



		hopra & Microbiology) onsultant Pathologist	Dr. Yugan MD CEO & Consultant	(Pathology)
NAME	: Mrs. JYOTI SOOD			
AGE/ GENDER	: 45 YRS/FEMALE	P	ATIENT ID	: 1644744
COLLECTED BY	: SURJESH	R	EG. NO./LAB NO.	: 012410160026
REFERRED BY	: CENTRAL PHOENIX CLUB	(AMBALA CANTT)	EGISTRATION DATE	: 16/Oct/2024 10:54 AM
BARCODE NO.	: 01518985	C	OLLECTION DATE	: 16/Oct/2024 10:57AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	R	EPORTING DATE	: 16/Oct/2024 11:55AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAI	), AMBALA CANTT		
Test Name		Value	Unit	Biological Reference interval
HAEMOGLOBIN (HB)			OBIN (HB). am/dL	12.0 - 16.0
HAEMOGLOBIN (HB) by CALORIMETRIC INTERPRETATION:-		9.4 <sup>L</sup>	gm/dL	12.0 - 16.0
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro tissues back to the lur	otein molecule in red blood ce ngs.	9.4 <sup>L</sup> Ils that carries oxyger	gm/dL	<b>12.0 - 16.0</b> odys tissues and returns carbon dioxide from t
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b>	9.4 <sup>L</sup> Ils that carries oxyger low red blood count.	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traun 2) Nutritional deficier	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate)	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. J, colon cancer or sto	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (trau 2) Nutritional deficier 3) Bone marrow probl	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. g, colon cancer or sto rrow by cancer)	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traui 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma I blood cell synthesis by chemo	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. g, colon cancer or sto rrow by cancer) otherapy drugs	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin lew <b>ANEMIA (DECRESED H</b> 1) Loss of blood (traun 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure 6) Abnormal hemoglo	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. g, colon cancer or sto rrow by cancer) otherapy drugs	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traui 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure 6) Abnormal hemoglo POLYCYTHEMIA (INCR 1) People in higher al	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma l blood cell synthesis by chemo obin structure (sickle cell anen <b>EASED HAEMOGLOBIN):</b> titudes (Physiological)	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. g, colon cancer or sto rrow by cancer) otherapy drugs	<b>gm/dL</b> n from the lungs to the b	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traui 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure 6) Abnormal hemogloc POLYCYTHEMIA (INCR 1) People in higher al 2) Smoking (Secondar 3) Dehydration produ	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma l blood cell synthesis by chemo obin structure (sickle cell anen <b>EASED HAEMOGLOBIN):</b> titudes (Physiological) y Polycythemia) ices a falsely rise in hemoglobi	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. I, colon cancer or sto prow by cancer) otherapy drugs hia or thalassemia).	gm/dL n from the lungs to the b mach ulcer)	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traui 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure 6) Abnormal hemogloc POLYCYTHEMIA (INCR 1) People in higher al 2) Smoking (Secondar 3) Dehydration produ 4) Advanced lung dise	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma l blood cell synthesis by chemo bbin structure (sickle cell anen <b>EASED HAEMOGLOBIN):</b> titudes (Physiological) y Polycythemia)	<b>9.4<sup>L</sup></b> Ils that carries oxyger low red blood count. I, colon cancer or sto prow by cancer) otherapy drugs hia or thalassemia).	gm/dL n from the lungs to the b mach ulcer)	
by CALORIMETRIC INTERPRETATION:- Hemoglobin is the pro- tissues back to the lur A low hemoglobin leve ANEMIA (DECRESED H 1) Loss of blood (traus 2) Nutritional deficier 3) Bone marrow probl 4) Suppression by red 5) Kidney failure 6) Abnormal hemoglo POLYCYTHEMIA (INCR 1) People in higher al 2) Smoking (Secondar 3) Dehydration produ 4) Advanced lung dise 5) Certain tumors 6) A disorder of the bo	otein molecule in red blood ce ngs. el is referred to as ANEMIA or <b>IAEMOGLOBIN):</b> matic injury, surgery, bleeding ncy (iron, vitamin B12, folate) lems (replacement of bone ma l blood cell synthesis by chemo obin structure (sickle cell anen <b>EASED HAEMOGLOBIN):</b> titudes (Physiological) y Polycythemia) ices a falsely rise in hemoglobi ease (for example, emphysema one marrow known as polycytl	9.4 <sup>L</sup> Ils that carries oxyger low red blood count. g, colon cancer or sto rrow by cancer) otherapy drugs hia or thalassemia). n due to increased ho )	gm/dL n from the lungs to the b mach ulcer)	

## NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD





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

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



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.



TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.



