

Table S1: Variables for data collection

Variable	Subcategories
1. Pseudonymised patient ID	
2. Patient demographics	<ul style="list-style-type: none"> <li>● Age</li> <li>● Gender</li> </ul>
<p>3. Who requested bloods?</p> <p><i>(This is the person who decided blood tests were needed, not necessarily the person putting the bloods on the system e.g. GP plan may say "bloods" but HCA puts tests on system - this would be a GP request)</i></p>	<ul style="list-style-type: none"> <li>● GP (salaried or partner)</li> <li>● Locum GP</li> <li>● Trainee doctor (GP registrar/F2 doctor)</li> <li>● Nurse practitioner</li> <li>● Nurse</li> <li>● Healthcare assistant</li> <li>● Paramedic</li> <li>● Physician associate</li> <li>● Pharmacist</li> <li>● Secondary care request</li> <li>● Practice protocol e.g. monitoring/QOF/annual reviews</li> <li>● Unclear</li> <li>● Other [free text]</li> </ul>
4. Primary reason for testing	<ul style="list-style-type: none"> <li>● Monitoring existing disease</li> <li>● Monitoring existing medication</li> <li>● Starting new medication</li> <li>● Symptoms/diagnosis (subclassified using ICPC2)</li> <li>● National Screening Programme</li> <li>● Patient or relative request</li> <li>● Follow-up/repeat of previous abnormal result</li> <li>● Unclear</li> <li>● Other [free text]</li> </ul>
5. Secondary reasons for testing	<i>(options as in [4] above)</i>
<p>6. Tests requested (for each test PACT member will be asked to categorise results as either normal/borderline/abnormal)</p>	<ul style="list-style-type: none"> <li>● Full blood count</li> <li>● Urea &amp; electrolytes (with/without potassium)</li> <li>● Liver function tests</li> <li>● Lipid tests</li> <li>● HbA1c</li> <li>● Thyroid function tests</li> <li>● Haematinics (B12, folate, ferritin)</li> <li>● Clotting screen</li> <li>● INR</li> <li>● ESR</li> <li>● Plasma viscosity</li> <li>● CRP</li> <li>● D-dimer</li> <li>● Rheumatoid factor</li> <li>● Glucose</li> <li>● Bone profile (calcium, phosphate etc)</li> <li>● Magnesium</li> <li>● Uric acid</li> <li>● Sex hormones (FSH, LH, Prolactin, testosterone)</li> <li>● PSA</li> <li>● Vitamin D</li> <li>● PTH</li> <li>● Coeliac screen</li> <li>● Other [free text]</li> </ul>

<p>7. GP coding of test results</p>	<ul style="list-style-type: none"> <li>● Normal</li> <li>● Satisfactory/expected/acceptable/stable</li> <li>● Borderline</li> <li>● Abnormal</li> <li>● Not specified (normal/abnormal not coded by filing GP)</li> <li>● Results not filed</li> <li>● Other</li> </ul>
<p>8. GP coding of action</p>	<ul style="list-style-type: none"> <li>● Take no action</li> <li>● Action not specified</li> <li>● Make appointment to see doctor</li> <li>● Make appointment to see nurse</li> <li>● Speak to doctor</li> <li>● Speak to nurse</li> <li>● Repeat test</li> <li>● Request notes</li> <li>● Patient to pick up prescription</li> <li>● Communicate with patient</li> <li>● Other</li> </ul>
<p>9. In your clinical opinion, was the action made by the filing GP appropriate?</p>	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> <li>● Partially</li> </ul>
<p>9a. [If the clinician selects 'no' or 'partially' to question 9]</p> <p>Please tick if as the result of the filing/actioning of the blood test result the patient</p>	<ul style="list-style-type: none"> <li>● Came to harm</li> <li>● Was, in your opinion, at high risk of harm</li> <li>● Was, in your opinion, at low risk of harm</li> <li>● Was, in your opinion, at no risk of harm</li> <li>● Unsure/can't tell</li> </ul> <p>[Optional free text box]</p>
<p>10. Is there evidence that steps were taken to ensure the intended action specified by the filing GP was carried out? If so, what steps?</p>	<ul style="list-style-type: none"> <li>● No</li> <li>● Yes – patient note/task sent</li> <li>● Yes – plan already in place</li> <li>● Yes – contact with patient</li> <li>● Other [free text box]</li> </ul>
<p>11. Please confirm whether intended action was carried out</p>	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> <li>● Can't tell</li> </ul>
<p>11a. [If the clinician selects 'no' or 'can't tell' to question 11]</p> <p>Please tick if as a result of the filing/actioning of blood test results the patient</p>	<ul style="list-style-type: none"> <li>● Came to harm</li> <li>● Was, in your opinion, at high risk of harm</li> <li>● Was, in your opinion, at low risk of harm</li> <li>● Was, in your opinion, at no risk of harm</li> <li>● Unsure</li> </ul> <p>[Optional free text box]</p>
<p>12. Did the blood tests directly lead to, or contribute towards, any of the following outcomes (multiple options may be selected)</p>	<ul style="list-style-type: none"> <li>● New diagnosis/confirmation of diagnosis</li> <li>● Change in medication/new medication</li> <li>● Change in lifestyle recommended eg weight loss, smoking cessation etc</li> <li>● Referral</li> <li>● Hospital admission</li> <li>● Further blood tests/repeat blood tests</li> <li>● Follow on xray/radiology investigations</li> <li>● Documentation of reassurance of patient/doctor</li> <li>● None of the above</li> </ul>

