**IN THE COURT OF APPEAL OF THE REPUBLIC OF SINGAPORE**

**[2017] SGCA 38**

Civil Appeal No 33 of 2016

Between

Hii Chii Kok

… *Appellant*

And

(1) Ooi Peng Jin London Lucien
(2) National Cancer Centre of Singapore Pte Ltd

… *Respondents*

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# JUDGMENT

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[Tort]—[Negligence]—[Breach of duty]

# Hii Chii Kok
# v
# Ooi Peng Jin London Lucien and another

**[2017] SGCA 38**

Court of Appeal — Civil Appeal No 33 of 2016
Sundaresh Menon CJ, Chao Hick Tin JA, Judith Prakash JA, Tay Yong Kwang JA and Steven Chong JA
3 October 2016

12 May 2017 Judgment reserved.

**Sundaresh Menon CJ (delivering the judgment of the court):**

1 This appeal concerns a patient whose central complaint is that he underwent a major pancreatic surgery that turned out to be unnecessary. As a result, he suffered life-threatening complications and to overcome these, he had to undergo further operations. He brought proceedings against his surgeon and the National Cancer Centre of Singapore Pte Ltd ("NCCS") for, among other things, negligent diagnosis and negligent advice. He also alleged that the post-operative care he was given was negligent, although this was not strenuously pursued on appeal. The High Court judge ("the Judge") who heard the matter dismissed the claim in its entirety. His judgment is reported as *Hii Chii Kok v Ooi Peng Jin London Lucien and another* [2016] SGHC 21 ("the Judgment"). Having considered the various issues, we largely agree with the Judge and dismiss the appeal in its entirety. Additionally, we note that with regard to the negligent advice claim, the Judge, who was bound by a previous

decision of this court, did not opine on whether the existing law should be departed from, and if so, to what extent; instead, the Judge applied both competing standards in the alternative and found on the facts that negligence had not been made out on either standard. In the interest of providing a degree of certainty and clarity to the law, this judgment shall consider and resolve that uncertainty.

2 The appeal throws into sharp relief an important question in the law of medical negligence: how should the court assess whether a doctor has fallen short of the standard of care that is expected of him, especially in relation to the provision of medical advice? More than a decade ago, our position on this issue was laid down in *Khoo James and another v Gunapathy d/o Muniandy and another appeal* [2002] 1 SLR(R) 1024 ("*Gunapathy*"). In *Gunapathy*, we accepted that the assessment of whether a doctor has met the requisite standard of care in *all aspects* of his interaction with the patient should be made with reference to the practices and opinions of a responsible body of medical practitioners, although such practices and opinions must be logically defensible. In other words, we adopted, as applying to the entirety of the doctor-patient relationship, the principles set out in *Bolam v Friern Hospital Management Committee* [1957] 1 WLR 582 ("*Bolam*") and *Bolitho v City and Hackney Health Authority* [1998] AC 232 ("*Bolitho*"). These principles are commonly referred to as "the *Bolam* test" with "the *Bolitho* addendum". This has been described as laying down a physician-centric approach because it places emphasis on peer review to determine whether a doctor's conduct was lacking. On account of this, it has faced much criticism over the years. In several key jurisdictions, it has been abandoned in favour of an approach that can be described as more patient-centric, at least in relation to the aspect of medical advice. This shift was reflected recently in the United Kingdom ("UK") in the decision of the Supreme Court in *Montgomery v Lanarkshire*

*Health Board* [2015] UKSC 11 ("*Montgomery*"). The question before us in this appeal is whether we too should gravitate towards a more patient-centric approach. If so, should such an approach apply to all aspects of the doctor's interaction with the patient? And insofar as we do apply a patient-centric approach, how should the court prescribe the test for determining whether the standard of care has been satisfied?

3 The Attorney-General deemed the issue of such public interest that his chambers ("the AGC") applied for leave to file submissions (which were prepared in consultation with the Ministry of Health and the Ministry of Law). As this is a dispute between private parties, we sought their consent, which was forthcoming, to consider these submissions. The Attorney-General felt constrained to intervene having regard to the possible consequences that our decision might have on the cost of healthcare. His submissions were therefore confined to matters of policy and did not engage with the facts. The AGC filed its submissions at the end of November 2016. The appellant's counsel filed a substantive response on 21 December 2016. On 23 December 2016, the AGC filed a further letter (with certain enclosures). We declined to give leave to admit this letter (and its enclosures) on 27 December 2016.

4 Having considered all the submissions, we are satisfied that it is appropriate to move towards a somewhat more patient-centric approach when prescribing the standard of care in relation to the doctor's duty to *advise* the patient and to provide the patient with the requisite information to enable him to participate meaningfully in decisions affecting the medical treatment he will receive. This is a function of the central principle that the patient has autonomy over such matters. However, this will not mean that the doctor's views will cease to be significant. In our judgment, the appropriate standard of care is one that strikes a balance between the interests of the doctor and the

patient. We elaborate on this below. But first, we set out the facts and issues relevant to the case.

**Background Facts**

5 The appellant is Dato' Seri Clement Hii Chii Kok ("the Patient"). He is a prominent Malaysian businessman who happens to hold a law degree. He used to be a journalist.

6 The first respondent is Professor Ooi Peng Jin London Lucien ("Dr Ooi"). Dr Ooi, is a surgeon specialising in hepatobiliary and pancreatic ("HPB") surgery as well as surgical oncology. He chaired the Division of Surgery and was a senior consultant surgeon at the Singapore General Hospital ("SGH"). He held a concurrent appointment as senior consultant at the second respondent, the NCCS. By the time of the patient's surgery, Dr Ooi had performed more than 250 pancreatic operations. The NCCS manages an oncology centre providing outpatient specialist care for cancer patients.

7 As the facts have been extensively canvassed in the Judgment, we do not propose to reproduce all the facts here and will highlight only the salient matters.

8 In 2003, the Patient, who was based in Malaysia, learnt that he had a nodule in his right lung. By the middle of 2010, this was found to have grown from about 12mm in 2006 to about 18mm. It was established after testing that this was a neuroendocrine tumour ("NET") of low-grade malignancy. The Patient's attending physician in Malaysia, Dr Foo Yoke Ching, then referred him to the NCCS to undergo a particular procedure to ascertain whether some other nodules seen in his lungs were also NETs. The procedure in question is a positron emission tomography ("PET") scan using a radioisotope Gallium-

68 tagged with DOTATATE ("the Gallium scan") combined with an x-ray computed tomography ("CT") scan ("the Gallium PET/CT scan"). Each component provides different types of imaging using different techniques. The Gallium component works by detecting certain receptors, known as somatostatin receptors ("SSTRs"), that are present in abundance in NET cells. As these receptors bind well to a substance known as DOTATATE, its combination with the radioisotope Gallium-68 allows areas with concentrations of SSTRs to light up on the PET scan. The uptake of the radioisotope tracer by the somatostatin, or "tracer avidity", is measured using a semi-quantitative measure known as standardised uptake value, or the SUVmax value (see also the Judgment at [104]). The second component is the CT component. This provides morphological imaging that helps to identify the tumour mass and location.

***Events leading to the Tumour Board meeting on 29 July 2010***

9 On 19 July 2010, the Patient underwent the Gallium PET/CT scan, which was performed by Dr Andrew Tan, a nuclear medical physician with the SGH. It will be recalled that the primary purpose of doing this was to assess the position in relation to some other nodules that were in the Patient's *lungs*. However, this led to incidental findings of what *might* be two additional NETs in the head and body of the Patient's pancreas ("the PNETs"). The scan report stated:

> 2. Incidentally noted foci of increased tracer avidity in the uncinate process and body of the pancreas, with no definite corresponding mass or soft tissue thickening seen. Pancreatic islet cell tumors [*ie*, PNETs] are a consideration, and further evaluation with dual phase CT or MR is suggested.
>
> …
>
> There are focal areas of increased tracer uptake seen in the pancreatic uncinate process (SUVmax 23.0, image 177) and in

> the pancreatic body (SUVmax 13.2, image 165). No definite corresponding mass is evident.
>
> …

10 According to the Patient, who was given a copy of the report, Dr Andrew Tan advised him to undergo a further scan to ascertain whether masses could be located that would correspond to the light-ups on the Gallium scan. In this judgment, unless otherwise specified, we refer to the two light-ups that were detected by the Gallium scan on the head (also referred to as the pancreatic uncinate process) and body of the Patient's pancreas generally as "lesions".

11 On 20 July 2010, the Patient underwent a magnetic resonance imaging ("MRI") scan in Malaysia. However, his pancreas appeared normal and no masses were detected by this scan.

12 The Patient made arrangements for multiple consultations on 22 July 2010 at the NCCS. He met Dr Darren Lim ("Dr Lim"), who was a senior consultant oncologist at the NCCS. He also met Dr Koo Wen Hsin ("Dr Koo WH"), who, like Dr Lim, was an oncologist at the NCCS. Both doctors took the view that the Patient had PNETs (the Judgment at [17]–[19]). Dr Koo WH referred the patient to Dr Ooi, who did not disagree with what he calls the "working" or provisional diagnosis arrived at by Dr Lim and Dr Koo WH. The record of the Patient's consultation with Dr Ooi reflects that the following points were among those noted or canvassed (see also the Judgment at [20]–[21]):

(a) the MRI scan was negative;

(b) the surgical options were "pancreatic resection of body tumour plus Whipple" or "total pancrectomy";

(c) the options were surgery (to the pancreas and to the lungs); radio-nuclear therapy and chemotherapy (palliative); and

(d) the Patient said he would "think about it".

The reference to "surgical options" relates to the resection of the lesion at the body of the pancreas, and a procedure known as the Whipple procedure in relation to the lesion at the head of the pancreas. The Judge found that Dr Ooi did *not* tell the Patient at this consultation that he *definitely* suffered from cancer or neuroendocrine cancer (the Judgment at [24]). We see no reason to disagree with the Judge's finding of fact in this regard and we accept that Dr Ooi's evidence that PNETs was the "working" or provisional diagnosis at that time was accurate.

13 The Whipple procedure is the surgery that the Patient submits should never have been performed on him. The procedure, so named after the American surgeon who developed the technique in the 1930s, involves the removal of the head of the pancreas, a portion of the bile duct, the gallbladder and the duodenum (the first part of the small intestine), usually also with a part of the stomach. After the removal, the remaining parts of the pancreas, bile duct and stomach are manually joined to the intestine to preserve the integrity of the gastro-intestinal tract. When a structure is linked to another, this is referred to as an anastomosis. Three different anastomoses are done as part of the Whipple procedure to connect the various structures to each other. A known post-surgical complication of the Whipple procedure is anastomotic leakage, where the integrity of one or more of the anastomoses is compromised and a leak ensues.

14 It appears that Dr Ooi's recommended course was surgery to remove the supposed PNETs. In an email from the Patient to Dr Ooi the next day (23 July 2010), the Patient said that he and his family were trying to absorb the technicalities of the case and he was agreeable in principle to Dr Ooi's recommendation for "surgery on [the Patient's] pancreas to remove the two tumours"; the Patient also said he would be in touch during that week on proposed surgery dates in August 2010.

15 Apart from the consultations on 22 July 2010 at the NCCS, the Patient had been corresponding quite extensively with Dr Andrew Tan through email from 20 July 2010 onwards (being the day after the Gallium PET/CT scan had been conducted). The contents of those emails may be summarised as follows:

(a) On 20 July 2010, Dr Andrew Tan sent the Patient a document which explained NETs. The Patient replied and expressed his appreciation that Dr Andrew Tan had gone "the extra mile" to retrieve the Gallium PET/CT scan report immediately after the scan and for "explaining the details to [him]".

(b) On 22 July 2010, Dr Andrew Tan replied that he understood "the stresses and difficulties in dealing with cancers". He informed the Patient that he would be "discussing the case in our combined [tumour] board on the 29th [of] July to get a consensus".

(c) On 23 July 2010, the Patient informed Dr Andrew Tan that his MRI scan report was negative. He also informed Dr Andrew Tan of his consultation with Dr Ooi (see [12] above). The Patient said that he "was told that the [Gallium PET/CT] scan done by your lab was more accurate, and surgery should be done to take out part of the pancreas".

The Patient expressed confidence in Dr Ooi's expertise but confusion with "the conflicting findings". He sought Dr Andrew Tan's input.

(d) On 23 July 2010, Dr Andrew Tan replied. He said that the Patient's case would be discussed during the coming week. He also said as follows:

> … In regards to the discrepancy between the [PET] and MRI imaging, it is not uncommon to find discrepant findings. This is because essentially, [PET] imaging looks at cellular function whereas MRI or [CT] imaging looks at anatomy. So cellular abnormalities may be picked up in instances where no anatomical changes have yet occurred.
>
> However, there is a significant amount of uncertainty. Perhaps you could wait until after the joint meeting on the 29th, then I can update you on the consensus opinion. This may help you further form an educated decision on what steps need to be taken.

16 We digress to explain that Dr Andrew Tan's reference to "the joint meeting on the 29th" is a reference to the meeting of the NCCS' tumour board ("Tumour Board"). As explained at [10] of the Judgment, the Tumour Board, which meets to discuss cases that raise complex and novel medical issues, comprises a multi-disciplinary team of doctors with the relevant sub-speciality skills. During the meetings of the Tumour Board, the doctors may discuss and determine the diagnosis and potential treatment options in relation to a particular case.

17 It is useful to set out the Patient's reply to Dr Andrew Tan on 24 July 2010 in full as this email suggests that the Patient understood the precise problem in relation to his diagnosis even at that juncture. The Patient accepted that there was "*a lot of uncertainty*" as to whether the pancreatic lesions were indeed PNETs. It is also evident that the source of the uncertainty was that the results of the various diagnostic tools were not all in alignment. Hence, he

seemed also to be interested in whether more checks or investigations could be done to dispel the uncertainty. While, he was "all for aggressive treatment", he also sought to be updated after the meeting of the Tumour Board so that he could "make a more informed decision on the way forward":

> Dr Andrew,
>
> Indeed, in my case, there is a lot of uncertainty. However, [Dr Ooi] appeared certain enough to immediately recommend surgery of the pancreas.
>
> I am all for aggressive treatment, and I believe [Dr Ooi] has the expertise and experience to give sound advice and perform the surgery well.
>
> However, since then, I have talked to a couple of other surgeons, who felt the matter need more investigations [*sic*].
>
> They are referring to the fact that 1) the biopsy shows malignancy in the lung tumour while the gallium scan didn't show hot spots and 2) the [MRI] scan didn't pick up any tumours while the gallium scan showed two hot spot[s].
>
> I certainly would appreciate the feedbacks [*sic*] from your discussions on 29th July. This will help me to make a more informed decision on the way forward.

18 Dr Andrew Tan replied on 29 July 2010, after the Tumour Board meeting. Dr Koo WH and Dr Andrew Tan were part of the five-person weekly Tumour Board meeting. The Tumour Board included three other doctors with the following specialties: medical oncology, surgical oncology – hepatic-biliary specialty and pathology. At the end of the meeting, Dr Andrew Tan was tasked to communicate the results of the discussion to the Patient, which he did by way of an email sent that same morning. We also reproduce this in full:

> Hi Clement
>
> We have just finished the neuroendocrine tumour meeting, and I thought I might update you on the consensus
>
> 1. The *impression* is that the pancreas lesion and the right lung lesion are 2 separate entities or primaries.

> 2. The lung lesion is known to be slow growing and well differentiated type neuroendocrine tumour, and surgical options are fairly straight forward.
>
> 3. The pancreas lesion is more troublesome. The *impression* is that the pancreas lesions are *real despite negative MRI and CT findings*, and these are of increased importance as compared with the lung lesion, as it is appreciated that pancreatic neuroendocrine tumours have a higher propensity for spread.
>
> 4. The current risk of spread or metastasis is not known. The pancreas body lesion measures 1.5cm based on the PET SUV outline.
>
> 5. In regards to the uncinate head lesion, it can represent a neuroendocrine tumour or pancreatic polypeptide hyperplasia. Current literature is yet uncertain on the significance of such uncinate somastatin uptake.
>
> 6. The consensus is for removal of the pancreatic body lesion. The pancreatic head lesion is *more uncertain*, as the surgical side-effects/morbidity may be higher. You might want to discuss the surgical options with [Dr Ooi]
>
> 7. The second option is to wait and repeat another scan in about 6 months.
>
> 8. Its a balance of risk of possible tumor growth/spread versus surgical risks.
>
> I hope this may give you a clearer picture on your options. Do feel free to contact me if you have any other queries. Also, if you want to speak to other patients regarding neuroendocrine tumors, I can put you in touch with a patient advocacy group that we are in close contact with.
>
> [emphasis added]

19 It may be seen from this email that the Tumour Board was unable to arrive at definite conclusions and was instead seeking to interpret the data to arrive at what it could only describe as "impression[s]". In particular, in relation to the lesion at the head of the Patient's pancreas, the Tumour Board was even more tentative and was unwilling to express a preference as between this being a PNET or a condition known as pancreatic polypeptide hyperplasia ("hyperplasia"), which is a condition featuring the proliferation or accumulation of *normal* cells. Further, as to the course ahead in relation to the

lesion at the head of the pancreas, the Tumour Board described this as "more uncertain" not only because of the uncertainty of the diagnosis, but also because this is what would require the Whipple procedure and the Tumour Board was conscious of the higher morbidity that was associated with that. While the consensus view was to recommend removal, at least of the lesion in the body of the pancreas, as the preferred option, a second option of waiting was also tabled although this then had to be balanced with the risk of the disease spreading, should it emerge that these were PNETs. This too was highlighted.

20 The Patient forwarded this email to Dr Ooi on the same day who replied shortly thereafter:

> what Andrew mentions about the lesions in the pancreas is as what we have previously discussed which is that the lung lesions are slower in growth and activity then [*sic*] the ones in the pancreas (based on time frame as seen on your previous scans as well as on PET activity) and hence the pancreas lesions should be the one to address as a priority
>
> as both the uncinate and body lesions light up on PET it would be difficult for anyone to be conclusive on whether these represent tumours or hyperplasia so if we have to remove one we should also remove the other, otherwise it does not make sense
>
> waiting 6 months for a repeat PET is an option as mentioned by Andrew but you will need to accept the risk as we previously discussed that if these are tumours there is a potential for spreading while waiting
>
> the surgical morbidity and mortality of the Whipple's operation is higher than for removal of the body tumour alone but this is a general statement and does not take into consideration surgeon and patient factors
>
> younger and more fit patients have better outcomes
>
> experienced surgeons and centres with high volume have better outcomes as operating times and length of stay are generally shorter

> as explained to you at the consultation, we have gone through the surgical procedure and risks and you do happen to be a good risk candidate in terms of expected outcome
>
> hope this helps to clarify
>
> I am happy to proceed with the [Whipple procedure] if you are ok or to discuss further when you come on whether it makes sense to leave one tumour behind and remove the other

21 Dr Ooi evidently did not disagree with the consensus opinion of the Tumour Board. In fact, Dr Ooi went somewhat further – he thought that it would be difficult to be conclusive on whether *either* of the lesions were tumours or hyperplasia. We also note that while Dr Ooi was clearly in favour of surgery for both pancreatic lesions, he was also open to the options of surgery for only one of the tumours or with waiting though he too pointed out the risk of the disease spreading if it turned out that these were PNETs. He also acknowledged the higher morbidity that is generally associated with the Whipple procedure although he thought that this had to be viewed in its proper perspective having regard to considerations that were specific to the patient and the surgeon in question.

22 About 15 minutes later, the Patient replied and said:

> … All things considered, I agree with you that both tumours on my pancreas should be taken out at the same time. This is also based on our earlier discussions that half of the pancreas could remain, to do its functions.

***Events between the Patient's decision and the surgery***

23 Before the surgery, there were further email exchanges between the Patient and his doctors, some of which will be elaborated on below. For now, it suffices to note that the correspondence includes an email that was sent on 9 August 2010, in which the Patient enquired about performing a further diagnostic test – the endoscopic ultrasound ("EUS") – in relation to the

suspected PNETs. The Patient told Dr Andrew Tan that he had been advised that he should "at least do an [EUS] to assess for occult neoplasm". In his response on the same day, Dr Andrew Tan recommended that he consult one Dr Tan Yu Meng, who used to be a senior consultant oncologic surgeon at the NCCS before he ventured into private practice. Dr Andrew Tan told the Patient that it might be helpful to obtain a second opinion "and perhaps perform the EUS". Dr Andrew Tan also said that as the EUS might be inconclusive on its own, the Patient might also consider undergoing the EUS with a biopsy.

