2 Westbury Mews, Westbury-on-Trym,
Bristol, BS9 3QA
ENGLAND

MP

V

M H (for A-LH)

Court Reference Number Not Known

Report of

DR SAM CREAVIN

FOR THE COURT

DATED xx NOVEMBER 2022

SPECIALIST FIELD GENERAL PRACTICE

THE CLAIMANT MP

ON THE INSTRUCTIONS OF Law Firm LLP

SUBJECT MATTER Alleged failure to act on abnormal blood tests

SOLICITOR REFERENCE: xxx
MY REFERENCE: xxx

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1. Introduction

1.1. **The writer:** I am Doctor Sam Creavin. My specialist field is General Practice. Full details of my qualifications and experience entitling me to give expert evidence are given in Appendix A.

1.2. **Summary background of the case**: The case concerns the management of blood test results in in a 37 year-old-woman.

1.3. **Those involved in the case**: MP (Patient); Dr W, Dr P, Dr A, & Dr C (GP, xxx Medical Centre); A-LH, Mrs EP & Mrs B (Nurse, xxx Medical Centre); HP (admin role, xxx Medical Centre)

1.4. **Technical terms and explanations**. I have indicated technical terms in emphasis and abbreviations in Navy Blue. Appendix B provides a glossary and summary of abbreviations

1.5. **Summary of my opinion**: That the management provided by A-LH was in line with the standard of care that I would expect.

2. The issues to be addressed and a statement of instructions

2.1. I was instructed by Law Firm LLP in a letter dated xx September 2022. This later stated:

You are asked to prepare a report on breach of duty in this matter...
I would be grateful if you could please respond to each of the allegations raised in the Letter of Claim in relation to Miss H and Ms B as well as providing any comments that you feel are relevant. In addition, I would be grateful if you could please consider the following queries and answer within the body your report:-

- Were the blood results received on xx February 2018 normal? Can you please identify what levels of haemoglobin are normal and whether these blood results show a low level?
- If they do show a low level, please confirm what reasonable action should have been taken?
- In your opinion is there significant difference between the haemoglobin levels of xx February and those eventually taken in May 2018?
- Do the results of the ultrasound scan of xx March 2018 warranted any kind of urgent referral or action taken by Miss H.
- Do you consider there to be any breach in relation to the other attendances outlined in the Letter of Claim?

3. My investigation of the facts

3.1. **Assumed facts** I have assumed that any laboratory investigations, including radiology reporting, that were done at or on behalf of M H, whether or not the samples were taken in the community, were processed in accordance with good clinical practice, by competent practitioners, working in a typical NHS environment.

4. The available documents

4.1. I was sent a brief summary of the case on xx September 2022 by Defendant. These cover the period xx November 1980 to xx August 2019 inclusive (300 pages).

4.2. I was told that the following information was not available:

4.2.1. the results of the blood test taken on xx December 2017

4.2.2. telephone recordings from xxx Medical Centre

5. Past Medical History

5.1. MP had a previous history of CIN 1 (HPV positive) in 2015 (page 5). There was a history of menorrhagia

coded on November 2017 (page 16) but dating back to at least xx April 2013 (page 32).

5.2. An entry on xx October 2009 by Dr RW (page 150) states *"Hb very low. Phoned patient. Heay periods. Start iron. Rep. Hb when finished. May need Gynae referral*".

5.3. An entry on xx September 2007 (page 152) indicates three previous pregnancies with live birth. A laparoscopic sterilisation was performed in 2008 (page 151).

5.4. On xx October 2009 (page 149) the notes record a haemoglobin of 99g/L [115-165], a MCV of 81 fL [84-102] and a haematocrit of 0.316 [0.37-0.47].

5.5. On xx April 2013 (page 180) the notes record a weight of 44.6kg and a past history of smoking.

5.6. A blood test on xx November 2016 (page 182) was normal 1.

5.7. There was an admission to hospital on xx November 2017 (page 185) with breathlessness and dizziness (page 155), when MP was under the care of Dr MHP, a consultant physician, who stated "*I have also asked her to see you to discuss treatment for menorrhagia*". This admission appears to have followed the result of a blood test done on the same day, which had been requested following an appointment for chest pain on xx October 2017 (page 186).

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[1] *haematocrit* 0.443 [0.4-0.52] *platelet* 313 ^{9} [300-370] *haemoglobin* 151 g/L [130-180] *MCV* 86 fL [80-99] *wcc* 5.54 ^{9} [4-11]

6. The events I have been instructed to consider

6.1. MP was a 37 year old woman who attended xxx Medical Centre on xx January 2018 and consulted with Dr W (page 10). With a date of birth of xx November 1982, MP would have been aged 37 years 1 month 23 days on the date of the initial consultation. The recorded history was

> Has been suffering anaemia and recently had iron transfusions
> In general feels better but says very HMB since last 2/12. no IMB or PCB
> Cycles still 26-28/7
> Wanted to be sure nothing else going on. Sterilised 10 years ago - no contraception. No new meds.
> Mum was mid 40s when went through menopause - had hysterectomy in 40s as did pt's sister
> Examination P 66 Sats 99% O/A /par Diagnosis HMB ? cause
> Plan Bloods - FBC / Clotting / TFTs / LH / FSH - and review with results
> Try tranexamic acid - has had before without any issues
> Dr V W - Locum GP

