fall in the range where specific microbial resistance mechanism are likely (e.g. beta-lactamases), and clinical efficacy has not been reliable in treatment studies.

#### **CAUTION:**

Conditions which can cause a false Negative culture:

- 1. Patient is on antibiotics. Please repeat culture post therapy.
- 2. Anaerobic bacterial infection.
- 3. Fastidious aerobic bacteria which are not able to grow on routine culture media.
- 4. Besides all these factors, at least in 25-40 % of cases there is no direct correlation between in vivo clinical picture.
- 5. Renal tuberculosis to be confirmed by AFB studies.

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



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