

**Patient Name:** HARTGE, HANNAH  
**Patient Address:** BOBBIWAA SOUTH NEWELL HIGHWAY PO BOX 623, NARRABRI 2390  
**D.O.B:** 30/05/1982 **Gender:** F  
**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-VBF-0 **Provider:** Laverty Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** B12, FOLATE, R.C.FOLATE (VBF-0)  
**Clinical Information:**

Clinical Notes : Lethargy, weight gain, cold intolerance.

|                | VITAMIN B12 AND FOLATE STUDIES |          |
|----------------|--------------------------------|----------|
| Request Number | 21681043                       | 24481704 |
| Date Collected | 22 Feb 23                      | 6 Sep 23 |
| Time Collected | 11:00                          | 09:38    |

|                             |     |      |
|-----------------------------|-----|------|
| B12 (301-740) pmol/L        | 265 | 422  |
| Active B12 (> 40) pmol/L    | 35  |      |
| Serum Folate (> 9.0) nmol/L |     | 32.4 |

#### Folate Interpretation:

|               | DEFICIENCY  | BORDERLINE       | SUFFICIENCY |
|---------------|-------------|------------------|-------------|
| Serum Folate: | <4.5 nmol/L | 4.5 - 9.0 nmol/L | >9.0 nmol/L |
| RBC Folate:   | <340 nmol/L | 340 - 570 nmol/L | >570 nmol/L |

#### Serum Folate Assay:

In the absence of recent oral intake, a serum folate >9.0 nmol/L effectively rules out folate deficiency.

Red cell folates (RCF) are no longer processed routinely. If you have requested a RCF, and require a result for appropriate clinical reasons, this will need to be discussed and agreed with a Consultant Haematologist on +61290027085 or Dr. Lucinda Wallman, Consultant Pathologist in Immunology and Medical Director on telephone number +61 290057179

Requested Tests : VBF, TFT, PRL, GLU, MBA, LIP, HOR, FE, FBE, A1C

**Patient Name:** HARTGE, HANNAH  
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**D.O.B:** 30/05/1982 **Gender:** F  
**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-A1C-0 **Provider:** Laverty Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** GLYCATED HAEMOGLOBIN (A1C-0)  
**Clinical Information:**

Clinical Notes : Lethargy, weight gain, cold intolerance.

GLYCATED HAEMOGLOBIN (HbA1c)

Specimen Type: EDTA

|             |     |          |           |
|-------------|-----|----------|-----------|
| HbA1c- NGSP | 4.8 | %        | (4.0-6.0) |
| HbA1c- IFCC | 29  | mmol/mol | (20-42)   |

The WHO recommends that an HbA1c cut-off of  $\geq 6.5\%$  (48 mmol/mol) is used to diagnose type 2 diabetes.

While it is recognised that HbA1c levels approaching this cut-off place patients at increasingly higher risk of developing diabetes ( $<6.5\%$ ), there is no consensus as to exactly which cut-off at the lower end of the continuum to use for categorising patients as high risk. Various groups quote lower limits for at-risk patients that vary between 5.5% and 6.0% (37 and 42 mmol/mol).

Please note that HbA1c should not be used for diagnosing diabetes mellitus in the following circumstances:

- Children and young people
- Pregnancy - current or within the past 2 months
- Suspected Type 1 diabetes mellitus
- Symptoms of diabetes for  $<2$  months
- Patients who are acutely ill
- Patients taking drugs that can cause rapid onset hyperglycaemia such as corticosteroids, antipsychotic drugs
- Acute pancreatic damage or pancreatic surgery
- Kidney failure
- Patients being treated for HIV infection

Please be cautious when requesting or interpreting HbA1c when patients:

- May have an abnormal haemoglobin
- May be anaemic
- May have an altered red cell lifespan (e.g. post-splenectomy)
- May have had a recent blood transfusion

Requested Tests : VBF\*, TFT, PRL, GLU, MBA, LIP, HOR, FE, FBE, A1C

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**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-HOR-0 **Provider:** Lavery Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** HORMONE PROFILE (HOR-0)  
**Clinical Information:**

Clinical Notes : Lethargy,weight gain,cold intolerance.