24 On 10 August 2010, the Patient emailed Dr Ooi to ask if he should, before the scheduled surgery, "do an [EUS] imaging (maybe with biopsy)" of the head of the pancreas. In Dr Ooi's reply on the same day, he said that the "EUS is only useful if positive but if negative does not mean it is safe to leave the tumour alone". He also said that there was a "slight risk with EUS-FNA [endoscopic ultrasound with fine needle aspiration, which is a reference to the biopsy] and in your situation may not be beneficial". The short point that Dr Ooi was making was that the additional step would not be conclusive unless it yielded a positive reading, in which case the surgery would have to be carried out in any event. A negative reading on the other hand, would not be conclusive and so would not have resolved anything.

25 The Patient relayed Dr Ooi's opinion on the EUS to Dr Andrew Tan on 12 August 2010, who replied as follows:

> 1. I agree with the opinion that EUS would only be useful if findings are positive (strong positive predictive value). However, absence of findings will not mean an absence of tumor, hence in my opinion, an EUS or ERCP procedure would be more useful if needle biopsy of the region of interest (uncinate process) were done. I am just not too sure if this is technically easy, and would need the input from the surgeon or gastroeneterologist.

> …
>
> 4. In regards to the surgical options, do have a good discussion with [Dr Ooi]. As a personal opinion, I do feel that if technically possible, a resection of the pancreatic body lesion with biopsy of the uncinate process would be best. This is because of my personal reservations as to the significance of the uncinate process lesion, as we have been seeing several patients with such findings, and this may actually be secondary to a particular cell type or non-tumorous lesion (e.g. hyperplasia), and a Whipples operation is a fairly major surgical procedure.
>
> 5. And yup, if you need a 2nd opinion in regards to surgical options, I think Yu Meng has good hands and a lot of experience. Just drop him a ring when you feel up to it. [Dr Ooi] and Yu Meng were previously colleagues, and they should be familiar with each other.

26 It appears from Dr Andrew Tan's response that he had reservations as to whether the lesion at the head of the pancreas was a PNET given the experience with other patients who presented with similar indications but were then found not to have PNETs. In view of this, as well as the complexity of the Whipple procedure, he thought the best course was to remove the lesion in the body of the pancreas and perform a biopsy of the lesion at the head of the pancreas. It was against this background that he mentioned again the possibility of the Patient obtaining a second opinion. However, the Patient chose not to act on this and did not undergo the EUS.

27 The Patient also stated in his affidavit of evidence-in-chief that between the Tumour Board meeting on 29 July 2010 and 8 August 2010, he "did engage in discussion with some medical professionals in Malaysia but most of them informed [him] that [he] should abide by the advice of the surgeon who recommended that both the cancers in the pancreas ought to be surgically resected".

***The surgery on 16 August 2010***

28 On the day of the surgery after cutting open the Patient's abdomen, but prior to carrying out the Whipple procedure, Dr Ooi conducted an intra-operative ultrasound scan ("IOUS") (that is, the use of an ultrasound device to scan the Patient's pancreas during the surgery), but again the result was negative in the sense that there was no sign of any tumour. Dr Ooi then used his hands to feel the pancreas by a form of examination known as bimanual palpation. In doing so, he felt two distinct areas of hardening (or induration) that corresponded to the locations (and sizes) of the light-ups on the Gallium scan. Dr Ooi therefore proceeded to conduct the Whipple procedure for the lesion on the pancreatic head and resect the lesion on the body of the pancreas. After the operation, which took nearly five hours, two surgical drains were placed in the Patient's body so that fluid from the wound sites could drain out from the body. The parts of the pancreas that had been removed were sent for histopathological examination on the same day.

29 The operation report states that the pre-operative diagnosis was "CA Pancreas" (cancer of the pancreas). The post-operative diagnosis was recorded as "? Pancreatic endocrine tumour/hyperplasia – head of pancreas/uncinate and body of pancreas". Among the "findings", it was recorded that there was a "2cm well demarcated indurated area at head of pancreas/uncinate process corresponding to the Gallium Dotate scan", and a "separate 1x0.5cm distinct indurated area at mid body superior surface cranial edge". It was also recorded that the IOUS did not "demonstrate distinct lesions" but the decision was made to proceed with the operation in view of the well demarcated indurated areas corresponding to the scan. Also recorded were the "pathologist's comments", which stated as follows: "areas of induration noted as specified but no distinct tumour on sectioning, [frozen section (which is the microscopic

analysis of a specimen)] shows endocrine islets - ? hyperplasia vs tumour" [all capitalisations removed].

30 According to the histopathology report, which was dated 27 August 2010, it was found, in relation to the lesion at the head of the pancreas, that there was "no convincing evidence of malignancy". Under the microscopic description, it was found that "in some areas, there appears to be an increase in number of islets". The accompanying comment was that: "[a]lthough there is no morphometric/volumetric quantitation, the appearances are suggestive of islet cell hyperplasia. The possibility of multiple microadenomas was considered in the differential diagnosis". This description of the appearances applied to the lesion in the body of the pancreas as well. In summary, the post-operative histopathology indicated that the Patient's pancreas had hyperplasia in both areas and not PNETs.

***The post-operative events***

31 The Patient remained in hospital from 16 to 27 August 2010. The doctors found that he appeared to be generally well. By 21 August 2010, the right surgical drain contained only 10 ml of serous (clear) fluid. However, the left surgical drain had about 2,200 ml of clear fluid. Dr Ooi said in his evidence that the findings from the left surgical drain were consistent with what would be expected from a pancreatic leak stemming from excision to the pancreas; such leaks could take anything from a few days to a few weeks to resolve, and could be managed conservatively. Dr Ooi also said that the leak was not due to an anastomotic leak as the contents going through the left surgical drain were devoid of bile or dietary contents and further, because the patient had no abdominal symptoms or signs. There were, however, some contrary indications, and we discuss this in more detail at [212]–[219] below.

32 By 27 August 2010, Dr Ooi found the Patient clinically well with no other symptoms apart from the discharge into the left surgical drain. While the discharge volume was about 1,410 ml, there were no adverse abdominal symptoms; the Patient was stable and comfortable. He ate well and passed out soft stools. At the Patient's request, he was discharged with a left abdominal drain and told that he had a controlled pancreatic leak. The right surgical drain was removed. At the time of his discharge, the Patient had a normal temperature of 37.3ºC. He was given a follow-up appointment a week later.

33 As scheduled, on 3 September 2010, Dr Ooi saw the Patient. Dr Ooi noted that the serum amylase level (which would be elevated if the pancreas is inflamed) and the total white blood cell count (which would be elevated if there is infection) were normal, which suggested that about three weeks after surgery, the Patient suffered no pancreatitis or infection, which, according to him, were the most common indications of anastomotic leak. The Patient told Dr Ooi that his left drain had been dry for the past three days without any change in his overall condition. In particular, he reported no fever or abdominal pain and had been eating and moving his bowels well. Dr Ooi then removed the drain.

34 It was also during the appointment on 3 September 2010 that Dr Ooi apparently discussed the histopathology report with the Patient. It seems that no allegations of negligent diagnosis and/or advice were advanced by the Patient at that point. A follow-up appointment was scheduled for 17 September 2010.

35 The Patient emailed Dr Andrew Tan on 5 September 2010 to discuss surgical options in relation to his lung NET. Dr Andrew Tan replied on the same day that the Patient should focus on his recovery for the time being. He

also observed that the significance of hyperplasia in the pancreatic lesions was still not certain and that these might represent pre-tumorous lesions. At the same time, he also said that it was welcome news that the pancreatic lesions were not overtly cancers, based on the histopathology report.

36 On 9 September 2010, the Patient emailed Dr Ooi to update him that he was recovering well but had a loss of appetite and everything tasted bitter. Dr Ooi replied to say that the sensation of bitterness should subside after the course of antibiotics was completed. A few days later, on 13 September 2010, there was some draining at the site of the Whipple procedure. The Patient duly informed Dr Ooi of this and was told that it should eventually dry.

37 However, on the night of 15 September 2010, the Patient contacted Dr Ooi and told him that he was in Malaysia, was vomiting blood, and wanted to see Dr Ooi urgently. Dr Ooi advised the Patient to seek urgent medical attention at the nearest medical centre. After a series of scans, a blood clot and necrotic tissue covering the site of the pancreas-stomach anastomosis was identified. The Patient was advised to undergo surgery, and he consented to this. On 16 September 2010, the Patient underwent surgery in Malaysia where the doctors, amongst other things, removed necrotic tissue from the posterior wall of the stomach. The Patient lost a substantial amount of blood and received eight pints of blood during the surgery.

38 After the surgery, the Patient continued to drain bile-stained fluids. His treating doctors in Malaysia took the view that a further consultation from a HPB disease specialist would be beneficial. On 4 October 2010, the Patient was transferred to a HPB disease specialist hospital in Malaysia where a diagnosis of "hepaticojunostomy anastomotic leak" was made. This meant that the anastomosis between the hepatic duct and the small intestine had leaked.

An exploratory laparotomy was performed on 20 October 2010. Portions of the Patient's pancreas and spleen were removed. The Patient was discharged on 9 November 2010. He subsequently commenced proceedings against the respondents.

**The decision below**

39 The Judge held that Dr Ooi owed a duty of care to properly diagnose, advise and treat the Patient. In relation to the NCCS, the Judge held that its duty of care arose in respect of only diagnosis and advice. In respect of these duties, the Judge held that the respondents had not fallen short of the requisite standard of care expected of them.

40 Beginning with the issue of diagnosis, the Judge found that the Gallium scan was the diagnostic tool of choice for PNETs and that the results of that scan read in the light of the medical knowledge at the time showed that:

(a) the two regions of focal uptakes were, at least, signs of malignancy;

(b) there was a chance of a false positive in relation to the pancreatic head lesion;

(c) the SUVmax value of 23.0 for the pancreatic head lesion pointed to malignancy; and

(d) though the Patient's CT and MRI scans did not show a corresponding mass, CT and MRI scans frequently missed out smaller PNETs.

41 After assessing the expert evidence, the Judge concluded that the respondents were not negligent in arriving at the clinical diagnosis of PNETs for both lesions and the differential diagnosis of hyperplasia in particular for the lesion at the head of the pancreas. The respondents' diagnosis was also supported by the opinions of leading medical experts in the field and these opinions were both logical and defensible.

42 On the issue of the advice furnished to the Patient, the Judge found that the respondents did not fall below the requisite standard of care. The Judge first applied the law as laid down in *Gunapathy*, the relevant test being whether the advice rendered by the respondents could be accepted as proper and reasonable by a body of responsible medical experts and whether the opinions of those experts were defensible when the test of logic was applied. On that basis, the Judge found that the advice given by neither Dr Ooi nor the NCCS was wanting.

43 The Judge also considered the approach in *Montgomery*, which was to ask whether the respondents took reasonable care to ensure that the Patient was aware of any material risks (being risks that would be regarded as material to a reasonable person in the Patient's position) involved in the Whipple procedure and of any reasonable alternative or variant treatments. The Judge categorised the risks into two sets: first, the prospect that the diagnoses might not represent the actual condition of the Patient upon post-operative histopathology; and second, the risks that arose specifically in relation to the Whipple procedure and the complications that might flow from it. Applying *Montgomery*, the Judge was satisfied that the respondents had discharged their duty in advising the Patient of the material risks and available alternatives.

44 In relation to the care rendered to the Patient during the post-operative period, the Judge held that Dr Ooi did not fall below the requisite standard of care. After considering the evidence of the experts on this issue, the Judge found that it was not unreasonable or improper for Dr Ooi to have discharged the Patient on 27 August 2010. Additionally, there was no basis for suspecting that the Patient's condition needed any further investigation during the outpatient consultation on 3 September 2010. While the Patient's medical expert was of the view that the Patient must have been suffering from the anastomotic leak sometime before 3 September 2010, the Judge held that the expert could not muster the objective clinical data to support his assertions.

45 Finally, on the issue of causation, the Judge found that, in any event, the Patient would not have changed his decision to undergo the Whipple procedure. The Patient took an "aggressive approach" to treatment with the aim of eliminating the risk of the pancreatic lesions being PNETs. The Judge therefore dismissed the Patient's claims in their entirety.

**The Patient's case on appeal**

46 On appeal, the Patient submits that the Judge erred in finding that the respondents were not negligent in diagnosing him with PNETs. He points to the fact that there was no test which showed a mass that corresponded to the light-ups on the Gallium scan, and that in fact, *all* the other tests such as the CT and MRI scans pointed away from a diagnosis of PNETs. The Patient also submits that the Judge wrongly found that hyperplasia was a *very rare* condition, such that it would have been reasonable to discount it in favour of a more probable diagnosis of PNETs. On the contrary, the Patient maintained that hyperplasia was in fact a common occurrence in the head of the pancreas, and it would therefore have been a more probable explanation for the light-ups

on the Gallium scan in the absence of a demonstrable mass on the other scans. Therefore, the Patient argues that the confidence with which the diagnosis of PNETs could be made was "severely compromised".

47 The Patient also maintains that the advice he was given was inadequate to enable a reasonable patient to make an informed decision. He submits that the test to be applied ought to be that set out in *Montgomery* as it is "more persuasive and in line with modern thinking on patient's rights". On that basis, the Patient contends that the quality of the respondents' advice on the Gallium scan, its limitations, the importance of the absence of positive results on the morphological scans, and the peculiarity of the pancreas in relation to functional scans were "sorely deficient". He also takes issue with the fact that he was not advised to go for further investigations such as the EUS-FNA and an intra-operative biopsy, and was misinformed that negative results could not rule out PNETs and were therefore not of value. He also contends that he ought to have been advised of the possibility of undergoing surgery to first resect the pancreatic body lesion while conducting further tests on the pancreatic head lesion.

48 On the issue of post-operative care, the Patient submits that Dr Ooi was negligent as he had ignored signs of an anastomotic leak. He also contends that the Judge erred in finding that the NCCS did not owe him a duty of care in relation to the Whipple procedure and post-operative care. Finally, the Patient argues that the Judge erred in not finding that had the Patient been properly advised, he would have elected to monitor the lesions in his pancreas instead of undergoing the Whipple procedure.

**Issues**

49 Based on the foregoing, we distil the main issues as follows:

(a) what the applicable test is (or tests are) in relation to the assessment of the standard of care in medical negligence;

(b) whether the respondents fell below the requisite standard of care in reaching their diagnosis of the Patient's condition;

(c) whether the respondents fell below the requisite standard of care in relation to the information and advice that was furnished to the Patient;

(d) whether Dr Ooi fell below the requisite standard of care in relation to the care extended to the Patient during the post-operative period;

(e) whether the NCCS owed a non-delegable duty of care to the Patient in relation to the Whipple procedure and care during the post-operative period and whether the NCCS fell below the requisite standard of care in this regard; and

(f) if there was a breach in relation to the above, whether that breach of duty caused the Patient to suffer the loss for which he now seeks recovery.

50 In relation to [49(a)] above, we invited further submissions from the parties prior to the hearing of the appeal on 3 October 2016. The questions we posed pertained to the continued applicability of *Gunapathy* in assessing the standard of care in relation to the provision of advice and whether the application of *Montgomery* would change the result on the question of whether there was any inadequacy in the information and advice that had been furnished to the Patient in the present case.

## Our decision

51 On the present facts, we were ultimately of the view that whichever test was adopted, negligence had not been made out in respect of the duty to advise. Nonetheless, given the importance of the legal questions raised, we considered it desirable to reach a firm conclusion on what the test should be. After due consideration of the submissions of the parties and of the AGC as well as the parties' further responses arising from the AGC's submissions, we have concluded that although the law as it was stated in *Gunapathy* still applies in the contexts of diagnosis and treatment, a different, more patient-centric test is now required in the context of the information and advice that doctors provide to their patients. Applying the new test to the negligent advice claim, and the law as stated in *Gunapathy* to the other claims, we have concluded that the applicable standards were not breached in relation to the entirety of the respondents' interactions with the Patient. Our detailed reasons follow.

### *The applicable test(s) to assess the standard of care in medical negligence*

52 We begin our analysis by setting out the position established by this court in *Gunapathy* before proceeding to consider the following questions:

(a) How does the general professional standard of care relate to the more specific standards (such as the *Bolam* test) which have arisen in the medical context?

(b) Should the *Bolam* test (with the *Bolitho* addendum) be rejected altogether, and if not, should it remain the sole test to govern all aspects of the doctor-patient relationship?

(c) If the *Bolam* test should be departed from to any extent, what should replace it in the relevant aspect(s) of the doctor-patient relationship?

*The current position in Singapore*

53 As it stands, *Gunapathy* is the leading local authority on the standard of care imposed on a doctor in relation to all aspects of the treatment and care of his patient. *Gunapathy* accepted that the relevant test was that set out in *Bolam* and also accepted (and to some extent clarified) the supplement to the test which was added in *Bolitho*. Despite the detailed discussion in *Gunapathy*, it appears to us that significant confusion remains over the scope and underlying logic of the *Bolam* test and *Bolitho* addendum, such that restatement and clarification are now in order.

(1) The *Bolam* test

54 In *Bolam* – a decision of the High Court of England and Wales of some sixty years vintage – McNair J, in a direction to the jury, laid down the general principle (at 586) that the standard of care when a person exercises a special skill is that of "the ordinary skilled man exercising and professing to have that special skill". That hypothetical person is also, implicitly, taken to be a reasonable one. Somewhat overshadowing that general principle (which we shall, for convenience, refer to as "the general professional standard") is the more specific test (that is, the *Bolam* test) which McNair J then set out as follows (at 587):

> [A 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.

A notable feature of the *Bolam* test is that it does not require the defendant's view to reflect the orthodoxy within the profession but only requires that the defendant's view is accepted by a "responsible body of medical men skilled in that particular art". Indeed, the test recognises that a single orthodox view on a given issue may not even exist in the context of medical practice.

55 It appears to us that in interpreting and applying the principles stated in *Bolam*, there has sometimes been a tendency to fixate on the *Bolam* test without properly relating it to the overarching principle which it serves. It is therefore appropriate to pause here to consider the true relationship between the general professional standard and the *Bolam* test. To begin with, why was it necessary to introduce a more specific test instead of simply deploying the standard of "the ordinary skilled man exercising and professing to have that special skill" directly? The short answer is that the general professional standard of care does not guide the court on how to deal with the reality, which McNair J recognised, that, perhaps with especial force in a medical context, it will often be impossible to identify a single professional consensus on the correct course that should have been taken. Instead, one is likely to be confronted with a diversity of views on the matter, such that the realistic answer to the question "What would an ordinary skilled member of the profession have done?" would not be simply "He would have done this", but rather "He would have done this, or that, or *that*, depending on his views on the issue".

56 Given that reality, the court cannot blithely pick out and endorse a single view from a diverse range of professional views and then hold the defendant liable for not complying with that one view. That would be inappropriate for two reasons: first, it would be presumptuous of the court to purport to resolve a genuine controversy which the experts themselves were unable to resolve, and secondly, even if it were possible for the court to confidently state that one camp was mistaken and another camp was correct, it would be unfair to the defendant to make him liable for holding a view which others in his profession quite reasonably (though, it might subsequently emerge, incorrectly) also held. On the other hand, it would be equally inappropriate to treat *every* possible view as acceptable, even if, for instance, it was held only by the defendant himself. A balance therefore has to be found between the need to respect the diversity of views within a profession and the need to hold members of that profession responsible for their acts. By articulating the *Bolam* test, McNair J was, without expressly saying so, attempting to strike that balance: he recognised that on any given matter of professional skill or knowledge, there was bound to be a range of acceptable (though divergent) views as well as an array of views which fell outside that acceptable range. Thus, to avoid liability, a defendant would have to show that there were *other* competent members of his profession who agreed with him, but could not be expected to show that *all* his fellows agreed with him.

57 A crucial point to note is that this inquiry is not, and has never been, an end in itself or a replacement for the general professional standard of care, but is rather *a convenient and efficient means of determining what an ordinary skilled member of the profession would reasonably have done in the defendant's shoes*. It is, in short, a practical mode of implementing the more general standard, which is still the overarching principle to which the court must direct its mind. This does not mean the court may freely second-guess

the result of applying the *Bolam* test; that would defeat the purpose of having the more specific test. Rather, it means that the court should be guided by the overarching principle when it encounters difficulties or ambiguities in applying the test, and should resolve those difficulties or ambiguities in a manner that is consistent with that overarching principle.

(2) The *Bolitho* addendum

58 The *Bolam* test was later supplemented in the decision of the House of Lords in *Bolitho*, which *Gunapathy* also accepted. *Bolitho* required that the body of opinion relied upon must satisfy a threshold test of logic, failing which the court could disregard that body of opinion. As articulated by Lord Browne-Wilkinson (at 242), this means that 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. [emphasis added]

59 *Gunapathy* adopted this test, but sought also to clarify it (at [64]) by breaking it down into a two-stage analysis. At the first stage, the court must be satisfied that the expert had directed his mind to the comparative risks and benefits relating to the matter. Bare and unsupported assertions would therefore fail the test at this stage. At the second stage, assuming the expert had indeed directed his mind to the comparative risks and benefits relating to the matter, the question is whether the medical expert had arrived at a "defensible conclusion". According to *Gunapathy* (at [65]), this question is answered through the satisfaction of two factors. First, the medical opinion

must be internally consistent. Second, the opinion should not "fly in the face" of proven extrinsic facts relevant to the matter.