	<ul style="list-style-type: none"> <li>● Unclear/other [free text]</li> </ul>
<p>13. <i>Is there evidence in the notes that these blood test results were communicated to the patient? If so, how?</i></p>	<ul style="list-style-type: none"> <li>● No</li> <li>● Yes - text message</li> <li>● Yes - phone call from non-clinical staff</li> <li>● Yes - phone appointment with clinical staff</li> <li>● Yes - face-to-face appointment with clinical staff</li> <li>● Yes - letter</li> <li>● Yes – email</li> <li>● Other [free text]</li> </ul>
<p>14. <i>In your clinical opinion were the tests necessary?</i></p>	<ul style="list-style-type: none"> <li>● Yes all tests were necessary</li> <li>● Some tests were necessary, but not all</li> <li>● No tests necessary</li> </ul> <p>[Optional free text box if 'some tests' or 'no tests necessary' selected]</p>

## Box S1: Why Test training - clinical cases

Please find below extracts from medical records for 3 fictitious clinical cases. Please code these using the link you have been sent.

### Case 1:

Bill McMasters, age 62

Past medical history: Essential hypertension, obesity.

Medications: ramipril 5mg OD, atorvastatin 20mg.

Consultation notes:

03/04/2021 Mrs Ruth Reader (HCA) bloods taken as per protocol (hypertension monitoring)

FBC, U+E, HbA1c, TFT, lipid profile

Test results (see below) filed as '*satisfactory, no action required*'

No further notes relating to blood test communication or actioning in the electronic health records.

<b>Full blood count – FBC</b>	<b>Test result (normal range)</b>
Total white cell count	6.12 10 <sup>9</sup> /L (4.0 – 11.0)
Red blood cell (RBC) count	5.15 10 <sup>12</sup> /L (4.50 – 6.00)
Haemoglobin estimation	153 g/L (130 – 170)
Haematocrit	0.477 L/L (0.40 – 0.52)
Mean corpuscular volume (MCV)	92.6 fL (83 – 100)
Mean corpusc. Haemoglobin (MCH)	29.7 pg (27.0 – 32.0)
Mean corpusc. Hb. conc. (MCHC)	321 g/L (310 – 350)
Platelet count	212 10 <sup>9</sup> /L (150 – 400)
Red blood cell distribut width	13.4 (11.5 – 15.5)
Neutrophil count	3.94 10 <sup>9</sup> /L (1.5 – 8.0)
Lymphocyte count	1.47 10 <sup>9</sup> /L (1.0 – 4.0)
Monocyte count	0.49 10 <sup>9</sup> /L (0.2 – 1.0)
Eosinophil count	0.18 10 <sup>9</sup> /L (0.0 – 0.5)
Basophil count	0.04 10 <sup>9</sup> /L (0.0 – 0.2)
Neutrophil/Lymphocyte Ratio	2.68
<b>Serum electrolytes</b>	
Serum sodium	142 mmol/L (133 – 146)
Serum potassium	4.4 mmol/L (3.5 – 5.3)
Serum creatinine	64 umol/L (59 – 104)
<b>! Urea</b>	<b>10.9 mmol/L (2.5 – 10.7)</b>
eGFRcreat (CKS-EPI)/1.73 m <sup>2</sup>	90 L/min
<b>HbA1c</b>	
HbA1c Lab Report Comment	34 mmol/mol No evidence of diabetes currently.
<b>Thyroid function test</b>	
Serum TSH	1.2mIU/L (0.27 – 4.2)
<b>Lipid profile</b>	
Serum Cholesterol	2.3mmol/L
Serum HDL cholesterol	0.9mmol/L
Serum cholesterol/HDL ratio	2.6
Se non HDL cholesterol level	1.4mmol/L

