

-.NICOLE CHESTER HERB BAR 1/39 WAGAWN STREET TUGUN QLD 4224

MARK TWIST 21-Dec-1964

Male

26/28 CASTELLO CIRCUIT VARSITY LAKES QLD 4227

LAB ID: 4146220 UR NO.: 6392620 Collection Date: 22-Sep-2025 Received Date: 23-Sep-2025



4146220

BLOOD - CITRATE Result Result Range Units FIBRINOGEN 3.1 2.0 - 4.5 g/L HAEMATOLOGY COMMENTS Fibrinogen test performed by accredited laboratory NATA: 2133

| | | _ | - | | | | | | |
|---------------------|--------------|-------------|--------------|---|---|--|--|--|--|
| BIOCHEMISTRY | | | | | | | | | |
| BLOOD - SERUM | Result | Range | Units | | | | | | |
| UEC (Renal) | | | | | | | | | |
| Sodium | 138 | 135 - 145 | mmol/L | | | | | | |
| Potassium | 4.1 | 3.5 - 5.2 | mmol/L | | • | | | | |
| Chloride | 102 | 95 - 110 | mmol/L | | | | | | |
| Bicarbonate | 22 | 20 - 32 | mmol/L | • | | | | | |
| Anion Gap | <i>18</i> *H | 8 - 16 | mmol/L | | | | | | |
| Urea | 6.4 | 4.0 - 9.0 | mmol/L | | | | | | |
| Creatinine (mmol/L) | 0.07 | 0.06 - 0.13 | mmol/L | | | | | | |
| Creatinine | 75 | 60 - 110 | umol/L | | | | | | |
| Estimated GFR | >90 | > 90 | ml/min/1.73s | | | | | | |
| | | | | | | | | | |

UEC Comment

ELEVATED ANION GAP:

An elevated anion gap indicates metabolic acidosis. In uncontrolled diabetes, there is an increase in ketoacids due to metabolism of ketones. In these conditions, bicarbonate concentrations decrease by acting as a buffer against the increased presence of acids (as a result of the underlying condition). The bicarbonate is consumed resulting in a high anion gap.

ESTIMATED GFR COMMENT:

eGFR (mL/min/1.73m2) is calculated by the laboratory using the CKD-EPI formula eGFR > 90 mL/min/1.73 sq.m - Normal GFR

LIVER FUNCTION TESTS

| Bilirubin (Total) | 7 | 0 - 20 | umol/L | • |
|-------------------|-------|-------------|---------|---|
| ALP | 100 | 30 - 110 | units/L | • |
| GGT | 38 | 5 - 50 | units/L | • |
| ALT | 27 | 10 - 50 | units/L | • |
| AST | 31 | 10 - 50 | units/L | • |
| Protein - Total | 71 | 60 - 80 | g/L | • |
| Albumin | 42 | 33 - 48 | g/L | • |
| Globulin | 29 | 26 - 39 | g/L | • |
| Urate | 0.420 | 0.20 - 0.50 | mmol/L | • |
| Ferritin | 218 | 30 - 400 | ug/L | |



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Iron Studies Comment

FERRITIN COMMENT:

Serum ferritin levels >30 $\mu g/L$ demonstrates healthy iron stores as long as co-existing inflammatory disease or hepatocellular damage are not present.



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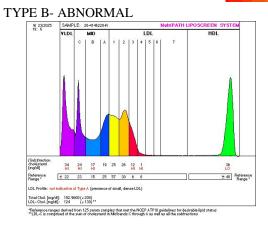
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| LIPIDS | | | | |
|--|---------------|-------------|----------|---|
| Cholesterol | 5.0 | 0.0 - 5.5 | mmol/L | |
| Triglycerides | 1.7 | 0.0 - 2.0 | mmol/L | |
| LIPID STUDIES | | | | |
| HDL(Protective) | 1.1 | 0.9 - 2.0 | mmol/L | |
| Non-HDL Cholesterol | 3.92 | < 4.0 | mmol/L | • |
| LDL(Atherogenic) | 3.2 | 0.0 - 3.4 | mmol/L | |
| Cholesterol/HDL Ratio | 4.7 | | | |
| LDL/HDL RATIO (Risk Factor) | 2.9 | 0.0 - 3.6 | | • |
| Trig/HDL Ratio | 1.6 | 0.5 - 1.7 | RATIO | |
| Lipoprotein (a) | 30.7 | 0.0 - 75.0 | nmol/L | |
| APOLIPOROTEIN PROFILE | | | | |
| Apolipoprotein B | 0.92 | 0.70 - 1.20 | g/L | |
| Apolipoprotein A-1 | 1.23 | 1.10 - 1.80 | g/L | |
| RATIO (APO B / APO A-1) | 0.74 | 0.45 - 1.25 | | |
| High Sens CRP | 4.97 | 0.00 - 5.00 | mg/L | |
| LIPOSCREEN LDL Subfractions2 | | | | |
| Very Low Density Lipoprotein (VLDL) | <i>0.9</i> *H | 0.1 - 0.6 | mmol/L | |
| Intermediate Density Lipoprotein (IDL-1) | 0.6 | 0.1 - 0.6 | mmol/L | • |
| Intermediate Density Lipoprotein (IDL-2) | 0.4 | 0.1 - 0.4 | mmol/L | • |
| Intermediate Density Lipoprotein (IDL-3) | 0.5 | 0.1 - 0.6 | mmol/L | • |
| Low Density Lipoprotein (LDL-1) | 0.64 | 0.10 - 1.50 | mmol/L | • |
| Low Density Lipoprotein (LDL-2) | 0.67 | 0.10 - 0.80 | mmol/L | • |
| Low Density Lipoprotein (LDL-3) 0. | 31 *H | 0.00 - 0.20 | mmol/L | |
| Low Density Lipoprotein (LDL-4) 0. | <i>03</i> *H | 0.00 - 0.01 | mmol/L | |
| Low Density Lipoprotein (LDL-5) | 0.00 | 0.00 - 0.01 | mmol/L | |
| Low Density Lipoprotein (LDL-6) | 0.00 | 0.00 - 0.01 | mmol/L | |
| Low Density Lipoprotein (LDL-7) | 0.00 | 0.00 - 0.01 | mmol/L | |
| Mean Particle Size 264 | 4.0 *L | > 268.0 | Angstrom | • |