60 The two-stage analysis appears simple and indeed should not be difficult to apply in the majority of cases. What may not be as apparent is how, precisely, it relates to the idea of logicality and, through that, to the general professional standard of care. In our judgment, the two-stage analysis is implicitly based on a commonsense definition of an "opinion [which] has a logical basis": one which is (a) based on sufficiently comprehensive reasons that are (b) not obviously unsustainable.

61 At the first stage of the inquiry, the court is concerned with whether an expert called by the defendant doctor has considered everything which is relevant to the inquiry which his opinion is supposed to address. His task as an expert witness is to give his opinion on whether, *given all the considerations (of risk and otherwise) relevant in the circumstances of the case*, the defendant doctor's chosen course was acceptable. If the expert has not considered some relevant risk or benefit, or some other relevant fact or argument, he has omitted an essential part of the inquiry and his opinion cannot be said to have a logical basis. We wish to note that we are not here referring to opinions which do not even address the question put to the experts (for instance, where an expert has instead given an opinion on what the appropriate course would be in a different situation than that before the court). In our judgment, such an irrelevant or point-missing opinion would not need to be considered under the *Bolitho* addendum because it would, in the first place, have failed to satisfy the *Bolam* test itself (see [106] and [110] below).

62 The second stage of the inquiry is engaged once the court is satisfied that the opinion is based on sufficiently comprehensive reasons. The court

must then ask whether, having regard to those reasons including the extrinsic facts that are relevant to the matter, the opinion in question passes the test of logic. If the opinion relies on premises that are mutually exclusive (the first limb), or on one or more premises that are inconsistent with extrinsic facts (the second limb), the conclusion will be indefensible in the sense that it is based on one or more obviously false premises.

63 It should be noted that although the principles in *Bolitho* which we have just discussed were described by the court in *Gunapathy* as an "addendum", the court also observed that the *Bolitho* addendum was not a wholly new concept engrafted onto the *Bolam* test, but merely an expression of an understanding which was already implicit in *Bolam* (*Gunapathy* at [63]). We agree with this observation, which is borne out especially in Lord Browne-Wilkinson's discussion in *Bolitho* (at 241–242) of the use of qualifiers such as "responsible, reasonable and respectable" in describing the relevant body of opinion in the pre-*Bolitho* case law. In our judgment, the real point of the *Bolitho* addendum was to remind courts and judges that they were not to abdicate the responsibility of assessing the acceptability of the defendant doctor's conduct to the medical expert(s). Rather, the court has to arrive at its own assessment on whether the evidence adduced by the defendant doctor establishes that there was a genuine divergence of professional views on the issue which is worthy of deference, and it should do this by considering specifically whether the position advanced withstands the test of logic. This latter assessment is one to be made by the court applying its analytical methodology. If the court concludes that the position advanced does not pass the test of logic, it should reject it. And it should do so not because it *must* regard such an illogical position as unreflective of the views of a responsible body of professionals – although that too might strike the court in its assessment, and would be a valid basis for rejection where appropriate – but

because a view that cannot be shown to cross the threshold of logicality commands no deference or respect. In this context, it is worth noting Lord Browne-Wilkinson's statement in *Bolitho* (at 243) that there are cases which "demonstrate that … *despite a body of professional opinion sanctioning the defendants' conduct*, the defendant can properly be held liable for negligence" [emphasis added]. Those cases – *Hucks v Cole* [1993] 4 Med LR 393 ("*Hucks v Cole*") and *Edward Wong Finance Co Ltd v Johnson Stokes & Master (a firm)* [1984] AC 296 ("*Edward Wong*") – were cases where, in Lord Browne-Wilkinson's view, the courts had found that the alleged body of opinion did exist and did have the content alleged, not only among the specific experts called at trial but in the profession at large, but that *the opinion itself was illogical* and should be rejected (see *Bolitho* at 242). In our judgment, this is an important feature of the *Bolitho* addendum, which has perhaps received less attention than it deserves.

64 Thus framed, it should be apparent that the *Bolitho* addendum is not a true exception to the *Bolam* test or to the general professional standard of care, but is instead a logical corollary to them. A doctor who acts in accordance with an outright illogical opinion cannot be said to be acting in accordance with a responsible, reasonable or respectable body of opinion. Nor can he be said to be acting as an ordinary skilled member of the profession would *reasonably* act – even if there are in fact others who would act the same way. Sometimes on examination it may transpire that a great many members of the profession share a common but unreasonable practice, perhaps because they have neglected to reassess their methods following an advance in medical knowledge, or because they still cling to out-of-date ideas (see the comments by Sachs LJ in *Hucks v Cole* at 397, cited with approval in *Gunapathy* at [66]). On those rare occasions, a doctor who adheres to that practice will find no safety in numbers.

(3) A different test for advice?

65 *Gunapathy* also clarified the issue of whether the *Bolam* test and the *Bolitho* addendum extended to the giving of information and advice or was limited only to diagnosis and treatment. In *Bolitho*, Lord Browne-Wilkinson expressly stated that he was only addressing the questions of diagnosis and treatment and not that of disclosure of risk (see *Bolitho* at 243). However, while *Gunapathy* endorsed *Bolitho*, it also followed the earlier decision of the majority of the House of Lords in *Sidaway v Board of Governors of the Bethlem Royal Hospital and the Maudsley Hospital* [1985] AC 871 ("*Sidaway*"), which had applied the *Bolam* test to the provision of advice, as well as to diagnosis and treatment (see *Gunapathy* at [57]). In *Sidaway*, Lord Diplock preferred to view the doctor's duty to the patient as monolithic rather than as one that lent itself to being differentiated into various component parts with different criteria of what might satisfy the duty of care. His Lordship observed (at 893) that:

> In English jurisprudence the doctor's relationship with his patient which gives rise to the normal duty of care to exercise his skill and judgment to improve the patient's health in any particular respect in which the patient has sought his aid, has hitherto been treated as *a single comprehensive duty covering all the ways in which a doctor is called upon to exercise his skill and judgment in the improvement of the physical or mental condition of the patient … This general duty is not subject to dissection into a number of component parts to which different criteria of what satisfy the duty of care apply, such as diagnosis, treatment, advice* …[emphasis added]

66 Although the court in *Gunapathy* did not expressly endorse Lord Diplock's view of doctors as having a single comprehensive duty to which a single test would apply, it did state that the two majority judgments (the other being Lord Templeman's) had in common the view "that the standard of care relating to advice was to be determined by the medical profession, not the

court, in the patient's interests" (*Gunapathy* at [138]). Consistently with this, the court accepted that the *Bolitho* addendum, as well as the *Bolam* test, would extend to all aspects of the doctor's duty including the provision of medical advice (at [141] and [143]). *Gunapathy* also took the view that Lord Bridge's proposition in *Sidaway* (at 900) that even where the *Bolam* test was satisfied, there could be liability for failing to disclose "a substantial risk of grave adverse consequences" (such as a ten per cent risk of a stroke), should be viewed as being subsumed within the *Bolitho* addendum (*Gunapathy* at [141]).

67 Ultimately, the court's decision in *Gunapathy* turned on its holding that the trial judge in that case had erred by taking Lord Bridge's comments in *Sidaway* out of context and giving them too broad an interpretation (*Gunapathy* at [133]–[134]). The court consciously refrained, however, from pronouncing on the merits of a "doctrine of informed consent", which was not fully argued in *Gunapathy*, beyond observing that *Sidaway* was "somewhat shaky ground on which to stand" if one wished to mount an argument based on informed consent (at [142]).

68 We pause here to clarify what is meant by "the doctrine of informed consent". As noted in *Gunapathy* (at [135]), the classic statement of this doctrine is the United States ("US") Court of Appeals, District of Columbia Circuit case of *Canterbury v Spence* (1972) 464 F 2d 772 ("*Canterbury v Spence*"), which Lord Scarman relied on in his strong dissent in *Sidaway*. As succinctly summarised by Lord Scarman in *Sidaway* (at 887):

> In *Canterbury v Spence* … the court enunciated four propositions. (1) The root premise is the concept that every human being of adult years and of sound mind has a right to determine what shall be done with his own body. (2) The consent is the informed exercise of a choice, and that entails an opportunity to evaluate knowledgably the options available and the risks attended upon each: see p. 780. (3) [T]he doctor must, therefore, disclose all "material risks"; what risks are

> "material is determined by the "prudent patient" test, which was formulated by the court, at p. 787:
>
> > "a risk is … material when *a reasonable person*, in what the physician knows or should know to be the patient's position, would be likely to attach significance to the risk or cluster of risks in deciding whether or not to forego the proposed therapy." (Emphasis supplied).
>
> (4) The doctor, however, has what the court called a "therapeutic privilege." This exception enables a doctor to withhold from his patient information as to risk if it can be shown that a reasonable medical assessment of the patient would have indicated to the doctor that disclosure would have posed a serious threat of psychological detriment to the patient.
>
> [emphasis in original]

Lord Scarman approved of this test in substance, although he appears to have preferred to refer to the "prudent patient test" instead of the larger doctrine of informed consent of which that test forms a part (*Sidaway* at 888).

69 From this summary of the doctrine of informed consent, it should be apparent that the court in *Gunapathy*, by accepting that the *Bolam* test and *Bolitho* addendum applied to all aspects of the doctor's duty, had in substance rejected the doctrine, as it and the *Bolam* test are mutually incompatible. Thus, the caveat in [142] of *Gunapathy* is perhaps best understood as a recognition by the court that, although it would not accept the doctrine in that appeal, it might be persuaded to do so in another appeal with fuller argument on the point.

70 We note in passing that the doctrine is not happily named; as the High Court of Australia rightly observed in *Rogers v Whitaker* (1992) 175 CLR 479 ("*Rogers v Whitaker*"), "the phrase 'informed consent' is apt to mislead as it suggests a test of the validity of the patient's consent" (at [15]). In fact, where "informed consent" is absent, the consequence is not that the consent is *invalid*

– which would imply that the treatment might constitute the tort of battery – but simply that the duty, under the tort of negligence, to properly advise or warn of risks has been breached (see Shane S Monks, "The Concept of Informed Consent in the United States, Canada, England and Australia: A Comparative Analysis" (1993) 17(2) University of Queensland LJ 222 at 223–225 ("*Monks 1993*")). We shall therefore attempt, where possible, to avoid the use of this misleading phrase. Nonetheless, its underlying substance forms the crux of this aspect of the appeal.

(4) Is the *Bolam* test restricted to medical negligence?

71 Before concluding this statement of the current law on medical negligence, we wish to dispel some confusion, which has arisen out of a passage from *Gunapathy*, as to whether the *Bolam* test and *Bolitho* addendum apply to *non*-medical negligence. The issue is of some relevance to the present appeal, despite it arising in the medical context, because the variance (if any) between the degree of protection afforded to doctors and that afforded to other professionals is one factor which this court ought to consider in assessing whether the correct balance has been struck.

72 In *Gunapathy*, this court noted (at [68]) that in developing the *Bolitho* addendum, the House of Lords in *Bolitho* had drawn on, or analogised from, *Edward Wong*, a case concerning non-medical negligence. That was a decision of the Privy Council in which the defendant Hong Kong lawyers were found to be negligent despite having acted in conformity with a universally accepted practice among lawyers in Hong Kong. The court in *Gunapathy* stated that:

> 69 The trial judge, in addressing these authorities, concluded that they required that "expert medical evidence, like all expert evidence, be subject to the scrutiny of the court and be discarded if found to be unsupported by sound reason or logic". We hesitate to apply such a broad brush to what are

> really two differing strands of judicial reasoning. *Although* Bolam *represents the starting point for the standard of care for all professionals, its specific test refers to the medical profession. Hence, the willingness of the court to adjudicate over differing opinions in other professions should not be transposed to the medical context.* While judges are eminently equipped to deal with the practice and standards of, for example, the legal profession, the same cannot be said with the intricacies of medical science. *The fact that* Edward Wong *… was cited in* Bolitho *should not therefore be treated as an invitation to merge the treatment of expert medical evidence with that of other expert evidence.* [emphasis added in italics]

73 Commentators have taken this passage to be an unequivocal rejection of the *Bolam* test (and thus also the *Bolitho* addendum) outside the medical context: see, for example, Disa Sim, "*Dr Khoo James & Anor v Gunapathy d/o Muniandy and another appeal*: Implications for the Evaluation of Expert Testimony" [2003] Sing J LS 601 ("*Sim 2003*") at 606–608; Gary Chan Kok Yew, *The Law of Torts in Singapore* (Academy Publishing, 2nd Ed, 2016) ("*Chan 2016*") at para 06.051; and Kumaralingam Amirthalingam, "Medical Negligence and Patient Autonomy: Bolam Rules in Singapore and Malaysia – Revisited" (2015) 27 SAcLJ 666 ("*Kumaralingam 2015*"). On that view, *Gunapathy* stands for the proposition that only the medical profession is to be accorded the deference built into the *Bolam* test and *Bolitho* addendum, with the practices of every other profession subject to the full and robust scrutiny of the court. Based on that interpretation, Sim criticises *Gunapathy* for unjustifiably singling out the medical profession for exceptional treatment when in fact many other professions involve knowledge which is equally technical and which the court would be equally ill-equipped to understand (*Sim 2003* at 607). Chan agrees with Sim and points out that a number of subsequent Singapore decisions, including our decisions in *JSI Shipping (S) Pte Ltd v Teofoongwonglcloong* [2007] 4 SLR(R) 460 ("*JSI Shipping*") and *PlanAssure PAC v Gaelic Inns Pte Ltd* [2007] 4 SLR(R) 513, have applied the *Bolam* test and *Bolitho* addendum to non-medical contexts as well (*Chan 2016*

at para 06.052). The same is true of the UK courts, which apply the *Bolam* test to professions generally (*Clerk & Lindsell on Torts* (Sweet & Maxwell, 20th Ed, 2010) at para 10–03, citing *Gold v Haringey HA* [1988] QB 481).

74 If indeed *Gunapathy* was intended to confine the *Bolam* test and *Bolitho* addendum to the medical context only, we agree with Sim and Chan that it would give rise to a troubling inconsistency. However, it appears to us that *Gunapathy* is more open to interpretation than the learned commentators have allowed. For one thing, the court in *Gunapathy* was not dealing with an attempt to apply the *Bolam* test and *Bolitho* addendum in a non-medical context; rather, the court was responding to an attempt by the plaintiff-patient to *undermine* the *Bolam* test in the medical context by relying on non-medical cases (such as *Edward Wong*) in which the court appeared to be relatively willing to second-guess professional opinions as illogical. That is why *Gunapathy* states (at [69]) that "the *willingness* of the court to adjudicate over differing opinions in other professions should not be *transposed to the medical context*" [emphasis added], rather than stating that the *reluctance* of the court to adjudicate over differing opinions in the medical context should not be *transposed to other professions*. Strictly speaking, this court in *Gunapathy* was not asked to decide, and did not decide, the question of whether transposition could occur in the opposite direction by applying the *Bolam* test in non-medical contexts. In any event, it is clear that – as Chan points out – any limitation imposed in *Gunapathy* in that respect has been overtaken by later cases such as *JSI Shipping*, in which we expressly accepted (at [49]–[53]) that the *Bolam* test and *Bolitho* addendum applied to other classes of professionals (such as, in that case, auditors).

75 Nonetheless, the statements made in [69] of *Gunapathy* are salutary reminders (consonant with those of Lord Browne-Wilkinson in *Bolitho* at 243)

of the practical need for a judge to approach with circumspection (but not unyielding unwillingness) any invitation to reject the opinion of a competent medical expert on the basis that it is illogical. The underlying basis for this is the degree of uncertainty and complexity of professional knowledge that informs the resolution of the issue in question, and in this regard, it is the case that this simply will not be constant in every situation, much less across professions. The court in *Gunapathy* was certainly not wrong to note that medical science is *one* domain in which the difficulty confronting a medically untrained judge might be particularly acute. The court should therefore be duly circumspect, in applying the *Bolitho* addendum in a medical case (or, indeed, in a non-medical case engaging an equally uncertain and technical body of knowledge), before concluding that the views of a competent expert are illogical. To put it another way, although the court must scrupulously implement the two-stage inquiry under the *Bolitho* addendum (as clarified by *Gunapathy*), it should in doing so remain self-critically aware of the possibility that some seeming flaws in a proven body of opinion may be the product of the court's imperfect understanding of an alien domain of knowledge, rather than an indication that the opinion itself is indefensible, and ensure that this possibility has been displaced.

(5) Conclusion on the law as it stands

76 In sum, the state of the law in the medical context, prior to the present decision, may be summarised as follows:

(a) The general professional standard is that of an ordinary and reasonable skilled person exercising or professing to have that special skill or competence.

(b) The specific test to be adopted in determining whether the general professional standard has been met is the *Bolam* test read with the *Bolitho* addendum.

(c) The *Bolam* test only requires that the defendant's practice was supported by a responsible body of opinion within the profession, even if there is another body of opinion which disagrees.

(d) The *Bolitho* addendum consists of a two-stage inquiry of, first, whether the experts holding the opinion had directed their minds to the comparative risks and benefits relating to the matter, and second, whether the opinion was defensible (meaning that it was internally consistent *and* did not contradict proven extrinsic facts relevant to the matter).

(e) The *Bolam* test read with the *Bolitho* addendum governs *all aspects* of a doctor's interaction with a patient, including diagnosis, treatment and advice. Phrased negatively, there is no separate standard for disclosure of risk or other advice.

(f) In applying the *Bolitho* addendum to a body of opinion concerning a domain as complex and uncertain as medical science, the court should remain aware of its own limitations and adopt a duly cautious approach.

77 We turn now to the question of whether, and to what extent, the current state of the law requires further modification to suit the realities of contemporary medical practice in Singapore.

*Should the* Bolam *test be retained, and if so, to what extent?*

78 There are three possible views to take on the matter of reform: that the *Bolam* test and *Bolitho* addendum should be wholly replaced; that the *Bolam* test and *Bolitho* addendum should be retained without change; or that the *Bolam* test and *Bolitho* addendum should continue to apply to some aspects of medical care, but not others.

(1) The argument for full abolition

79 The strongest criticism of the *Bolam* test has been that it has reduced the determination of negligence to an exercise of doctors judging doctors, instead of judges doing so. This state of affairs, which may be likened to self-regulation or a peer review regime, has been said to confer near immunity on the medical profession. Notwithstanding the requirement of a "responsible body" of medical opinion, doctors when sued tend to look for sympathetic experts, and it would be unusual for a defendant doctor to be unable to find a single expert unwilling to defend his course of conduct. This fact, in combination with the judicial deference that is seemingly inherent in the formulation of the *Bolam* test, means that the test can potentially be satisfied even by the production of an expert whose professional views might lie at the fringes of medical standards and norms. The *Bolitho* addendum goes some way toward remedying that problem, but it is not the case that even a fringe opinion will necessarily be one that fails the relatively narrow two-stage inquiry under the *Bolitho* addendum.

80 Because of arguments of this sort, some courts have over time rejected the *Bolam* test in relation to *all* aspects of the doctor's duty, including diagnosis, treatment and care. In Australia, for instance, the initial rejection of the *Bolam* test in relation to the provision of information in *Rogers v Whitaker*

eventually led to its wholesale rejection in relation to all aspects of the doctor's duty, although subsequent legislative reforms (see [125] below) have restored the *Bolam* test in relation to diagnosis, treatment and care (see also *Kumaralingam 2015* at para 11). The decision of the Federal Court of Malaysia in *Foo Fio Na v Dr Soo Fook Mun* [2007] 1 MLJ 593 has similarly been seen by some as standing for the proposition that the *Bolam* test is no longer relevant to any aspect of medical negligence there (see also *Kumaralingam 2015* at paras 27 and 34).

81 In our judgment, such a response is unnecessarily radical. The *Bolam* test and *Bolitho* addendum may well require some modification, but the underlying concerns which motivated their development remain relevant. We echo the observation of this court in *Gunapathy* (at [144]):

> 144 At the heart of the *Bolam* test is the recognition that judicial wisdom has its limits. *A judge, unschooled and unskilled in the art of medicine, has no business adjudicating matters over which medical experts themselves cannot come to agreement. This is especially where, as in this case, the medical dispute is complex and resolvable only by long-term research and empirical observation.* Furthermore, the lawyer-judge in "playing doctor" at the frontiers of medical science might distort or even hamper its proper development. Excessive judicial interference raises the spectre of defensive medicine, with the attendant evils of higher medical costs and wastage of precious medical resources. [emphasis added]

82 Medical opinion is still deeply divided on many important matters and – despite the courts' increasingly frequent recourse to helpful mechanisms such as the appointment of a medical assessor to aid in a judge's understanding of technical matters – the courtroom still is not, and will likely never be, the best place to resolve controversies over the answers to the great questions that confront medical science. Furthermore, replacing the *Bolam* test and *Bolitho* addendum with a more demanding standard may encourage therapeutic and scientific conservatism, as doctors might be incentivised to

cling to the most established and mainstream approaches regardless of their relative effectiveness. Such an undue focus on orthodoxy could well discourage innovation and unnecessarily prolong the lifespan of "best practices" which, in truth, may be inferior to newer but less established competing practices.