6.2. The notes show a blood sample was taken on xx February 2018 (page 11) The results were filed by A-LH as

> normal, no further action

6.3. MP spoke to Mrs EP on xx February (page 11) to review the results. The consultation note reads:

> History: Telephone call to M continues with heavy periods. Changing pads every hour Recent bloods came back normal. Had blood transfusion before xmas.
> Advised to come for review today or tomorrow, unable to get to surgery until Wednesday. Appointment booked for xx/2/18 a t 16.10
> Red flags discussed
> Plan 1. advised to contact 111 oohrs if worsening symptoms /emergency department if red flags patient happy

6.4. MP was then seen in person on xx February 2018 (page 12) by Mrs EP and the consultation note reads

> History: attends alone
> painful and heavy periods
> dizzy spells Transexamic tablets have made little difference. Past 3 month heavy bleeding during periods getting worse
> Pain and bleeding after intercourse on the odd occasion
> has yearly biopsise and smears
> no weight loss
> no chest pain

> no cough
> no visual disturbance
> eating and drinking normally
> Nil issues with bowels
> Nil issues with ppasing urine
> Examination Oxygen saturation at periphery 98%
> Standing O/E blood pressure reading 105/73
> OE temperature normal 35.7
> Plan 1. repeat FBC - patient to book 2. Refer for ultrasound scan
> Pulse rate 69 bpm
> 112/76

6.5. The referral for ultrasound scan is given at page 219 of the GP records and reads

> I would be grateful if you would see this 37 year old lady for pelvic ultrasound. She has painful heavy bleeding. Pain and bleeding during intercourse on the odd occasion.

6.6. The ultrasound scan report is given on xx March 2018 at page 166 of the GP notes as

> LMP xx.02.2018
> Uterus Anteverted normal sized uterus measuring 70 x 50 x 78mm. No obvious myometrial lesions demonstrated.
> The endometrium was smooth in contour but very thickened to 21mm AP diameter. It appeared hyperechoic in echotexture with several echogenic regions within. No obvious vascularity was seen on Doppler application. This appearance may be due to underlying menstrual blood but underlying pathology cannot be excluded. It is difficult to assess the endometrium at this stage of the cycle Adnexa No obvious adnexal masses or free fluid demonstrated Right ovary volume 8.2cm^3 and NAD left ovary 12cm^3 and NAD no obvious adnexal masses or free fluid demonstrated

6.7. This result is filled on xx March by A-LH (page 13) with no comment or action.

6.8. A consultation took place with Mrs EP on xx April 2018 (page 14) regarding back pain, an ultrasound scan of the back was requested, and a diagnosis of sciatica was made. The request states

> scan to lower back
> Hx of lower back pain for 1 year
> Now symptoms of sciatica
> Currently taking paracetamol and ibuprofen
> When pain intolerable uses naproxen
> query cause

6.9. A blood sample was taken on xx May 2018 (page 15), the key results are given in Table 1.

6.10. Following this a consultation took place with Dr P on xx May 2018 (page 15) and the note reads:

> Problem: *menorrhagia*
> History: Long standing history of *dysmenorrhoea* and *menorrhagia*. Tubal ligation done more than ten years ago. Mum and sister have had hysterectomies done. Patient has exaggerated pain when opening bowels.
> Could this be endometriosis?
> Also complains of right sided hip pain that is worse on activity. Had a fall down flight of stairs a year ago.
> USS sound scan results noted with thickened endometrium cannot exclude pathology
> Plan Xray right hip referral to gynae

6.11. The referral to gynaecology was made by Dr P as routine and stated (page 205)

> Dear Colleague
> I would be grateful if you would see this patient who complains of irregular and heavy bleeding with severe lower abdominal pain. Her Mother and sister have both had hysterectomies. Patient has had tubal ligation done more than ten years ago. Recent ultrasound scan showed thickened endometrium which may be due to period but could not rule out any pathology. The patient does complain of worsening pain when opening bowels and am wondering if this could possibly be endometriosis.
> Thank you and kindest regards

Table 1: Key full blood count results

Measure	Date	Results	Normal Range
haemoglobin	x Feb 2018	121g/L	115-165
haematocrit		0.385	0.37-0.47
MCV		90fL	84-102
haemoglobin	x May 2018	118g/L	115-165
haematocrit		0.385	0.37-0.47
MCV		95fL	84-102
ferritin		21ng/ml	12-300
haemoglobin	x Oct 2018 *	114g/L	115-165
haematocrit		0.355	0.37-0.47
MCV		92fL	84-102
haemoglobin	x Nov 2018 *	111g/L	115-165
haematocrit		0.358	0.37-0.47
MCV		94fL	84-102
ferritin		7ng/ml	12-300

abnormal results shown in red

6.12. On xx May there was an entry from Dr A (page 16)

> History cytology form seen, task forwarded to sec for urgent referral to colposcopy clinic

6.13. On xx May an entry is made by HP (page 16)

> Spoke to gynae sec as gp wanted patient referring to colposcopy - she is already under them, awaiting result of a biopsy

6.14. Nothing further was recorded about the referral made by Dr P to gynaecology. On xx November 2018 there was a consultation with Dr C (page 17)

> Problem telephone consultation
> History called and spoke to the pt noted HB 11.1, ferritin 7 used to have heavy periods but not anymore, no chnaeg on bowlee habbit no blood in stool/urine/sputum says she has lost almosta stone agree dto take iron tablets dose /se explanined and recheck FBC, ferritin, B12, folic acid in two months and to book appointmnet tosee gP to discuss weight loss
> Diagnosis Telephone consultation
> ferrour fumarate 322mg tablets 84mg take one daily

