Neutral Citation Number: [2020] EWHC 158 (QB)

Case No: QB-2017-004080

**IN THE HIGH COURT OF JUSTICE**
**QUEEN'S BENCH DIVISION**

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: Friday, 31st January 2020

**Before** :

**ANDREW LEWIS QC**
**(sitting as a Deputy Judge of the High Court)**

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**Between:**

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| **Leia BRADY** | **Claimant** |
| **- and -** | |
| **SOUTHEND UNIVERSITY HOSPITAL NHS FOUNDATION TRUST** | **Defendant** |

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**Jamie Carpenter** (instructed by **Gadsby Wicks Solicitors**) for the **Claimant**
**Anna Hughes** (instructed by **Browne Jacobson LLP**) for the **Defendant**

Hearing dates: 14-18 October 2019

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# Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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ANDREW LEWIS QC

**Andrew Lewis QC:**

## Introduction

1. The Claimant claims that a delay in diagnosing an actinomycosis infection in 2013 led to surgical drainage of a psoas abscess in February 2014 and further procedures that have left her with extensive abdominal scarring and ongoing symptoms. Quantum was agreed by the parties in the sum of £56,000. Liability remained in dispute.

## Background

2. The basic facts of the case are largely agreed. Detailed chronologies were helpfully set out in Counsels' skeleton submissions and the Claimant's chronology.

3. On 24th May 2013, the Claimant underwent a laparoscopic appendectomy at the Southend University Hospital ("SUH"). During the procedure, *"acute appendicitis, turbid free pelvic fluid"* were found, and a standard appendectomy with pelvic suction and washout were performed.

4. On 1st August 2013, the Claimant attended her general practitioner with acute epigastric pain which had started the previous night. She was referred to the surgical assessment unit (SAU) at the SUH on the same day. She reported central abdominal pain and pain in the left upper quadrant. Diagnoses of gastritis, gallstones and pancreatitis were considered, and investigations ordered. Blood tests showed raised inflammatory markers (white cell count and CRP).

5. On 2nd August 2013, an ultrasound scan was reported as *"heterogenous ill-defined mass in epigastric region anterior to pancreas"*. A CT scan for further evaluation was recommended.

6. On 5th August 2013, a CT scan ("the first scan") was reported by Dr Tam, Consultant Radiologist, as follows:

> *"There is a mass in the right upper quadrant. There is hyperdense and contains areas of fat and there is some localised hyper-vascularity. It is separate from the large bowel and stomach. The appearances would be consistent with omental infarction rather than a primary mesenteric/omental neoplasm. There is no evidence of intussusception. After clinical discussion with the Surgical SPR, I gather she has had a recent laparoscopic appendectomy which makes the diagnosis of omental infarction most likely.*
>
> *Comment: omental infarction".*

7. The Claimant's pain had improved by then and the radiological 'most likely' diagnosis was accepted by the clinicians. Accordingly, on 6th August 2013, the Claimant was discharged home.

8. At an Outpatients appointment on 21st August 2013, the Claimant reported continuing pain. At that stage, the Surgical Registrar, Mr Lawrence, noted that the omental

infarction was *"unrelated to"* the appendectomy, and adopted a conservative management approach with a review in three weeks.

9. On 18th September 2013, the Claimant was reviewed in the Outpatients clinic by Mr Tsokodayi, who noted a *"craggy lump"* in the Claimant's upper abdomen, and that she was still in pain. She was immediately admitted to the SAU. There, she was noted to have ongoing spasmodic abdominal pain, and blood tests confirmed raised CRP and white cell count. The Claimant was commenced on a 7-day course of intravenous antibiotics, Augmentin. The initial plan was to undertake a diagnostic laparoscopy the following day. However, at 19:20 hours, the Claimant was reviewed by Mr James Wright, Consultant Surgeon, who decided that a CT scan should be performed.

10. On 20th September 2013, the "second scan" was reported by Dr Jain, a Consultant Radiologist, in the following terms:

> *"Clinical information: patient had lap appendectomy in May 13. Subsequently had ongoing spasmodic abdominal pain. Had CT scan in August which ?omental infarction. Patient has had recent deterioration in abdominal. Palpable mass in RUQ and difficulty eating, nausea. Raised inflammatory markers ?necrotic omentum ?partially obstructing bowel ?collection.*
>
> *Report: Lung bases are clear. Liver looks unremarkable. There is a large mass which is vascular grossly related to the posterior aspect of the right abdominal wall. This requires for the urgent evaluation. This is causing gastric outlet obstruction. Also encasement of the right transverse colon. There is nodularity in the entire abdomen. And this requires further urgent evaluation. This case has been discussed with the referring consultant".*

11. It is clear from the report that Dr Jain and Mr Wright discussed the case. Dr Jain's evidence confirmed her uncertainty as to a diagnosis and that she would have recommended performing surgery or a biopsy. The records confirm that a tissue sample was required, but that Mr Wright intended to speak to a specialist. The Claimant requested and was granted home leave over the weekend on oral antibiotics, with a view to returning and continuing IV antibiotics.

12. It was not until 25th September 2013 that Mr Wright's ward round recorded that the Claimant's scan had been sent to the Royal Free Hospital for review and a biopsy may be needed. A note by an SHO later that day recorded that Mr Wright had spoken to Miss Hughes, a Specialist Upper GI Surgeon at the Royal London Hospital, who had reviewed the scans and advised that it *"looks like omental infarction"* so that the Claimant did not need an urgent gastroscopy. As the Claimant's condition had improved with the antibiotic treatment, the Claimant was discharged home.