83 It is for good reason, then, that McNair J set the standard not by reference to the orthodox view (which may be on the verge of being outdated or, in truly novel areas of practice, may not yet exist), nor the majority view (which may well be proved wrong in time), nor even by reference to the correct scientific standard (which the court is poorly placed to determine, not only because of its own limitations of expertise, but also because the scientific community is constantly advancing the frontiers of knowledge). Instead, he set the standard by reference to the views of a responsible body of practitioners. In our judgment, this remains a sensible compromise, at least where the inquiry concerns matters of scientific knowledge (as opposed to matters of human judgment, which we discuss further at [125] below). We therefore reject the argument (which, in fairness, the Patient did not advance) that the *Bolam* test and *Bolitho* addendum should be wholly dispensed with.

(2) The argument for full retention

84 What of the view that the *Bolam* test and *Bolitho* addendum should not be interfered with to any degree, even as regards advice? The strongest argument in favour of that view is the contention that if the *Bolam* test and *Bolitho* addendum were abandoned in favour of a standard that placed greater emphasis on the interests and perspective of the patient, it would spark an unacceptable increase in medical litigation. This would, it is said, have two deleterious effects: first, it would drive up the cost of medical malpractice

insurance, and thus increase the costs of healthcare to the public, and second, it would increase the pressure on doctors to adopt what is commonly referred to as "defensive medicine". The latter term, which was alluded to in *Gunapathy* (at [144]), refers to "the practice of doctors advising and undertaking the treatment" – or, indeed, the diagnostic process – "which they think is legally safe even though they may believe that it is not the best for their patient" (*Sidaway* at 887, *per* Lord Scarman). Two paradigm examples of defensive medicine are where a doctor prescribes a test or treatment that is unlikely to be of much utility simply to ward off the risk of later being faulted for not having prescribed it, and where a doctor refuses to recommend a potentially beneficial treatment because it is riskier or newer than other, less effective treatments and therefore more likely to expose the doctor to future litigation.

85 It cannot be denied that the cost of healthcare and the practice of defensive medicine (which also feeds into the cost of healthcare to some extent) are both real concerns. However, we do not accept that they provide sufficient reason for the court to shut the door to reform entirely. In the first place, it has not been distinctly established that *any* departure from the *Bolam* test would in fact have the consequences of more medical litigation, higher insurance premiums and greater healthcare costs. It must be recalled that what is being considered is partial reform and, in particular, the possible adoption of the *Montgomery* approach to advice specifically. As Lord Kerr of Tonaghmore and Lord Reed suggested in that case, adopting "an approach which results in patients being aware that the outcome of treatment is uncertain and potentially dangerous, and in their taking responsibility for the ultimate choice to undergo that treatment" may actually *decrease* the likelihood of litigation (*Montgomery* at [93]). Furthermore, we note that certain factors which have driven up the cost of medical professional insurance in the US – the jurisdiction in which

such concerns have been perhaps the most prominent – are not present in Singapore. The US legal system features jury awards which often would, in Singapore, be considered highly inflated; allows contingency fee arrangements (encouraging opportunistic negligence suits); and does not follow a "loser pays" principle of costs (thus reducing the disincentive for litigants or law firms to bring weak or speculative claims). In the absence of such factors in Singapore, we see no reason to believe, without clear evidence, that a carefully calibrated shift in the standard of care is likely to lead to a drastic increase in the frequency and value of medical negligence lawsuits in Singapore.

86 In any event, we note that this is an argument that resides purely in the realm of policy and which depends on uncertain empirical claims about the likely economic effects of the proposed reform. As Lord Scarman noted in *Sidaway* (at 887), the court is concerned with legal principle, and should generally leave policy problems to the legislature. It is, of course, legitimate for us to be mindful of the policy implications of *legal* arguments presented to us; but it is another thing for us to make a sweeping legal decision on the basis of a *pure policy argument with no legal content*, especially one which turns on factual assertions concerning economic consequences which are not clear and obvious. The latter is a bridge too far.

87 The problem of defensive medicine falls more squarely within the ambit of the court's inquiry, since it directly implicates the question of whether the proposed standard will fortify or hinder the medical profession's fulfilment of its duties to its patients. In that regard, we note that unlike a wholesale rejection of the *Bolam* test and *Bolitho* addendum, which the court in *Gunapathy* rightly warned against (at [144]), reform of the more limited nature being considered appears unlikely to contribute significantly to the practice of defensive medicine. The implications of *Montgomery* are limited to

advice, whereas the concerns in defensive medicine pertain mainly to diagnosis and treatment. In concrete terms, the proposed reform (which we discuss in the appropriate section below) does not touch on what tests or treatments a doctor should conduct or recommend, but rather the extent of communication which is necessary regarding the risks and alternative treatments/tests. We therefore do not think the spectre of defensive medicine is a strong reason to shy away from reform in the area of advice specifically.

(3) The argument for partial abolition

88 We have rejected the proposition that the *Bolam* test and the *Bolitho* addendum should be dispensed with entirely, as well as the proposition that they should be entirely immune to change. The question that remains is whether there are compelling reasons to change the *status quo* with respect to any aspects of the doctor-patient relationship. In order to answer this question, it is necessary first to schematise the various aspects of the doctor-patient relationship, because it is only by examining those aspects – and the specific challenges that arise in relation to them – that we will be able to determine the continuing suitability of the *Bolam* test and *Bolitho* addendum in each context.

89 It is important to recognise, at the outset, one practical reality of the doctor-patient relationship. That reality is that the dynamic between the parties is precisely that – dynamic – and can change markedly depending on whether the interaction is principally in connection with (a) diagnosis, (b) advice (including the provision of information on such matters as treatment options and risks), or (c) treatment. Indeed, we do not understand Lord Diplock's speech in *Sidaway* (at 893) as denying this reality; instead, his quarrel is with the idea that these different aspects can be sufficiently separated from each other and assessed according to different standards.

90 With the greatest respect to Lord Diplock's views, and their adoption in *Gunapathy*, we consider it artificial to treat these three aspects of medical care as monolithic and capable of being assessed with reference to a single test. We reach this conclusion despite recognising the force in Lord Diplock's observation that the three aspects cannot always be rigidly demarcated. Indeed, it will often be the case that a single step in the medical care process will engage more than one aspect of the doctor's duty, and the different aspects will then be in play concurrently. That is one reason why we prefer to refer to these as "aspects" as opposed to "stages" (which might, misleadingly, imply a clear demarcation and set chronological order). Lord Diplock provided two concrete examples of such interplay when he observed in *Sidaway* (at 893) that:

> … Diagnosis itself may involve exploratory surgery, the insertion of drugs by injection (or vaccination) involves intrusion upon the body of the patient and oral treatment by drugs although it involves no physical intrusion by the doctor on the patient's body may in the case of particular patients involve serious and unforeseen risks. …

91 The facts of the present case provide a further illustration of this, in that even after the surgery commenced, the bimanual palpation was done essentially as a diagnostic step before the decision was made to go ahead with the Whipple procedure. We note as well that the three aspects may emerge and submerge repeatedly at different points in the relationship: for instance, advice may be needed even before a particular diagnostic technique is employed, and a treatment once completed may (and usually will) require further advice to be given to the patient on the success or otherwise of the treatment and the next steps to be taken.

92 We recognise, therefore, that applying different standards of assessment to different aspects of the relationship may not be a

straightforward task. But we cannot agree with Lord Diplock's conclusion that it is "neither legally meaningful nor medically practicable" to draw a distinction between what the *duty of the doctor* requires in each of the three aspects (*Sidaway* at 893). Instead, what we conclude from the features discussed above is three-fold. First, it is true that the doctor has a single, overarching duty to the patient, but that overarching duty may manifest itself in different *forms* and be amenable to assessment through different *tests*. The specific tests should be thought of as practical modes of implementing the overarching duty or general principle, rather than as departures from it (see [57] above). Secondly, any replacement for the *Bolam* test and *Bolitho* addendum with regard to a particular aspect must be able to accommodate the dynamism earlier described and must not rely on the drawing of artificial or otherwise untenable distinctions. Finally, such a replacement test must not be so complex, uncertain, or onerous that doctors – who do not have the luxury of unlimited time to ponder and reflect before making a decision – cannot reasonably be expected to satisfy the test.

93 We return to these analytical challenges, and how they are to be overcome, later in this judgment, but at this stage, the basic point we make is that there *is* a material difference in the dynamics of the doctor-patient relationship in relation to each of these aspects. That material difference is, in essence, the degree of passivity on the part of the patient. During the hearing, Mr N Sreenivasan SC, who appeared for the Patient, rightly observed that at the time when diagnosis is the focal point of the interaction, the patient is a passive participant, providing information, surrendering blood samples and otherwise making his body available for tests to be done, all under the direction of the doctor so as to enable the doctor to ascertain his medical condition. Similarly, at the time when treatment is administered, and especially in cases where this consists of surgery, the patient is even more so a

passive participant. Further, in many cases of surgery, the patient will be unconscious and thus *entirely* passive. In contrast, between these two aspects of their interactions, after a working diagnosis has been formed and before the recommended treatment is administered, is the time when the patient must assume an active role. On the premise that one generally cannot be forced to accept treatment, this is the moment where it is generally *for the patient to make his decision*.

94 The point was well-illustrated by Mr Sreenivasan's example of an elderly patient who has been diagnosed with late-stage cancer. Assuming that the cancer is hostile and the prognosis is not good even with aggressive and expensive treatment, the ultimate decision on whether to proceed with such treatment, or to focus on palliative care, must surely reside with the patient.

95 In our judgment, the general characteristics of the three aspects of medical care which we have identified are as follows.

96 The first aspect, which we have described as "diagnosis", is concerned with establishing what the patient's medical need is. The patient will often have a complaint that is commonly conveyed in terms of symptoms; or the patient might have discovered something which requires further investigation or consideration in medical terms. The doctor's function here is to obtain the relevant and necessary information from the patient, consider what further information may be required and how this may be obtained, consider and analyse all of this information either on his own or, sometimes, in consultation with other doctors, usually specialists, and then form at least provisional conclusions as to what would be the best way in which to proceed with a view to addressing the medical complaint or concern which has been presented. In the context of this function, the doctor is very much in control. It is true that he

depends on the patient's forthrightness and candour but the patient is, in the main, led by the doctor. This is not to say that *all* diagnostic processes will take place without the prior involvement of the patient under the more active rubric of advice. That may be the case where the diagnostic method is routine, non-invasive and risk-free (as in the case of the measuring of body temperature or blood pressure); however, where a diagnostic procedure is unusual, invasive or risky (as in the case of exploratory surgery), the advice facet will first have to be engaged.

97 Once the doctor has obtained sufficient information, in the ordinary case, his next function is to present the appropriate information to the patient. This is the aspect that we have described as "advice", and we include within this rubric both advice in the narrow sense of recommendations as to what should be done, as well as advice in the broader sense of the provision of information regarding alternative treatments and the risks attendant on various possible treatments (or indeed diagnostic procedures, where those are risky or invasive). The critical point to note is that in this aspect of the interaction between the doctor and the patient, although the focus of the inquiry is on the nature and extent of information that the doctor must provide to the patient, it is the patient who is in charge because it is the patient who must make choices and decisions. Those choices and decisions will inevitably entail a calculus of risks, uncertainties, pain, discomfort or even suffering on the one hand, and potential benefits on the other. But these are decisions that are ultimately the patient's to make. The doctor's function here is to empower and enable the patient to make that decision by giving him the relevant and material information.

98 The final aspect of the doctor's role is where he carries out that which the patient has agreed should be carried out. This is captured by the short-hand

expression "treatment", and it extends, in cases of surgery, to pre- and post-operative treatment and care. Here again, the patient's involvement is minimal save to the extent and in the situation where the patient in the exercise of his autonomy chooses not to receive any or particular treatment.

99 We will next consider the continued applicability (or otherwise) of the *Bolam* test and *Bolitho* addendum in relation to each of these medical functions. To briefly outline the analysis that follows, we consider that the *Bolam* test and *Bolitho* addendum should be retained, with some clarification, for the medical functions of diagnosis and treatment. However, we consider that in relation to the function of providing advice and information to the patient, the practical implementation of the general standard of care should no longer be the *Bolam* test and *Bolitho* addendum, but should instead be a modified version of the standard or test set out in *Montgomery*.

*The appropriate test in relation to diagnosis and treatment: the* Bolam *test read with the* Bolitho *addendum*

100 We earlier stated (at [81]–[83] above) some of the compelling reasons why we see value in retaining the *Bolam* test in some capacity at least. Those reasons, which are essentially those noted in *Gunapathy*, can be summarised as follows:

(a) medical science will inevitably and always be in a state of discovery and learning, such that there will frequently be legitimate differences of opinion within the profession as to the appropriateness of a particular course taken by a defendant;

(b) innovation should be encouraged within limits, rather than be discouraged or stifled by concerns over the risk of liability and litigation; and

(c) science, including medical science, is a pursuit that is best guided and assessed by scientific rather than legal methods and principles.

In our judgment, these considerations remain valid in the context of diagnosis and treatment, as becomes apparent when we consider the specific challenges which confront a doctor when discharging these two facets of his duty.

101 The process of diagnosis, as we have observed, involves the collection, integration and interpretation of seemingly disparate pieces of information. This includes an array of information which is specific to the facts of the patient's case, such as subjective information reported by the patient, observations made by medical staff and objective data gleaned from clinical investigations. In interpreting that information, a doctor must draw on his own direct experience accrued over the course of his career, as well as on the continually evolving pool of medical knowledge contained in manuals, learned journals, and the like. Even all of this may sometimes add up only to an incomplete picture and despite the availability of an array of diagnostic tools, conclusive findings will often not be possible. Much will depend on the doctor's experience, good sense and sound judgment. This is complicated by the fact that medical knowledge remains imperfect and evolving. In at least some cases, a definitive diagnosis will be impossible before treatment and therapy must be recommended to the patient despite the absence of a definitive diagnosis. In such circumstances, it is wholly unremarkable that reasonable doctors may disagree over the appropriate diagnosis. These realities of medical practice have not changed since *Bolam*. Thus, the compelling factors in favour of retaining the peer review-based *Bolam* test, read with the *Bolitho* addendum, continue to apply with great force in the diagnostic context.

102 For much the same reasons, we are similarly satisfied that the *Bolam* test and the *Bolitho* addendum remain relevant to evaluating the standard of care in relation to treatment, including pre- and post-operative care. Moreover, in the specific context of surgery, it will often be the case that more latitude will be afforded to the surgeon than is afforded to a doctor in perhaps any other setting. Behind the doors of the operating theatre lies a dynamic scene where there is often the greatest actual danger to the patient and where it is often the most difficult and potentially the most unfair to second-guess what the surgeon ought to have done. Of course, where a complaint against a surgeon concerns his pre-meditated selection of a particular procedure or technique, or for his care in carrying out the planned surgery, there may not be a need to afford him any special degree of latitude. But where a decision is made on the fly in response to a complication that arises in the course of the surgery, the court will be understandably hesitant to lay blame at the surgeon's door when his peers would not do so.

103 However, our continued acceptance of the *Bolam* test is subject to two general observations as well as two clarifications regarding the *Bolitho* addendum specifically.

104 The first general observation concerns the significance of the general professional standard of care to the court's application of the *Bolam* test. We reiterate that the standard of care for medical practitioners, as it is for other professionals, is ultimately that of the reasonable and competent doctor. As we earlier observed (at [57] above), the *Bolam* test, with its emphasis on the views of a responsible body of professionals, is not intended to be a replacement for the general professional standard of care, but rather a practical mode for implementing that standard. Put differently, the *Bolam* test is a *proxy* or a *heuristic* for determining what a reasonable and competent doctor would do.

Its underlying logic is that a reasonable and competent doctor would only do that which at least some responsible body of doctors would do. The court should not lose sight of that logic when applying the *Bolam* test to the specific facts of the case before it.

105 We pause here to acknowledge that in applying the *Bolam* test with its underlying purpose in mind, the court may sometimes have to consider further nuances such as whether, when and how adjustments to this standard should be made to take account of the experience or lack thereof, the special expertise and so on of the allegedly negligent doctor. It is not necessary for us, in the context of this case, to offer a definitive view on how those questions should be resolved. We leave that for another time when those issues are in fact engaged.

106 The second general observation we wish to make is that the *Bolam* test is not without its limitations even in the context of diagnosis and treatment. Tort law in general, and the law of negligence in particular, is largely concerned with duties that are imposed by law on all persons and with the liabilities that flow from the breach of those duties. In the context of the law of negligence, those duties are largely concerned with the imposition of care to avoid harm that is preventable. Although the law looks to frame these standards as objectively as possible, by recourse to the standard of the fictitious legal personage generally known as one or other variant of the "reasonable person", the precise content of these standards and duties are invariably affected by the context and circumstances faced by the actor. A simple example from a non-professional context will illustrate the point: a motorist's duty not to drive at an excessive speed will mean different things depending on whether the road is wet or dry, the surroundings are brightly lit or dark, and whether it is a busy road cutting through a residential

neighbourhood or a highway that excludes all non-motorised traffic. Similarly, what is required by a doctor's duty to his patient depends on context-specific circumstances such as the state of the patient and whether it is a medical emergency. Accordingly, a *general* rule supported by a responsible body of medical opinion may not be determinative if it is expressed in terms which do not cast much light on the appropriateness of the defendant's conduct in the *specific* circumstances of the case before the court. In so recognising, the court would not be rejecting or second-guessing the soundness of that body of opinion on its own terms, but merely determining that the body of opinion fails to answer the questions which arise in the individual case.

107 This leads us to our two clarifications regarding the *Bolitho* addendum. The first concerns the true scope of the addendum. It is sometimes assumed that the *Bolitho* addendum is an exhaustive framework governing all matters concerning the court's treatment of expert evidence on medical and other professional matters. That assumption is mistaken. As a matter of principle, the scope of the *Bolitho* addendum only extends to the court's approach to a body of opinion that has been shown to exist. The *Bolitho* addendum does not apply to findings of fact (such as whether a nodule found in a plaintiff's brain was scar tissue or a tumour), which only the court can make: *Gunapathy* at [70]. Equally, the *Bolitho* addendum does not govern purely evidential matters such as whether the content of the evidence adduced by an expert witness is relevant to the legal question to be determined and whether the expert witness is, in the first place, being truthful as to what his real opinion is.

108 We say this on the basis of the substance and language used in *Bolitho* itself. Lord Browne-Wilkinson states (at 241–242) that the question is whether a body of opinion is "responsible", "reasonable" or "respectable", and that "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." These statements all presuppose that the body of opinion relied upon in fact exists and has been correctly reflected in the expert witness's testimony. What is assessed under the *Bolitho* addendum is the logicality of a body of opinion of which the existence and content have already been proven.

109 The consequence of this observation is that the court always retains the responsibility and the power, before the *Bolitho* addendum is engaged, to decide whether the testimony of an expert witness is credible, accurate and relevant. It should be remembered that the question of negligence rests on the court's evaluation of the evidence such that it is satisfied that there exists a "*genuine* difference of opinion" [emphasis added] within the medical community (*Rogers v Whitaker* at [8]) and that the defendant doctor's conduct is conduct that reflects that difference of opinion, rather than conduct that has failed to meet any acceptable standards. If there are good reasons to discount the expert testimony which is led to establish the existence and content of an alleged body of opinion, the court may find that there is insufficient evidence that the alleged body of opinion even exists or that it has the content alleged. In that case, the *Bolam* test itself will not be satisfied for lack of a proven supporting body of opinion, and it will be unnecessary to proceed to the question of whether the *Bolitho* addendum is satisfied. (In any event, without a proven body of opinion, the *Bolitho* addendum would not have anything on which to operate.)

110 One expects and hopes that such occurrences will be rare, but they may arise where, for instance, an expert can be distinctly shown to be misrepresenting or distorting his evidence, so as to give a misleading impression as to the existence or content of a body of opinion. In addition (as stated at [106] above), the court may discount a body of opinion which –

although not necessarily unsound in itself – fails to address the questions before the court. Neither of these situations (and there may be others) should be considered applications of the *Bolitho* addendum. They are merely applications of the court's general duty to assess the evidence presented to it and reject it if it is not credible or not probative of the facts to be proved – namely, the existence, content and/or relevance of the alleged body of opinion which is necessary for the satisfaction of the *Bolam* test.