6.15. The blood test in November 2018 is abnormal, with a low ferritin and *haemoglobin* (see Table 1). There was an encounter with Mrs B on xx December 2018 (page 19)

> History Telephone call to a patient
> Asked to call patient regarding heavy period
> Has had heavy bleeding and lower abdominal pain. Started a few days ago
> Had previous h/o of problem when younger
> Period due
> smear up to date - due repeat in January, H/O abnormal cells
> F/H heavy bleeding.
> Not currently taking any contraception was sterilised 11 yrs ago
> getting hot sweats
> Pt concerned as has h/o anaemia, reassured as currently taking prescribed Ferratin, that this will help maintain iron levels
> Plan Advised to monitor for remainder of this period and next
> if problem reoccurs to attend we can book for lower abdominal USS / swabs

6.16. Following consultations with Dr E (xx Jan 2019; where a repeat ultrasound was requested), Dr B (xx Feb 2019), Dr T reviewed the ultrasound scan result on xx Feb 2019, MP then spoke to Dr T on xx Mar 2019 and Dr B then referred MP on xx Mar 2019 (page 22). Following a referral to hospital MP was seen by the gynaecology service. A letter from gynaecology to xxx Medical Centre dated xx May 2019 (page 222) stated

> The scan which was performed on xx February showed an endometrial cavity distended and heterogeneous in echotexture measuring 11.3 with no obvious polyp seen. Both ovaries were NAD. I have explained the findings and need for further investigation and I have referred her to be seen in our hysteroscopy clinic for further management

6.17. A subsequent letter dated xx May 2019 (page 225) stated

> M was seen as a new patient in the menstrual disorders clinic on xx May with heavy periods and abnormal bleeding. She has got three children all delivered normally. She has been sterilised in the past...
> She has a history of anaemia and is on iron tablets for the same.
> The outpatient's hysteroscopy that was carried out showed the presence of an 8cm cavity uterus. There was a grade 1 endometrial fibroid on the posterior wall. She complained of quite a bit of pain during the diagnostic procedure. I have taken endometrial biopsy and sent it for histology.
> I will see her in the gynae outpatients with the results...

> M was seen as a follow-up patient in the gynae clinic on xx June following an outpatients hysteroscopy carried out in the recent past which showed an 8cm endometrial cavity and a normal endometrial biopsy. There was however posteriod wall grade 1 fibroid. She is therefore not suitable for a mirena coil.

Table 2: *haemoglobin* results over time

Date	***haemoglobin***	***MCV***
x May 2001	115 g/L	88 fL
x Dec 2001	102 g/L	84 fL
x Oct 2002	110 g/L	90 fL
x Feb 2003	93 g/L	89 fL
x Nov 2006	113 g/L	96 fL
x Mar 2007	88 g/L	85 fL
x Oct 2009	99 g/L	81 fL
x April 2013	87 g/L	74 fL
x Nov 2017	66 g/L	66 fL
x Feb 2018	121g/L	90fL
x May 2018	118g/L	95fL
x Oct 2018	114g/L	92fL
x Nov 2018	111g/L	94fL

Hb normal range 110-165; 115-165 from Nov 2006
MCV normal range 76-99; 84-102 from Nov 2006
abnormal results shown in red text

7. Review of Other Facts

7.1. Guidelines do not necessarily reflect the standard of care I would expect to see but they can be useful.

7.2. **Gynaecological Cancer**

7.3. Referral guidelines for suspected gynaecological cancer are [3]:

7.4. Ovarian cancer — over 7000 new ovarian cancers are diagnosed each year in the UK. A full time GP is likely to diagnose approximately one person with ovarian cancer every 3–5 years. The 5-year survival is dependent upon the stage at diagnosis.

7.4.1. Refer the woman urgently if physical examination identifies ascites and/or a pelvic or abdominal mass (which is not obviously uterine fibroids).

7.4.2. Carry out tests in primary care if a woman (especially if 50 years or over) reports having any of the following symptoms on a persistent or frequent basis – particularly more than 12 times per month:

7.4.2.1. Persistent abdominal distension (women often refer to this as 'bloating').

7.4.2.2. Feeling full (early satiety) and/or loss of appetite.

7.4.2.3. Pelvic or abdominal pain.

7.4.2.4. Increased urinary urgency and/or frequency.

7.4.3. Consider carrying out tests in primary care if a woman reports unexplained weight loss, fatigue, or changes in bowel habit.

7.4.4. Measure serum CA125 in primary care in women with symptoms that suggest ovarian cancer. If serum CA125 is 35 IU/ml or greater, arrange an ultrasound scan of the abdomen and pelvis.

7.4.5. If the ultrasound suggests ovarian cancer, refer the woman urgently for further investigation.

7.5. Endometrial cancer — around 8000 new endometrial cancers are diagnosed each year in the UK. A full

time GP is likely to diagnose approximately one person with endometrial cancer every 3–5 years. The 5-year survival is close to 80%.

7.5.1. Refer women using a suspected cancer pathway referral (for an appointment within 2 weeks) for endometrial cancer if they are aged 55 years and over with post-menopausal bleeding (unexplained vaginal bleeding more than 12 months after menstruation has stopped because of the menopause).

7.5.2. Consider a suspected cancer pathway referral (for an appointment within 2 weeks) for endometrial cancer in women aged under 55 years with post- menopausal bleeding.