## Case 2:

Jane Johnson, age 78

Past medical history: ovarian cancer

02/04/2021 Letter from oncology: "Stage 3 ovarian cancer, continuing on cisplatin chemotherapy. GP to monitor FBC, U+E, LFT please."

05/04/2021 Mrs Ruth Reader (HCA)

Bloods taken as per hospital letter: FBC, U+E, LFT

Results filed by Dr Jones as 'please book telephone consultation'

Task sent to receptionist to ask patient to book telephone consultation

10/04/2021: Telephone consultation (Dr Jones)

Patient informed test results, drop in eGFR (was 35 now 28), Hb stable ?related to chemo, has appointment with oncology tomorrow

12/04/2021: Oncology letter, fall in eGFR, chemo dose reduced

Full blood count – FBC	Test result (normal range)
<b>! Total white cell count</b>	<b>2.52 10<sup>9</sup>/L (4.0 – 11.0)</b>
Red blood cell (RBC) count	4.50 10 <sup>12</sup> /L (4.50 – 6.00)
<b>! Haemoglobin estimation</b>	<b>118 g/L (130 – 170)</b>
Haematocrit	0.477 L/L (0.40 – 0.52)
<b>! Mean corpuscular volume (MCV)</b>	<b>80.2 fL (83 – 100)</b>
Mean corpusc. Haemoglobin (MCH)	29.7 pg (27.0 – 32.0)
Mean corpusc. Hb. conc. (MCHC)	321 g/L (310 – 350)
Platelet count	212 10 <sup>9</sup> /L (150 – 400)
Red blood cell distribut width	13.4 (11.5 – 15.5)
<b>! Neutrophil count</b>	<b>1.01 10<sup>9</sup>/L (1.5 – 8.0)</b>
Lymphocyte count	1.47 10 <sup>9</sup> /L (1.0 – 4.0)
Monocyte count	0.49 10 <sup>9</sup> /L (0.2 – 1.0)
Eosinophil count	0.18 10 <sup>9</sup> /L (0.0 – 0.5)
Basophil count	0.04 10 <sup>9</sup> /L (0.0 – 0.2)
Neutrophil/Lymphocyte Ratio	2.68
<b>Serum electrolytes</b>	
Serum sodium	142 mmol/L (133 – 146)
Serum potassium	4.4 mmol/L (3.5 – 5.3)
<b>! Serum creatinine</b>	<b>169 umol/L (59 – 104)</b>
<b>! Urea</b>	<b>15.9 mmol/L (2.5 – 10.7)</b>
<b>! eGFRcreat (CKS-EPI)/1.73 m<sup>2</sup></b>	<b>28 L/min</b>
<b>Liver function tests</b>	
Serum total biliruben	10 umol/L (<21)
<b>! Serum albumin</b>	<b>24 (35 – 55g/L)</b>
Serum ALT level	59 U/L (10 - 60)

### Case 3:

Jane Smith, age 56

Past medical history – nil of note

12/04/2021: Dr P Jones (GP partner)

Problem: tired all the time

History: past 1m tiredness, low energy, mild SOB on exertion, smoker 20/d

Examination: BP 145/85, pulse 80, sats 96%, chest clear

Comment: check bloods, CXR, rv with results

24/04/2021: Mrs Ruth Peters (HCA)

Bloods taken under the name of Dr Jones: FBC, U+E, TFT, HbA1c

25/04/2021: Test results received (see below)

30/04/2021: Dr Jones coded test results '*satisfactory, no action required*'

No evidence of communication or any further actioning of results.