13. There is, in the records, a subsequent letter from Mr Wright, typed on 17th October 2013, stating:

> *"I sent the scans across to Bart's Hospital for Frances Hughes, one of the Upper GI Surgeons, to look at after discussing the case with her. She reviewed the CT scans with several of the GI*

> *specialist radiologists at Bart's Hospital and they also feel that this diagnosis of spontaneous omental infarct is correct".*

14. It appears that no follow up appointment was arranged as anticipated. However, in October 2013, the Claimant's partner phoned the SUH and asked for the Claimant to be seen as she was having further pain. The Claimant appears to have attended, but not been willing to wait to be seen. Therefore, it was not until further contact was made that an Outpatient appointment with Mr Wright on 8th November 2013 took place (6 weeks following discharge). The Claimant then reported that she was having occasional discomfort and pain and had an episode of vomiting. Examination revealed an abdominal mass still present. Mr Wright advised the Claimant that *"we do not have a definite histological diagnosis at the moment but obtaining that is a risk and we should only do so if absolutely necessary"*. Mr Wright arranged a gastroscopy *"to exclude significant gastric outlet obstruction/luminal pathology"* and planned a repeat CT scan in about 4 weeks' time. It was noted that the advice from the Royal London was that it could take a number of months to achieve resolution of the condition.

15. The Claimant claims she was given an appointment for a gastroscopy in around late December 2013 but did not attend as she was unwell and cancelled the appointment. The Defendant's records establish that gastroscopies were arranged for 26th November 2013 and 3rd January 2014, which the Claimant failed to attend and in consequence of which she was discharged. The Claimant's case is that her condition improved for a few weeks, but that she started to get pain in the left side of her back and down her left leg in January/early February 2014.

16. On 16th February 2014, the Claimant attended the A&E Department of the SUH, complaining of a one-week history of left-sided abdominal pain and vomiting. A CT scan the following day demonstrated a left-sided psoas abscess containing gas and fluid, which was drained surgically. The previous abdominal mass was no longer visible. Microbiological analysis confirmed the infecting organism as actinomyces. The Claimant underwent a number of further surgical procedures under general anaesthetic and was discharged home on 26th February 2014. From 19th February 2014, the Claimant was under the care of Dr Day, a Consultant in infectious Diseases. He recommended removal of her intrauterine contraceptive device (IUCD), although he thought this less likely to be the source of infection. It was removed on 20th February 2014, sent for culture and reported as negative for actinomyces. On 3rd April 2014, he wrote to the Claimant's GP explaining:

> *"I have explained to Leia and her partner the nature of the infection, which was most likely triggered by the release of intestinal bacteria by her episode of appendicitis in May last year. As you know, she had three subsequent admissions prior to the latest one with abdominal pain. CT imaging demonstrated an abscess of her anterior abdominal wall in September. She was also noted to have what, at the time, was thought to be omental infarction although with hindsight possibly were deposits of infection".*

## Issues

17. It is the Claimant's case that the omental mass observed on the first and second CT scans was an actinomycosis infection and not an omental infarction. That the source of the infection was the turbid fluid noted to have leaked from her appendix in May 2013. That appropriate action by any of Dr Tam, Dr Jain or Mr Wright would have resulted in the omental mass being biopsied and a diagnosis of actinomycosis being made. The Claimant contends that the source of the psoas abscess, found in a different part of the Claimant's abdomen, was the same. The Claimant's case is that the omental mass did respond to antibiotics provided and resolved, but that they did not prevent the development of the psoas abscess. It is agreed that if the omental mass was an infection, the infection would have resolved completely with a course of intravenous antibiotics, followed by a year of oral antibiotics. Accordingly, the subsequent deterioration and treatment in February 2014 would have been avoided.

18. The Defendant's case is that the Claimant probably suffered two rare conditions, an omental infarction and actinomycosis. However, in any event, the medical practitioners acted reasonably in concluding that the abdominal mass in 2013 was probably an omental infarction and treating it conservatively without undertaking a biopsy.

19. The Court is therefore required to decide the following issues:

    i) Was the First CT Scan reported in a reasonable manner? In particular, was it reasonable to conclude that the most likely diagnosis was omental infarction?

    ii) If it is found that the First Scan was incorrectly reported would proper reporting have led to a biopsy?

    iii) Was the Second CT Scan reported in a reasonable manner?

    iv) Was it mandatory to perform a biopsy in September 2013 to investigate the mass?

    v) Would a biopsy of the mass in August or September 2013 have confirmed actinomycosis?

## Law

20. Counsel disagree as to the appropriate standard of care to be applied insofar as this case can be considered a "pure diagnosis" case. In my judgment the consideration of this claim as a 'pure diagnosis' case is of limited effect in respect of the allegation of negligence in wrongly diagnosing omental infarction, particularly where the Claimant's case is that there were a range of diagnoses that could have been reached on interpretation of the scans, and the alleged negligence is a failure to perform a test to confirm a specific diagnosis. I consider the law to be applied to the issues that I have to decide in this case in the following paragraphs.