NAME       : Mrs. JYOTI SOOD         AGE/ GENDER       : 45 YRS/FEMALE       PATIENT ID       : 1644744         COLLECTED BY       : SURJESH       REG. NO./LAB NO.       : 012410160026         REFERRED BY       : CENTRAL PHOENIX CLUB (AMBALA CANTT)       REGISTRATION DATE       : 16/Oct/2024 10:54 AM         BARCODE NO.       : 01518985       COLLECTION DATE       : 16/Oct/2024 10:57 AM         CLENT CODE       : ROS DIAGNOSTIC LAB       REPORTING DATE       : 16/Oct/2024 12:09PM         CLENT ADDRESS       : 6349/1, NICHOLSON ROAD, AMBALA CANTT       Biological Reference interval         CLIENT ADDRESS         CLIENT CODE         CLIENT ADRESS         CODE         CLIENT CODE		<b>Dr. Vinay C</b> MD (Pathology Chairman & Co			(Pathology)
COLLECTED BY       SURJESH       REG. NO./LAB NO.       SURJESH         REFERRED BY       CENTRAL PHOENIX CLUB (AMBALA CANTT)       REGISTRATION DATE       S16/Oct/2024 10:54 AM         BARCODE NO.       S01518985       COLLECTION DATE       S16/Oct/2024 10:57 AM         CLIENT CODE.       KOS DIAGNOSTIC LAB       REPORTING DATE       S16/Oct/2024 12:09 PM         CLIENT ADDRESS       G349/1, NICHOLSON ROAD, AMBALA CANTT       Biological Reference interval         CLIENT ADDRESS         CALCIUM         CLICINCAL CHEMISTRY/BIOCHEMISTRY         CALCIUM         CALC	NAME	: Mrs. JYOTI SOOD			
REFERRED BY : CENTRAL PHOENIX CLUB (AMBALA CANTT) REGISTRATION DATE : 16/Oct/2024 10:54 AM BARCODE NO. : 01518985 COLLECTION DATE : 16/Oct/2024 10:57AM CLIENT CODE : KOS DIAGNOSTIC LAB REPORTING DATE : 16/Oct/2024 12:09PM CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT Test Name Value Unit Biological Reference interval CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT Test Name Value Unit Biological Reference interval CLIENT CLIENT	AGE/ GENDER	: 45 YRS/FEMALE		PATIENT ID	: 1644744
BARCODE NO.       : 01518985       COLLECTION DATE       : 16/Oct/2024 10:57AM         CLIENT CODE.       : KOS DIAGNOSTIC LAB       REPORTING DATE       : 16/Oct/2024 12:09PM         CLIENT ADDRESS       : 6349/1, NICHOLSON ROAD, AMBALA CANTT       If Addition and the addition addition addition and the addition and the addition addition and the addition addition addition addition addition addition addition addition addition and the addition addition addition and the addition additio	COLLECTED BY	: SURJESH		REG. NO./LAB NO.	: 012410160026
CHENT CODE       KOS DIACNOSTIC LAB       REPORTING DATE       : 16/Oct/2024 12:09PM         CHENT ADDRESS       : 6349/1, NICHOLSON ROAD, AMBALA CANTT       Init       Biological Reference interval         Test Name       Value       Unit       Biological Reference interval         CLINICAL CHEMISTRY/BIOCHEMISTRY       CALCIUM       CALCIUM         Segment 2016, SPECTROPHOTOMETRY       8.99       mg/dL       8.50 - 10.60         by ARSENAZO IN, SPECTROPHOTOMETRY       8.99       mg/dL       8.50 - 10.60         Segment Column (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.       2. Calcium levels may also reflect abnormal vitamin D or protein levels.         2. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS).         4. In serum, calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system.         wordetion, calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system.         WOTE-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system.         wordetion, calcium ions play an important role in blood clotting	REFERRED BY	: CENTRAL PHOENIX CLUB (	AMBALA CANTT)	<b>REGISTRATION DATE</b>	: 16/Oct/2024 10:54 AM
CLIENT ADDRESS       : 6349/1, NICHOLSON ROAD, AMBALA CANTT         Test Name       Value       Unit       Biological Reference interval         CLINICAL CHEMISTRY/BIOCHEMISTRY       CLINICAL CHEMISTRY/BIOCHEMISTRY         CALCIUM:       SERUM       8.99       mg/dL       8.50 - 10.60         by ARSENAZO III, SPECTROPHOTOMETRY       8.99       mg/dL       8.50 - 10.60         Location (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyrold gland, or gastrointestinal tract.       Calcioum levels may also reflect abnormal vitamin D or protein levels.         3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS).       A. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium.         MOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. addition, calcium ions play an important role in blood clotting and bone mineralization.         HYPOCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES :       1.00 to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH).         3.07E:-A characteristic symptom of hypocalcemia is latent or manifest tetany	BARCODE NO.	: 01518985		COLLECTION DATE	: 16/Oct/2024 10:57AM
Test Name       Value       Unit       Biological Reference interval         CLINICAL CHEMISTRY/BIOCHEMISTRY CALCIUM         DECINICAL CHEMISTRY/BIOCHEMISTRY         Decision of the second of the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.         1. Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.         2. Calcium levels may also reflect abnormal vitamin D or protein levels.         3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS).	CLIENT CODE.	: KOS DIAGNOSTIC LAB		<b>REPORTING DATE</b>	: 16/Oct/2024 12:09PM
CLINICAL CHEMISTRY/BIOCHEMISTRY CALCIUM SERUM by ARSEMAZO III, SPECTROPHOTOMETRY NTERPETATION: 1. Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, by arstemazo lil, spectrophotometry NTERPETATION: 2. Calcium levels may also reflect abnormal vitamin D or protein levels. 3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS). 4. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium. WOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. addition, calcium is bas for equently associated with hypocalcemia due to decreased vitamin-D synthesis. 2. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH). 3. NOTE:- A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia. HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:- 1.1ncreased mobilization of calcium from the skeletal system or increased intestinal absorption. 2.Primary hyperparathyroidism (pHPT) 3.Bore metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.	CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD	, AMBALA CANTT		