SERUM HORMONE PROFILE

|                      |                |             |            |                |                     |                     |                 |
|----------------------|----------------|-------------|------------|----------------|---------------------|---------------------|-----------------|
| Specimen Type: Serum |                |             |            |                |                     |                     |                 |
| Request Number       | Date Collected | FSH<br>IU/L | LH<br>IU/L | PROG<br>nmol/L | E2 (ATEL)<br>pmol/L | E2 (BECK)<br>pmol/L | LH/FSH<br>Ratio |
| 24481704             | 6 Sep 23       | 13          | 22.4       |                | 1036                |                     |                 |
| Reference Ranges     |                | FSH         | LH         | PROG           | OESTRADIOL          |                     |                 |
| Follicular           |                | 2-12        | 2-12       | 0.5-4.5        | 100-530             |                     |                 |
| Midcycle             |                | 12-30       | >15        |                | 235-1300            |                     |                 |
| Luteal               |                | 2-12        | 2-15       | 10.6-89.1      | 205-790             |                     |                 |
| Menopausal           |                | >25         | >10        |                | <100                |                     |                 |
| Prepubertal          |                | <6          | <4         |                |                     |                     |                 |

PLEASE NOTE:

'E2 (ATEL)' - Oestradiol by Siemens Atellica assay  
'E2 (BECK)' - Oestradiol by Beckman Access assay

Requested Tests : VBF\*, TFT, PRL, GLU, MBA, LIP, HOR, FE, FBE, A1C\*

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**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-LIP-0 **Provider:** Laverty Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN

**Date Requested:** 1/09/2023

**Date Performed:** 6/09/2023

**Date Collected:** 6/09/2023

**Complete:** Final

**Specimen:**

**Subject(Test Name):** LIPID STUDIES (LIP-0)

**Clinical Information:**

Clinical Notes : Lethargy, weight gain, cold intolerance.

|                | LIPID STUDIES |          |
|----------------|---------------|----------|
| Request Number | 21681043      | 24481704 |
| Date Collected | 22 Feb 23     | 6 Sep 23 |
| Time Collected | 11:00         | 09:38    |
| Specimen Type: | Serum         |          |

Reference intervals are included for reference only, and interpretation / treatment goals should be guided by patient-specific cardiovascular risk assessment (see Australian Cardiovascular Risk Charts. Alternatively, the web-site [www.cvdcheck.org.au](http://www.cvdcheck.org.au) can be accessed in order to complete a risk assessment for individual patients.)

|            |     |     |
|------------|-----|-----|
| Haemolysis | Nil | Nil |
| Icterus    | 1+  | 1+  |
| Lipaemia   | Nil | Nil |

| Fasting status   |        | Random | Fasting |
|------------------|--------|--------|---------|
| Chol (3.9-5.2)   | mmol/L | 3.3    | 4.7     |
| Trig (0.5-1.7)   | mmol/L | 0.6    | 0.4     |
| HDL (1.0-2.0)    | mmol/L |        | 2.0     |
| LDL (1.5-3.4)    | mmol/L |        | 2.5     |
| Non-HDL (< 3.4)  | mmol/L |        | 2.7     |
| Chol/HDL (< 4.5) |        |        | 2.4     |

NVDPA TARGET LIPID RANGES (MMOL/L) FOR PATIENTS AT HIGH / MODERATE RISK OF CARDIOVASCULAR DISEASE:

|                   |        |
|-------------------|--------|
| TOTAL CHOLESTEROL | <4.0   |
| TRIGS (FASTING)   | <2.0   |
| HDL-C             | >= 1.0 |
| LDL-C             | <2.0   |
| NON HDL-C         | <2.5   |

LDL-C exceeds target for higher risk patients and may be excessive in some individuals.

Requested Tests : VBF\*, TFT, PRL, GLU, MBA, LIP, HOR\*, FE, FBE, A1C\*

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**Gender:** F  
**Medicare No.:** 2528754858  
**IHI No.:**  
**Lab. Reference:** 23-24481704-PRL-0  
**Provider:** Lavery Pathology  
**Addressee:** DR PETER ONAIYEKAN  
**Referred by:** DR. PETER ONAIYEKAN  
  
**Date Requested:** 1/09/2023  
**Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023  
**Complete:** Final  
**Specimen:**  
**Subject(Test Name):** SERUM PROLACTIN (PRL-0)  
**Clinical Information:**

Clinical Notes : Lethargy,weight gain,cold intolerance.