21. The classic statement for the standard of care required of a medical professional is McNair J's direction to the jury in *Bolam v Friern HMC* [1957] 1 WLR 582:

> *"[The doctor] is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible*

> *body of medical men skilled in that particular art... Putting it the other way round, a man is not negligent, if he is acting in accordance with such a practice, merely because there is a body of opinion who would take a contrary view."*

22. That test does not allow a defendant to avoid liability simply by producing evidence that a respectable minority of practitioners would have acted similarly. In *Bolitho v City and Hackney HA* [1998] AC 232 Lord Browne-Wilkinson took the opportunity to introduce the well-known caveat to the *Bolam* test that the *"respectable minority practice"* must have a sound and logical basis:

> *"The court has to be satisfied that the exponents of the body of opinion relied upon can demonstrate that such opinion has a logical basis. In particular, in cases involving, as they so often do, the weighing of risks against benefits, the judge before accepting a body of opinion as being responsible, reasonable or respectable, will need to be satisfied that, in forming their views, the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter."*

23. It is important to note that *Bolam* and other appellate decisions endorsing that test have been concerned with what can be called "treatment cases". Cases where a doctor recommends or undertakes treatment or further diagnostic procedures. In such cases, there are often choices and options available and risks and benefits that need to be considered. However, it has been recognised that in some areas of medical practice, such as radiology or histopathology, there should be limited scope for any genuine difference of opinion. A diagnosis based upon a scan is usually either right or wrong. In these "pure diagnosis" cases, there is no weighing of risks against benefits, and no decision to treat or not to treat, just a diagnostic or pre-diagnostic decision, which is either right or wrong, and either negligent or not negligent. However, in determining the proper approach to considering pure diagnosis cases, this court is bound by the Court of Appeal decision and approach in *Penny v East Kent HA* [2000] Lloyds Rep Med 41.

24. In that case four cervical smears taken from three claimants between 1989 and 1992 were reported by primary cyto-screenings as negative (i.e. no abnormal cells seen). Unfortunately, each claimant went on to develop invasive adenocarcinoma of the cervix requiring radical surgery. Early detection would have resulted in minor surgery only. The claimants contended that each smear slide exhibited abnormalities which no reasonably competent primary cyto-screener could, with confidence, treat as negative.

25. The decision of the judge at first instance was based on his view that the *Bolam* test would only apply where there were differing views as to what constituted acceptable professional practice. Because the experts agreed that the cyto-screeners were wrong in the way that they had interpreted the slides no question of acceptable practice arose. On the judge's primary reasoning any misdiagnosis or misreporting was ipso facto fundamentally inconsistent with acceptable professional practice. In the alternative to that basis for his decision, the judge applied the *Bolam* test and still found against the defendant. Counsel and the Appellate Court in *Penny* accepted that *Bolam* and *Bolitho*

applied, thereby avoiding an analysis of the judge's primary reasoning. Lord Woolf MR, delivering the Judgment of the whole Court (May and Hale LJJ), concluded:

> *"26. ...The screeners were exercising skill and judgment in determining what report they should make and in that respect the* Bolam *test was generally applicable. Later authorities make clear that this is the appropriate standard to apply. However, as we will explain, the fact that two sets of competent experts genuinely hold differing opinions as to whether or not at the relevant date, which is the date of the examination, the screeners could without being negligent have diagnosed the smears as negative does not necessarily provide the solution to the dispute on liability in these cases."*
>
> *27. There is the qualification which Lord Browne-Wilkinson identified in the passage already cited from his opinion in* Bolitho. *In addition the* Bolam *test has no application where what the judge is required to do is to make findings of fact. This is so, even where those findings of fact are the subject of conflicting expert evidence. Thus in this case there were three questions which the judge had to answer:*
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> *i) What was to be seen on the slides?*
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> *ii) At the relevant time could a screener exercising reasonable care fail to see what was on the slide?*
>
> *iii) Could a reasonably competent screener, aware of what a screener exercising reasonable care would observe on the slide, treat the slide as negative?*
>
> *28. Thus, logically the starting point for the experts' reasoning was what was on the slides. Except in relation to the slide known as Palmer 2, as to which there was a striking conflict, as a result of a meeting which took place between the experts they were in substantial but by no means total agreement. In so far as they were not in agreement, the judge had the unenviable task of deciding as a matter of fact which of the experts were correct as to what the slides showed. This was a task which required expert evidence. However the evidence having been given, the judge had to make his own finding on the balance of probabilities on this issue of fact in order to proceed to the next step in answering the question of negligence or no negligence. Having come to his own conclusion as to what the slides showed, the judge had, therefore, then to answer the 2nd and 3rd questions in order to decide whether the screener was in breach of duty in giving a negative report. Whether the screener was in breach of duty would depend on the training and the amount of knowledge a screener should have had in order to properly perform his or her task at that time and how easy it was to discern what the judge had found was on the slide. These*

> *issues involved both questions of fact and questions of opinion as to the standards of care which the screeners should have exercised. As already indicated, there was virtually no evidence of the actual training provided to the primary screeners. The approach of the experts was to give their opinion, based on their respective interpretations of what was on the slide, on the general question of whether a reasonably competent screener, exercising the appropriate standard of care, could treat the slide as negative."*

26. *Penny* has been recently considered in detail in the judgment of Kerr J in *Muller v Kings College Hospital NHS Foundation Trust* [2017] EWHC 218. Kerr J's reluctance to accept the law as stated in *Penny*, can clearly be seen in the following passages:

> *"72. Unfortunately, the Court of Appeal did not expressly endorse the judge's proposition that the* Bolam *principle did not apply because there was no issue of whether a particular course of conduct was acceptable medical practice. However, the Court of Appeal did allow a liberal invocation of Lord Browne-Wilkinson's* Bolitho *exception, no doubt because this was, in Lord Browne-Wilkinson's words, not a case where there was any "weighing of risks and benefits", which should attract particular deference to the views of the experts, whether or not unanimous.*
>
> *73. I have had to review that case law in some detail in order to draw from it, with some regret, the conclusion that even in a pure diagnosis case such as this, the exercise of preferring one expert to another must be viewed through the prism of the* Bolitho *exception, rather than, as would be preferable, by rejecting the very notion that the* Bolam *principle can apply where no "*Bolam*-appropriate" issue arises. I respectfully agree with Judge Peppitt QC that the latter approach is more coherent, and I return to my starting point: that McNair J did not have a pure diagnosis case such as this in mind when he gave his direction to the jury.*
>
> *74. If in this case the question is formulated in* Bolam *terms as "whether the practice of the professional making the diagnosis accorded with a respectable body of opinion within the profession", that question is indistinguishable in practice from the question whether the error was one which would be made by a professional exercising reasonable skill and care; the very test propounded by Lord Clyde in* Huntley.
>
> *75. In a case involving advice, treatment or both, opposed expert opinions may in a sense both be "right", in that each represents a respectable body of professional opinion. The same is not true of a pure diagnosis case such as the present, where there is no weighing of risks and benefits, only misreporting which may or may not be negligent. The experts expressing opposing views on that issue cannot both be right. And the issue*

> *is, par excellence a matter for the decision of the court, which should not, as a matter of constitutional propriety, be delegated to the expert.*
>
> *…*
>
> *79. However, I am bound by the law as it currently stands, to approach that issue by reference to a possible invocation of the* Bolitho *exception. I must not, therefore, reject Dr Foria's view unless I am persuaded that it does not hold water, in the senses discussed in Lord Browne-Wilkinson's speech in* Bolitho *and developed in other cases: that is to say, if it is untenable in logic or otherwise flawed in some manner rendering its conclusion indefensible and impermissible."*

27. It follows that determining what the CT scans show (e.g. (i) omental infarction or infection, (ii) whether the mass involved the lesser omentum, (iii) whether the mass was infiltrating the transverse colon), are essentially questions of fact for the Court to determine on the balance of probabilities, with the assistance of the witness and expert evidence provided. It is a separate question as to whether Dr Tam's or Dr Jain's assessments, even if conflicting with the Court's findings of fact, were negligent or not negligent. In that respect, I judge their work in accordance with *Penny* by invocation of the *Bolitho* exception. Insofar as I am required to assess their views on advancing differential diagnoses or recommending further investigation or treatment, as well assessing Mr Wright's conduct, there can be no question but that the *Bolam* test, with the *Bolitho* qualification, applies.

## Omental Infarction or Actinomycosis?

28. The fundamental question of fact before the Court is whether the omental mass present in 2013 was an omental infarction or actinomycosis. Whether it was one or other is not determinative of the allegations of breach of duty, but is determinative of causation. It is a question of fact that has to be decided on the balance of probabilities, with the benefit of receiving witness and expert evidence, but also with the benefit of hindsight knowing how events unfolded in 2014.

29. I received evidence from expert consultant radiologists, Dr Spratt on behalf of the Claimant and Dr Tolan on behalf of the Defendant. Both have distinguished careers and impressive CVs. Although presenting opposing views, I did not consider that either were simply advancing one party's case, even though, as Defendant's Counsel rightly pointed out, some of the language used by Dr Spratt in his reports could suggest otherwise. It is clear that Dr Tolan possessed greater experience and expertise in gastrointestinal radiology, and Dr Spratt, on my findings, made fundamental errors as to the precise location of the omental mass and surrounding anatomy. In particular, much of the reasoning in his report was based upon his opinion that the mass was not in the greater omentum at all whereas by his own subsequent admission it was in part. Further, I note that Dr Spratt confirmed that he had seen only 3 cases of omental infarction throughout his career whereas Dr Tolan saw them three or four times every year, and clearly had the greater relevant experience.

30. I also had the benefit of hearing from experts in infectious diseases, Dr Ellis on behalf of the Claimant and Dr Croft on behalf of the Defendant. Again, both experts sought to do their best to assist the Court. However, the experience and qualifications of Dr Ellis, a consultant in infectious diseases, were more impressive and far more relevant to the issues in this case. Dr Croft worked in public health medicine and did not possess the basic qualification (MRCP) which would enable him to begin training in infectious diseases, and he had never held a consultant post in infectious diseases. I particularly noted that Dr Croft's initial consideration of the case did not even reference the 'turbid fluid' found on appendectomy, which was an obvious source of infection for such an expert to consider. Where there is conflict in respect of their speciality, I prefer and accept the evidence of Dr Ellis.

31. The omentum is an apron of highly vascularised fatty tissue that drapes in front of the visceral organs of the abdomen. It acts as a protective layer absorbing fat and fighting injury and infection. An infarction within the omentum can occur as a result of either trauma or arising spontaneously. The infarction inevitably involves some reduction in vascular supply and the creation of dead tissue. It is a condition that is normally treated conservatively, as the dead tissue will normally absorb away into the rest of the body. However, it is a rare condition, with even the experts in the case having only seen a small number in their careers. An actinomycosis infection is an equally rare condition, and even Dr Croft, an expert, had never had to treat it himself.

32. It is agreed that the Claimant developed actinomycosis which led to the psoas abscess in the lower left quadrant of the Claimant's abdomen. I accept Dr Ellis's clear explanation that the most likely source of the infection was the Claimant's appendicitis, and the *"turbid free pelvic fluid"* observed prior to the performance of the appendectomy. I also accept his explanation that this eventually tracked into the lower abdomen, leading to the psoas abscess, and not via the omental mass. It is, of course, possible that the source of that infection and the development of the abscess was the Claimant's intrauterine device, that was noted to be ill-fitting and possibly irritating the cervical wall. I note the microbiology of the removed IUCD was negative for infection. However, Dr Tolan described the February 2014 scan in his report as showing *"increased soft tissue in the region of the left adnexa with low attenuation within it, which probably represents a hydrosalpinx"*. This, he considered, was indicative of an ascending infection caused by the IUCD. However, he was unable to tell whether the hydrosalpinx contained pus or water, and I readily accept Dr Ellis' view, as the appropriate expert on this issue, that if the source of the abscess had been the IUCD the expected findings would have been *"considerably more dramatic"* than a simple finding of fluid. Further, it is well recognised that a perforated appendix is the most common predisposing event for abdominal actinomycosis.