CALCIUM: SERUM by ARSENAZO III, SPECTROPHOTOMETRY MITERPECTATION: 1. Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract. 2. Calcium levels may also reflect abnormal vitamin D or protein levels. 3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS). 4. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium. MOTE-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. addition, calcium ions play an important role in blood clotting and bone mineralization. HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :- 1. Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis. 2. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH). 3. MOTE A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia. HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:- 1. Increased mobilization of calcium from the skeletal system or increased intestinal absorption. 2. Primary hyperparathyroidism (pHPT) 3. Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.	Test Name		Value	Unit	Biological Reference interval
ALCIUM: SERUM 8.99 mg/dL 8.50 - 10.60 by ARSENAZO III, SPECTROPHOTOMETRY <b>MERPRETATION:</b> Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, warathyroid gland, or gastrointestinal tract. Calcium levels may also reflect abnormal vitamin D or protein levels. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight).Of this, 99% is present as calcium hydroxyapatite in bo ind <1% is present in the extra-osseous intracellular space or extracellular space (ECS). I. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is resent as free or ionized calcium. <b>VDTE:</b> -Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. Iddition, calcium ions play an important role in blood clotting and bone mineralization. <b>MPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :</b> Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH). <b>NOTE:</b> - A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia. <b>MPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:</b> Increased mobilization of calcium file skeletal system or increased intestinal absorption. <b>Primary hyperparathyroid mof the breast, prostate, thyroid gland, or lung.</b>		CLIN	NICAL CHEMIS	TRY/BIOCHEMISTR	Y
by ARSENAZO III, SPECTROPHOTOMETRY <u>NTERPRETATION:</u> Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, arathyroid gland, or gastrointestinal tract. Calcium levels may also reflect abnormal vitamin D or protein levels. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight).Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS). The calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium. WOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. Iddition, calcium ions play an important role in blood clotting and bone mineralization. HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :- Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH). S.NOTE:- A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia. HYPERCALCEMIA (INCREASE CALCIUM IEVELS) CAUSES:- Lincreased mobilization of calcium from the skeletal system or increased intestinal absorption. Primary hyperparathyroidism (pHPT) Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.			CA	LCIUM	
by ARSENAZO III, SPECTROPHOTOMETRY INTERPRETATION: 1. Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract. 2. Calcium levels may also reflect abnormal vitamin D or protein levels. 3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight).Of this, 99% is present as calcium hydroxyapatite in bo and <1% is present in the extra-osseous intracellular space or extracellular space (ECS). 4. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium. NOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. addition, calcium ions play an important role in blood clotting and bone mineralization. HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :- 1.Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis. 2. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH). 3. NOTE:- A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia. HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:- 1.Increased mobilization of calcium from the skeletal system or increased intestinal absorption. 2. Primary hyperparathyroidism (pHPT) 3. Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.	CALCIUM: SERUM		8.99	mg/dL	8.50 - 10.60
<ol> <li>Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.</li> <li>Calcium levels may also reflect abnormal vitamin D or protein levels.</li> <li>The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight).Of this, 99% is present as calcium hydroxyapatite in bo and &lt;1% is present in the extra-osseous intracellular space or extracellular space (ECS).</li> <li>In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium.</li> <li>NOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. addition, calcium ions play an important role in blood clotting and bone mineralization.</li> <li>HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :-         <ol> <li>Lue to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis.</li> <li>Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH).</li> <li>MOTE:- A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia.</li> </ol> </li> <li>HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:-         <ol> <li>Increased mobilization of calcium from the skeletal system or increased intestinal absorption.</li> <li>Primary hyperparathyroidism (pHPT)</li> <li>Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.</li> </ol> </li> </ol>	•	ECTROPHOTOMETRY			
<ol> <li>Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis.</li> <li>Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH).</li> <li><b>NOTE:-</b> A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia.</li> <li>HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:-</li> <li>I.Increased mobilization of calcium from the skeletal system or increased intestinal absorption.</li> <li>Primary hyperparathyroidism (pHPT)</li> <li>Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.</li> </ol>	4. In serum, calcium present as free or io <b>NOTE:-</b> Calcium ions a	is bound to a considerable exte nized calcium. affect the contractility of the he	nt to proteins (app art and the skeleta	roximately 40%), 10% is in I musculature, and are esse	
1.Increased mobilization of calcium from the skeletal system or increased intestinal absorption. 2.Primary hyperparathyroidism (pHPT) 3.Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.	1.Due to the absence 2. Chronic renal failu	e or impaired function of the pa ire is also frequently associated ce to the action of parathyroid l	with hypocalcemi normone (PTH).		
		istic symptom of hypocalcenna	is latent or manife	st tetany and osteomalaci	а.