<b>Full blood count – FBC</b>	<b>Test result (normal range)</b>
Total white cell count	6.69 10 <sup>9</sup> /L (4.0 – 11.0)
Red blood cell (RBC) count	4.55 10 <sup>12</sup> /L (4.50 – 6.00)
Haemoglobin estimation	132 g/L (130 – 170)
Haematocrit	0.474 L/L (0.40 – 0.52)
Mean corpuscular volume (MCV)	84.6 fL (83 – 100)
Mean corpusc. Haemoglobin (MCH)	29.3 pg (27.0 – 32.0)
Mean corpusc. Hb. conc. (MCHC)	333 g/L (310 – 350)
<b>! Platelet count</b>	<b>619 10<sup>9</sup>/L (150 – 400)</b>
Red blood cell distribut width	11.6 (11.5 – 15.5)
Neutrophil count	6.95 10 <sup>9</sup> /L (1.5 – 8.0)
Lymphocyte count	1.47 10 <sup>9</sup> /L (1.0 – 4.0)
Monocyte count	0.39 10 <sup>9</sup> /L (0.2 – 1.0)
Eosinophil count	0.14 10 <sup>9</sup> /L (0.0 – 0.5)
Basophil count	0.04 10 <sup>9</sup> /L (0.0 – 0.2)
Neutrophil/Lymphocyte Ratio	2.68
<b>Serum electrolytes</b>	
Serum sodium	136 mmol/L (133 – 146)
Serum potassium	4.7 mmol/L (3.5 – 5.3)
Serum creatinine	70 umol/L (59 – 104)
eGFRcreat (CKS-EPI)/1.73 m <sup>2</sup>	93 L/min
<b>HbA1c</b>	38 mmol/mol
HbA1c Lab Report Comment	No evidence of diabetes currently.
<b>Thyroid function test</b>	
Serum TSH	1.5mIU/L (0.27 – 4.2)

# Data Collection Form v1.0

Please complete the survey below.

Thank you!

## Clinical Case 1 Answersheet

Response was added on 14-04-2022 17:02.

Please watch the Why Test training videos and read the clinical cases before completing this form.  
This form relates to the fictitious case 1: Bill McMasters

Patient Age (at the time of testing)

- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- >80

Patient Gender

- Male
- Female
- Other

Test details

Who requested bloods?

This is the person who decided blood tests were needed, not necessarily the person putting the bloods on the system e.g. GP plan may say "bloods" but HCA puts tests on system - this would be a GP request

- GP (salaried or partner)
- Locum GP
- Trainee doctor (GP registrar/F2 doctor)
- Nurse practitioner
- Nurse
- Healthcare assistant
- Paramedic
- Physician Associate
- Pharmacist
- Secondary care request
- Practice protocol e.g. monitoring/QOF/annual reviews where patient has not had testing directly requested by a GP/clinician
- Unclear
- Other

The blood tests were put onto the system by an HCA who was following the practice protocol for hypertension monitoring, so this should be recorded as 'practice protocol'.

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**Primary reason for testing**

- Monitoring existing disease
- Monitoring existing medication
- Starting new medication
- Symptoms/Diagnosis
- National Screening Programme
- Patient request
- Follow-up/repeat of previous abnormal report
- Unclear
- Other

The reason for testing according to the medical records was 'hypertension monitoring' so this should be recorded as 'monitoring existing disease'.

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**Monitoring existing disease**

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**Which disease was being monitored?**

- Chronic kidney disease
- Type I diabetes
- Type II diabetes
- Hypertension
- Other

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**Secondary reason(s) for testing: (OPTIONAL)**

Please tick any secondary reason(s) for testing

- Monitoring of known disease e.g. CKD, diabetes
- Monitoring existing medication e.g. methotrexate, lithium
- Starting new medication
- Assessing response to medication
- Diagnosis
- National Screening Programme
- Secondary care request
- Patient request
- Follow-up/repeat of previous abnormal result
- Other

In this case the patient was taking ramipril so you could add 'monitoring existing medication' as a secondary reason for testing.

**Please tick all the tests required and if results were normal, abnormal or just outside of the normal range.**

**Select normal if all tests are within the laboratory specified reference ranges**

**Select borderline if one or more tests are very slightly outside of the laboratory specified reference range**

**Select abnormal if one or more tests are definitely outside of the normal range**

	Normal	Borderline	Abnormal
Full blood count	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
U&E's (with/without potassium)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Liver function tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lipid tests	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
HbA1c	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thyroid function tests	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Haematinics (B12, folate, ferritin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clotting screen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
INR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ESR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plasma Viscosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D-dimer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rheumatoid factor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glucose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bone profile (calcium, phosphate etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Magnesium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uric acid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sex hormones (FSH, LH, Prolactin, testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PSA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vitamin D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PTH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coeliac screen (eg TTG)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which element(s) of this test were abnormal/borderline?