33. I therefore consider that the balance of probabilities favours the source of the infection leading to the February 2014 abscess, as the appendix operation of May 2013. Although, a more finely balanced decision, I am also persuaded, with the benefit of hindsight, that the omental mass seen in 2013 was probably not an infarction but, on reflection, an infection. In coming to that finding of fact I have been particularly influenced by the following factors:

    i) Although the appendectomy would have resulted in a degree of disturbance of the omentum it is not likely to have resulted in obvious trauma so as to have caused a traumatically induced infarction.

ii) A secondary infarction would more likely occur nearer to the location of the operation than the location of the mass in this case.

iii) Although raised inflammatory markers are consistent with both infarction and infection, the increasing size of the mass between the first and second scan favoured an infective process rather than an infarction.

iv) I consider it unlikely that the Claimant, having developed appendicitis, would then go on to suffer coincidentally two very rare conditions within the year (i.e. a spontaneous infarction and actinomycosis). This favours the conclusion that the same source of infection also tracked towards the greater omentum, leading to an infection and the mass that was, with hindsight, wrongly diagnosed as a probable omental infarction.

v) I accept Dr Ellis' evidence and analysis that there was a well-established causal mechanism for the infection. That its timing 2 to 3 months after surgery fits in with the known characteristics of abdominal actinomycosis. That the appearance of peritoneal nodularity in the second CT scan is consistent with a infective process. That the diagnosis is consistent with resolution of the omental infection following IV antibiotics and the failure of those antibiotics to eradicate the infection completely from the Claimant's body.

## The First Scan

34. The Claimant alleges that Dr Tam was negligent when reporting on the first CT scan, in proposing a diagnosis of omental infarction, rather than a malignancy or an infective process. My judgment that the mass was, with the benefit of hindsight, probably not an omental infarction, does not, as suggested by Claimant's counsel, inevitably lead to a conclusion that Dr Tam was negligent in diagnosing the mass as a probable omental infarction at the time that he did.

35. I had the benefit of hearing Dr Tam's evidence. His role as an interventional radiologist meant that he saw more of the abnormal cases of infection and malignancy than other radiologists at SUH. He presented as a considered Radiologist, who gave proper and careful thought to coming to the conclusion that he did. Although Dr Tam did have difficulty explaining what features not shown on the scan supported his conclusion, he was clear that omental infarction was the most likely radiological diagnosis based on the features described in the report (e.g. the location of the mass in the omentum and that it was hyperdense and contained fat). This was supported by Dr Tolan, who concluded *"that a large majority of responsible radiologists would have inferred that the most likely diagnosis would have been omental infarction and that all other lesions would have been much rarer"*. Dr Tolan considered the scan representative of omental infarction and viewed Dr Tam's reported findings an 'exam answer' identifying key features of an omental infarction (i.e. new mass right quadrant, not involving the bowel, involving the greater omentum, fatty deposits and high density). Although Dr Spratt contended that Dr Tam's approach *"illogical and ill-founded"* I have had no difficulty in rejecting his expert evidence on this point.

36. In reviewing the CT scan with the radiological experts, and hearing their expert evidence, I formed the following views:

i) Dr Spratt's strong criticism of Dr Tam was based upon his initial view that the mass was in the lesser omentum and did not involve the greater omentum at all. This erroneous view provided a basis for him rejecting an argument that an omental infarction was present. However, he himself conceded that he was wrong, recognising that at least part of the mass entered the greater omentum. Dr Tam himself gave more accurate evidence identifying that the mass did not invade the hepatocolic ligament, but was in the greater Omentum at the edge.

ii) Upon reviewing the scans 'dynamically' with both experts I was wholly accepting of Dr Tolan's description of the anatomy of the abdomen during the review of the CT scans, and considered that Dr Spratt had misplaced the location of the omental mass. I accepted Dr Tolan's description that the lack of proximity meant there could not be any relationship between the mass and the lesser omentum, given the distance from the portal structures. As Dr Tolan advised and demonstrated to this court the mass was only on the greater omentum. Having made such a fundamental error, it is difficult to accept Dr Spratt's criticism that the report of the first scan should not have diagnosed an omental infarction.

iii) I accept Dr Tolan's evidence, based upon his far greater experience, that the radiological appearances of the first scan were similar to examples of omental infarction that he had seen in his own clinical practice. The limited literature available evidences that an omental infarction will not present in a classic or wholly uniform way. The very small study by *Oh et al* (2011) identified 4 different classifications for the secondary omental infarctions considered (which I accept appeared encapsulated), and there are the variations illustrated in the *Yoo et al* (2007) and *Choh et al* (2017) papers. The Claimant argues with some merit that although there are similarities in the presentations in those articles they are not the same as the mass in this case. Although that assists in part in accepting that the mass was on balance an infection rather than infarction, it does not deflect from Dr Tolan's clear expert opinion or the confident view of Dr Tam at the time of the first scan.

iv) I reject Dr Spratt's view that the thickening of the colonic wall (particularly as seen on the second scan) evidenced 'invasion' as anticipated with a developing severe infection. It was accepted that an inflammatory mass can produce secondary thickening of adjacent structures, and that was what the scans clearly demonstrated to me rather than any 'invasion'. Therefore, the criticism that the mass should have been described as 'infiltrative' fails completely and supports the reasoning behind the diagnosis of an omental infarction at that time.

