



Mr. EMMANUEL GODSON AKWOVIAH

PID NO: P36180013225

Age: 33 Year(s) Sex: Male

Reference:

Sample Collected At:
GILEAD MEDICAL & DENTAL CENTER
HOUSE NO BALB NO C896/3,KANDA
HIGHWAY NORTH RIDGE,ACCRA-
14911.
014911

VID: 36180113761

Registered On:

03/09/2018 05:55 PM

Collected On:

03/09/2018

Reported On:

24/09/2018 05:36 PM

Investigation	Observed Value	Unit	Biological Reference Interval
Thyroid panel-1 (T3/T4/TSH) (Serum)			
T3 (Total) (CMIA)	1.37	ng/dL	Male: <= 3 Days : 100-740 Male: 3 - 365 Days : 105 - 245 Male: 1 - 5 Years : 105 - 269 Male: 5 - 10 Years : 94 - 241 Both: > 10 Years : 0.52-1.85 : 0.52 - 1.85
T4 (Total) (CMIA)	6.90	µg/dL	4.4-10.8
TSH(Ultrassensitive)	1.39	µIU/mL	0.45-4.5

INTERPRETATION

TSH	T3 / FT3	T4 / FT4	Suggested Interpretation for the Thyroid Function Tests Pattern
Within Range	Decreased	Within Range	• Isolated Low T3-often seen in elderly & associated Non-Thyroidal illness. In elderly the drop in T3 level can be upto 25%.
Raised	Within Range	Within Range	•Isolated High TSHespecially in the range of 4.7 to 15 mIU/ml is commonly associated with Physiological & Biological TSH Variability. •Subclinical Autoimmune Hypothyroidism •Intermittent T4 therapy for hypothyroidism •Recovery phase after Non-Thyroidal illness"
Raised	Decreased	Decreased	•Chronic Autoimmune Thyroiditis •Post thyroidectomy,Post radioiodine •Hypothyroid phase of transient thyroiditis"
Raised or within Range	Raised	Raised or within Range	•Interfering antibodies to thyroid hormones (anti-TPO antibodies) •Intermittent T4 therapy or T4 overdose •Drug interference- Amiodarone, Heparin,Beta blockers,steroids, anti-epileptics"
Decreased	Raised or within Range	Raised or within Range	•Isolated Low TSH -especially in the range of 0.1 to 0.4 often seen in elderly & associated with Non-Thyroidal illness •Subclinical Hyperthyroidism •Thyroxine ingestion"
Decreased	Decreased	Decreased	•Central Hypothyroidism •Non-Thyroidal illness •Recent treatment for Hyperthyroidism (TSH remains suppressed)"
Decreased	Raised	Raised	•Primary Hyperthyroidism (Graves' disease),Multinodular goitre, Toxic nodule •Transient thyroiditis:Postpartum, Silent (lymphocytic), Postviral (granulomatous,subacute, DeQuervain's),Gestational thyrotoxicosis with hyperemesis gravidarum"
Decreased or within Range	Raised	Within Range	•T3 toxicosis •Non-Thyroidal illness

References: 1. Interpretation of thyroid function tests. Dayan et al. THE LANCET • Vol 357 • February 24, 2001
2. Laboratory Evaluation of Thyroid Function, Indian Thyroid Guidelines, JAPI, January 2011,vol. 59

Mr. David Adjei Adu
Bsc.Biomedical Scientists



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Investigation

AFP-Alpha Feto Protein
(Serum)

Observed Value

1.17

Unit

IU/mL

Biological Reference Interval

0-5.8

Interpretation:

1. The primary malignancies associated with AFP elevations are hepatocellular carcinoma and non-seminomatous germ cell tumors. Other gastrointestinal cancers like gastric, pancreatic occasionally cause elevations of AFP. Multiple benign disorders like cirrhosis, viral hepatitis, pregnancy are associated with AFP elevations. Level above which benign disease is considered unlikely is 500 ng/ml .
2. Range for newborns is not established, however neonates have elevated AFP levels (>100,000 ng/mL)(conversion 1 IU/ml x 1.21 = 1ng/ml) that rapidly fall to below 100 ng/mL by 150 days & gradually return to normal by one year. Ref - Tsuchida Y et al: Evaluation of alpha-fetoprotein in early infancy. J Ped Surg 1978 April;13(2):155-162.

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HBV-Hepatitis B Viral load(Quantitative)

Test Principle : Real Time PCR

Target Selected : Highly conserved pre-Core/Core region of the HBV genome across A-G genotypes is selected for amplification & detection.

Equipment : COBAS AmpliPrep and COBAS TaqMan

Result :

HBV - Hepatitis B Viral load (Quantitative)	148 IU/mL
Log Value	2.17
HBV - Hepatitis B Viral load	861 copies/ml

Result Interpretation:

Result (IU/ml)	Log Value	Comments
Target Not Detected	Not Applicable	HBV DNA Not Detected
Below 20 IU/ml	Below 1.30	HBV DNA Detected, less than 20 HBV DNA IU/ml.
> 20 - 170000000	1.30 - 8.23	HBV DNA Detected within the linear range of the assay
Above 170000000	Above 8.23	HBV DNA Detected above the linear range of the assay

Note:

- This assay is a quantitative assay used for monitoring patients on therapy and not qualitative assay used for screening. Hence a Target Not Detected result should not be considered as HBV status Negative for the patient.
- Quantitative viral load results are best reflected when reported using log transformed units. Logarithmic expression best reflects the process of viral replication and is less subject to over interpretation of non-clinically significant (minor) changes.

Test Details:

Limit of Detection: 20 IU/ml
Measuring Range: 20 - 170000000 IU/ml
Conversion Factor: 1 IU/ml - 5.82 copies/ml

Clinical utility:

- Determine need to treat chronic HBV infection
- Indicator of chronic hepatitis
- Monitor virological response to therapy
- Demonstrate viral replication in patients with mutant HBV

Niranjan B. Patil



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- Predict likelihood of response to therapy
- Indicate emergence of resistant variants during antiviral therapy

Clinical Background:

- HBV is the most common cause of chronic liver disease worldwide. HBV is a DNA virus that is transmitted primarily through blood exposure and sexual contact, and from mothers to their children.
- The clinical manifestations range from sub clinical hepatitis to symptomatic hepatitis and, in rare instances, fulminant hepatitis. Long-term complications of hepatitis B include cirrhosis and hepatocellular carcinoma.
- Perinatal or childhood infection is associated with few or no symptoms but has a high risk of becoming chronic.
- HBV DNA detection and HBV DNA level measurement are essential for the diagnosis, decision to treat and subsequent monitoring of patients.
- Follow-up using sensitive real-time PCR quantification assays is strongly recommended because of their sensitivity, specificity, accuracy and broad dynamic range.

Limitation of Assay:

PCR is a highly sensitive technique; common reasons for paradoxical results are contamination during specimen collection, selection of inappropriate specimen and inherent PCR inhibitors in the sample. Confirmed HBV cases may have viral load below this detection range. Hence the results Below 20 IU/ml do not indicate that the patient is negative for HBV. It is not advisable to compare viral loads between two different techniques.

Reference:

- EASL Clinical practice guidelines: Management of chronic hepatitis B. J Hepatol 2012; 57:167-185.
- Lok ASF, McMahon BJ, Chronic hepatitis B: Update 2009. HEPATOLOGY 2009, 50:No.3.
- WHO Hepatitis B Fact sheet N 204 July 2012.

-- End of Report --

Niranjan B. Patil