- Urea
- Sodium
- Potassium
- Creatinine
- Chloride
- Bicarbonate
- eGFR

The urea is just outside of the normal range, the rest of the bloods are normal.

How did the filing clinician code these results? Please select the option that best applies.

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the abnormal results.

- Normal
- Satisfactory/expected/acceptable/stable
- Borderline
- Abnormal
- Not specified (normal/abnormal not coded by filing GP)
- Results not filed
- Other

What action did the filing GP say should be taken?

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the actionable results.

- Take no action
- Action not specified
- Make appointment to see doctor
- Make appointment to see nurse
- Speak to doctor/book telephone consultation with doctor
- Speak to nurse/book telephone consultation with nurse
- Repeat test
- Request notes
- Patient to pick up prescription
- Communicate with patient
- Other

Results were filed as 'satisfactory, no action required'

In your clinical opinion, was the action made by the filing GP appropriate?

- Yes
- No
- Partially

This question relies on your clinical judgement, in this case the action seems reasonable.

Impact of tests

Did blood tests directly lead to (or contribute towards) any of the following outcomes?

Tick all that apply

- New diagnosis/confirmation of diagnosis
- Change in medication/new medication
- Change in lifestyle recommended eg weight loss, smoking cessation etc
- Referral
- Hospital admission
- Further blood tests/repeat blood tests
- Follow on xray/radiology investigations
- Documentation of reassurance of patient/doctor
- None of the above
- Unclear/can't tell

Many monitoring blood tests will not lead to any clear change in patient outcomes. If that is the case please select 'none of the above'.

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Is there evidence in the notes that these blood test results were communicated to the patient? If so, how?

- No
- Yes - text message
- Yes - phone call from non-clinical staff
- Yes - phone appointment with clinical staff
- Yes - face-to-face appointment with clinical staff
- Yes - letter
- Yes - email
- Other

There was nothing in the notes to show that the results were communicated to the patient.

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In your clinical opinion, were the tests necessary?

- Yes all tests were necessary
- Some tests were necessary, but not all
- No tests necessary

This question relies on your clinical judgement. If there are guidelines for testing these could be helpful. For routine hypertension monitoring NICE do not routinely recommend full blood test and thyroid function, We have therefore selected 'some tests were necessary, but not all' for this case.

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Total score (%)

100

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Thank you for completing clinical case 1. Please check your answers by downloading the attached answer sheet then press 'submit'. If you have any questions please email [whytest-study@bristol.ac.uk](mailto:whytest-study@bristol.ac.uk)

[Attachment: "WhyTestCase1\_annotated.pdf"]

# Data Collection Form v1.0

Please complete the survey below.

Thank you!

## Clinical Case 2 Answersheet

Response was added on 14-04-2022 17:23.

Please watch the Why Test training videos and read the clinical cases before completing this form.  
This form relates to the fictitious case 2: Jane Johnson

Patient Age (at the time of testing)

- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- >80

Patient Gender

- Male
- Female
- Other

Test details

Who requested bloods?

This is the person who decided blood tests were needed, not necessarily the person putting the bloods on the system e.g. GP plan may say "bloods" but HCA puts tests on system - this would be a GP request

- GP (salaried or partner)
- Locum GP
- Trainee doctor (GP registrar/F2 doctor)
- Nurse practitioner
- Nurse
- Healthcare assistant
- Paramedic
- Physician Associate
- Pharmacist
- Secondary care request
- Practice protocol e.g. monitoring/QOF/annual reviews where patient has not had testing directly requested by a GP/clinician
- Unclear
- Other

The notes state 'bloods taken as per hospital letter'  
so this is a secondary care request

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**Primary reason for testing**

- Monitoring existing disease
- Monitoring existing medication
- Starting new medication
- Symptoms/Diagnosis
- National Screening Programme
- Patient or relative request for testing
- Follow-up/repeat of previous abnormal report
- Unclear
- Other

The primary reason for testing is to monitor the chemotherapy  
You could also add 'monitoring existing disease' (ie Cancer) as  
a secondary reason for testing