PROLACTIN

Specimen Type: Serum

| Request<br>Number | Date<br>Collected | Prolactin<br>mIU/L |
|-------------------|-------------------|--------------------|
|                   | Ref Range         | (40-570)           |
| 24481704          | 06/09/23          | 232                |

Requested Tests : VBF\*, TFT, PRL, GLU, MBA, LIP, HOR\*, FE, FBE, A1C\*

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**D.O.B:** 30/05/1982 **Gender:** F  
**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-TFT-0 **Provider:** Laverty Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** THYROID FUNCTION TEST (TFT-0)  
**Clinical Information:**

Clinical Notes : Lethargy,weight gain,cold intolerance.

|                      | THYROID PROFILE |          |
|----------------------|-----------------|----------|
| Request Number       | 21681043        | 24481704 |
| Date Collected       | 22 Feb 23       | 6 Sep 23 |
| Time Collected       | 11:00           | 09:38    |
| Specimen Type: Serum |                 |          |
| TSH (0.5-4.0) mIU/L  | 2.1             | 3.1      |

Result(s) consistent with euthyroidism.

Please note the above reference intervals have been developed from a non-pregnant healthy general population study.

Requested Tests : VBF\*, TFT, PRL\*, GLU, MBA, LIP\*, HOR\*, FE, FBE, A1C\*

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**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-FE-0 **Provider:** Lavery Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** IRON STUDIES (FE-0)  
**Clinical Information:**

Clinical Notes : Lethargy, weight gain, cold intolerance.

IRON STUDIES

|                  |           |              |
|------------------|-----------|--------------|
| Request Number   | 21681043  | 24481704     |
| Date Collected   | 22 Feb 23 | 6 Sep 23     |
| Time Collected   | 11:00     | 09:38        |
| Specimen Type:   | Serum     |              |
| Iron (10-30)     | umol/L    | 21 15        |
| T'ferrin(32-48)  | umol/L    | <b>24 26</b> |
| T. Sat. (13-45)  | %         | 45 29        |
| Ferritin(30-165) | ug/L      | 76 55        |

Transferrin may be decreased by inflammation (acute or chronic) or protein deficiency or loss.

Requested Tests : VBF\*, TFT\*, PRL\*, GLU, MBA, LIP\*, HOR\*, FE, FBE, A1C\*



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**Medicare No.:** 2528754858 **IHI No.:**  
**Lab. Reference:** 23-24481704-GLU-0 **Provider:** Lavery Pathology  
**Addressee:** DR PETER ONAIYEKAN **Referred by:** DR. PETER ONAIYEKAN  
  
**Date Requested:** 1/09/2023 **Date Performed:** 6/09/2023  
**Date Collected:** 6/09/2023 **Complete:** Final  
**Specimen:**  
**Subject(Test Name):** GLUCOSE (GLU-0)  
**Clinical Information:**

Clinical Notes : Lethargy,weight gain,cold intolerance.

SERUM/PLASMA GLUCOSE

|                        |           |          |
|------------------------|-----------|----------|
| Request Number         | 21681043  | 24481704 |
| Date Collected         | 22 Feb 23 | 6 Sep 23 |
| Time Collected         | 11:00     | 09:38    |
| Fasting status         | Random    | Fasting  |
| Serum (3.4-5.4) mmol/L | 3.9       | 4.3      |

Normal glucose concentration.

Requested Tests : VBF\*, TFT\*, PRL\*, GLU, MBA, LIP\*, HOR\*, FE\*, FBE, A1C\*



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**Medicare No.:** 2528754858  
**Lab. Reference:** 23-24481704-MBA-0  
**Addressee:** DR PETER ONAIYEKAN

**Gender:** F  
**IHI No.:**  
**Provider:** Lavery Pathology  
**Referred by:** DR. PETER ONAIYEKAN

**Date Requested:** 1/09/2023

**Date Performed:** 6/09/2023

**Date Collected:** 6/09/2023

**Complete:** Final

**Specimen:**

**Subject(Test Name):** SERUM CHEMISTRY (MBA-0)

**Clinical Information:**

Clinical Notes : Lethargy, weight gain, cold intolerance.