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

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

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

 KOS Molecular Lab: IInd Floor, Parry Hotel, Staff Road, Opp. GPO, Ambala Cantt -133 001, Haryana

 0171-2643898, +91 99910 43898
 care@koshealthcare.com
 www.koshealthcare.com





TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.



	<b>Dr. Vinay Ch</b> MD (Pathology & Chairman & Con	Microbiology)	ME	n Chopra D (Pathology) ht Pathologist	
NAME	: Mrs. JYOTI SOOD				
AGE/ GENDER	: 45 YRS/FEMALE		PATIENT ID	: 1644744	
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BARCODE NO.	: 01518985	VIDALA CANTT)	COLLECTION DATE	: 16/Oct/2024 10:57AM	
CLIENT CODE.	: KOS DIAGNOSTIC LAB		REPORTING DATE	: 16/Oct/2024 12:36PM	
CLIENT ADDRESS				. 10/ OCt/ 2024 12.30F M	
LIENI ADDRESS	: 6349/1, NICHOLSON ROAD,	AMBALA CANT I			
Test Name		Value	Unit	Biological Reference interv	al
			AMINS		
	VIT	AMIN D/25 H	YDROXY VITAMIN D3		
	ROXY VITAMIN D3): SERUM	53.5	ng/mL	DEFICIENCY: < 20.0	
by CLIA (CHEMILUMINI	ESCENCE IMMUNOASSAY)			INSUFFICIENCY: 20.0 - 30.0	
				SUFFICIENCY: 30.0 - 100.0 TOXICITY: > 100.0	
INTERPRETATION:				10/10/11/2 100:0	
DEFI	CIENT:	< 20	r	ng/mL	
	FICIENT:	21 - 29		ng/mL	
	ED RANGE: CATION:	30 - 100 > 100		ng/mL	
2.25-OHVitamin D r issue and tightly bou 3. Vitamin D plays a p obosphate reabsorpt 4. Severe deficiency n DECREASED: 1. Lack of sunshine ex 2. Inadequate intake, 3. Depressed Hepatic 4. Secondary to advar 5. Osteoporosis and S 5. Enzyme Inducing di NCREASED: 1. Hypervitaminosis I severe hypercalcemia	und by a transport protein while rimary role in the maintenance ion, skeletal calcium deposition, nay lead to failure to mineralize posure. malabsorption (celiac disease) Vitamin D 25- hydroxylase activi need Liver disease econdary Hyperparathroidism (N rugs: anti-epileptic drugs like phe D is Rare, and is seen only after p a and hyperphophatemia. ent therapy in deficient individual individuals as compare to whites,	r and transport fr in circulation. of calcium home calcium mobiliza newly formed os ty Aild to Moderate mytoin, phenoba rolonged exposu s must be monite	orm of Vitamin D and tran ostatis. It promotes calciu ation, mainly regulated by teoid in bone, resulting in e deficiency) arbital and carbamazepine ire to extremely high doses ored by periodic assessme	sport form of Vitamin D, being stored in a m absorption, renal calcium absorption a parathyroid harmone (PTH). rickets in children and osteomalacia in ad , that increases Vitamin D metabolism. s of Vitamin D. When it occurs, it can resu nt of Vitamin D levels in order to prevent ciency due to excess of melanin pigment wh	nd lults. It in
NOTE:-Dark coloured interefere with Vitami					





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

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

KOS Central Lab: 6349/1, Nicholson Road, Ambala Cantt -133 001, Haryana KOS Molecular Lab: IInd Floor, Parry Hotel, Staff Road, Opp. GPO, Ambala Cantt -133 001, Haryana 0171-2643898, +91 99910 43898 | care@koshealthcare.com | www.koshealthcare.com

