

## Question 24 – Answer with Explanation

### Situation

You are a Foundation Year 2 Doctor working in General Practice at:

The MedEd Surgery  
Education Street  
Gosforth  
NE12 1BY

Your supervisor is Dr Leahy.

### Patient details

|                 |  |
|-----------------|--|
| Name:           | Freda Jones                                  |
| Address:        | 81 Framlington Place<br>Newcastle<br>NE2 4HH |
| Date of birth:  | 23/02/1992                                   |
| Patient number: | 8465 547 126                                 |

### History

Ms Jones has come to the surgery as she has reported a persistent feeling of tiredness and fatigue for the last 3 months.

This is her second appointment, and she has seen no improvement since her last appointment 6 weeks ago. Upon further discussion, she has no idea about what may be causing her tiredness and is deeply troubled by this. She would like further investigation.

She reports no weight loss, fever or night sweats, no change in bowel habit, no nausea or vomiting., and no pain or muscle tenderness. Her appetite is normal, and her mood is euthymic. She does find sleep refreshing and reports no sleep disturbance.

She experiences regular menses and has had no disturbance of her menstrual cycle over the last few months. She does not report menorrhagia.

She is employed as a primary school teacher but is struggling at work due to her tiredness. She does not smoke, drink alcohol, or consume caffeine. Ms Jones is vegetarian but has a healthy diet. She has a single sexual partner, and they use barrier contraception.

She has no significant past medical history.

### Examination

|        |                     |
|--------|---------------------|
| Pulse: | 80 beats per minute |
|--------|---------------------|

|                     |             |
|---------------------|-------------|
| Blood pressure:     | 102/66 mmHg |
| Oxygen Saturations: | 98%         |

No abnormalities found upon examination.

### **Investigations**

Normal urine dip stick.

No other investigations have been ordered up until this point.

### **Task**

Please order up to **nine** tests to investigate Ms Jones's symptoms using the appropriate request form attached.

|  |  |  |
|--|--|--|
| Patient number: 8465 547 126   |  | <b>Clinical details:</b><br><i>(Incl. current antibiotic therapy)</i><br>31-year-old female with no significant past medical history presenting with 3-month history of persistent tiredness and fatigue which is impacting on her life. Blood tests to investigate causes for these symptoms.   |
| Surname: Jones   | Forename: Freda  |  |
| D.O.B.: 23/02/1992   | Sex (please circle):    M <u>F</u>   |  |
| Ward / Practice: The MedEd Surgery   | Consultant / GP: Dr Leahy  |  |
| Specimen date: Todays Date   | Time: The current time   |  |
| Requesting MO: Dr Robert Bain  |  | Signature: Rbain   |
| <b>BIOCHEMISTRY</b>  | <b>HAEMATOLOGY</b>   | <b>MICROBIOLOGY / VIROLOGY</b>   |
| <input checked="" type="checkbox"/> U/E <input type="checkbox"/> Glucose<br><input checked="" type="checkbox"/> Bone profile <input type="checkbox"/> <i>tick if fasting</i><br><input checked="" type="checkbox"/> Liver profile <input checked="" type="checkbox"/> HbA1c<br><input type="checkbox"/> Gamma GT <input type="checkbox"/> Urine<br><input type="checkbox"/> Amylase                 microalbumin<br><input type="checkbox"/> Ionised calcium <input type="checkbox"/> Cholesterol<br><input type="checkbox"/> Magnesium <input type="checkbox"/> Lipid profile<br><input type="checkbox"/> Urate <input type="checkbox"/> <i>tick if fasting</i><br><input checked="" type="checkbox"/> CRP <input checked="" type="checkbox"/> Thyroid profile<br><input checked="" type="checkbox"/> Ferritin <input type="checkbox"/> <i>on T4</i><br><input type="checkbox"/> Immunoglobulins <input type="checkbox"/> Cyclosporin<br><input type="checkbox"/> Tacrolimus<br><br><i>Other (specify):</i> | <input checked="" type="checkbox"/> FBC <input type="checkbox"/> INR<br><input type="checkbox"/> ESR <input type="checkbox"/> APTR<br><input type="checkbox"/> B12/Folate <input type="checkbox"/> Coagulation screen<br><input type="checkbox"/> Glandular fever screen<br><input type="checkbox"/> Haemoglobinopathy screen<br><br><i>Other (specify):</i> | Specimen type:<br><br><input type="checkbox"/> Culture and sensitivity<br><input type="checkbox"/> AFB/TB culture<br><input type="checkbox"/> HIV <input type="checkbox"/> HBsAg <input type="checkbox"/> HCV Ab<br>Other ( <i>specify</i> ):  |
|  |  | <b>IMMUNOLOGY</b><br><input checked="" type="checkbox"/> Auto AB screen <input type="checkbox"/> Thyroid Microsomal Abs<br><input type="checkbox"/> Rh Factor <input type="checkbox"/> Total IgE<br><input type="checkbox"/> ENA Abs                Other ( <i>specify</i> ):<br><input type="checkbox"/> ANCA<br><input type="checkbox"/> DNA Abs |

## Explanation:

This case is what could be described as a 'tired all the time' bloods case and should be investigated with a wide net of investigations to rule in / out any potential causes.

### Clinical Details:

As a rule, clinical details sections should include:

- **Background information** – 31-year-old female with no significant past medical history
- **Clinical Problem** - with 3-month history of persistent tiredness and fatigue which is impacting on her life
- **Indications for investigations** - Blood tests to investigate causes for these symptoms.

Up to 9 tests are acceptable here. More than 9 tests would lead to zero marks being awarded for this question.

Tests ordered can include:

1. **Full Blood Count** - to assess for anaemia and other causes (i.e. haematological malignancy).
2. **Ferritin** – To assess potential for iron deficiency anaemia.
3. **Renal Function** – to assess for renal disease and electrolyte disturbance.
4. **Bone Profile** – To assess for derangement of calcium. Ionised calcium would also be acceptable.
5. **Liver Function Tests** – To assess for underlying liver disease.
6. **Inflammatory markers** (ESR or CRP are acceptable).
7. **Thyroid Function Tests** – To assess hypo / hyperthyroidism.
8. **HbA1C** – To assess for underlying diabetes mellitus.
9. **IgA Tissue Transglutaminase (TTG)** – This is to investigate coeliac disease which can present with no bowel symptoms. A TTG is part of the auto antibody screen so either is acceptable.

This list has been taken from the 'Investigations' in 'tiredness and fatigue in adults' from NICE CSK (1). Other blood tests could be

considered but for the purposes of this question, these are the top blood tests to consider.

**References and Useful Resources:**

1. <https://cks.nice.org.uk/topics/tiredness-fatigue-in-adults/diagnosis/investigations/>