SERUM CHEMISTRY

Request Number 21681043 24481704  
Date Collected 22 Feb 23 6 Sep 23  
Time Collected 11:00 09:38  
Specimen Type: Serum

|            |     |     |
|------------|-----|-----|
| Haemolysis | Nil | Nil |
| Icterus    | 1+  | 1+  |
| Lipaemia   | Nil | Nil |

|          |                           |        |           |           |
|----------|---------------------------|--------|-----------|-----------|
| Na       | (135-145)                 | mmol/L | 140       | 141       |
| K        | (3.6-5.4)                 | mmol/L | 4.4       | 4.6       |
| Cl       | (95-110)                  | mmol/L | 101       | 103       |
| HCO3     | (22-32)                   | mmol/L | 26        | 27        |
| An Gap   | (10-20)                   | mmol/L | 17        | 16        |
| Urea     | (2.5-8.0)                 | mmol/L | 4.3       | 3.8       |
| Creat    | (45-90)                   | umol/L | 55        | 60        |
| eGFR     | mL/min/1.73m <sup>2</sup> |        | > 90      | > 90      |
| Urate    | (0.14-0.36)               | mmol/L | 0.21      |           |
| Bili     | (< 15)                    | umol/L | <b>34</b> | <b>29</b> |
| AST      | (< 30)                    | U/L    | <b>30</b> | 18        |
| ALT      | (< 30)                    | U/L    | <b>42</b> | 15        |
| GGT      | (< 35)                    | U/L    | 8         | 8         |
| Alk Phos | (20-105)                  | U/L    | 43        | 53        |
| Protein  | (60-82)                   | g/L    | 61        | 67        |
| Albumin  | (38-50)                   | g/L    | 39        | 42        |
| Glob     | (20-39)                   | g/L    | 22        | 25        |
| Ca       | (2.10-2.60)               | mmol/L | 2.27      |           |
| Corr Ca  | (2.10-2.60)               |        | 2.35      |           |
| PO4      | (0.75-1.50)               | mmol/L | 1.02      |           |

eGFR >=90 mL/min/1.73m<sup>2</sup> usually indicates normal kidney function but does not exclude patients with early kidney damage (those with albuminuria, haematuria or abnormal kidney imaging).

Requested Tests : VBF\*, TFT\*, PRL\*, GLU, MBA, LIP\*, HOR\*, FE\*, FBE, A1C\*

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**Medicare No.:** 2528754858  
**Lab. Reference:** 23-24481704-FBE-0  
**Addressee:** DR PETER ONAIYEKAN

**Gender:** F  
**IHI No.:**  
**Provider:** Laverty Pathology  
**Referred by:** DR. PETER ONAIYEKAN

**Date Requested:** 1/09/2023

**Date Collected:** 6/09/2023

**Specimen:**

**Subject(Test Name):** HAEMATOLOGY (FBE-0)

**Clinical Information:**

**Date Performed:** 6/09/2023

**Complete:** Final

Clinical Notes : Lethargy, weight gain, cold intolerance.

|                     |                      | HAEMATOLOGY |          |
|---------------------|----------------------|-------------|----------|
| Request Number      |                      | 21681043    | 24481704 |
| Date Collected      |                      | 22 Feb 23   | 6 Sep 23 |
| Time Collected      |                      | 11:00       | 09:38    |
| Specimen Type: EDTA |                      |             |          |
| Hb (115-165)        | g/L                  | 136         | 135      |
| Hct (0.34-0.47)     |                      | 0.40        | 0.41     |
| RCC (3.9-5.8)       | x10 <sup>12</sup> /L | 4.4         | 4.4      |
| MCV (79-99)         | fL                   | 92          | 93       |
| MCH (27-34)         | pg                   | 31          | 31       |
| MCHC (320-360)      | g/L                  | 337         | 328      |
| RDW (10.0-17.0)     | %                    | 12.4        | 13.2     |
| WBC (4.0-11.0)      | x10 <sup>9</sup> /L  | 6.7         | 4.7      |
| Neut (2.0-7.5)      | x10 <sup>9</sup> /L  | 4.0         | 2.1      |
| Lymph (1.0-4.0)     | x10 <sup>9</sup> /L  | 2.1         | 2.1      |
| Mono (0.2-1.0)      | x10 <sup>9</sup> /L  | 0.3         | 0.3      |
| Eos (< 0.7)         | x10 <sup>9</sup> /L  | 0.1         | 0.1      |
| Baso (< 0.2)        | x10 <sup>9</sup> /L  | 0.1         | 0.0      |
| Plat (150-400)      | x10 <sup>9</sup> /L  | 323         | 316      |

HAEMATOLOGY: FBC parameters are within reference range.

Requested Tests : VBF\*, TFT\*, PRL\*, GLU\*, MBA\*, LIP\*, HOR\*, FE\*, FBE, A1C\*