7.5.3. Consider a direct access ultrasound scan to assess for endometrial cancer in women aged 55 years and over with:

7.5.4. Unexplained symptoms of vaginal discharge who:

7.5.4.1. are presenting with these symptoms for the first time, or have thrombocytosis, or report haematuria, or

7.5.4.2. Visible haematuria, and (low haemoglobin levels, or thrombocytosis, or high blood glucose levels).

7.6. Cervical cancer — just below 3000 new cervical cancers are diagnosed each year in the UK, around three quarters of these following screening. A full time GP is likely to diagnose one person with cervical cancer approximately every 10 years. The 5-year survival is approximately 65%Consider a suspected cancer pathway referral (for an appointment within 2 weeks) for women if, on examination, the appearance of their cervix is consistent with cervical cancer.

7.7. Vulval cancer — over 1000 new vulval cancers are diagnosed each year in the UK. A full time GP is likely to diagnose approximately one person with vulval cancer during their career.

7.7.1. Consider a suspected cancer pathway referral (for an appointment within 2 weeks) for vulval cancer in women with an unexplained vulval lump, ulceration, or bleeding.

7.8. Vaginal cancer — over 250 new vaginal cancers are diagnosed each year in the UK, meaning most GPs will not encounter a woman with the disease during their career. The 5-year survival varies

considerably with stage.

7.8.1. Consider a suspected cancer pathway referral (for an appointment within 2 weeks) for vaginal cancer in women with an unexplained palpable mass in or at the entrance to the vagina.

7.9. **Fibroids**

7.10. Fibroids are found in 20% to 50% of women older than 30 years and approximately 25% of women with fibroids have symptoms that require treatment [4].

7.11. Key symptoms of fibroids include heavy menstrual bleeding, pelvic pain, pelvic mass, or infertility. Other symptoms may include bloating, urinary complaints, constipation. Women with fibroids should be referred urgently if there are features of possible cancer, or based on judgement if there is diagnostic uncertainty, severe bleeding symptoms, a fibroid of more than 3cm or submucal fibroid, infertility associated with the fibroid, or rapid growth of a fibroid after menopause [5].

7.12. **Menorrhagia**

7.13. For women with menorrhagia, referral to a gynaecologist is advised [7] if there are features of a pelvic/abdominal mass which is not obviously due to a fibroid, there are features of cancer, there are complications such as constipation, pelvic pain, or dysparenunia, or there is iron deficiency anaemia which has failed to respond to conventional treatments.

7.14. **Iron Deficiency Anaemia**

7.15. Consideration should be given to the cause of iron deficiency anaemia [2]; causes are broadly categorised as:

7.15.1. Inadequate dietary iron intake

7.15.2. Impaired absorption (e.g., due to coeliac disease)

7.15.3. Increased iron loss because of bleeding, usually from the gastrointestinal tract

7.15.4. Increased iron requirements because of infancy, pregnancy, or lactation

7.15.5. Unknown cause.

7.16. In general, practice would be to investigate for gastrointestinal blood loss in all patients, since this can be due to potentially serious cases namely cancer. Exceptions to this practice include [2]:

7.16.1. menstruating women

7.16.2. patients with a history of obvious blood loss from another system

7.16.3. patients with thalassaemia.

8. My opinion

8.1. I have compared the care that was provided to MP to the standard of care I would expect to see provided by a competent autonomous practitioner, practising competently, in an otherwise safe normal working environment.

8.2. Response to specific questions

Were the blood results received on xx February 2018 normal?

8.3. The blood test results received on xx February 2018 were normal (Table 1 page 8; Table 2 page 10). They show a haemoglobin 121g/L [115-165g/L] MCV of 90fL [84-102] and a haematocrit of 0.385 [0.37-0.47]. The platelet count is 325 109/L [150-450] the white cell count 6.5 109/L [4-11].

Can you please identify what levels of haemoglobin are normal and whether these blood results show a low level?

8.4. The haemoglobin reference ranges (normal values) vary from lab to lab but are given in square brackets in the notes (and above). For this lab, at the time of the test, the normal range was115-165g/L. The test in February 2018 is normal.

If they do show a low level, please confirm what reasonable action should have been taken?

8.5. These blood results in February 2018 do not show a low level of haemoglobin.

8.6. I note a blood test was taken on xx December 2017 but the results do not appear to be available.

8.7. I would not necessarily expect most clinicians to take any action on these blood tests in February 2018.

8.8. Given the history of anaemia in the past, some clinicians might order a repeat test in three months, which might have been particularly appropriate given the history of a ferrinject infusion on xx December 2017. However, it is well within the range of care I would expect to see to have filed the result on xx February 2018 as "normal no action".

In your opinion is there significant difference between the haemoglobin levels of 7 February and those eventually taken in May 2018?

8.9. The blood test on xx May 2018 was filed as normal (Table 1 page 8; Table 2 page 10). It shows a haematocrit 0.385 [0.37-0.47] MCV 95 fL [84-102] platelet count 317 109/L [150-450] haemoglobin 118g/L [115-165] ferritin 21 ng/ml [12- 300]. These results are all within the normal ranges given.

8.10. The results might be interpreted by some to suggest a fall in the level of haemoglobin, but variation of up to 6%-10% can be within the accuracy of the test, and these results are likely to be consistent (i.e., not substantially different) within the limits of the test [1]. Many clinicians would have filed this result as normal.

