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

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

NAME	**: Mrs. KRISHNA RANI**		
AGE/ GENDER	: 79 YRS/FEMALE	**PATIENT ID**	: 1544301
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012407100038**
REFERRED BY	: CENTRAL PHOENIX CLUB (AMBALA CANTT)	**REGISTRATION DATE**	: 10/Jul/2024 11:45 AM
BARCODE NO.	: 01512866	**COLLECTION DATE**	: 10/Jul/2024 11:51AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 10/Jul/2024 02:47PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

CLINICAL PATHOLOGY

PROTEINS: 24 HOURS URINE

URINE VOLUME: 24 HOUR *by SPECTROPHOTOMETRY*	550	mL	
PROTEINS: 24 HOURS URINE *by BIURET, SPECTROPHOTOMETRY*	114.45	mg/ 24 HOURS	25 -160

INTERPRETATION:

TYPES OF PROTEINURIA	*TOTAL PROTEINS IN mg/24 HOURS*	*CONDITIONS*
MINIMAL PROTEINURIA:	150 - 500 mg/24 hours	Chronic pyelonephritis, Chronic Interstial Nephritis, Renal Tubular disease, Postural
MODERATE PROTEINURIA:	500 - 1000 mg/24 hours	Nephrosclerosis, Multiple Myeloma, Toxic Nephropathy, Renal Calculi
HEAVY PROTEINURIA:	1000 - 3000 mg/24 hours	Nephrotic Syndrome, Acute Rapidly Progressive & Chronic Glomerulonephritis, Diabetes mellitus, Lupus erythematosus, Druga like Pencillamine, Heavy metals like Gold & Mercury.

NOTE:
1.Excreation of total protein in individuals is highly variable with or without kidney disease.
2.Conditions affecting protein excreation other than kidney didease are urinary tract infection, diet, mensturation & physical activity.

COMMENT:
1.Diagnosis of kidney disease and response to therapy is usually obtained by quatitattively analyzing the amount of protein excreated in urine over a 24 hour period.

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CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 13/Jul/2024 05:42PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

SPECIAL INVESTIGATIONS

PROTEIN ELECTROPHORESIS: SERUM

Test Name	Value	Unit	Biological Reference interval
TOTAL PROTEINS: SERUM *by MIGRATION GEL ELECTROPHORESIS*	6.2	gm/dL	6.20 - 8.00
ALBUMIN: SERUM *by MIGRATION GEL ELECTROPHORESIS*	3.62	gm/dL	3.50 - 5.50
GLOBULIN: SERUM *by MIGRATION GEL ELECTROPHORESIS*	2.58	gm/dL	2.30 - 3.50
A : G RATIO: SERUM *by MIGRATION GEL ELECTROPHORESIS*	1.4	RATIO	1.00 - 2.00
ALPHA 1 GLOBULIN *by MIGRATION GEL ELECTROPHORESIS*	0.35	gm/dL	0.11 - 0.40
ALPHA 2 GLOBULIN *by MIGRATION GEL ELECTROPHORESIS*	0.8	gm/dL	0.43 - 1.03
BETA 1 GLOBULIN *by MIGRATION GEL ELECTROPHORESIS*	0.42	gm/dL	0.30 - 0.59
BETA 2 GLOBULIN *by MIGRATION GEL ELECTROPHORESIS*	0.32	gm/dL	0.20 - 0.53
GAMMA GLOBULIN ***by MIGRATION GEL ELECTROPHORESIS***	**0.69^{L}**	**gm/dL**	**0.75 - 1.80**
MYELOMA (M) BAND/SPIKE *by MIGRATION GEL ELECTROPHORESIS*	NO MONOCLONAL BAND SEEN	gm/dL	
INTERPRETATION	HYPOGAMMAGLOBULINEMIA		

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 alpha2, 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.

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Test Name	Value	Unit	Biological Reference interval

8.Hypogammaglobulinemia on serum protein electrophoresis occurs in about 10% of patients with multiple myeloma who do not have a serum 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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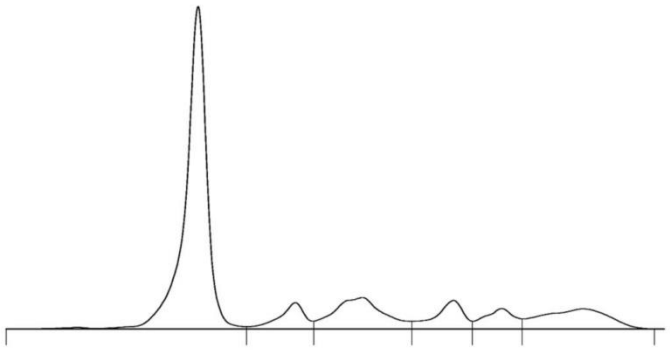
KOS DIAGNOSTIC LAB
6349/1, NICHOLSON ROAD, SADAR BAZAR, AMBALA CANTT. HARYANA-133001

PROTEIN ELECTROPHORESIS

Name: **KRISHNA RANI**
Sample : **12**
Sex : **F**

Date: **7/11/2024**
ID: **0517811495**
Age : **79**

A/G Ratio: **1.40**
T. P.: **6.2** g/dL



Fractions	%		Ref. %	Conc.	Ref. Conc.
Albumin	**58.4**		55.8 - 66.1	**3.62**	3.57 - 5.42
Alpha 1	**5.7**	>	2.9 - 4.9	**0.35**	0.19 - 0.40
Alpha 2	**12.9**	>	7.1 - 11.8	**0.80**	0.45 - 0.96
Beta 1	**6.7**		4.7 - 7.2	**0.42**	0.30 - 0.59
Beta 2	**5.1**		3.2 - 6.5	**0.32**	0.20 - 0.53
Gamma	**11.2**		11.1 - 18.8	**0.69**	0.71 - 1.54

Signature

-- End of Report --

Tests marked with NABL symbol are accredited by NABL vide Certificate no MC-2676; Validity till 04-04-2026

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