111 The second clarification we wish to make is that after a court has accepted an expert witness's testimony as to the existence and content of a body of opinion, and has determined that it addresses the questions before the court, the court must then ensure that proper effect is given to the *Bolitho* addendum. We emphasise that we are not setting out any new proposition of law in that respect; as earlier stated (at [63]–[64] above), it is clear even on the current state of the law that the *Bolitho* addendum is an expression of an integral part of the logic implicit in the *Bolam* test and that its fulfilment is not to be treated as a mere formality. Our observation here is merely a reminder intended to address the concerns raised by some commentators – which are to some extent justified – that in truth *Bolitho* has brought about little change (see, for example, *Kumaralingam 2015* at para 10) and is too often paid no more than lip service by the courts (see, for example, José Miola, "On the Materiality of Risk: Paper Tigers and Panaceas" (2009) 17 Med L Review 76 ("*Miola*") at 79). To the extent that has indeed been the case, it should not continue to be so.

112 With the above observations and clarifications in mind, we do not think it necessary, in respect of the aspects of diagnosis and treatment, to modify the *Bolam* test or the *Bolitho* addendum from the form stated in *Gunapathy*. Thus, the summary provided at [76] above, supplemented by what

we have just discussed, remains representative of Singapore law with the sole exception that, contrary to what is stated in [76(e)], the aspect of advice shall henceforth be covered by a different test. It is to that aspect we now turn.

*The appropriate test in relation to the provision of advice: the modified* Montgomery *test*

113 As earlier noted, the aspect of advice has a significantly different complexion from the other two aspects of medical care in that the patient is not (or at least, need not be) a passive recipient of care, but an active interlocutor in whom ultimately rests the power to decide what course to pursue. Unfortunately, the parties are in unequal positions. The doctor has the information, knows its potential significance, will be in a position to make judgment calls as to the weight or significance to be placed on that information, and is usually able to be objective and dispassionate. The patient on the other hand has the affliction to be treated, will (where serious medical conditions are concerned) likely be emotional, and may be prone to place inappropriate emphasis, either insufficient or excessive, on risks. These difficulties may be exacerbated if the patient is not able to understand the complexities of his medical situation and the proposed treatment. Yet it ultimately remains the patient's decision to make.

114 The legal test one should shape to address this state of affairs depends, we acknowledge, on the ethical principles which are seen to inform the law. Although there is no perfect consensus among medical ethicists, it is fair to say that the following key ethical norms or moral principles (as stated by Tom L Beauchamp and James F Childress, *Principles of Biomedical Ethics* (Oxford UP, 5th Ed, 2001) at p 12) feature in some capacity in practically all systems of medical ethics:

> … (1) *respect for autonomy* (a norm of respecting the decision-making capacities of autonomous persons), (2) *nonmaleficence* (a norm of avoiding the causation of harm), (3) *beneficence* (a group of norms for providing benefits and balancing benefits against risks and costs), and (4) *justice* (a group of norms for distributing benefits, risks, and costs fairly).

115 These principles are by no means new, but at the time the *Bolam* test was developed, much less emphasis was generally placed on the principle of patient autonomy than was the case in relation to the principle of beneficence. The doctor occupied a paternal role, which sometimes required him to make decisions which were considered too important, and too difficult to understand, to be left in the patient's hands. It was acceptable to keep a patient in the dark as to the risks and alternative treatments relating to his illness if this would make him more likely to undergo the treatment which was (as only the doctor could know) best for the patient's health. On that view, the *Bolam* test would obviously be appropriate even with regard to advice, since that is the standard which would best protect the doctor's freedom to pursue the noble goal of bettering the patient's health as the doctor (who knows best) sees fit.

116 As long as this physician-centric view accorded with the expectations of society, there was perhaps no principled or practical difficulty with retaining the *Bolam* test as regards advice. But this did not last, and even before *Montgomery* changed the law in the UK, the increasing recognition of the need to treat patient autonomy seriously saw patient-centric approaches gain ascendance in parts of the US (see, for example, *Canterbury v Spence*), Canada (see, for example, *Reibl v Hughes* (1980) 2 SCR 880) and Australia (see, for example, *Rogers v Whitaker*). Without delving into the precise positions these jurisdictions adopted, it suffices to say that all of them arrived at standards or tests which would require disclosure of risks and/or alternatives

to the patient, with some accommodation of the patient's viewpoint in the analysis.

117 Even as these other common law jurisdictions moved towards a more patient-centric approach, the UK, for some time, held fast to the *Bolam* test even in relation to advice. But there was clearly significant judicial discomfort with maintaining this position, given the incontrovertible fact that it is ultimately the patient who must decide whether to undergo a recommended treatment and procedure. In Lord Scarman's dissent in *Sidaway*, he observed that a patient's decision to consent to the proposed treatment might not depend only on medical considerations, but also "circumstances, objectives and values" which might lead him to a different decision from that suggested by a purely medical opinion (at 885–886). He proposed a more patient-centric test where advice was concerned, which we earlier discussed (see [68] above). Although Lord Scarman's view did not find favour with his brethren in *Sidaway*, subsequent cases have cast further doubt on the viability of the *Bolam* test in the context of medical advice (see, for example, *Pearce v United Bristol Healthcare NHS Trust* [1999] EWCA Civ 865, which introduced the terminology of the reasonable patient into English law).

118 In 2014, the UK Supreme Court in *Montgomery* finally and definitively vindicated Lord Scarman's view. In a judgment both principled and practical, the court recognised that the *Bolam*-era conception of the patient as a passive recipient of treatment no longer prevailed within the profession or in the wider society. Overwhelming evidence – including evidence in the form of guidelines produced by medical associations – showed that in the context of the UK, developments within the profession and in society at large had shifted the balance toward recognising patient autonomy as a principle of prime importance (*Montgomery* at [75]–[81]). Rather than repeat *Montgomery*'s able

analysis on that point, we simply note instead that professional practice in Singapore, too, has undergone the same transformation. The foreword of the Singapore Medical Council's Ethical Code and Ethical Guidelines (2016 Edition) ("the 2016 ECEG"), which came into force on 1 January 2017, notes that "a new generation of patients is far better informed about medical matters, their choices and rights". What is more, the 2016 ECEG explicitly makes respect for autonomy an imperative, stating that doctors are to uphold their patients' "desire to be adequately informed and (where relevant) their desire for self-determination" (at p 13). The section on consent contains 20 items and is prefaced with the following statement (at p 37):

> An important part of patient autonomy involves ensuring that patients give their valid consent (if they are able to do so) to any treatment or procedure prior to their undergoing such treatment or procedure. *This involves the patients making voluntary decisions on their medical care* ***after having known and understood the benefits and risks involved.*** [emphasis added in italics and bold italics]

119 The professional guidelines we have cited are not, in our view, merely aspirational; nor are they a counsel of perfection. They reflect the fact that the nature of the doctor-patient relationship has evolved together with the level of education and access to knowledge of the ordinary Singaporean. At one time, it might have been generally true that the patient remained passive through all the phases of his interaction with the doctor. These days, however, the archetypal patient should no longer be seen – and, we imagine, would not want to be seen – as a passive recipient of such information. The discussion of which treatment to pursue is now best seen as a collaborative process involving the doctor and the patient.

120 In our judgment, it would be wrong to ignore this seismic shift in medical ethics, and in societal attitudes towards the practice of medicine, in

deciding how the realities of the doctor-patient relationship are to be reflected in the applicable legal standards for doctors. It is therefore incumbent on us to reconsider the advice aspect of the relationship through the lens of patient autonomy *as well as* the principle of beneficence and ensure that *both* principles are upheld. There must be a balance between both principles (as well a balance between the doctor's perspective and the patient's perspective); neither should dominate the other.

121 Does the *Bolam* test, read with the *Bolitho* addendum, successfully strike that balance in the context of advice? *Montgomery* answered that question in the negative. The *Bolam* test, by design, does not allow any room for the patient's perspective. Lord Reed and Lord Kerr (with whom the other Law Lords agreed), in a passage which echoes and elaborates on similar concerns in [14] of *Rogers v Whitaker*, observe (at [83] of *Montgomery*) that there is:

> 82 … a fundamental distinction between, on the one hand, the doctor's role when *considering possible investigatory or treatment options* and, on the other, her role in *discussing with the patient any recommended treatment and possible alternatives, and the risks of injury which may be involved.*
>
> 83 The former role is an exercise of professional skill and judgment: what risks of injury are involved in an operation, for example, is a matter falling within the expertise of members of the medical profession. *But it is a* non sequitur *to conclude that the question whether a risk of injury, or the availability of an alternative form of treatment, ought to be discussed with the patient is also a matter of purely professional judgment.* ***The doctor's advisory role cannot be regarded solely as an exercise of medical skill without leaving out of account the patient's entitlement to decide on the risks to her health which she is willing to run (a decision which may be influenced by non-medical considerations).*** Responsibility for determining the nature and extent of a person's rights rests with the courts, not with the medical professions.
>
> [emphasis added in italics and bold italics]

122 This passage suggests that the greatest concern in this context is that the use of the *Bolam* test gives insufficient regard to the autonomy of the patient, who should be armed with all the information he reasonably requires in order to make a proper decision as to whether to proceed with the proposed treatment. Applying the *Bolam* test to determine what and how much information to impart to the patient would allow the doctor to withhold whatever he wishes to so long as some of his peers would have done the same. Such an outcome is incompatible with even a modest notion of patient autonomy. Moreover, since the decision as to what ought to be discussed with the patient is not "a matter of purely professional judgment" (which we take to mean a matter of medical science even though the decision is still one of professional judgment in the wider sense), the argument for a peer-review standard is less compelling. Indeed, the court in applying the peer review-based *Bolam* test to advice runs the risk of abdicating its role as the arbiter of individual rights.

123 As against this, the respondents and the AGC submit that the *Bolam* test and the *Bolitho* addendum should continue to apply to the aspect of advice. Dr Ooi's counsel, Mr Edwin Tong SC, submits that the application of the *Bolam* test and *Bolitho* addendum is not inconsistent with upholding autonomy. As the body of responsible and reasonable opinion must be assessed in the light of local practices, needs and regulations, he submits that no reasonable body of opinion in Singapore today can ignore the 2016 ECEG, which enshrines the patient's right to information, autonomy and self-determination. The AGC makes a similar argument that regard for patient autonomy and appropriate risk disclosure are already required under the application of the *Bolam* test and *Bolitho* addendum, when considered *together with* the 2016 ECEG. Counsel for the NCCS, Ms Kuah Boon Theng, submits that the *Bolam* test and *Bolitho* addendum remain consistent with the

premise that decision-making in a clinical setting is a shared undertaking between patient and doctor.

124 In our judgment, these arguments – with great respect to those making them – miss the point. The question is not whether there is a duty to ensure that information is shared with the patient. That question can readily be answered by reference to the 2016 ECEG, were it even necessary to do that. The real question is how the content and extent of that duty is to be determined. Is the sufficiency of the information to be furnished to a patient to be determined by reference to the views of a "responsible body" of doctors? Or is it to be measured also, or even only, from the perspective of what a patient would reasonably regard as material to the decision that is to be made?

125 The short answer, in our judgment, is that once we accept that a patient should be equipped with such information as is reasonably required to arrive at an informed decision, it would be incongruous to then *ignore* the patient's perspective when examining the question of the sufficiency of the information provided. In this regard, we refer to David Andrew Ipp, Australian Treasury, *Review of the Law of Negligence: Final Report (2002)* ("the Ipp report"). This was prepared by an expert panel convened in May 2002 to review Australia's law of negligence in response to the concern that unpredictability in the law of negligence was a factor driving up insurance premiums. In arriving at its recommendations in the context of professional negligence, the expert panel considered the distinction between treatment and the provision of information to be a "very important" one, as a result of which the law should deal with both activities in different ways (the Ipp report at p 37). The basis for treating the provision of information differently from other aspects of the doctor-patient relationship was to be found in the fact that it was the *patient's* right to decide whether to undergo medical treatment or not (the Ipp report at p 45).

One major implication of the patient's right to give or withhold consent was that the opinions of medical practitioners on what information should be given to patients should not set the standard of care. That would render the patient's right to information and the patient's autonomy nugatory, since the doctor would be free to give only such information as would best nudge the patient into making the decision which the *doctor* thinks is right, and to withhold information which might incline the patient the other way. Furthermore, as was noted in *Montgomery*, unlike assessments as to diagnosis and treatment, assessments as to what a patient should or should not be told are only partly assessments concerning medical science. They are, equally, assessments as to the patient's personal concerns and priorities, and these are not essentially dissimilar to the sorts of assessment which the court is routinely called upon to make in non-medical cases. They are thus assessments which are relatively less deserving of judicial deference. For these reasons, it is the court that must be the ultimate arbiter of the adequacy of the information given to the patient, and in reaching its decision, it would be illogical not to adopt (at least for some purposes) the perspective of the patient who is, after all, the rights-holder in this scenario. The arguments raised by the respondents and by the AGC do not address that difficulty.

126 In our judgment, it is now necessary and justified for the Singapore courts, like those in the UK and many other jurisdictions, to depart from the *Bolam* test in relation to advice. This is so because the developments that were considered in *Montgomery* are also mirrored in our milieu, and because merely incorporating those developments as relevant facts under the *Bolam* test fails to address the fundamental problems with the *Bolam* test as discussed above. Having so held, we turn next to the test which should replace the *Bolam* test in relation to advice. To that end, we shall first set out the test as stated in *Montgomery*, along with its facts (as they provide a useful illustration of the

test in action), before setting out a modified version of that test which will henceforth govern the standard of case in relation to the provision of information and advice by a doctor to his patient.

127 In *Montgomery*, the complaint was that the doctor had failed to advise the patient, who was of small stature, diabetic, and pregnant with a larger than usual baby, of the risk of shoulder dystocia (which is the inability of the baby's shoulders to pass through the pelvis) involved in vaginal birth. In the patient's case, it was not disputed that the risk of shoulder dystocia was between 9% and 10%. The doctor accepted that this was a high risk, but stated that her practice was not to discuss such risks in detail (if at all) because *her* assessment was that the risk of a grave problem resulting from shoulder dystocia was small. The doctor also stated that if she disclosed such information, her experience was that most women would elect to undergo a caesarean section, but in her view, it was "not in the maternal interests for women to have caesarean sections". It turned out that the risk of shoulder dystocia materialised, as a result of which the patient's son was born with severe disabilities.

128 Rejecting the *Bolam* test, the UK Supreme Court stated its preference for a variant of the test proposed in Lord Scarman's dissent in *Sidaway* (see [68] above). It added (or adopted) one refinement to that test, which was (following *Rogers v Whitaker* at [16]) that in addition to risks or alternative treatments which a reasonable patient in a similar position would wish to know of, the doctor was also expected to advise the patient as to risks or alternative treatments which the specific patient would in fact have wished to know of for reasons known, or which should have been known, to the doctor. *Montgomery* thus set out the applicable test as follows (at [87]):

> The doctor is therefore under a duty to take reasonable care to ensure that the patient is aware of *any material risks involved in any recommended treatment, and of any reasonable alternative or variant treatments*. The test of materiality is whether, in the circumstances of the particular case, a reasonable person in the patient's position would be likely to attach significance to the risk, or the doctor is or should reasonably be aware that the particular patient would be likely to attach significance to it. [emphasis added]

129 However, this was not without some significant exceptions. For instance, the doctor would be entitled to withhold information of a risk if he reasonably thought that the disclosure would be seriously detrimental to the patient's health, or when circumstances of necessity arose (at [88]). Further, the court stated (at [89]) that the assessment of whether a risk is material is "fact-sensitive", and is one that is also sensitive to the characteristics of the particular patient. Among other things, it will be relevant to have regard to "the nature of the risk, the effect that its occurrence would have upon the life of the patient, the importance to the patient of the benefits sought to be achieved by the treatment, the alternatives available, and the risks involved in those alternatives" (*Montgomery* at [89]).

130 On the facts, the UK Supreme Court held that the doctor was negligent in failing to advise the patient of the risk of shoulder dystocia, which was indisputably high, and to discuss with her the alternative of delivery by caesarean section. This conclusion was reinforced by the doctor's evidence that the risk of shoulder dystocia was likely to affect the patient's decision, and the patient's evidence that she was anxious about her ability to deliver the baby vaginally. The court also held that the doctor was not entitled to withhold information because the information would be likely to cause mothers to request caesarean sections. That was a decision for the patient in question to make; and the doctor's responsibility was to explain to the patient why one

treatment would be medically preferable to another, having taken care to ensure that she was made aware of the pros and cons of each of them.

131 Having considered the approaches and experiences of various common law jurisdictions as well as the concerns raised by the respondents and the AGC, we are satisfied that a proper balance can be struck with an inquiry that consists of three general stages. (In what remains of the judgment, we shall refer to this inquiry as a whole as simply "the test".) The test draws heavily on the test in *Montgomery*, but with a few significant alterations.

132 At the first stage, the patient must identify the exact nature of the information that he alleges was not given to him and establish *why* it would be regarded as relevant and material. Unlike the court in *Montgomery*, we do not confine the scope of the information in question to material risks concerning the recommended treatment and any reasonable alternatives or variant treatment. In our judgment, the information which doctors ought to disclose is (a) information that would be relevant and material to a reasonable patient situated in the particular patient's position, or (b) information that a doctor knows is important to the particular patient in question. We are satisfied that this stage of the inquiry should be undertaken essentially from the perspective of the patient, because the autonomy of the patient, who has an interest in being furnished with sufficient information – in terms of *both* quantity and quality – to allow him to arrive at an informed decision as to whether to submit to the proposed therapy or treatment, demands nothing less.

133 Assuming that the court is satisfied that the information is indeed relevant and material, it will then proceed to the second stage of the test, which is to determine whether the doctor was in possession of that information. It might well be that the doctor was not, for instance, because he

did not conduct the procedure which would have discovered that information, or because he lacked the factual or technical knowledge to realise that a particular risk or alternative treatment existed. If the doctor was not aware of the information, it would make little sense to ask whether the he should have given it to the patient; one cannot give what one does not have. This does not, of course, mean that a doctor can never be liable for negligence in this scenario. Rather, such issues should be dealt with as *instances of (potentially) negligent diagnosis or treatment, not (potentially) negligent advice*. The crux of such a complaint will be that the doctor made the wrong diagnosis or failed to administer the proper treatment due to his ignorance or carelessness, and will be dealt with under those rubrics instead. Here the appropriateness of the doctor's conduct, in line with what we have said at [100]–[102] above, will continue to be assessed from the professional perspective of the doctor, applying the *Bolam* test and the *Bolitho* addendum.

134 Assuming the court finds that the doctor did possess the information, it will then proceed to the third stage of the inquiry and examine the reasons *why* the doctor chose to withhold the information from the patient. Here, the inquiry is again undertaken from the doctor's perspective. In this context, we begin by reiterating the observation we have made at [57] above, which is that the overarching inquiry is to determine the defendant doctor's conduct against the measure of the reasonably competent and skilled professional. We have also described the *Bolam* test, together with the *Bolitho* addendum as a proxy indicator or a heuristic that is useful in the context of determining liability for diagnosis or treatment because these raise what are essentially technical and scientific questions for which ready answers may not yet avail. But there is simply no need, at least in general, for adopting the same approach when considering the doctor's reasons for not making certain information available to the patient, when the court has determined that such information is material

and ought, at least in principle, to have been disclosed. Here, the court must consider whether the doctor was justified in withholding the information, and if it so concludes, then the doctor would not be found to have breached the standard of care in relation to his duty to communicate the information. However, the justification for withholding such information, although informed by medical considerations, should not, in general, be assessed using the *Bolam* test. If it were, then the change would be merely semantic and a doctor's standard of care would continue to be assessed by reference to whether the non-disclosure would have been regarded as reasonable by a responsible body of medical practitioners. Rather, the court must be satisfied that the non-disclosure was justified having regard to the doctor's reasons for withholding the information and then considering whether this was a sound judgment having regard to the standards of a reasonable and competent doctor. However, as we explain below, there will nonetheless remain specific contexts in which the *Bolam* test will continue to be relevant.

135 It bears reiterating that in applying this three-step test in the context of advice, we are not departing from the general professional standard. Rather, the test outlined above is intended merely to *reflect* – in the form of a more specific test tailored to the context of advice – what an ordinary and reasonable doctor would have done in the circumstances. We prefer this approach over applying the *Bolam* test and *Bolitho* addendum as the default approach in this particular context in order to give recognition to the fact, previously overlooked, that the patient has a *prima facie* right to the information reasonably required to enable him to make a decision. The ultimate question therefore is whether the doctor was justified not to furnish that information. To the extent the defendant doctor, in withholding that information, acted in accordance with what the court finds an ordinary and

reasonable doctor would and should have done, he would not be considered to have been negligent in advising the patient.