8.11. However, given the history of menorrhagia and anaemia, there are also many clinicians who would have suggested repeating the blood test in three months, or a continuing course of iron treatment since the ferritin is on the lower end of the normal range.

8.12. Given that MP was affected by menorrhagia I think it is within the bounds of reasonable practice that she was not further evaluated for an alternative cause for iron deficiency in February or May 2018, particularly as she has seen Dr MHP (page 156) in November 2017, who had noted her iron deficiency anaemia.

Do the results of the ultrasound scan of xx March 2018 warranted any kind of urgent referral or action taken by Miss H.

8.13. The results of the ultrasound scan cannot exclude any definite pathology (Section 6.6). The timing of the scan means that the interpretation of the test is limited. I would expect to see one of the following approaches taken in March 2018.

8.14. Firstly, a repeat ultrasound scan to be arranged at a different phase in the cycle. This could have been

requested on an urgent basis, but given the evidently relatively short waiting time for the first scan (on the basis of the notes) it would probably also have been reasonable to request on a routine basis, so long as it was done within two months. Further management would depend on the result of the repeat ultrasound scan but might include either referral to gynaecology, or re-evaluation in primary care, or reassurance.

8.15. Secondly, as an alternative, some cautious practitioners might have taken advice from gynaecology on the basis of the first scan. This might have been done verbally by phoning a specialist via the hospital switchboard or in writing, or might have taken the form of a referral to gynaecology. Some very cautious doctors might have made this referral on a fast tract / suspected cancer / two week wait basis but I do not think this would be the majority of doctors.

8.16. The ultrasound requested in April 2018 was of the back, rather than the uterus. This is very unusual practice, ultrasound scan of the back is almost never requested in practice.

8.17. It appears that a referral to gynaecology was done on xx May 2018. This is 6 weeks 2 days since the original ultrasound scan on xx March. Some GP surgeries would have a four-six week waiting time for a routine appointment.

8.18. Therefore on balance that while I would expect to see a different approach to the management of the ultrasound scan in March 2018, overall the management of the ultrasound result by the practice is at the very limit of acceptable practice that I would expect to see.

Do you consider there to be any breach in relation to the other attendances outlined in the Letter of Claim?

8.19. At the consultation in May 2018 I would expect to see a referral to gynaecology, which was done. At that stage it was 6 weeks 2 days since the original ultrasound scan, which could not exclude underlying pathology. At that stage I would expect to see a referral to gynaecology, since requesting and waiting for a repeat ultrasound scan would additional time and introduce further delay. This referral to gynaecology could have been a verbal discussion with a specialist about the ultrasound result.

8.20. I do not understand why the referral to gynaecology made in May 2018 did not seem to progress. It is speculation, but it is possible that around xx May there was administrative confusion around two referrals to gynaecology services and that this led to one or both of them being inadvertently cancelled in error. This information may be available from either the practice, the hospital, or the bookings system. I would not expect to see a referral cancelled without the input of a clinician.

8.21. However it came about, the end result was that the practice did not refer MP to gynaecology for her menorrhagia, despite an inconclusive ultrasound result, and in the context of iron deficiency anaemia, until xx March 2019, around one year after the inconclusive ultrasound result. I would expect to see a referral to gynaecology prior to this date. I think there were missed opportunities to do this, or to ask MP about what had happened to the xx May 2018 referral, at consultations on xx November 2018 (Dr C) and xx December 2018 (Mrs B), see Section 8.27.

8.22. On the basis of NICE guidelines [3], the care provided regarding the investigation of the vaginal bleeding was overall within the range of care I would expect to see. Some experts recommend histological sampling of the uterus in women aged less than 40 years with irregular and heavy bleeding because 5% to 10% of endometrial cancers occur in women aged less than 40 years [4]; however, this is not mandatory based on 2022 UK best practice guidelines [5].

8.23. In 2013, I note that Dr Q had advised MP to book a follow up appointment in three months to repeat the blood test, and to review if symptoms were not improving. I would generally expect to see an ultrasound scan arranged to investigate the menorrhagia, but the consultation in 2013 is within the range of care I would expect to see since a follow up is advised.

8.24. In January 2018 the haemoglobin had recently been very low (66g/L), and MP had recently been admitted to hospital. Given the very low haemoglobin in November 2017, I would generally expect to see an examination taking place in January 2018, or being arranged very shortly after, to include an examination of the cervix and pelvic examination, with swabs being taken to exclude genital infection e.g., chlamydia [6]. Some GPs would have deferred a pelvic examination if an ultrasound scan was requested. A pelvic ultrasound scan was requested within a month by the practice, and so overall the care in January/February by the practice is just within the range of care I would expect to see.

8.25. In May 2018 I would expect to see a referral to a gynaecologist taking place by May 2018. Dr P does indeed make a referral, but this does not subsequently seem to take place.

8.26. There does not seem to have been any recognition or acknowledgement by clinicians after the encounter in May 2018 that a referral to gynaecology has been made for the menorrhagia, in addition to the care that gynaecology are providing for CIN, and this is below the minimal standard I would expect to see. I would expect to see clinicians who had not met with MP previously reviewing the medical record for the last two or three encounters about related issues and identifying that referral had been in May 2018 but not occurred. Having identified this, I would expect to see a new referral being made, possibly on an urgent basis.