Type text here

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**Monitoring existing medication**

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**Which medication was being monitored?**

Cisplatin

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**Secondary reason(s) for testing: (OPTIONAL)**

Please tick any secondary reason(s) for testing

- Monitoring of known disease e.g. CKD, diabetes
- Monitoring existing medication e.g. methotrexate, lithium
- Starting new medication
- Assessing response to medication
- Diagnosis
- National Screening Programme
- Secondary care request
- Patient request
- Follow-up/repeat of previous abnormal result
- Other

**Please tick all the tests required and if results were normal, abnormal or just outside of the normal range.**

**Select normal if all tests are within the laboratory specified reference ranges**

**Select borderline if one or more tests are very slightly outside of the laboratory specified reference range**

**Select abnormal if one or more tests are definitely outside of the normal range**

	Normal	Borderline	Abnormal
Full blood count	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
U&E's (with/without potassium)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Liver function tests	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lipid tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HbA1c	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thyroid function tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Haematinics (B12, folate, ferritin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clotting screen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
INR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ESR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plasma Viscosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D-dimer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rheumatoid factor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glucose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bone profile (calcium, phosphate etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Magnesium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uric acid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sex hormones (FSH, LH, Prolactin, testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PSA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vitamin D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PTH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coeliac screen (eg TTG)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Which element(s) of this test were abnormal/borderline?

- Haemoglobin estimation (Hb)
- Total white cell count (WBC)
- Red blood cell count (RBC)
- Haematocrit
- Mean corpuscular volume (MCV)
- Mean corpuscular haemoglobin (MCH)
- Mean corpuscular haemoglobin concentration (MCHC)
- Platelet count
- Red blood cell distribution width
- Neutrophil count
- Lymphocyte count
- Monocyte count
- Eosinophil count
- Basophil count

---

Which element(s) of this test were abnormal/borderline?

- Urea
- Sodium
- Potassium
- Creatinine
- Chloride
- Bicarbonate
- eGFR

---

Which element(s) of this test were abnormal?

- Albumin
- Alkaline phosphatase (ALP)
- Alanine aminotransferase (ALT)
- Aspartate aminotransferase (AST)
- Bilirubin
- Gamma-glutamyl transferase (GGT)
- Total protein
- Globulin

---

How did the filing clinician code these results? Please select the option that best applies.

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the abnormal results.

- Normal
- Satisfactory/expected/acceptable/stable
- Borderline
- Abnormal
- Not specified (normal/abnormal not coded by filing GP)
- Results not filed
- Other

The GP has coded the results as 'please book telephone consultation' but has not actually specified that the results are abnormal (which of course may be perfectly appropriate) so please choose 'not specified' here

What action did the filing GP say should be taken?

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the actionable results.

- Take no action
- Action not specified
- Make appointment to see doctor
- Make appointment to see nurse
- Speak to doctor/book telephone consultation with doctor
- Speak to nurse/book telephone consultation with nurse
- Repeat test
- Request notes
- Patient to pick up prescription
- Communicate with patient
- Other

The GP has coded 'book a telephone consultation'

In your clinical opinion, was the action made by the filing GP appropriate?

- Yes
- No
- Partially

This seems reasonable

Is there evidence that steps were taken to ensure the intended action specified by the filing GP was carried out? If so, what steps?

- No
- Yes - Patient note/Task sent
- Yes - Plan already in place
- Yes - Contact with patient
- Other

This question relates to whether the GP actually took action to ensure that the necessary follow up took place  
In this case a task was sent to reception

Please confirm whether the intended action was carried out

- Yes
- No
- Can't tell

The telephone consultation took place as planned

Was the intended action carried out in a timely manner?

(This will vary depending on the degree of abnormality of the test results)

- Yes
- No
- Can't tell/unsure

This question relies on your clinical judgement, in this case results were actioned in a reasonably timely manner.

Impact of tests

Did blood tests directly lead to (or contribute towards) any of the following outcomes?

Tick all that apply

- New diagnosis/confirmation of diagnosis
- Change in medication/new medication
- Change in lifestyle recommended eg weight loss, smoking cessation etc
- Referral
- Hospital admission
- Further blood tests/repeat blood tests
- Follow on xray/radiology investigations
- Documentation of reassurance of patient/doctor
- None of the above
- Unclear/can't tell

The letter from oncology shows a change in the dose of chemotherapy took place, presumably due to the fall in eGFR.