136 We now develop our analysis of each of these stages.

(1) The first stage of the test

137 As we have observed, the first stage of the inquiry is concerned with relevance and materiality. In our judgment, materiality is to be assessed from the vantage point of the patient, having regard to matters that the patient in question was reasonably likely to have attached significance to in arriving at his decision, or matters which the doctor in fact knew or had reason to believe that the patient in question would have placed particular emphasis on.

138 Material information should not be limited to risk-related information. As the Ipp report notes at p 48, the information that a doctor must provide even without being asked will include "other types of information that may be needed to enable patients to make an informed decision about their health". The broad types of material information include those identified in the Canadian case of *Dickson v Pinder* [2010] ABQB 269 ("*Dickson v Pinder*") as follows (at [68]):

(a) the doctor's diagnosis of the patient's condition;

(b) the prognosis of that condition with and without medical treatment;

(c) the nature of the proposed medical treatment;

(d) the risks associated with the proposed medical treatment; and

(e) the alternatives to the proposed medical treatment, and the advantages and risks of those alternatives.

139 As to what exactly it is about the various types of information that would be considered relevant or material, in our judgment, this is largely a matter of common sense. It would be unwise and perhaps impossible for us to set out in a pre-emptive manner just what the limits of such information should be, but in general, information that reasonable people would regard as immaterial or irrelevant, would be safe to omit.

140 To take the case of risks, it seems to us that what makes a risk sufficiently material to the reasonable patient will vary along the dimensions of likelihood and severity. It has been held in Canada, for instance, that a risk must be disclosed where it is *likely* to transpire, even if the outcome is a *slight* injury, or where the risk is *uncommon* (but not unknown) but it carries *serious* consequences, such as paralysis or death (see, for example, *Dickson v Pinder* at [74]). It seems to us that such a matrix is a sensible tool for determining the materiality of risks so that remote risks with minor consequences will generally be deemed immaterial, while likely risks with severe consequences will almost certainly be risks that the reasonable patient is likely to attach significance to before deciding on the proposed treatment and should therefore be disclosed.

141 One noteworthy logical consequence of the matrix-based analysis is that it is conceivable for even a very severe consequence to not require disclosure if its chances of occurring are so low that the possibility is not worth thinking about. That outcome is reasonable – after all, it has been pointed out that virtually every member of society routinely places himself in situations in which severe consequences including death are a remote but real

possibility (see, for instance, *Monks 1993* at 233). Such a remote but real possibility confronts each of us every time we choose, for instance, to travel by automobile, yet it would not make sense for us to forego modern forms of travel in response. It has also been suggested, at least in Australia, that the failure to highlight risks that are *obvious* from the viewpoint of the reasonable person in the patient's position – these being risks that are patent or matters of common knowledge – should not result in a finding that the relevant standard of care has been breached (see the Ipp report at para 3.63). To put it simply, there will be no need to state what even a layperson would be aware of without specifically being advised of it; nor to state that which would be regarded as so plainly unlikely that it would not concern the reasonable person. This is common sense.

142 In terms of the proposed treatment, it has been held in Canada – and we agree – that while a discussion of the benefits to be gained and likely side-effects or risks from the recommended treatment or operation is obviously important, the advantages and disadvantages associated with alternative procedures and the consequences of foregoing treatment should also be disclosed since a patient cannot measure risks in the abstract. After all, without knowing at least in broad terms what the alternatives to a recommended treatment are, and what risks those alternatives carry, it is difficult to see how a patient could make a sensible assessment of whether the recommended treatment is a suitable one. However, only *reasonable* alternatives need to be disclosed; the doctor should not have to provide information on fringe alternatives or so-called "alternative medicine" practices (see *Malinowski v Schneider* [2010] ABQB 734 at [40] ("*Malinowski v Schneider*") citing the Alberta Court of Appeal in *Seney v Crooks* [1998] ABCA 316 at [57]–[58]); nor should he have to provide information on mainstream treatment options which are obviously inappropriate on the facts. The option of non-treatment

should also be communicated if it is an alternative that the reasonable patient, situated as the patient in question was, would regard as material (*Malinowski v Schneider* at [41]).

143 In the final analysis, as we have said, the question of whether the information is reasonably material is one that will have to be answered with a measure of common sense. The reasonable patient would not need or want to know and understand every iota of information before deciding on whether to undergo the proposed treatment. Indeed, it has been observed that indiscriminately bombarding the patient with information, in what has been colourfully described as an "information dump", tends to have the opposite effect of leaving the patient more confused and less able to make a proper decision. Yet the amount of information furnished cannot be so threadbare that the reasonable patient is left to grapple with information that is as vague as it is abstract. The *types* of information which are reasonably material will typically comprise those described above (at [138]). The factors of *certainty and consequence* (and context) will necessarily influence what information is reasonably material at every stage. Where the diagnosis is uncertain, more information pertaining to other possible diagnoses will also become material. The pertinent information in this respect may include the *degree of certainty*, the *reasons* for the lack of certainty, and *whether more can be done* to clarify the uncertainty. The possibility of and reasons for a differential diagnosis, if any, will also generally be regarded as material.

144 One further point should be noted. Although the standard of materiality is objective, it remains necessary to contextualise this so that materiality is judged from the patient's perspective. The court's evaluation will therefore take into account the personal circumstances of the patient by examining what a reasonable person in the position of the patient in question would consider

material. What seems minor on when assessed by its impact on *most* persons might well be important for particular individuals. For instance, a very slight risk of scarring during facial surgery may seem insignificant to most patients, but if the patient is an aspiring model, "to most reasonable people *in her position* the risk of scarring would take on significance and therefore ought to be disclosed" [emphasis in original] (see Rob Heywood, "Subjectivity in risk disclosure: considering the position of the particular patient" (2009) Professional Negligence 25(1) 3 at p 7) [emphasis in original]. The risk of scarring would thus be objectively material to that patient, even though it would, equally, be objectively immaterial to most other patients. In this regard, such circumstances would only be relevant to the extent the doctor knew or ought reasonably to have known of them. Whether a circumstance is one which a doctor ought reasonably to have known of is to be determined objectively, although any guidance promulgated by professional bodies as to what information should be elicited from patients will be given great weight.

145 There will even be situations where certain information would be immaterial even to the reasonable person in the patient's position, but is nonetheless important to the patient in question for his own (sometimes idiosyncratic) reasons. But for the patient to rely on this to mount a case that material information has not been disclosed, it will be necessary to establish that the doctor actually knew or had reason to believe that particular information was relevant and material to the particular patient. The doctor has no open-ended duty to proactively elicit information from the patient, and will not be at risk of being found liable owing to idiosyncratic concerns of the patient unless this was made known to the doctor or the doctor has reason to believe it to be so. In the usual case, the standard of care should only extend to materiality on this ground where the patient has in fact asked *particular*

*questions* or otherwise expressed *particular concerns* that are relevant to the omitted information. As *Miola* observes (at p 103):

> … in order for the subjective arm in *Rogers* [*ie*, that concerning information which is of special significance to a specific patient] to bite, it is first necessary for the patient to communicate to the doctor the facts that put her in possession of information that must be considered. To give an example, if the patient is a keen amateur football player, and thus a small risk in knee joint mobility might be of significance to her, our doctor cannot know unless she is told. In this regard, actions by the patient are required to trigger the need for knowledge in the medical practitioner. Thus, while Gummow J. in *Rosenberg* held that questions were not the only way of satisfying the subjective limb, stating that there are a 'multitude of potential circumstances' (none of which he ventured to enunciate) where a court might find liability, it is clear that in almost all situations it is through questioning that the patient will make the significance of a risk apparent to the doctor. It is on the basis of the patient's 'keen interest' in and 'incessant' questioning about the procedure that was the basis of the doctor's liability in *Rogers* itself. In this way, then, the subjective limb of *Rogers* will almost invariably be triggered by an interaction between doctor and patient…

Although the inquiry in such a situation may be said to be "subjective" in the sense that it takes reference from what the particular patient considers important, it is ultimately still objective because what the court looks to is whether the questions and concerns (if any) conveyed to the doctor by the patient *did lead or should reasonably have led* the doctor to conclude that the information in question was material to the patient.

146 Finally in this connection, we observe that expert medical evidence and guidelines such as the 2016 ECEG, which set out guidance that doctors generally ought to meet in the majority of situations, will be useful (but not necessarily determinative) in helping the courts ascertain what would be considered material information that should be communicated in the circumstances of the case. As the AGC pointed out (in seeking to persuade us

that a departure from the *Bolam* test is unwarranted), the 2016 ECEG encapsulates both an objective and subjective standard. For example, doctors must ensure that patients are made aware of the purpose of the tests, treatments or procedures to be performed on them, as well as the benefits, significant limitations, material risks and possible complications. They should also be made aware of alternatives available to them. The material risks include those that would be important to patients in their *particular* circumstances (see C6(3) of the 2016 ECEG). Further, to patients who are seeking to improve their appearance through aesthetic medicine, the doctor is required to disclose risks that are lower than those required to be disclosed in conventional medicine, as aesthetic treatment is not deemed medically necessary (see B10(4) of the 2016 ECEG).

(2) The second stage of the test

147 This stage requires little elaboration. It covers the scenario in which the doctor's justification is not that he had a good reason to withhold information in his possession, but that the information was not in his possession in the first place. As earlier stated, the question then should be whether he ought to have ordered the tests, or apprised himself of the medical knowledge, which would have given him the information – a question best considered under the rubrics of diagnosis or treatment and not advice.

(3) The third stage of the test

148 At the third stage, the court must consider whether there is any reasonable justification why the information, though material and in the doctor's possession, was nevertheless withheld. It is here that the court will adopt a physician-centric approach, which means that the expert evidence of doctors seeking to justify the withholding of such information as a matter of

medical practice and judgment will assume some significance. This addresses the concern that even in the dispensation of information, there is an element of professional judgment involved.

149 At this stage of the inquiry, the burden is on the doctor to justify the non-disclosure. We do not think it would be helpful or appropriate to restrict the sorts of situations in which such non-disclosure might be found to be justified. The doctor will have to put across his reasons for the course he took, if necessary with supporting expert evidence to the extent he relies on particular considerations of medical practice and judgment. It will then be for the court to consider whether, in all the circumstances, the doctor's conduct was justified and so does not constitute a breach of the standard of care. Without meaning to limit the scope of this stage of the inquiry to these, we observe that the Ipp report details three such situations (at para 3.61), namely, waiver, treatment provided on an emergency basis, and therapeutic privilege. We emphasise that these are not exhaustive of the sorts of situations that would justify non-disclosure at the third stage, but these examples are useful in that they are indicative of the range of situations in which this may arise and the diversity of considerations that would inform the court when assessing this. Thus it will be seen that in the first situation, the paramount consideration is to respect the autonomy of the patient and in that context, the court undertakes an essentially factual inquiry to determine whether the non-disclosure was in fact in line with the patient's wishes. In the second situation, as the paramount consideration is beneficence and because it involves the doctor's judgment in a critical setting, the *Bolam* test with the *Bolitho* addendum would apply instead. And in the third situation, it is again a situation where beneficence comes to the fore but with due regard to the need to determine whether *in fact* the patient's situation is such as to need the doctor to make some judgments that might override the patient's autonomy in

the fullest sense. We emphasise that these are not exhaustive; but we briefly elaborate on each of these situations.

150 The first situation relates to waiver. Patient autonomy confers rights on the patient; it does not impose obligations. Thus, there is no *obligation* on the patient to hear what is material to him, and he is entitled to exercise his autonomy by deciding that he does not wish to hear further information about the proposed treatment or its alternatives. Given the seriousness of such a decision, waiver should ordinarily be express, or *extremely* clear if it is to be inferred. Moreover, the doctor should satisfy himself that, in deciding to waive his right to hear further information, the patient properly appreciates the seriousness of his decision. Since this is essentially concerned with the factual question of the existence and scope of a waiver, expert opinion will usually be of little assistance here.

151 In the second situation, there are emergency situations, where the duty is suspended because there is a threat of death or serious harm to the person and the person temporarily lacks decision-making capacity and there is no appropriate substitute decision-maker. This falls within the principle of necessity, which was accepted in *Montgomery* (at [88]). One classic example is where life-saving surgery must be performed on an unconscious or delirious person. This would be a narrow ground, but it is one in which the doctor's perspective is especially important, since the crucial question is whether the treatment really needed to be performed so urgently that there was no opportunity to seek solutions which would have allowed the provision of adequate information to the patient. Medical expert opinion will therefore be crucial and in this specific context, we consider that it would be appropriate to retain the *Bolam* test with the *Bolitho* addendum.

152 Third, there is the broader therapeutic privilege which applies where the doctor reasonably believes that the very act of giving particular information would cause the patient serious physical or mental harm. We agree that doctors should have a measure of latitude in invoking the therapeutic privilege, and this should extend to cases where although patients have mental capacity, their decision-making capabilities are impaired to an appreciable degree. These will include patients with anxiety disorders (to whom the mere knowledge of a risk may, without more, cause harm) or certain geriatric patients who, as described by the NCCS, may be "easily frightened out of having even relatively safe treatments that can drastically improve their quality of life", and whose state of mind, intellectual abilities or education may make it impossible or extremely difficult to explain the true reality to them.

153 We recognise that this concern may, on specific facts, be compelling, and the court should not find a doctor to be negligent when such exceptional circumstances are present. Nevertheless, it is important that the therapeutic privilege exception should not be abused by enabling a doctor to prevent a patient who is *capable of making a choice* from doing so merely because the doctor considers that choice to be contrary to the patient's best interests (*Montgomery* at [91]). Thus, although expert medical (including, where appropriate, psychological) evidence will often be helpful or even crucial to the court's assessment, the inquiry remains an objective one and not one to be assessed using the *Bolam* test. The focus of the inquiry in this context is not on whether some doctors might consider it appropriate to invoke the privilege but rather whether the court is satisfied that the patient was suffering from such an affliction that he in fact was likely to be harmed by being apprised of the relevant information. Or that the patient, though not strictly lacking mental capacity, nonetheless suffered from such an impairment of his decision-

making abilities that the doctor would be entitled to withhold the information having regard to (a) the benefit of the treatment to the patient; (b) the relatively low level of risk presented; and (c) the probability that even with suitable assistance, the patient would likely refuse such treatment owing to some misapprehension of the information stemming from the impairment. These are issues that are more focused on the state and condition of the patient and although expert evidence could be helpful in this context, we do not think it will be necessary to apply the *Bolam* test.

(4) How the information should be communicated

154 Having set out the three stages of the test, it remains for us to emphasise that in implementing the test, it should be recalled that as the duty of the doctor is a duty to take *reasonable* care, he is not expected to meet "unrealistic standards of behaviour". This means that consideration must be given to the situation of the doctor, who is "not required to *ensure* that the patient fully comprehends the information given, but only to *take reasonable care* in this and other respects" [emphasis added] (the Ipp report at para 3.46). *Montgomery*, too, recognises this (at [87]).

155 Nonetheless, we also observe that while it is important to ensure that a patient has sufficient information to make an informed decision, the mere provision of information is pointless if it is not accompanied by a quality of communication that is commensurate with the ability of the patient to understand the information. As the 2016 ECEG itself states, it is good communication that supports patient autonomy and facilitates the patient's decision making (see C2 of the 2016 ECEG). Further, as the AGC correctly points out, a key issue for patients is the capacity to assess risks with *medical guidance*.

156 The ultimate aim is for patients to have sufficient information to *understand* the consequences of their decision, and to this end, the doctor must ensure that the information given is presented "in terms and at a pace" that allows the patient to assimilate it, thereby enabling him to make informed decisions (2016 ECEG at C5). The same point was made in *Montgomery* (at [90]). In Canada, the general position taken by the courts is that a doctor cannot stop at relaying statistical probabilities, but "must ensure that the significance of these risks is impressed upon a patient, that is, that the patient understands what would happen if a risk were to materialize" (Paul McGivern and Natalia Ivolgina, "Legal Liability in Informed Consent Cases: What Are the Rules of the Game?" (2013) 7(1) McGill JL & Health 129 at 140).

*The need to guard against hindsight and outcome bias*

157 Before we leave this part of our analysis, we wish to make a general observation, cutting across all three aspects of medical care, on the nature of the inquiry before the court in a case of medical negligence. A ruling of whether there was medical negligence is inevitably one that is made months, if not years after the fact. The material events are reconstructed, with both sides adducing evidence that seek to support their case on some specific act or omission, such as what the doctor should have concluded, what the patient should have been told, or how the doctor should have conducted an operation.

158 Research suggests that medical experts can exhibit "hindsight bias" in that "a retrospective reviewer, knowing the outcome of an event, may have an exaggerated sense of their own probable ex ante ability to predict it" (Thomas B Hugh and Sidney W A Dekker, "Hindsight Bias and Outcome Bias in the Social Construction of Medical Negligence: A Review" (2009) 16(5) JLM 846 at p 848). There is also the related possibility of "outcome bias", which refers

to the influence of outcome knowledge upon evaluations of decision quality. This is evidently more likely to occur when doctors make judgments on the appropriateness of care by other doctors being aware of what subsequently transpired, with one study suggesting that it was not just the willingness to make judgments but the harshness of judgments that increased when there had been an adverse or severe outcome (at p 849). It has also been suggested that both forms of bias are not only influential in medical expert reports but can also directly influence the decisions of lawyers and judges (at p 847).

159 In this regard, we emphasise the critical importance of ensuring that the courts, in evaluating whether the doctor has met the requisite standard of care in any aspect of his interaction with the patient, should apply the relevant tests with reference only to the facts that were known *at the time that the material event occurred*. As was held by the High Court of Australia in *Rosenberg v Percival* [2001] HCA 18 at [68] citing a previous decision of the same court in *Maloney v Commissioner for Railways* (1978) 18 ALR 147 at 148, "perfection or the use of increased knowledge or experience embraced in hindsight after the event should form no part of the components of what is reasonable in all the circumstances".

160 In relation to diagnosis then, it is irrelevant that the diagnosis eventually turned out to be wrong because this does not answer the question of whether the process by which the doctor arrived at the diagnosis was negligent. As mentioned above, the process of medical diagnosis is often prone to imprecision (see [101] above) and would be dependent on a synthesis and analysis of the information that was available *at the time of the diagnosis*. After the material events have come to pass, it may well be that new insights are gained. However, such knowledge should not be considered by the courts

because the enquiry should be based on what was known at the time of the allegedly negligent diagnosis.

161 In relation to the provision of information, too, the question of what information a reasonable person in the patient's position would have likely attached significance to should be answered by reference to the time at which the relevant decision (to undergo the proposed treatment was made) and not at a later time (see the Ipp report at para 3.55). Similarly, when determining whether the therapeutic privilege exception (for instance) is satisfied, the focus should be on what the doctor reasonably knew of the patient's mental or psychological condition at the time, and not what later transpired.

162 Finally, in a related context, we have also considered the argument advanced on behalf of the NCCS to the effect that even properly informed patients might yet pursue negligence claims (*cf*, *Montgomery* at [93]). Ms Kuah drew our attention to studies which suggest that patients possess flawed recollections of what they had or had not been told. In other words, there could be situations of "forgetful patients" who, perhaps under the fog of illness, deny that they were ever apprised of a risk. In our judgment, this phenomenon does not detract from the need to ensure that patients are sufficiently well-informed so that they can provide informed consent at the material time. Rather, the solution if at all lies in improving methods of documenting the information that the doctor imparts to the patient, and keeping appropriate medical records of such discussions.

163 With these principles in mind, we turn to consider their application to the facts of the present case.

***Whether the respondents fell below the requisite standard of care in reaching their diagnosis of the Patient's condition***

164 In the present case, the Patient did not turn out to have PNETs. But that does not mean his doctors had been negligent in arriving at their diagnosis. Indeed, after reviewing the evidence and the arguments, we conclude that the NCCS and Dr Ooi did not breach their standard of care in terms of their diagnosis of the Patient's condition.

165 First, it is important to clarify what the diagnosis was. In this regard, the relevant diagnosis for present purposes is the one upon which the Patient based his decision to undergo surgery. The key pieces of information the doctors had to work with at the material time were as follows:

(a) The Patient had an existing lung NET of low-grade malignancy.

(b) The Gallium scan showed two focal areas of increased tracer uptake at the head of the pancreas (SUVmax 23.0) and at its body (SUVmax 13.2). However, there was no definite corresponding mass or soft tissue thickening seen on the CT scan.

(c) The subsequent MRI scan showed no discernible mass.