v) Contrary to the assertion made in his initial report Dr Spratt accepted in evidence the fact that the boundaries of the mass were ill-defined did not exclude a diagnosis of an omental infarction. This was something that Dr Tam confirmed in evidence stating that it did not mean the diagnosis of omental infarction was less likely. A position supported by Dr Tolan who confirmed that ill-defined borders is not a key feature and does not help to differentiate one disease from another.

vi) The presence of hypervascularity did not rule out omental infarction, particularly in the early stages which may have been the point when the first

scan was performed. Although I accept that the continuation of the hypervascularity thereafter made the diagnosis less likely by the time of the second scan, it was not inconsistent with such a diagnosis, even at that stage.

vii) The presence of fat within the mass at that stage was consistent with omental infarction.

viii) There was no pus demonstrated in the mass, which would have been indicative of an infective cause.

37. Dr Tam's report suggests that he considered the appearance of the scan was consistent with omental infarction even before he became aware that the Claimant had undergone an appendectomy in May 2013. Knowledge of the operation at that stage would have reasonably endorsed his view on the diagnosis. The operation note for the appendectomy confirms that the surgeons were in the vicinity of the mass as they examined the gallbladder and found it to be normal which might cause some traction on the omentum. Although for reasons stated earlier I reject that being the cause of the mass, it was a factor available to Dr Tam when considering the likely diagnosis. In my judgment Dr Tam was not negligent to conclude that omental infarction was the *"most likely"* diagnosis as described in his report. At that stage in the medical history he had a proper basis and radiological appearances supporting his opinion.

38. I note that the *"Standards for the Reporting and Interpretation of Imaging Investigations"* provided by the Royal College of Radiologists recommend that:

> *"The level of certainty or doubt surrounding a radiological diagnosis should be clearly indicated in the report. If a definitive diagnosis is given it should be assumed that this will be used for patient management.*
>
> *If a definitive diagnosis is not possible, then advice about further investigation should be given on the basis of knowledge of the relative accuracy and applicability of the suggested investigations… Further investigations should be suggested only where necessary, particularly when it entails discomfort or radiation exposure for the patient."*

In my judgment Dr Tam's description in the body of the report that omental infarction was the *"most likely"* diagnosis, was not only justifiable at that stage, but complied with RCR advice in identifying the level of certainty of his view (i.e. *"most likely"*). Given that reasonable view, even though a definitive diagnosis was not given, the confidence with which he reasonably held that opinion at that stage, did not warrant advice from him about further invasive investigations.

39. I have also considered whether Dr Tam's report was misleading and negligent in any other respects. The Claimant complains that a definitive diagnosis should not have been given and that alternatives could not be ruled out. Therefore, the report should have at least mentioned differential diagnoses of infection and malignancy in particular.

40. Bearing in mind RCR guidance, I do not consider it negligent not to have identified malignancy as a differential diagnosis in the conclusion of the report. Dr Tam had

clearly given consideration to it as evidenced by the body of his report. The clinicians would have read the whole of the report and recognised, like Dr Tam, that the Claimant was relatively young and had recently undergone an abdominal procedure without any sign of malignancy being present at operation. Dr Tam rightly considered this possibility so remote that he should not be regarded as negligent in failing to specifically identify it as a differential diagnosis. I accept Dr Tolan's view that a primary malignancy was *"extremely unlikely"* and that on the scan it did not look like a malignancy. It is therefore clear to this Court that highlighting it as a differential diagnosis to be further investigated at that stage was inappropriate. Indeed Mr Antrum, the Claimant's surgical expert, accepted that, Mr Wright *"could probably rule out malignancy"* based on the information available to him in September 2013, and Mr Rew agreed that the mass was unlikely to be malignant. Accordingly, in my judgment, it cannot be maintained that a biopsy was necessary to rule out malignancy at either the first or second scan. Indeed, even if mentioned as a differential diagnosis at the first scan, to have embarked upon any invasive investigations for such a remote possibility at that early stage in the presentation was inappropriate and therefore, in my judgment, highly unlikely to have occurred.

41. Further, I regarded Dr Spratt's evidence as inconsistent and confusing on the reporting of malignancy. At one stage he suggested that a radiologist should never exclude malignancy and that every radiologist considering a mass should identify cancer as a possibility. That seems to this Court to partially defeat the purpose of obtaining a radiologist report to narrow down the differential diagnoses and identify the most likely diagnosis so as to guide the clinicians towards appropriate further investigations and treatment. In my judgement that is exactly what Dr Tam did. It may be that other radiologists would not have done so with such confidence but that does not render his approach in any way negligent.

42. Similarly, it is important to note that there were no obvious signs or symptoms to support a diagnosis of a severe infection. Certainly not sufficient to embark upon undertaking a biopsy and the inherent risks that that involved (e.g. bleeding, infection, anaesthetic risks), particularly bearing in mind that by the time of the first scan the Claimant's symptoms were improving. I accept that Dr Tam acted reasonably at that stage in taking the view that infection should not be a differential diagnosis as it did not look like an abscess. I also accept Dr Tolan's view that at that stage *"a large majority of radiologists would not expect to see a delayed atypical infection relating to appendicitis in the right upper quadrant supracolic omentum and that this would be considered by a radiologist to be extremely unusual"*.