8.27. **Aspects of care that were below the minimal acceptable standard I would expect of a reasonable ordinary GP acting with usual skill and care, and logically**

8.27.1. In November 2018, failure to either

8.27.2. (A) arrange a face to face appointment within two weeks to examine the patient in person, given the history obtained that the heavy periods were no longer an issue and the blood test remained abnormal.

8.27.3. (B) as a bare minimum, if a face to face was not arranged within two weeks, to ask additional symptoms such as whether there was any difficulty swallowing, chest pain, breathlessness, or abdominal pain.

8.27.4. (C) ask about the referral to gynaecology in May that had apparently been made but not progressed

8.27.5. In December 2018 failure to either

8.27.6. (A) proactively arrange a follow up appointment to discuss the symptoms further regarding anaemia, weight loss and bleeding

8.27.7. (B) discuss anaemia, weight loss and bleeding further in the consultation that did take place

8.27.8. (C) ask about the referral to gynaecology in May that had apparently been made but not

progressed

8.28. **What I would expect to see**

8.29. In November 2018 the blood tests are abnormal. At this stage I would expect to see a face to face appointment to examine the patient, since the history obtained is that the heavy periods are "not anymore" an issue. Additionally the mention of weight loss is of concern. I would expect to see additional history recorded regarding problems swallowing, loss of appetite, indigestion, abdominal pain, cough or chest pain.

8.30. These symptoms potentially are suggestive of serious underlying pathology and I would expect to see a face to face appointment arranged within two weeks. At a face to face appointment I would expect to see an examination of the abdomen, chest, and measurement of the weight. Further action would then depend on the findings and might include several approaches, ranging from a repeat blood test in 6-8 weeks, arranging further investigations such as chest x-ray or sigmoidoscopy, or referral to specialist.

8.31. It is at the very limits of acceptable practice to have advised the patient to book an appointment regarding the weight loss especially in the context of iron deficiency anaemia, rather than directly booking one or asking an administrator to arrange a time. The urgency and importance of being seen in person does not appear to have been made clear to MP and in any event a face to face appointment was not booked in November 2018. As a bare minimum if a face to face was not arranged within two weeks, it was necessary to ask additional symptoms such as whether there was any difficulty swallowing, chest pain, breathlessness, or abdominal pain. Overall, I think the consultation in November 2018 is below the minimal acceptable standard I would expect to see.

8.32. On xx December the care is just below the minimal standard I would expect to see. This is a busy week for practices, occurring between two bank holidays. In 2018 Tuesday xx and Wednesday xx would have been bank holidays; as would Tuesday xx in the following week, so Friday xx December 2018 is likely to have been a particularly busy day. Given these circumstances, the care offered for the acute issue is within the range of care I would expect to see.

8.33. However, the problem of ongoing bleeding, in the presence of anaemia, weight loss, and (noted for the first time in this consultation) hot sweats is not adequately addressed, even accounting for the

context. I would expect to see a follow up face to face appointment conducted within a week to address the ongoing issues in more detail. I would expect that face to face appointment to include history about the symptoms, and particularly to explore symptoms of possible lymphoma (such as night sweats, weight loss, swollen glands), history relevant to iron deficiency anaemia (see paragraph above), measurement of weight, examination of abdomen and pelvic examination. At that face to face appointment, which I think should have taken place prior to 10 January, I would expect to see further blood tests and an ultrasound scan, and possibly other tests such as a chest x ray or urgent referral to a specialist such as a gynaecologist or haematologist.

8.34. In both November and December, there is no enquiry as to whether the gynaecology referral made in May has progressed. As outlined at Section 8.26 there does not seem to have been any recognition or acknowledgement by these clinicians that a referral had been made. I would expect to see clinicians who had not met with MP previously reviewing the medical record for the last two or three encounters about related issues and identifying that referral had been in May 2018 but not occurred. Having identified this, I would expect to see a new referral being made, possibly on an urgent basis.

8.35. **Summary**

8.36. Regarding the aspects I have been asked to specifically address I think the care provided in February 2018 and in May 2018 are within the range of care I would expect to see.

8.37. The care in response to the ultrasound scan in March 2018 omits several important aspects that I have detailed in Section 8.14.

8.38. The failure to seek a gynaecological opinion or repeat a pelvic ultrasound scan in March 2018 was initially mitigated by a referral done in May 2018, but this seems to have never taken place.

8.39. There were some aspects of care in November 2018 and December 2018 that fell below the standard of care that I would expect to see but I was not instructed specifically on these and they were not contained in the letter of claim.

8.40. If the Judge determines that the care is below the expected standard, then the Court will require the assistance of other experts to determine whether any deficiencies in care caused loss(es).

8.41. **Areas where there is possibly a range of opinion**

8.42. In January 2018 some critical experts would take the view that there had recently been an admission with anaemia and that it was mandatory to arrange further investigations i.e., vaginal ultrasound scan to look for any underlying pathology. In my view it was just reasonable to defer taking any further action until a repeat blood test and trial of first line treatment. MP had just been in hospital and many reasonable GPs acting with usual skill and care would have taken the logically defensible view that the hospital would have arranged any urgent tests that were required. In my view, given that in many GP practices it could take up to four weeks to arrange an appointment, especially over the Christmas / January period, and that an ultrasound scan is indeed arranged within five weeks of the appointment in January 2018 (on xx February 2018), I think the care is within the range I would expect in January.