166 In ascertaining the diagnosis that was made known to the Patient, the evidence that is most relevant is that arising from the Tumour Board meeting on 29 July 2010. Until then, although various doctors such as Dr Lim and Dr Koo WH had put forth the opinion on the basis of the above information that the lesions in the Patient's pancreas were PNETs, there was still, as the Patient had noted in an email to Dr Andrew Tan on 24 July 2010, a "significant amount of uncertainty" surrounding his condition. In keeping with this, the

Patient was told that his case would be discussed at a Tumour Board meeting to attempt to arrive at a consensus (see [15(b)]–[15(d)] above). Thus, while the provisional view prior to the meeting of the Tumour Board was a diagnosis of PNETs, this was by no means a view that was either definite or communicated as such. In fact, on 24 July 2010, the Patient, in reply to Dr Andrew Tan, stated that he would "appreciate the feedbacks [*sic*] from [the Tumour Board Meeting] on 29th July" as it would "help [him] to make a more informed decision on the way forward" (see [16] above).

167 The Tumour Board met as planned on 29 July 2010. The diagnosis and advice was summarised in the email sent by Dr Andrew Tan to the Patient shortly after the meeting. Part of the email, which we have set out in full at [18] above, states:

> …
>
> 3. The pancreas lesion is more troublesome. *The impression is that the pancreas lesions are real despite negative MRI and CT findings*, and these are of increased importance as compared with the lung lesion, as it is appreciated that pancreatic neuroendocrine tumours have a higher propensity for spread.
>
> …
>
> 5. In regards to the uncinate head lesion, *it can represent a neuroendocrine tumour or pancreatic polypeptide hyperplasia. Current literature is as yet uncertain on the significance of such uncinate somastatin uptake.*
>
> … [emphasis added]

168 The email states that the "impression" was that the pancreatic lesions were "real", that is to say, the Tumour Board was of the opinion that the lesions were probably PNETs but could not be certain in this regard. In fact, the Patient was told that the lesion at the head of the pancreas could represent a PNET *or hyperplasia*. After the Patient forwarded Dr Andrew Tan's email to Dr Ooi on the same day, Dr Ooi, who did not disagree with the Tumour

Board's opinion, replied that it would be "difficult for anyone to be conclusive" as to whether the light-ups on the Gallium scan represented tumours or hyperplasia (see [19] above).

169 From these various written communications between the parties, the unmistakable picture that emerges of the diagnosis that was made known to the Patient prior to his decision to proceed with surgery was that he *probably* had PNETs, although there remained the possibility that he had hyperplasia in one or both lesions. On this basis, the suggestion of the Tumour Board and Dr Ooi was to proceed to surgery though a second option proffered was to wait and assess the condition again in six months' time. Evidently, the diagnosis of PNETs was by no means a certain diagnosis. The Patient is therefore incorrect to assert that no differential diagnosis of hyperplasia was made. If the diagnosis was indeed conclusive, the doctors surely would *not* have advised the Patient that he had the option of waiting for six months before repeating a scan.

170 Having established the precise diagnosis that was made and conveyed to the Patient, we turn to consider whether the respondents were negligent in arriving at this diagnosis. Applying the *Bolam* test and the *Bolitho* addendum, the question is whether this diagnosis was supported by a responsible body of medical men and was grounded in logic. In relation to the latter limb, we also examine (a) whether the doctors' diagnosis was defensible given the information available to them and (b) if *more* should have been done to establish a firmer diagnosis.

171 To begin, we highlight the simple but important point that the diagnosis that the Patient *probably* had PNETs was not one that was arrived at by only *one* doctor acting in an individual capacity, but was a diagnosis that

various doctors such as Dr Lim, Dr Koo WH, Dr Andrew Tan and Dr Ooi had all come to. Not only was the view shared amongst these various doctors, the diagnosis that the Patient probably had PNETs was also supported by the views of the multi-disciplinary team of doctors after the Tumour Board's meeting on 29 July 2010. On the face of things and before delving deeper into the parties' arguments and expert evidence, it is already apparent that the respondents' diagnosis of the Patient's condition was one that was in line with a responsible body of healthcare professionals.

172 Given this state of affairs, it is unsurprising that the Patient did not strenuously argue on appeal that the respondents' diagnosis fell foul of the *Bolam* test on the ground that it was not supported by a responsible body of healthcare professionals. Indeed, the respondents' diagnosis was supported by experts called on their behalf, such as Professor Markus Büchler ("Prof Büchler"), a consultant general surgeon at Heidelberg University Hospital (who concurrently holds an appointment at the European Pancreatic Centre in Germany – the largest pancreatic surgery centre in the world), and Professor Irene Virgolini ("Prof Virgolini"), a nuclear medical surgeon at the Medical University of Innsbruck.

173 Instead, the arguments made by the Patient on appeal on the question of whether the diagnosis had been made negligently are grounded chiefly (if not entirely) on the application of the *Bolitho* addendum. Simply put, the Patient's submission is that the expert evidence supporting the respondents' diagnosis does not have a logical basis. In this connection, the Patient emphasises the fact that there was no demonstrable mass on the fused CT component of the Gallium PET/CT scan, the MRI scan and intra-operatively, the IOUS. In the absence of such a mass, the Patient argues that the diagnosis should have been hyperplasia, which was not a rare occurrence. As the

Gallium scan does not differentiate between SSTRs in normal cells or an accumulation of either normal or abnormal cells like a tumour, the Patient submits that locating a mass would be a necessary precondition to the diagnosis of a PNET. The Patient points to warnings from experts who had specifically cautioned against interpreting bright spots on Gallium scans as PNETs where there was no demonstrable corresponding mass on morphological imaging. In particular, much was made of the fact that certain guidelines authored by Prof Virgolini herself had strongly recommended "correlation with other imaging modalities (CT, MRI)" (Irene Virgolini *et al*, "Procedure guidelines for PET/CT tumour imaging with $^{68}$Ga-DOTA-conjugated peptides: $^{68}$Ga-DOTA-TOC, $^{68}$Ga-DOTA-NOC, $^{68}$Ga-DOTA-TATE" (2010) 37 Eur J Nucl Med Mol Imaging 2004 at p 2008). The paper also noted, under a section on sources of error, that uptake was not specific for malignant tumours. Further, the Patient also cites Michael Gabriel *et al*, "$^{68}$GA-DOTA-Tyr$^{3}$-Octreotide PET in Neuroendocrine Tumors: Comparison with Somatostatin Receptor Scintigraphy and CT" (2007) 48(4) The Journal of Nuclear Medicine 508, which states that as the very specific binding of the Gallium tracer lends itself to the possibility of over-interpretation, interpretation should be done cautiously in organs showing physiologically enhanced tracer uptake. The Patient therefore submits that the absence of morphological scan images ought to have raised "alarm bells" such that the respondents ought to have reconsidered the validity of the diagnosis of PNETs.

174 Additionally, the Patient questioned the doctors' reliance on the *degree* of the tracer avidity (SUVmax 23.0 and 13.2 for the light-ups at the head and body of the pancreas) when (a) there was no identifiable mass and (b) there was medical literature indicating that SUVmax values were not reliable in the diagnosis of PNETs. He also submits that the doctors were negligent in not

carrying out a preoperative EUS-FNA because if an EUS-FNA had been performed, this too would have yielded a negative result and that would have further diminished the validity of the conclusion that the Gallium scan light-ups should be interpreted as being PNETs. In essence, the Patient's position is that in the absence of an identifiable mass, the diagnosis of PNETs ought to have been excluded or at least very significantly discounted and that to the extent the medical experts have suggested otherwise, this is illogical and unreasonable.

175 The Judge extensively analysed the various expert opinions and came to the conclusion that the diagnosis of the Patient's condition was reasonable and logically arrived at given the Patient's history, the results obtained from the various tests done, and the efficacy and limitations of each of those tests including those which could have been carried out but were not. He also found that the diagnosis was supported by the opinions of leading medical experts in the relevant areas of specialisation and that these opinions were "entirely defensible" (the Judgment at [172]). Having regard to the evidence and the parties' arguments, we see no reason to depart from the Judge's findings which were arrived at after a thorough examination of the evidence before him. Clearly, there was a body of doctors who considered the assessment of the Patient's condition in this case to have been acceptable, and that body of medical opinion was not illogical. In this judgment, we thus highlight only certain salient and significant factors to explain our view that the respondents were not negligent in their diagnosis of the Patient's condition.

176 As we explained at [59] above, the *Bolitho* addendum as explained in *Gunapathy* essentially involves a two-stage inquiry. The first stage entails examining whether the expert had directed his or her mind to the relevant considerations relating to the matter. The second stage requires us to assess if

the medical opinion is internally consistent and whether it flies in the face of proven extrinsic facts relating to the matter. In the present context, the main questions in relation to the first stage are whether the experts had considered the various factors pointing towards and against a diagnosis that the Patient probably had PNETs on the facts and test results which they possessed at the material time, and whether more should have been done to establish a firmer diagnosis. These opinions will then have to be scrutinised for internal consistency and external validity at the second stage. We take each of these inquiries in turn.

177 In relation to the first stage, we are satisfied that the respondents' experts had sufficiently considered the factors pointing towards and against a diagnosis of PNETs before concluding that the respondents' diagnosis of the Patient was appropriate. For instance, Prof Büchler's opinion, which is set out at [154]–[155] of the Judgment, demonstrates that he had considered the factors pointing against a diagnosis of PNETs, such as the absence of any identifiable mass on the CT and MRI scans, but was nonetheless of the view that the presence of other indicators of PNETs, such as (a) the fact that the Patient had a lung NET; (b) the presence of *two* light-ups on the Gallium scan without any other hotspots; and (c) the high SUVmax value suggested that it was more likely than not that the Patient suffered from PNETs. Similarly, Prof Virgolini's view was that, in spite of some contrary indications, the result of the Gallium test, especially the presence of the two lights-ups, when seen in the context of the whole test indicated that there was something "not normal" about the lesions in the Patient's pancreas.

178 In arriving at their opinion that the respondents' diagnosis of the Patient's condition was proper, the respondents' experts had also considered if the respondents had done enough to ascertain the Patient's diagnosis. In

particular, both experts considered whether an EUS-FNA ought to have been performed and answered the question in the negative (see the Judgment at [130]). It may be recalled that the Patient alleges that the respondents were negligent as they failed to conduct an EUS-FNA (a pre-operative procedure) and a core biopsy (an intraoperative procedure) before the Whipple procedure was embarked on. The Patient contends that a negative result from these procedures would have further lessened the validity of the diagnosis of PNETs. However, in the first place, the Patient has not been able to prove this basic premise. As the Judge found on a review of the expert evidence and medical literature presented, an EUS-FNA had no positive diagnostic value and there was no supporting literature which demonstrated that an EUS-FNA could or would differentiate between PNETs and hyperplasia (the Judgment at [128] and [133]). Similarly, the evidence of the pathologists, which the Judge accepted, was that a core biopsy would not have been able to distinguish between PNETs and hyperplasia (the Judgment at [145] and [171]). Indeed, we note that the consensus opinion of all the experts who testified at the trial was that the most definitive way to tell PNETs apart from hyperplasia was through post-operative histopathology. In short, there would have been no way to distinguish in a *definitive* way between the two conditions pre-operatively. In short, an EUS-FNA or a core biopsy would have increased the cost and time expended on diagnosing the Patient without any significant accompanying diagnostic utility. In the premises, we accept the opinion of the respondents' experts that there was no necessity to carry out any further tests as one that was arrived at after taking into account the relevant arguments for and against the conduct of further tests.

179 As to the second stage, we are satisfied that the opinions of the respondents' experts are both internally consistent and amply supported by medical and academic authority. As the Judge noted, Prof Büchler's and Prof

Virgolini's opinions were supported by the medical literature that was available at the material time (see the Judgment at [162]). In this regard, it must be emphasised that even the Patient's nuclear medicine expert, Dr Lisa Bodei, had effectively accepted during trial that the Gallium scan was the "best diagnostic test available" in relation to the detection of PNETs, and that it was "obviously superior" to the CT and MRI scans in terms of sensitivity and specificity though she noted there were instances of false positives. Significantly, Dr Bodei also accepted that generally speaking, very high SUVmax values tended to be indicative of a malignancy.

180 In fact, while the Patient's counsel submitted that the existence of PNETs was a "mere possibility", he clarified during the hearing that it was not his case that the absence of demonstrable mass was conclusive evidence that *no* PNETs existed. Indeed, there was not a single doctor among all those involved, including Dr Ooi, Dr Andrew Tan and the Tumour Board who thought PNETs could be excluded as a diagnosis, though there might have been some differences of opinion as to the degree of confidence that would be placed on this diagnosis. At the same time, it was always presented as a *probable* diagnosis as a result of which the Patient was offered, though he declined it, the option to wait and see. In the circumstances, we find that the opinions of the respondents' experts, which affirms the validity and appropriateness of the respondents' pre-operative diagnosis that the Patient *probably* had PNETs, was eminently logical and defensible.

181 Intra-operatively, Dr Ooi had conducted an IOUS and bimanual palpation. The results of the IOUS – like that of the CT and MRI scans – was negative in that it did not show any lesions. However, when performing bimanual palpation, Dr Ooi noted two distinct areas of induration on the pancreas which corresponded with the areas of uptake in the Gallium scan.

The Patient's case is that Dr Ooi ought not to have proceeded with the Whipple procedure given that the IOUS too yielded a negative result and because palpation was of little utility in distinguishing between PNETs and hyperplasia.

182 In our judgment, Dr Ooi was not negligent when he proceeded with the Whipple procedure despite the negative IOUS result. His decision is supported by the expert evidence, which, in our view, is entirely responsible, logical and defensible. As noted by Prof Martha Pitman ("Prof Pitman"), a pathologist at the cytopathology laboratory at the Massachusetts General Hospital, a negative IOUS result was not conclusive that no tumour was present. When asked whether the three negatives in the CT and MRI scans and the IOUS decreased the probability of the Patient having PNETs, Prof Pitman reasoned that as the Gallium scan was noted by the literature as the most sensitive test for the detection of NETs, a positive result on the Gallium scan "puts in doubt the other tests that don't show an anatomical structure [of] a tumour". Moreover, Dr Ooi's decision to proceed with the Whipple procedure was taken after he had identified two indurations when palpating the pancreas. In this regard, the evidence of Prof Büchler and Professor Krishnakumar Madhavan ("Prof Madhavan"), a consultant surgeon at the National University Hospital, was that palpation and IOUS were complementary tests during surgery for identifying the location of the lesions. In other words, the palpation was an appropriate tool which allowed Dr Ooi to corroborate the pre-operative diagnosis of PNETs and indeed, it assisted him in locating them. In the circumstances, we find that Dr Ooi was not negligent in carrying out the Whipple procedure despite the negative IOUS result.

183 For these reasons, we are satisfied that the diagnosis that the Patient *probably* had PNETs with the possibility of hyperplasia was not negligent. It

was a diagnosis which the respondents made after exercising their professional judgment with due care, taking into account all the surrounding circumstances, and was supported by a responsible and logical body of medical opinion. We therefore find that the respondents had not fallen below the requisite standard of care in arriving at the diagnosis of the Patient's condition.

***Whether the respondents fell below the requisite standard of care in relation to the advice rendered to the Patient***

184 We turn to assess whether the respondents fell below the standard of care in relation to the advice rendered to the Patient, that is, whether the respondents had sufficiently disclosed the risks related to the Patient's treatment as well as any reasonable alternatives or variant treatments. In line with the framework set out at [132]–[134] above, we assess whether the respondents fell below the requisite standard of care in relation to the advice rendered in the following three stages:

(a) Was the information which the Patient alleges was negligently withheld from him information which was relevant and material from the perspective of a reasonable patient in the Patient's position, or which would have been considered relevant and material by the Patient for particular reasons which the respondents knew or should have known?

(b) Was this information which the respondents had at the material time, and if not, were the respondents (under the diagnosis as opposed to the advice framework) negligent in not obtaining or having this information?

(c) If this was information which either a reasonable patient in the Patient's position would find relevant and material or which the

> respondents knew the Patient would have considered relevant for reasons peculiar to him, and which was in the respondents' possession at the material time, were the respondents reasonably justified in withholding this information?

185 In the Patient's further submissions, he raises 14 points concerning material information which the respondents had allegedly failed to inform him about. We do not propose to deal with these points individually. As a broad summary, many of these points related to specific information about the Gallium test, such as the number of times it had been used and its diagnostic value in circumstances where no corresponding mass was detected on the CT and MRI scans. The Patient also alleges that he had not been informed of the uncertainty of the Tumour Board's diagnosis of PNETs, especially where the lesion at the head of the pancreas was concerned and that the respondents ought to have informed him that it was advisable to undergo surgery to remove only the lesion in the body of the pancreas instead of undergoing the Whipple procedure to remove the lesion at the head of the pancreas.

186 We begin by reiterating that a doctor is *not* under a duty to provide his patient with an encyclopaedic range of information in relation to anything and everything which the patient might wish to know. Instead, a doctor's duty to advise only covers that which would enable the patient in question to make an informed decision (see [138] above). Bearing this in mind, many of the Patient's allegations related to information which failed the first stage of the test. For example, the Patient alleged that the respondents had failed to inform him that the Gallium PET/CT scan "was a newly introduced scan and had only been used in 20 patients and particularly only in 5 instances to diagnose PNETs". In our judgment, a reasonable patient in the Patient's position would not consider it necessary to be informed of something so specific as the exact

number of times the Gallium PET/CT scan had been previously used. The only possible significance of that number was that it might suggest some weak inference as to the reliability of the Gallium PET/CT scan. What would be material to a reasonable patient in the Patient's position would be the limitations of the Gallium scan, and, in particular, that there was a possibility that the scan results could have identified false positives – not the specific number of times the scan had previously been used.

187 In our judgment, there was also no factor or consideration which the respondents knew or should specifically have known about the Patient which would have led them to believe that the Patient would have considered such information to be relevant and material. Indeed, we see no reason to think that he would in fact have considered the information to be so. Ironically, had the respondents inundated the Patient with all 14 points of information, as he is now asserting they should have, they might have opened themselves up to an allegation that they had failed to curate and present to the Patient, in an understandable fashion, the information which he required in order to make his decision. It seems to us that the respondents conducted themselves responsibly by ensuring that the gist of the relevant information was conveyed to the Patient without an unnecessary and overwhelming amount of detail accompanying it.

188 The preceding analysis applies as well to many of the other 14 points of specific information which the Patient argues should have been shared with him, such as the precise functions or "roles" of the Gallium PET/CT scan and the detailed nature of hyperplasia and the pancreas.

189 We turn to the Patient's more substantial allegations against the respondents. These allegations in essence amount to complaints that he had not been informed of the following:

(a) there was a risk that his condition might turn out not to be PNETs given the various test results and the diagnostic value of the Gallium scan; and

(b) an available alternative was to remove the lesion in the body of the pancreas only, instead of removing both the lesions at the head and body of the pancreas.

190 In our judgment, both these points constitute information which any reasonable patient in the Patient's shoes would have expected to receive, fulfilling the first stage of the test. It is also undisputed that the respondents were in possession of the information at the material time, fulfilling the second stage of the test. Thus, if the information was in fact withheld, then unless there was a justifiable basis for withholding it, the Patient ought to have been informed of these points. However, before turning to the third stage of the test, there is an anterior matter to be addressed, which is whether the information was in fact withheld from the Patient. If the information was not withheld to begin with, it would be pointless to embark on the third stage of the test, since the result in any event would be that there was no breach.

191 Having assessed the evidence, we are satisfied that the respondents had amply advised the Patient concerning these two points. Between his initial consultations with the doctors on 22 July 2010 and the Tumour Board meeting on 29 July 2010, the Patient had already been given to understand the precise problem in relation to his condition – the uncertainty as to whether the lesions were indeed PNETs. In response to the Patient's email on 23 July 2010 stating

that he was "confused with the conflicting findings" (because the MRI scan had turned up negative), Dr Andrew Tan, in his reply, explained why there could be discrepant findings between the Gallium scan, the CT scan and the MRI imaging. Further, Dr Andrew Tan told him that "there [was] a significant amount of uncertainty", and advised him to wait until the Tumour Board meeting for the consensus opinion. The Patient in turn replied on 24 July 2010 and he too observed that "in my case there is a lot of uncertainty".

192 Just after the Tumour Board meeting on the morning of 29 July 2010, Dr Andrew Tan, on behalf of the Tumour Board, communicated the consensus opinion to the Patient. A brief review of the email (see [18] above) shows that the following material facts were communicated:

(a) The Patient was thought likely to have PNETs in the pancreas despite the negative CT and MRI findings.

(b) However, the lesion in the pancreatic head could represent hyperplasia as well.

(c) PNETs have a higher propensity for spread, although the risk of spread at that time was not known.

(d) The proposed treatment for the lesion at the body of the pancreas was surgical removal. However, the proposed treatment for the lesion at the head of the pancreas was more uncertain, as the surgical side effects could be more serious and morbidity could be higher. The Patient was accordingly advised to discuss the surgical options with Dr Ooi.

(e) Besides the proposed treatment, the Patient was presented with another option: to wait and repeat another scan in six months.