43. Noting that this was the first occasion that the Claimant had attended hospital with abdominal pain following the appendectomy, I consider that Dr Tam's report was reasonable and represented an acceptable practice. It did not make a single definitive diagnosis, but merely presented the "most likely" diagnosis for the clinicians to work with, which it was reasonable to do at the time. It did not completely exclude malignancy or infection, but rightly considered them so unlikely as not to encourage the clinicians towards investigating them further. I reject Dr Spratt's view that it is always beneficial to give a differential diagnosis. Where Dr Tam reasonably, in my judgment, considered the most likely diagnosis to be omental infarction at that stage, I do not consider he was under a duty to state in his report either that there were potentially significantly less likely diagnoses such as infection or malignancy, or to

recommend further investigation. As Dr Tam stated, it is sometimes important to give differential diagnoses, but not always, and this was one such case. I accept Dr Tolan's considered view that Dr Tam was acting reasonably in diagnosing omental infarction at that stage as the most likely diagnosis. Dr Tolan went so far as to state that he would have congratulated Dr Tam on making the diagnosis that he did.

44. In any event, if this court were wrong and differential diagnoses of malignancy and infection ought to have at least been mentioned, I do not consider that that would, on a balance of probability, have led to a biopsy being undertaken and the correct diagnosis of actinomycosis being made at that stage. Even if omental infarction was only a reasonable differential diagnosis, it would have been high on the list for reasons identified above, and with the Claimant's improvement during her stay in hospital, a wait and see approach would probably have been adopted, rather than pursuing an invasive biopsy with its associated risks. It is highly likely that with the improvement in symptoms at the time of the scan and during her stay in hospital that the Claimant would have been discharged for further review, as in fact happened on 21 August 2013, and encouraged to return in the event of any additional symptoms, as in fact happened on 18 September 2013.

45. Accordingly, although with hindsight I consider on balance that the omental mass was an infection rather than an infarction, I do not consider that Dr Tam's conduct was negligent. His report was without criticism, according to Dr Tolan, who I found to be an impressive expert in this case, and was at the very least in accordance with the practice of a reputable body of responsible radiologists. Even if a differential diagnosis had been mentioned, the very likely course would have been the conservative approach adopted.

## The Second Scan

46. The Claimant contends that Dr Jain was negligent when reporting on the second CT scan in failing to state that the omental infarction was not a likely diagnosis, and failing to provide a differential diagnosis, including malignancy or an infective process.

47. By this date, matters had moved on. The Claimant was experiencing a second episode of severe abdominal pain and the mass had grown 'considerably' according to the expert radiologists' joint statement. The second CT scan also showed gastric outlet obstruction, diffuse abdominal nodularity and encasement of the transverse colon. In my judgment there was more evidence available to question, but not rule out, the working diagnosis of an omental infarction.

48. Dr Jain's report was not misleading. Although she did not identify what the mass was or could be, she clearly reported the appearances seen on the CT scan. It is clear from her evidence in Court that she was wholly uncertain and therefore unwilling to identify a likely diagnosis in her written report. The fact that the supposed omental infarction had not resolved raised the doubt in her mind. However, she explained that she kept open the possibilities of omental infarction, infection and even malignancy, and informed Mr Wright of those possibilities in the discussion she unquestionably had with him as noted in her report. In my judgment, Dr Jain did not present with confidence and clearly felt unable to make a diagnosis with any certainty. However, it is difficult to understand how she can be criticised in those circumstances, for presenting the potential differential diagnoses to Mr Wright in conversation and providing her recommendation

that a biopsy be undertaken to determine from tissue sample the nature of the mass. I note the experts refer to her report as substandard in the joint statement, but in evidence they described it as 'safe' in the sense of simply identifying the mass and its features without any diagnosis and recommending *"further urgent evaluation"*. I have no doubt that she expressed her uncertainty and a number of differential diagnoses to include infection, infarction and malignancy to Mr Wright. Faced with the uncertainties as to diagnosis now presented in diagnosing the mass, she complied with RCR guidelines in recommending further investigation.

49. I therefore do not find that Dr Jain's conduct was negligent. Although her report was sub-optimal and did not identify the differential diagnoses, it did provide a clear view from a radiological perspective where to go in the further investigation of the case. Any criticism that her report failed to identify that the previous working diagnosis of omental infarction was less likely, was cured by her conversation with Mr Wright. Her report was certainly not misleading and, in fact, achieved exactly what the Claimant suggests it should have done; namely, pointing to other diagnoses that were not infarction and recommending the very further investigations that the Claimant complains were not performed, namely biopsy.

**Failure to Biopsy**

50. The final allegation of negligence made by the Claimant is that Mr Wright failed to act appropriately upon receipt of the second CT scan report, by not undertaking an urgent biopsy of the mass in September, and failing to appreciate that an omental infarction was not a likely diagnosis. Although, I readily accept that many surgeons in the position that Mr Wright found himself would have proceeded to obtain consent to perform a biopsy, the question this court has to decide is whether Mr Wright's conduct fell below the standard of a reasonably competent surgeon. To put it another way, was a biopsy mandatory at that stage?

51. For reasons stated above, although omental infarction was not the correct diagnosis and, by the time of the second scan, other differential diagnoses needed to be considered, I do not find that omental infarction was by then a highly unlikely diagnosis that should have been excluded from consideration. Not only did Dr Jain consider an omental infarction still to be a differential diagnosis, so did the Claimant's expert Mr Antrum. For reasons stated earlier I accept Dr Tolan's opinion that the scan still had appearances of omental infarction.

