

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

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

NAME : Mrs. REKHA BHARDWAJ  
AGE/ GENDER : 62 YRS/FEMALE  
COLLECTED BY :  
REFERRED BY :  
BARCODE NO. : 01519937  
CLIENT CODE. : KOS DIAGNOSTIC LAB  
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1658808  
REG. NO./LAB NO. : 012411020051  
REGISTRATION DATE : 02/Nov/2024 02:09 PM  
COLLECTION DATE : 02/Nov/2024 02:15PM  
REPORTING DATE : 02/Nov/2024 03:20PM

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

## CLINICAL CHEMISTRY/BIOCHEMISTRY

### 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	0.08	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM by CALCULATED, SPECTROPHOTOMETRY	0.18	mg/dL	0.10 - 1.00
SGOT/AST: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	13.85	U/L	7.00 - 45.00
SGPT/ALT: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	18.44	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	0.75	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL	106.48	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM by SZASZ, SPECTROPHOTOMETRY	31.46	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM by BIURET, SPECTROPHOTOMETRY	5.81 <sup>L</sup>	gm/dL	6.20 - 8.00
ALBUMIN: SERUM by BROMOCRESOL GREEN	3.82	gm/dL	3.50 - 5.50
GLOBULIN: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.99 <sup>L</sup>	gm/dL	2.30 - 3.50
A : G RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.92	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 CHOLESTATIS	> 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>	: Mrs. REKHA BHARDWAJ	<b>PATIENT ID</b>	: 1658808
<b>AGE/ GENDER</b>	: 62 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 012411020051
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 02/Nov/2024 02:09 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 02/Nov/2024 02:15PM
<b>BARCODE NO.</b>	: 01519937	<b>REPORTING DATE</b>	: 02/Nov/2024 03:20PM
<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 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		



  
**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>	: Mrs. REKHA BHARDWAJ	<b>PATIENT ID</b>	: 1658808
<b>AGE/ GENDER</b>	: 62 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 012411020051
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 02/Nov/2024 02:09 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 02/Nov/2024 02:15PM
<b>BARCODE NO.</b>	: 01519937	<b>REPORTING DATE</b>	: 02/Nov/2024 03:09PM
<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>KIDNEY FUNCTION TEST (BASIC)</b>			
UREA: SERUM <i>by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)</i>	25.46	mg/dL	10.00 - 50.00
CREATININE: SERUM <i>by ENZYMATIC, SPECTROPHOTOMETRY</i>	1.13	mg/dL	0.40 - 1.20
BLOOD UREA NITROGEN (BUN): SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	11.9	mg/dL	7.0 - 25.0
BLOOD UREA NITROGEN (BUN)/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	10.53	RATIO	10.0 - 20.0
UREA/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	22.53	RATIO	
URIC ACID: SERUM <i>by URICASE - OXIDASE PEROXIDASE</i>	<b>7.88<sup>H</sup></b>	mg/dL	2.50 - 6.80



  
 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>	: Mrs. REKHA BHARDWAJ	<b>PATIENT ID</b>	: 1658808
<b>AGE/ GENDER</b>	: 62 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 012411020051
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 02/Nov/2024 02:09 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 02/Nov/2024 02:15PM
<b>BARCODE NO.</b>	: 01519937	<b>REPORTING DATE</b>	: 02/Nov/2024 03:09PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

**INTERPRETATION:**

Normal range for a healthy person on normal diet: 12 - 20

To Differentiate between pre- and postrenal 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 hemorrhage.
4. High protein intake.
5. Impaired renal function plus .
6. Excess protein intake or production or tissue breakdown (e.g. infection, GI bleeding, thyrotoxicosis, Cushings syndrome, high protein diet, burns, surgery, cachexia, high fever).
7. Urine reabsorption (e.g. ureterocolostomy)
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 inappropriate antidiuretic hormone) 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.

**INAPPROPRIATE 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).





**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>	: Mrs. REKHA BHARDWAJ	<b>PATIENT ID</b>	: 1658808
<b>AGE/ GENDER</b>	: 62 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 012411020051
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 02/Nov/2024 02:09 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 02/Nov/2024 02:15PM
<b>BARCODE NO.</b>	: 01519937	<b>REPORTING DATE</b>	: 02/Nov/2024 03:20PM
<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

#### ANTI CYCLIC CITRULLINATED PEPTIDE CCP2 (HIGHLY SENSITIVE)

ANTI CYCLIC CITRULLINATED PEPTIDE (CCP) 2.9 AU/mL 0.00 - 5.00

ANTIBODY: SERUM

by CMIA (CHEMILUMINESCENCE IMMUNOASSAY)

#### INTERPRETATION:

1. ANTI-CCP antibodies are potentially important surrogate marker for diagnosis and prognosis in rheumatoid arthritis (RA).
2. Anti-CCP is of two types: Anti-CCP1 & Anti-CCP2.
3. **Anti-CCP2 is HIGHLY SENSITIVE (71%) & more specific (98%) than Anti-CCP1.**
4. Anti-CCP2 predict the eventual development in Rheumatoid Arthritis (RA), when found in undifferentiated arthritis
5. Anti-CCP2 may be detected in healthy individual's years before onset of clinical Rheumatoid Arthritis as well as to differentiate elderly onset Rheumatoid Arthritis from Polymyalgia Rheumatic & Erosive SLE.
6. **The positive predictive value of Anti-CCP antibodies for Rheumatoid Arthritis is far greater than Rheumatoid factor. Up to 30% patients with seronegative Rheumatoid Arthritis also show Anti CCP antibodies**

#### RHEUMATOID ARTHRITIS:

1. Rheumatoid Arthritis is a systemic autoimmune disease that is multi-functional in origin and is characterized by chronic inflammation of the membrane lining (synovium) joints which leads to progressive joint destruction and in most cases to disability and reduction of quality life.
2. The disease spreads from small to large joints, with greatest damage in early phase.
3. The diagnosis of RA is primarily based on clinical, radiological & immunological features. The most frequent serological test is the measurement of RA factor.
4. RA factor is not specific for rheumatoid arthritis, as it is often present in healthy individuals with other autoimmune diseases and chronic infections.
5. ANTI-CCP have been discovered in joints of patients with RA, but not in other form of joint disease.



  
 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>	: Mrs. REKHA BHARDWAJ	<b>PATIENT ID</b>	: 1658808
<b>AGE/ GENDER</b>	: 62 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 012411020051
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 02/Nov/2024 02:09 PM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 02/Nov/2024 02:15PM
<b>BARCODE NO.</b>	: 01519937	<b>REPORTING DATE</b>	: 02/Nov/2024 03:09PM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

### C-REACTIVE PROTEIN (CRP)

C-REACTIVE PROTEIN (CRP) QUANTITATIVE: SERUM by NEPHLOMETRY	<b>9.35<sup>H</sup></b>	mg/L	0.0 - 6.0
---	-------------------------	------	-----------

#### INTERPRETATION:

1. 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 proliferation.
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.

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



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

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