> However, the Patient was told that he had to balance the risk of possible tumour growth in this scenario against the surgical risks.

193 In our view, the diagnosis – and its inherent uncertainty – was impressed upon the Patient, who knew that there was a chance that the Gallium light-ups, especially that at the head of the pancreas, could be hyperplasia. The specific danger of PNETs, in the sense that they tended to spread fast, was conveyed to him, and he was also told what the doctors did not know – the degree of the risk of spread. The proposed treatment, that is, surgery, was communicated to him, along with the reasoning behind the recommendation. There was a greater readiness to remove the body lesion as that surgery was less complicated. For the head lesion, the recommendation on balance was also surgical removal and the fact that there were potential risks and limitations in relation to this lesion, which required the Whipple procedure, were made known to the Patient. In this regard, he was referred to Dr Ooi – the expert in this area – for a discussion. Besides the proposed treatment, the Patient was also presented with the option of waiting for six months to repeat the scan. In other words, an alternative which stemmed from the uncertainty of the diagnosis was provided to him. Waiting inevitably carried a risk – that if the lesions were indeed cancerous, there was the risk that they would grow or spread. This too was made clear. In addition, Dr Andrew Tan told the patient to "feel free" to contact him if he had any other queries. Thus, even if the information had been lacking in any respect, the door to further discussion was left open so that the Patient could obtain additional information *and* guidance. And the Patient *did* avail himself of this opening.

194 The Patient forwarded the consensus opinion of the Tumour Board to Dr Ooi, who replied shortly after to confirm that it would be "difficult for

anyone to be conclusive on whether [the clinical test results] represent[ed] tumours or hyperplasia". Dr Ooi's opinion on the surgical option was that both lesions should be removed if the Patient decided to opt for surgery. Even then, he told the Patient that he was open to further discussion on "whether it makes sense to leave one tumour behind and remove the other" (see [19] above). Moreover, Dr Ooi also accepted that waiting six months for a repeat scan was an option, though this came with the associated *risk of spread* if the Patient opted to wait and see. In other words, the advice that Dr Ooi gave to the Patient was similarly balanced and considered as Dr Andrew Tan's, and the Patient was also told that more information could be provided upon request.

195 Therefore, by the time the Patient confirmed that he would undergo the operation to remove both lesions on 29 July 2010, he was well aware of the risk that he was taking in undergoing the Whipple procedure in circumstances where it was not certain that the lesions were cancerous. He was also aware of the option of waiting and its limitations. A third alternative – removing the lesion at the body of the pancreas but not the lesion at the head of the pancreas – was also proposed. Further, the Patient had been made aware of the risks of the surgical procedure by Dr Ooi when he met Dr Ooi on 22 July 2010 to discuss the Whipple procedure and how it worked (see the Judgment at [21]). The Patient acknowledged that by the end of that consultation, he knew that the Whipple procedure was a major surgery and there was an associated mortality risk of 5%. While the Patient contended at trial that this consultation lasted no more than 15 minutes, the evidence shows that Dr Ooi clearly took much longer than that to explain the surgery to him (see the Judgment at [22]–[23]). The Patient has rightly not repeated this allegation on appeal.

196 On this basis, we are satisfied that the Patient had been apprised of the material facts necessary for him to make an informed decision to proceed with the Whipple procedure.

197 Indeed, the lines of communication remained open for him and on 8 August 2010, he asked Dr Andrew Tan *particular* questions he had omitted to ask previously, including why the Tumour Board thought that the body lesion was more definitely a PNET, while it was not sure if the head lesion was a PNET or hyperplasia. Dr Andrew Tan duly responded with a detailed elaboration of the thinking behind the Tumour Board's consensus opinion:

> In regards to the pancreas head lesion, why this is uncertain is because we have found in a large number of patients who have undergone such scanning, a portion of them actually show some tracer uptake in the uncinate process, and we have reports in which there were not tumors but actually a condition called pancreatic polypeptide hyperplasia. The literature is still not very conclusive on this. In regards to your case, tracer uptake in your uncinate process is high, and it is higher than what is expected even accounting for such. But we cannot conclusively characterize this finding as definitely tumor. As per the lesion in the body, no definite mass lesion is seen on the CT.

198 On 9 August 2010, the Patient asked about undergoing an EUS. Dr Tan promptly replied on the same day, recommending a former senior consultant oncologic surgeon who had entered private practice "to obtain a 2nd opinion and perhaps perform the EUS". Dr Andrew Tan further said that the EUS alone might not be conclusive, and asked the Patient to consider the EUS guided needle biopsy. The Patient was not discouraged from undergoing an EUS and Dr Andrew Tan even suggested that if he were to undergo such a scan, a biopsy should also be done for better results. On 10 August 2010, the Patient also consulted Dr Ooi about undergoing an EUS. Dr Ooi replied on the same day, explaining that an EUS "is only useful if positive but if negative

does not mean it is safe to leave the tumour alone". He also said that there was a "slight risk with EUS-FNA and in your situation, may not be beneficial".

199 On 12 August 2010, the Patient replied to Dr Andrew Tan. The Patient said that he had not called Dr Tan Yu Meng. The Patient also told Dr Andrew Tan what Dr Ooi had said. Later the same day (12 August 2010), Dr Andrew Tan replied saying, among other things, that he agreed that the EUS would be useful only if the findings were positive. In addition, Dr Andrew Tan gave his "personal opinion" that if technically possible, the body lesion could be resected while the lesion in the pancreatic head could be subject to a biopsy first, due to his reservations on the significance of that lesion, which might also be accounted for by a condition such as hyperplasia. This was especially so because the Whipple procedure was a "fairly major surgical procedure". Dr Andrew Tan closed by repeating his recommendation that the Patient consult a former NCCS doctor for a second opinion.

200 At least two points may be noted from the correspondence pertaining to the Patient's *particular* request for information on the EUS. First, the Patient knew that he had the option of undergoing the ultrasound and of its limitations. Second, it is important to note that despite being armed with Dr Andrew Tan's cautionary view, he chose not to act on this recommendation and did not undergo the EUS. In the circumstances, the Patient cannot claim that he did not receive the necessary information and guidance on this procedure.

201 When the totality of the correspondence between the Patient and his doctors is examined, it is clear that the Patient had been furnished with sufficient advice on the risk that the lesions might turn out not to be PNETs and on reasonable alternatives that might be pursued to treat the lesions. There

was no omission of any information that can be considered material, on any basis. Therefore, there is no occasion to examine whether any of the alleged omitted information was justifiably withheld. In the circumstances, the Patient's decision to undergo the Whipple procedure cannot be anything but informed.

202 Moreover, the manner of communication was unimpeachable. The doctors did not undertake an "information dump". The information was imparted promptly and in an open way; it was concise, guided and to the point. The Patient was given sufficient material information to mull over. When he had further questions, these were well-attended to. The totality of the evidence reveals to us that the Patient understood all the information that he was furnished. In the premises, we find that the respondents did not breach their duty to properly advise the Patient.

203 We note, for completeness, that it would not have made a difference in the present case whether we applied the modified *Montgomery* test or the *Bolam* test and *Bolitho* addendum as set out in *Gunapathy*. Had we applied the latter test, it would have been obvious from the respondents' experts' testimony that there was indeed a responsible body of medical opinion supporting the withholding of the additional detailed information which the Patient asserts he should have received, and that it could not be said – at any stage of the *Bolitho* analysis – to be illogical.

***Whether Dr Ooi fell below the requisite standard of care in relation to the care extended to the Patient during the post-operative period***

204 After the surgery on 16 August 2010, the Patient remained in hospital from 16 to 27 August 2010, when he was discharged and returned home to Malaysia. The Patient returned on 3 September 2010 to see Dr Ooi for an

outpatient consultation, but nothing seemed amiss. However, on the night of 15 September 2010, the Patient vomited blood and was subsequently found to have had an anastomotic leak, for which he had to be operated on.

205 The Patient's central complaints in relation to the care extended to him during the post-operative period as set out in his statement of claim are as follows:

> (a) Dr Ooi failed to discharge his duty of care owed to the Patient in relation to the post-operative period when he failed to heed the test results which showed elevated white blood cell count and elevated amylase content of the drain fluids. The Patient's fever and drainage of brownish fluid from the left surgical drain was also not appropriately reviewed and managed.
>
> (b) Dr Ooi ought not to have discharged the Patient on 27 August 2010 as he had not fully recovered.
>
> (c) Dr Ooi failed to appreciate the blood test results on 3 September 2010 during the Patient's outpatient review which showed that the Patient required admission and further review.

As noted at [1] above, these points were not strenuously argued on appeal. Nonetheless, we consider the issue in full for completeness.

206 The question of whether Dr Ooi had been negligent in the post-operative care of the Patient implicates two competing possibilities – first, that the Patient was already suffering from an anastomotic leak that should have been picked up over the course of the post-operative period and, at the latest,

by 3 September 2010; and second, that the anastomotic leak was a late and sudden event that could not reasonably have been detected beforehand.

207 The Patient's medical expert, Professor Irvin Modlin ("Prof Modlin"), Professor of Surgery at Yale University School of Medicine, was of the opinion that there were signs that demonstrated the Patient suffered from an anastomotic leak. These included abnormal pancreatic enzyme levels, excessive fluid drainage and the Patient's elevated temperature. Prof Modlin opined that given the post-operative abnormalities, tests such as a CT scan of the abdomen with dye ought to have been conducted by the fifth post-operative day (21 August 2010) which would have allowed for an early diagnosis of anastomotic leakage and the prevention of further complications.

208 Against this, Prof Büchler and Prof Madhavan both opined that the Patient's conditions in the post-operative period up until 3 September 2010 was consistent with a post-surgical situation known as a pancreatic fistula. Prof Büchler referred to Thilo Hackert *et al*, "Postoperative pancreatic fistula" (2011) 9 The Surgeon 211 at 212 which states that the leakage of enzyme-containing fluid was indicative of a post-operative pancreatic fistula, and that this condition could be managed by drainage alone (see also the Judgment at [234]). The paper also stated that the surgical drains could continue to leak for a period of two to four weeks after the surgery if the patient had a pancreatic fistula.

209 Prof Büchler and Prof Madhavan also opined that there were no signs of inflammation or further issues prior to or on 3 September 2010 and that there was thus no need for further investigation. Both experts agreed that a doctor would be acting within acceptable and usual standards in discharging a patient with a controlled pancreatic fistula as long as it was not affecting the

patient's health in other ways (for example, fever, pain or elevated white blood cells). Although the Patient's temperature and white blood cell count was slightly raised after surgery, this had begun to come down by the time the Patient was discharged. Prof Büchler also stated that a temperature of 37.7ºC– the Patient's temperature in the morning of 27 August 2010 prior to his discharge – was not indicative of an infection or complication; it was only if the Patient's temperature was above 38.5ºC that further investigations ought to have been conducted. Moreover, there were no signs of the Patient suffering from an anastomotic leak at his outpatient review on 3 September 2010. As Prof Madhavan further explained, the Patient's white blood cell count was normal after discharge which indicated that there was no infection, the left surgical drain had been dry for three days and he appeared to be healthy with no complaints of fever or abdominal pain. To him, these were important positive signs in that if there had been an anastomotic leak, the drainage of bile would not stop and the fluid would stay green in colour.

210 The Judge found that the Patient's medical expert, Prof Modlin, could not muster the objective clinical data to support his assertion that the Patient must have been suffering from anastomotic leakage from some time before 3 September 2010, when the Patient returned for his outpatient appointment. In the Judge's view, almost all the objections which Prof Modlin raised against Dr Ooi in his post-operative care of the Patient were countered point-by-point by Prof Büchler and Prof Madhavan, based on their experience as well as medical literature. In arriving at his finding that Dr Ooi had acted reasonably in discharging the Patient on 27 August 2010, the Judge noted, among other things, that while the Patient's left surgical drain was still draining fluid, all the readings recorded by both the nurses in the ward and Dr Ooi suggested that the fluids discharged were serous, that is, clear. There was therefore no reason

to suspect that the Patient was draining bile, which would have been indicative of an anastomotic leak (the Judgment at [245]).

211 On this point, we note that the Judge (and the respondents' experts) had relied on *Dr Ooi's* observations of the fluid that was discharging into the left surgical drain. According to these records, on 25 August 2010, 26 August 2010 and 27 August 2010 (the date of the Patient's discharge), the colour of the discharge was recorded as "non-bilious", "clear" and "serous" respectively.

212 However, the factual question of whether the fluid in the surgical drains was indeed clear or serous was, unfortunately, inadequately explored during the course of the trial. This might have been a potentially significant matter because the respondents' experts did not dispute that leakage of *bile* into the drains would represent cause for concern. As Prof Büchler said, if there had been bile, it would be "unusual and dangerous".

213 We say this because our review of the medical records shows that between 25 and 27 August 2010, there were in fact observations by a junior doctor and nurses that the discharge in both surgical drains was *coloured*. On the morning of 25 August 2010, Dr Dennis Aw ("Dr Aw"), a houseman had recorded that the left surgical drain contained *bilious* fluid (although when Dr Ooi later saw the Patient, his evaluation of the fluid was that it was actually non-bilious and contained only pancreatic juice). Further, the records also reflect that:

(a) On the night of 25 August 2010, a nurse observed that there was "brownish fluid" in the left surgical drain, while there was "yellowish fluid" in the right surgical drain.

(b) On 26 August 2010, it was observed in the morning that the left drain was draining "coloured fluid actively"; the right surgical drain was draining "minimal yellowish fluid". It was observed in the afternoon that the left surgical drain was draining "brownish fluid actively". These two readings were taken before Dr Ooi's description of the fluid on that date as "clear".

(c) On 27 August 2010, it was observed just after midnight that the right surgical drain was draining "brownish fluid", while the left dressing was dry and intact. Later, Dr Ooi recorded the fluid as "serous". But following that, it was again recorded at 10.30 am that the right surgical drain was draining 240ml of "brownish fluid during shift" while on the Patient's left side, the abdomen dressing was "dry and intact".

214 It would appear that the respondents' experts had taken the position that Dr Ooi's interpretations of the colour of the discharge were the only interpretations that matter, notwithstanding the observations made by Dr Aw and the nurses that the discharge was coloured. This was also the position that Dr Ooi took. He explained his evaluation of the Patient in comparison with Dr Aw's assessment on 25 August 2010 in the following terms:

> So when I saw [Dr Aw's records], of course the question is … is this really bilious or not. In my own observations, which was documented just below that, it's at [1200] hours. I noted a few things, "very well, no complains, took feeds well". These are signs of bowel continuity, no abdominal collection and no … leak. Because if there is leak … he won't be well and won't be taking the feeds orally.
>
> I made also a point to note that he was passing motion, which again is bowel continuity. I also showed in my own records that it was recorded as pancreatic juice (non-bilious) to document what I saw at that point in time.

> Now, I don't normally change notes of someone else who has written before me, that's not my practice. But I will document what I see at that point in time. And to compare someone who does pancreatic surgery on a regular basis versus a junior doctor who doesn't see it that often, I will put more reliance on what I see than on what he has seen.
>
> So my entry here was specifically written as non-bilious to address the concern at the time so that whoever sees the notes will not be confused, your Honour.

215 Given the entirety of the evidence as set out above, we think, with respect, that the Judge was incorrect to find at [243] of the Judgment that all the readings recorded by *both the nurses* in the ward and Dr Ooi suggested that the fluids discharged were serous or clear, by the time the plaintiff was discharged.

216 In fairness, the Judge did point out that Dr Ooi's observations of the colour were as good as anybody else's. On this, it is appropriate to reproduce the following exchange between the Judge and Prof Madhavan:

> A. If there is a clinical suspicion, then we would check it.
>
> Court: What sort of clinical suspicion?
>
> A. That means if *the senior person* thought, yes, there is a bile here.
>
> Court: But he is observing by colour, he knows nothing else. His observation of colour is as good as anybody else, unless he's colourblind or unless the other person is colourblind. Otherwise, between green and yellow, the distinction is not necessary.
>
> A. But, your Honour, by waiting the next day and the day after and you find that it is serous, that means there is no yellow or green --
>
> Court: I see, so the logic must be that if it is a breakdown, I would have to see more and more bile?
>
> A. Correct, your Honour.
>
> [emphasis added]

217 When Prof Büchler was asked if the green fluids reported on 25 August 2010 should have been investigated, he also said:

> No, *because it was a nurse report*, the surgeons that investigated the patients every day did not diagnose a bile fistula. We have a nurse report that says there was a greenish drainage fluid, and there is no continuous report of biliary fluid coming out of the drain. Therefore, there was no bile leakage, no anastomotic breakdown. There was none. [emphasis added]

218 On our review of the evidence, it appears that the Patient did not take issue with the various reports by the nurses of coloured fluid from the left and right drains on 26 and 27 August 2010. Indeed, in his submissions on appeal, the Patient focussed exclusively on Dr Aw's observation on 25 August 2010 that there was leakage of bilious fluid from the left surgical drain. In our judgment, the question of whether the observations made by Dr Aw and the nurses should have been so easily discounted in favour of Dr Ooi's observations could have been explored further in the course of the trial. It seems to us that there is some logic in Prof Modlin's comment that:

> So a houseman sees yellow coloured fluid and another person comes along later and says the fluid is now clear. It's hard for me to understand the discrepancy… I don't think you have to have done a Whipple to know the difference between clear fluid and yellow fluid.

219 However, despite this discrepancy, the Patient did not call Dr Aw or any of the nurses to the stand to explain their observations as recorded in the medical notes. Therefore, the only evidence which the Judge had was Dr Ooi's oral testimony coupled with the presence of the medical notes which appeared to show a discrepancy. There was also Prof Madhavan's observation (set out at [216] above) that if it were bilious, this would have continued and even deteriorated. In the circumstances, it is understandable for the Judge to have

come to the conclusion that the fluid found in the left and right surgical drains had been serous (and not coloured, or more importantly, bilious).

220 Further, even if a factual finding had been made by the Judge that non-serous fluid had been found in the surgical drains, this would not have answered the question of whether there were sufficient signs of an anastomotic leak in and of itself to warrant the conclusion that Dr Ooi was negligent not to have done more at the material time. In the first place, apart from the sole observation by Dr Aw on 25 August 2010 that the fluid in the left surgical drain was bilious, there is no other evidence that there was leakage of any bile into the left surgical drain. In fact, as mentioned above, the left surgical drain was recorded as being dry on 27 August 2010. Also, as we have already noted, Prof Madhavan's evidence was that if the Patient was indeed suffering from an anastomotic leak, the bilious discharge would not stop. In addition, we also note that during the outpatient appointment on 3 September 2010, the Patient told Dr Ooi that the left surgical drain had been dry for the past three days without any change in his overall condition. Further, at the time of discharge, the Patient had no fever, his white blood cell count was on a downward trend and almost normal. All this is consistent with the assessment of the respondents' experts that the Patient had a controlled pancreatic fistula which was appropriately managed through the use of drains.

221 In the light of the above, we see no reason to disagree with the Judge's assessment of the evidence and the conclusions he arrived at. Factually, we do not depart from the Judge's finding at [243] of the Judgment that the fluids discharged in the surgical drains were clear by the time the Patient was discharged. Applying the *Bolam* test and *Bolitho* addendum to the facts as found by the Judge, we are also satisfied that Dr Ooi's post-operative care of the Patient was supported by the strong and logical opinions of Prof Büchler

and Prof Madhavan, who are both well-regarded experts and practitioners in the field of pancreatic surgery. Indeed, we find on the medical evidence that the most plausible explanation for the subsequent anastomotic leak was a "sudden adverse event", as Dr Ooi's counsel put it during the appeal. We therefore affirm the Judge's holding that Dr Ooi was not negligent in his post-operative care of the Patient.

### *The issue of causation and whether the NCCS owed the Patient a non-delegable duty of care*

222 Almost the entirety of this judgment has been taken up with questions pertaining to the standard of care and how the conduct of doctors in various aspects of their interaction with their patients should be assessed when negligence is alleged. For this reason, it bears emphasis that proof of negligence does not give rise to liability in the tort of negligence without proof that this *caused* damage to the plaintiff patient. Hence, in the normal case, careful attention would have to be given to this question to determine whether the negligence (assuming this is found) was causative of damage. In this case, however, given our holdings that the respondents did not breach any of their duties of care to the Patient, the issues of whether any of these alleged breaches *caused* the Patient to suffer damage and whether the NCCS owed the Patient a non-delegable duty of care do not arise at all. We therefore see no need to consider these issues in detail.

## Conclusion

223 For these reasons, we dismiss the appeal with costs to the respondents. These are to be taxed if not agreed. We also make the usual order for the payment out of the security.

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| Sundaresh Menon<br>Chief Justice | Chao Hick Tin<br>Judge of Appeal | Judith Prakash<br>Judge of Appeal |
| Tay Yong Kwang<br>Judge of Appeal | Steven Chong<br>Judge of Appeal | |

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