8.43. In March 2018, as discussed at Section 8.13, the ultrasound scan could not exclude any pathology. Some particularly critical Experts instructed by parties acting for the Claimant may take the view that the action taken in response to the ultrasound scan was below the minimal acceptable standard, since there was ongoing heavy bleeding, including after sex, with anaemia, and an ultrasound had been requested which ultimately was unable to exclude any underlying pathology (e.g., fibroid or endometrial cancer). These critical experts would then take the view that it was a significant failing to fail to take any further action. As I outline in Section 8.14 and Section 8.15, I think there were several options that could have been taken by a reasonable ordinary GP acting with usual skill and care, either to repeat an ultrasound scan or to refer to gynaecology, as discussed at Section 8.17 this does indeed happen and therefore, as I outline at Section 8.18 I think the care falls within the range I would expect.

8.44. In May 2018, some experts would take the view that it was below the reasonable acceptable standard to not continue the referral to gynaecology. As outlined at Section 8.20 it is not clear to me why this did not continue to progress based on the available facts. Additional facts, such as the hospital booking system, the electronic referral system, or internal practice tasks may help to clarify the situation.

8.45. In November 2018 some experts may take the view that it was reasonable to advise MP to arrange an appointment and a follow up blood test in 8 weeks. In my view, given the ongoing anaemia in the absence of periods and weight loss, it was necessary to arrange a face to face examination within two

weeks, or, as a bare minimum to ask additional symptoms such as whether there was any difficulty swallowing, chest pain, breathlessness, or abdominal pain.

9. Statement of conflicts

9.1. I confirm that I have no conflict of interest of any kind, other than any which I have already set out in this report. I do not consider that any interest which I have disclosed affects my suitability to give expert evidence on any issue on which I have given evidence and I will advise the party by whom I am instructed if, between the date of this report and the trial, there is any change in circumstances which affects this statement.

10. Statement of Truth

10.1. I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth

11. Declaration

11.1. I am aware that my duty as an expert witness is to the court and I have complied with that duty. I confirm that I have no conflict of interest of any kind, other than any which I have already set out in this report. I do not consider that any interest which I have disclosed affects my suitability to give expert evidence on any issue on which I have given evidence and I will advise the party by whom I am instructed if, between the date of this report and the trial, there is any change in circumstances which affects this statement. This report is true to the best of my knowledge and belief.

A My experience and qualifications

I have completed the Cardiff University Bond Solon Civil Expert Certificate and am a member of the Expert Witness Institute. I am registered with the GMC (7047284).

I am a practising GP with a licence to practise, working 4-6 clinical sessions per week, pre- dominantly in-

hours but also in the out of hours setting. I am a Partner in a semi-rural practice of 5,500 patients in South Gloucestershire. I work as an independent GP in the role of senior shift clinician (clinical coordinator) for the out of hours provider in Bristol, North Somerset and South Gloucestershire, covering a population of around 900,000.

I have seen and cared for many people with fibroids and menorrhagia. I manage around 200 blood test results per week and see people with menorrhagia / fibroids around once every six weeks.

I also work as a clinical academic at the University of Bristol, where I completed a Ph.D. on the diagnosis of dementia, funded by a personal fellowship of £321,248 from the Wellcome Trust.

I graduated top of my class, with the University Student of the Year prize, having obtained the top marks in the undergraduate examinations in every year of the undergraduate program.

A.1 Employment

Role	**Organisation**	**Date commenced**
Partner	Streamside Surgery	2015-
Managing (senior) Partner from 2021		
GP	Brisdoc Out of Hours	2015-
Academic GP	University of Bristol	2015-
Clinical Lead - Analytics	CCG *	2021-
Board Director	Avon LMC †	2017-
GP	Devon Doctors Out of Hours	2021-
Previous Roles		
GP	Medvivo (Bath) Out of Hours	2018-19
GP Trainee	Bristol	2011-15
Rotations: A&E Medicine ENT O&G GP		
Foundation Doctor	Bristol	2009-11
Rotations: Medicine Surgery Medicine Neurosurgery Medicine GP		

* Bristol North Somerset & South Gloucestershire CCG

† Local Medical Committee

A.2 Education

- 2020 **PhD** *University of Bristol* Approaches to diagnosing dementia syndrome in General Prac- tice: Determining the value of gestalt judgement, clinical history and tests
- 2015 **MRCGP** *Royal College of General Practitioners*
- 2011 **MRCP (UK)** *Royal College of Physicians*
- 2009 **MB ChB Hons.** *University of Manchester*. Honours or Distinction in every examination
- 2008 **MPhil** *University of Keele* Prevalence and characteristics of pain, fatigue and combinations of these symptoms: a cross-sectional survey and follow-up study

A.3 Prizes & Awards

- 2015 **Best Oral Presentation** National GP ACF Conference
- 2014 **Best Oral Presentation** National GP ACF Conference
- 2014 **Winner** NIHR New Media Competition
- 2014 **Finalist** Vasco de Gama European Junior Researcher of the Year
- 2009 **Winner** Student of the year Keele University, Premier University award, £5000
- 2003-2009 **Best overall performance every year; Honours or distinction in every exam** Undergraduate Medicine Examinations year 1-5, Distinction at Finals

A.4 Administration

- 2020- Committee Member National Institute for Health and Care Excellence (NICE) **Diagnostics Advisory Committee**
- 2016-2020 Committee Member **HTA Prioritisation Committee A: Out of Hospital Care**

A.5 Grants

Principle Investigator on Grants totalling £398,910 and Co-Applicant on further Grants totalling £826,831