---

Is there evidence in the notes that these blood test results were communicated to the patient? If so, how?

- No
- Yes - text message
- Yes - phone call from non-clinical staff
- Yes - phone appointment with clinical staff
- Yes - face-to-face appointment with clinical staff
- Yes - letter
- Yes - email
- Other

The results were discussed with the patient in a telephone consultation with Dr Jones

---

In your clinical opinion, were the tests necessary?

- Yes all tests were necessary
- Some tests were necessary, but not all
- No tests necessary

The tests were requested by secondary care and were presumably necessary

---

Total score (%)

100

---

Thank you for completing clinical case 2. Please check your answers by downloading the attached answer sheet then press 'submit'. If you have any questions please email [whytest-study@bristol.ac.uk](mailto:whytest-study@bristol.ac.uk)

[Attachment: "WhyTestCase2\_answers.pdf"]

# Data Collection Form v1.0

Please complete the survey below.

Thank you!

## Clinical Case 3 Answersheet

Response was added on 14-04-2022 18:37.

Please watch the Why Test training videos and read the clinical cases before completing this form.  
This form relates to the fictitious case 3: Julia Smith

Patient Age (at the time of testing)

- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- >80

Patient Gender

- Male
- Female
- Other

Test details

Who requested bloods?

This is the person who decided blood tests were needed, not necessarily the person putting the bloods on the system e.g. GP plan may say "bloods" but HCA puts tests on system - this would be a GP request

- GP (salaried or partner)
- Locum GP
- Trainee doctor (GP registrar/F2 doctor)
- Nurse practitioner
- Nurse
- Healthcare assistant
- Paramedic
- Physician Associate
- Pharmacist
- Secondary care request
- Practice protocol e.g. monitoring/QOF/annual reviews
- Unclear
- Other

The tests were requested by Dr Jones,  
a GP partner.

---

Primary reason for testing

- Monitoring existing disease
- Monitoring existing medication
- Starting new medication
- Symptoms/Diagnosis
- National Screening Programme
- Patient or relative request for testing
- Follow-up/repeat of previous abnormal report
- Unclear
- Other

The main problem heading was 'tired all the time' so this should be recorded as the main presenting symptom.

---

Symptoms/diagnosis

---

Category of main presenting symptoms/suspected diagnosis

- General and unspecified
- Blood, blood forming organs and immune mechanisms
- Digestive
- Eye
- Ear
- Cardiovascular
- Muscoskeletal
- Neurological
- Psychological
- Respiratory
- Skin
- Endocrine/metabolic and natural
- Urological
- Pregnancy, childbearing and family planning
- Female genital
- Male genital
- Social problems
- Other

---

General and unspecified

---

Please tick relevant box(es)

- Pain general/multiple sites
- Chills
- Fever
- Weakness/tiredness general
- Feeling ill
- Fainting/syncope
- Coma
- Swelling
- Sweating problems
- Bleeding/haemorrhage NOS
- Chest pain NOS
- Concern/fear medical treatment
- Irritable infant
- Concern about appearance
- Euthanasia request/discussion
- Risk factor for malignancy
- Risk factor NOS
- Limited function/disability NOS
- General symptoms/complaint other
- Tuberculosis
- Measles
- Chickenpox
- Malaria
- Rubella
- Infectious mononucleosis
- Viral exanthem other
- Viral disease other/NOS
- Infectious disease other/NOS
- Malignancy NOS
- Trauma/injury NOS
- Multiple trauma/injuries
- Secondary effect of trauma
- Poisoning by medical agent
- Adverse affect medical agent
- Toxic effect non-medicinal substance
- Complication of medical treatment
- Adverse effect physical factor
- Effect prosthetic device
- Congenital anomaly OS/multiple
- Abnormal renal investigation NOS
- Allergy/allergic investigation NOS
- Premature newborn
- Perinatal morbidity other
- Perinatal mortality
- Death
- No disease
- Health maintenance/prevention
- General disease NOS
- Other

---

Secondary reason(s) for testing: (OPTIONAL)

Please tick any secondary reason(s) for testing

- Monitoring of known disease e.g. CKD, diabetes
- Monitoring existing medication e.g. methotrexate, lithium
- Starting new medication
- Assessing response to medication
- Diagnosis
- National Screening Programme
- Secondary care request
- Patient request
- Follow-up/repeat of previous abnormal result
- Other

