



# P K R JAIN HEALTHCARE INSTITUTE

NASIRPUR, Hissar Road, AMBALA CITY- (Haryana)

**A PIONEER DIAGNOSTIC CENTRE**

☎ 0171-2532620, 8222896961 ✉ pkrajainhealthcare@gmail.com

TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

NAME	: Mrs. CHARANJEET KAUR	PATIENT ID	: 1583087
AGE/ GENDER	: 47 YRS/FEMALE	REG. NO./LAB NO.	: 122408170009
COLLECTED BY	:	REGISTRATION DATE	: 17/Aug/2024 09:53 AM
REFERRED BY	:	COLLECTION DATE	: 17/Aug/2024 10:00AM
BARCODE NO.	: 12504190	REPORTING DATE	: 17/Aug/2024 01:53PM
CLIENT CODE.	: P.K.R JAIN HEALTHCARE INSTITUTE		
CLIENT ADDRESS	: NASIRPUR, HISSAR ROAD, AMBALA CITY - HARYANA		

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

## HAEMATOLOGY

### ERYTHROCYTE SEDIMENTATION RATE (ESR)

ERYTHROCYTE SEDIMENTATION RATE (ESR) by MODIFIED WESTERGREN AUTOMATED METHOD	55 <sup>H</sup>	mm/1st hr	0 - 20
---	-----------------	-----------	--------

#### 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:

1. ESR and C - reactive protein (C-RP) are both markers of inflammation.
2. Generally, ESR does not change as rapidly as does CRP, either at the start of inflammation or as it resolves.
3. **CRP is not affected by as many other factors as is ESR, making it a better marker of inflammation.**
4. If the ESR is elevated, it is typically a result of two types of proteins, globulins or fibrinogen.
5. Women tend to have a higher ESR, and menstruation and pregnancy can cause temporary elevations.
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



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

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





# P K R JAIN HEALTHCARE INSTITUTE

NASIRPUR, Hissar Road, AMBALA CITY- (Haryana)

**A PIONEER DIAGNOSTIC CENTRE**

☎ 0171-2532620, 8222896961 ✉ pkrjainhealthcare@gmail.com

TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

<b>NAME</b>	: Mrs. CHARANJEET KAUR	<b>PATIENT ID</b>	: 1583087
<b>AGE/ GENDER</b>	: 47 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 122408170009
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 17/Aug/2024 09:53 AM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 17/Aug/2024 10:00AM
<b>BARCODE NO.</b>	: 12504190	<b>REPORTING DATE</b>	: 17/Aug/2024 04:37PM
<b>CLIENT CODE.</b>	: P.K.R JAIN HEALTHCARE INSTITUTE		
<b>CLIENT ADDRESS</b>	: NASIRPUR, HISSAR ROAD, AMBALA CITY - HARYANA		

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

## IMMUNOPATHOLOGY/SEROLOGY

### RHEUMATOID FACTOR (RA): QUANTITATIVE - SERUM

<b>RHEUMATOID (RA) FACTOR QUANTITATIVE:</b>	39.09 <sup>H</sup>	IU/mL	<b>NEGATIVE:</b> < 18.0
<b>SERUM</b>			<b>BORDERLINE:</b> 18.0 - 25.0
<i>by NEPHLOMETRY</i>			<b>POSITIVE:</b> > 25.0

#### INTERPRETATION:-

##### RHEUMATOID FACTOR (RA):

1. Rheumatoid factors (RF) are antibodies that are directed against the Fc fragment of IgG altered in its tertiary structure.
2. Over 75% of patients with rheumatoid arthritis (RA) have an IgM antibody to IgG immunoglobulin. This autoantibody (RF) is diagnostically useful although it may not be etiologically related to RA.
3. Inflammatory Markers such as ESR & C-Reactive protein (CRP) are normal in about 60 % of patients with positive RA.
4. The titer of RF correlates poorly with disease activity, but those patients with high titers tend to have more severe disease course.
5. The test is useful for diagnosis and prognosis of rheumatoid arthritis.

##### 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.


##### CAUTION (FALSE POSTIVE):-

1. RA factor is not specific for Rheumatoid arthritis, as it is often present in healthy individuals with other autoimmune diseases and chronic infections.
2. Non rheumatoid and rheumatoid arthritis (RA) populations are not clearly separate with regard to the presence of rheumatoid factor (RF) (15% of RA patients have a nonreactive titer and 8% of nonrheumatoid patients have a positive titer).
3. Patients with various nonrheumatoid diseases, characterized by chronic inflammation may have positive tests for RF. These diseases include systemic lupus erythematosus, polymyositis, tuberculosis, syphilis, viral hepatitis, infectious mononucleosis, and influenza.
4. Anti-CCP have been discovered in joints of patients with RA, but not in other form of joint disease. Anti-CCP2 is HIGHLY SENSITIVE (71%) & more specific (98%) than RA factor.
5. Up to 30 % of patients with Seronegative Rheumatoid arthritis also show Anti-CCP antibodies.
6. The positive predictive value of Anti-CCP antibodies for Rheumatoid Arthritis is far greater than Rheumatoid factor.

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



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

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