A.6 Publications

1. Creavin S, Fish M, Bayer A, Gallacher J, Ben-Shlomo Y. Decline in Cognition from Mid-Life Improves Specificity of Mini-Mental State Examination: Diagnostic Test Accuracy in Caer- philly Prospective Study (CaPs). 2022 doi: 10.3233/JAD-220345
2. Creavin ST, Noel-Storr AH, Langdon RJ, Richard E, Creavin AL, Cullum S, Purdy

S, Ben- Shlomo Y. Clinical judgement by primary care physicians for the diagnosis of all-cause dementia or cognitive impairment in symptomatic people. doi: 10.1002/14651858.CD012558.pub2

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4. Merriel SWD, Pocock L, Gilbert E, Creavin S, Walter FM, Spencer A, Hamilton W. Systematic review and meta-analysis of the diagnostic accuracy of prostate-specific antigen (PSA) for the detection of prostate cancer in symptomatic patients. 2022. doi: 10.1186/s12916-021-02230-y
5. Creavin ST, Haworth J, Fish M, et al. Clinical judgment of GPs for the diagnosis of dementia: a diagnostic test accuracy study. 2021. DOI: 10.3399/BJGPO.2021.0058.
6. Seume P, Bevan S, Young G, et al. Protocol for an 'efficient design' cluster randomised con- trolled trial to evaluate a complex intervention to improve antibiotic prescribing for CHIldren presenting to primary care with acute COugh and respiratory tract infection: the CHICO study. 2021. DOI: 10.1136/bmjopen-2020-041769.
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10. Creavin S, Cullum S, Haworth J, et al. Towards improving diagnosis of memory loss in gen- eral practice: TIMeLi diagnostic test accuracy study protocol. 2016. DOI: 10.1186/s12875- 0160475-2.
11. Creavin S, Wisniewski S, Noel-Storr AH, et al. Mini-Mental State Examination (MMSE) for the detection of dementia in clinically unevaluated people aged 65 and over in community and primary care populations. 2016. DOI: 10.1002/14651858.CD011145.pub2.

12. Creavin S, Fish M, Gallacher J, Bayer A, and Ben-Shlomo Y. Clinical history for diagnosis of dementia in men: Caerphilly Prospective Study. 2015. DOI: 10.3399/bjgp15X686053.

13. Creavin A, Creavin S, Brown R, and Harrad R. Why can't my child see 3D television? 2014. DOI: 10.12968/hmed.2014.75.8.457.

14. Davis D, Creavin S, Noel-Storr A, et al. Neuropsychological tests for the diagnosis of Alzheimer?s disease dementia and other dementias: a generic protocol for cross-sectional and delayedver- ification studies. 2013. DOI: 10.1002/14651858.CD010460.

15. Creavin S, Gallacher J, Bayer A, Fish M, Ebrahim S, and Ben-Shlomo Y. Metabolic syndrome, diabetes, poor cognition, and dementia in the caerphilly prospective study. 2012. DOI: 10.3233/JAD-2011-111550.

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B Acronyms and Glossary

Acronyms

CIN	Cervical intra-epithelial neoplasia pages 4, 15
HPV	Human papillomavirus page 4
MCV	mean corpuscular volume pages 7, 10, 20
NHS	National Health Service page 3
NICE	National Institute for Health and Care Excellence page 20

Glossary

MCV	An mean corpuscular volume blood test measures the average size of your red blood cells. Red blood cells carry oxygen from your lungs to every cell in your body. It is useful in understanding the cause of anaemia pages 4, 9
NICE	an executive non-departmental public body of the Department of Health and Social Care in England that publishes guidelines. Established 1999 as the Na- tional Institute for Clinical Excellence; renamed 1 April 2005 as National In- stitute for Health and Clinical Excellence; renamed the National Institute for Health and Care Excellence on 1 April 2013 page 14
dysmenorrhoea	dysmenorrhoea is painful cramping, usually in the lower abdomen, which oc- curs shortly before or during menstruation, or both. page 7
ferritin	Ferritin is a blood protein that contains iron. A ferritin test helps your doctor understand how much iron your body stores. If a ferritin test reveals that your blood ferritin level is lower than normal, it indicates your body's iron stores are low and you have iron deficiency. As a result, you could be anemic pages 7, 10
haematocrit	A hematocrit (he-MAT-uh-krit) test measures the proportion of red blood cells in your blood. pages 4, 7, 10
haemoglobin	Haemoglobin (Hb) is a protein found in the red blood cells that carries oxygen in your body and gives blood its red colour pages 4, 7–10, 14

menorrhagia	Menorrhagia is the medical term for menstrual periods with abnormally heavy or prolonged bleeding. Although heavy menstrual bleeding is a common con- cern, most women don't experience blood loss severe enough to be defined as menorrhagia. pages 4, 7, 11, 12, 14, 15
platelet	Platelets, or thrombocytes, are small, colorless cell fragments in our blood that form clots and stop or prevent bleeding pages 4, 10
wcc	White blood cells are a part of your immune system that protects your body from infection. These cells circulate through your bloodstream and tissues to respond to injury or illness by attacking any unknown organisms that enter your body. pages 4, 10

C Statement of methodology

I reviewed the documents that I was sent in line with the instructions that I received and considered. I formulated my opinion on the basis of the facts in light of my experience, qualifications, and knowledge of the relevant literature.

D List of documents that I have examined, with copies of important extracts

D.1 Publications

References

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