Secondary reason for testing not required

**Please tick all the tests required and if results were normal, abnormal or just outside of the normal range.**

**Select normal if all tests are within the laboratory specified reference ranges**

**Select borderline if one or more tests are very slightly outside of the laboratory specified reference range**

**Select abnormal if one or more tests are definitely outside of the normal range**

	Normal	Borderline	Abnormal
Full blood count	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
U&E's (with/without potassium)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liver function tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lipid tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HbA1c	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thyroid function tests	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Haematinics (B12, folate, ferritin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clotting screen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
INR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ESR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plasma Viscosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D-dimer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rheumatoid factor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glucose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bone profile (calcium, phosphate etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Magnesium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uric acid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sex hormones (FSH, LH, Prolactin, testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PSA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vitamin D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PTH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coeliac screen (eg TTG)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which element(s) of this test were abnormal/borderline?

- Haemoglobin estimation (Hb)
- Total white cell count (WBC)
- Red blood cell count (RBC)
- Haematocrit
- Mean corpuscular volume (MCV)
- Mean corpuscular haemoglobin (MCH)
- Mean corpuscular haemoglobin concentration (MCHC)
- Platelet count
- Red blood cell distribution width
- Neutrophil count
- Lymphocyte count
- Monocyte count
- Eosinophil count
- Basophil count

How did the filing clinician code these results? Please select the option that best applies.

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the abnormal results.

- Normal
  - Satisfactory/expected/acceptable/stable
  - Borderline
  - Abnormal
  - Not specified (normal/abnormal not coded by filing GP)
  - Results not filed
  - Other
- Results were filed as 'satisfactory, no action required'

What action did the filing GP say should be taken?

If the panel of tests include a mix of normal and abnormal results please select the option which best describes how the GP coded the actionable results.

- Take no action
- Action not specified
- Make appointment to see doctor
- Make appointment to see nurse
- Speak to doctor/book telephone consultation with doctor
- Speak to nurse/book telephone consultation with nurse
- Repeat test
- Request notes
- Patient to pick up prescription
- Communicate with patient
- Other

In your clinical opinion, was the action made by the filing GP appropriate?

- Yes
- No
- Partially

Please tick if as result of the filing/actioning of the blood test results the patient:

- Came to harm
- Was, in your opinion, at high risk of harm
- Was, in your opinion, at low risk of harm
- Was, in your opinion, at no risk of harm
- Unsure

Raised platelets can be a sign of undiagnosed cancer especially in a symptomatic smoker aged >50. Follow up and further investigations should be undertaken in keeping with current guidelines:

<https://cks.nice.org.uk/topics/platelets-abnormal-counts-cancer/management/management/>

If you have identified a potentially harmful event, please confirm you will ensure this is actioned appropriately within your practice

I will ensure this is actioned appropriately within my practice

---

### Impact of tests

Did blood tests directly lead to (or contribute towards) any of the following outcomes?

Tick all that apply

- New diagnosis/confirmation of diagnosis
- Change in medication/new medication
- Change in lifestyle recommended eg weight loss, smoking cessation etc
- Referral
- Hospital admission
- Further blood tests/repeat blood tests
- Follow on xray/radiology investigations
- Documentation of reassurance of patient/doctor
- None of the above
- Unclear/can't tell

There was no evidence of change in outcome following testing (although the PACT member would be advised to follow this up, any future change in outcomes should not be included here)

Is there evidence in the notes that these blood test results were communicated to the patient? If so, how?

- No
- Yes - text message
- Yes - phone call from non-clinical staff
- Yes - phone appointment with clinical staff
- Yes - face-to-face appointment with clinical staff
- Yes - letter
- Yes - email
- Other

There was no evidence of communication of test results in the clinical notes

In your clinical opinion, were the tests necessary?

- Yes all tests were necessary
- Some tests were necessary, but not all
- No tests necessary

The answer to this question depends on your clinical judgment, in this case the tests are in keeping with guidelines for the initial investigation of tiredness symptoms.

Total score (%)

100

Thank you for completing clinical case 3. Please check your answers by downloading the attached answer sheet then press 'submit'. If you have any questions please email [whytest-study@bristol.ac.uk](mailto:whytest-study@bristol.ac.uk)

[Attachment: "WhyTestCase3\_answers.pdf"]