^(*) Result outside normal reference range

LDL Phenotype Pattern



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LIPOSCREEN Comments

RESULT INTERPRETATION

The Liposcreen LDL Subractions test provides a superior indicator for Coronary Artery Disease (CAD) risk than other conventionally available lipid profiles.

Many individuals with normal LDL and HDL cholesterol levels remain at risk from CAD as these conventional tests do not convey the detail of the CAD risk. Liposcreen additionally quantifies the different subfractions.

Liposcreen clearly identifies a patient's LDL phenotype profile;

This patient has a profile Not indicative of Type A, which is deemed ABNORMAL.

This is due to the presence of elevated levels of small dense LDLs (LDL3 and LDL4).

Of note is the elevated VLDL, IDL B and C bands, which when elevated are also deemed highly atherogenic.

Also of note is the low LDL Mean Particle size of 264 Angstrom, which indicates the presence of LDLs of a size capable of penetrating the endothelial lining and causing the development of atheromatous plaques.

Lipoprotein Pattern Characteristics:

(Patient may have some or all of these present)

Type A Deemed a normal profile.

Predominance of large/buoyant (less atherogenic) LDL

subclasses (LDL 1 and 2).

Mean Particle Size of > 263 Angstrom (A).

Elevated Cholesterol, Normal Triglycerides, Elevated Apo B

Deemed an ABNORMAL profile. Type B

Predominance of small/dense (more atherogenic) LDL

subclasses (LDL3, 4, 5, 6, 7).
Mean Particle Size of < 258 Angstrom (A).

Raised Cholesterol, Raised Triglycerides, Raised VLDL, Low HDLC

This profile is the designated atherogenic lipoprotein

phenotype, consistent with an increased risk of CAD. It is also It is also characteristically prevalent in insulin-resistant states such as Metabolic Syndrome and Type 2 Diabetes mellitus.

Follow up Liposcreen testing, for this patient, is recommended in 3 months.



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Lipid Profile Comment

Target Levels for the general population and the National Vascular Disease Prevention Alliance (NVDPA) treatment target levels for high-risk people (known coronary heart and other arterial diseases, diabetes, chronic renal failure, Aboriginal and Torres Strait Islander peoples and familial hyperlipidaemic conditions) are:

Tot. Cholesterol LDL-Cholesterol HDL-Cholesterol

General population: <5.5 mmol/L <3.0 mmol/L M: >=1.0, F: >=1.0 mmol/L

At risk individuals: <4.0 mmol/L <2.5 mmol/L

At risk:

Fasting Triglycerides: <2.0 mmol/L Non-HDL Cholesterol: <3.3 mmol/L

National guidelines generally specify specific targets, refer to www.cvdcheck.org.au

ELEVATED TRIGLYCERIDES:

Increased levels are seen in primary hypertriglyceridaemic states, and secondary to Nephrotic syndrome, Hypothyroidism, Pancreatitis, Diabetes mellitus, Alcoholism, oral contraceptive use or corticosteroid medication.

 GLUCOSE (FASTING)
 5.3
 3.0 - 5.4
 mmol/L

 BLOOD - PLASMA

 Homocysteine
 12.6
 5.0 - 15.0
 umol/L

Tests ordered: APOS,BioPEI,CFee,eGFR,FATS,FERR,FGLU,FIB,GOG137,GOG257,GOG258,HCRP,HOMO,LFT,LIP,Lipo (a),LIPOSCRN2,UEC,URAT