52. The junior doctors, following initial investigation of the Claimant, felt an exploratory laparotomy was appropriate. Mr Wright, sensibly and optimally in my judgment, ensured that a further CT scan was performed before any decisions were taken regarding future treatment. He gave evidence, in a convincing way, that he was uncertain about the diagnosis in this case and felt it unnecessary to carry out invasive investigations until he had a clearer picture of what the mass was and how it was behaving. Although he did not state that he lacked confidence in the opinion of Dr Jain, it is clear that her review of the radiology did not provide useful guidance to him as to what the mass was most likely to be. He confidently, and rightly, considered it was not malignancy, and reasonably pointed out something that did not appear to be in dispute, that even if it was, at that stage it was highly unlikely to be operable. He explained that nothing told him that he needed a biopsy at that point. He, therefore, took the view that a second opinion was appropriate, and specifically consulted Ms Hughes, a former

colleague, with expertise in gastroenterology, and her radiology department at the Royal London Hospital. None of those involved in that review were called to give evidence in the trial. It is not, therefore, certain precisely what information they received and provided. However, the recollection of Mr Wright, which I accept, and as clearly endorsed in the medical notes, was that he was given the opinion that the radiology appeared to be an omental infarction, and that a conservative approach to management should be followed. Indeed, if correct, it is agreed that conservative management would have been the appropriate course.

53. There is criticism that the Royal London Hospital may not have been a tertiary referral centre for gastrointestinal complications. However, Mr Wright confirmed that he did not seek an opinion from Ms Hughes merely because he knew her, but rather because the Royal London Hospital was a large teaching hospital and a tertiary referral centre and thus the place that he would go to seek a learned second opinion. Mr Antrum confirmed in evidence that the Royal London Hospital was a centre of excellence in this context.

54. I had the benefit of expert evidence from consultant surgeons; Mr Antrum, on behalf of the Claimant, and Mr Rew on behalf of the Defendant. Mr Antrum gave brutally simple expert evidence, which amounted to him not understanding why a surgeon, uncertain of a diagnosis, did not simply undertake a biopsy to resolve the question and determine the appropriate treatment. He thought the case no more complicated than that. However, I note that although he repeated that he could not understand why Mr Wright did not perform a biopsy he confirmed that once he had the second opinion from the Royal London hospital: *"I suppose he had to go with it"*. Although I found Mr Antrum's evidence refreshingly honest and to the point, I did not consider that he presented a thoughtful or considered approach to a general surgeon's practice, and in so far as he conflicted with the opinion of Mr Rew I reject his views on this occasion. Indeed, in evidence he partially supported Mr Wright's approach when he confirmed that the management from a handful of surgeons could either have been by biopsy, a laparoscopy or to watch and wait. He maintained that this final option meant keeping an eye on the patient to see what the trend was and that if there was no improvement then a biopsy was mandatory.

55. In contrast, Mr Rew, in his oral evidence, gave a detailed explanation and review of what a general surgeon should and should not do, and proper consideration as to risks and benefits of investigations and treatments available. His oral evidence was far superior to his narrower report that did not reflect on the risks of biopsy and made assumptions as to the diagnosis being an omental infarction. Mr Rew reinforced Mr Wright's evidence about the risks associated with biopsy, and that it was reasonable to take the view that only if such investigations were necessary should they be undertaken. He confirmed that it was good practice to seek second opinions where doubt existed, in order to optimise the treatment to the patient. He felt that to simply ignore that advice and proceed with a contrary course would be hard to justify (a view endorsed by other experts). Mr Wright not only considered carefully the appropriate diagnosis, but agonised over it, so as to take a second opinion. I find it hard to criticise him in any way for taking such a cautious approach, and it is certainly one that, at the very least, a reputable minority of general surgeons would have pursued. By the time Mr Wright received the second opinion, Mr Rew agreed that it was reasonable to discharge the

Claimant as her symptoms had improved during her period of in-patient management in September 2013; a view I accept.

56. The presented case did not allege any negligence after September 2013 and that was not tested in evidence with all the witnesses. Insofar as it is necessary to consider it all, it is not my judgment that any negligence occurred following the September discharge. Although there was a suggestion, in Mr Antrum's evidence, that Mr Wright should have ensured sooner review and sooner re-scanning and/or biopsy, I consider Mr Wright's approach sensible in arranging for a further review and subsequent investigations to monitor the situation. Although it was six weeks, rather than an optimum two weeks, before Mr Wright saw the Claimant again, at that stage symptoms appeared to have improved and, although the mass was present, there was a suggestion it was smaller and Mr Wright was right to keep the Claimant under review and suggest further investigations to at least monitor the situation. The Claimant accepted that there had been discussion regarding the risks of biopsy and Mr Wright gave evidence of the extremely rare but potentially catastrophic complications that he had to keep in mind. Mr Wright unquestionably kept an open mind and was prepared and willing to intervene if circumstances altered. It is unfortunate that the Claimant did not attend for gastroscopy and/or possibly a further CT scan if that had been organised. However, I cannot see that any criticism can be made of the Defendant in that respect. The Claimant was appropriately reviewed and no opportunities to reconsider the diagnosis were lost as a result of the Defendant's conduct. When the Claimant failed to attend the appointments that were clearly arranged for 26 November 2013 and 3 January 2014, the Claimant was rightly discharged.

## Conclusions

57. This has been a difficult case to decide, requiring careful consideration and review of not only the witness and expert evidence, but extensive literature in respect of unusual and rarely encountered conditions, namely omental infarction and actinomycosis. Although, on the balance of probabilities, I have concluded as a matter of fact that an early biopsy in 2013 would have revealed infection and avoided the Claimant's catastrophic illness in February 2014, in my judgment the criticisms of the Defendant are not made out. Accordingly, the Claimant's claim is dismissed.

58. Finally, I extend my thanks to both Counsel for their thorough approach to the case during the course of the trial and their detailed and helpful written closing submissions.