Welcome

Welcome to this week’s edition of BC Disease News.

In this week’s edition, we review the latest High Court authority of Jallow v Ministry of Defence [2018] EWHC B7 (Costs), which dealt with the question: was there ‘good reason’ to depart from the budgeted costs contained in the costs management order (CMO)?

We also discuss two decisions, taken by the IIAC, to add to the list of prescribed diseases eligible for disablement benefit. The Council, firstly, considered basal cell cancer and squamous cell cancer, caused by UV radiation; and secondly, recurrent kidney stones, caused by heat and dehydration.

In this week’s feature article, we evaluate a review, published in the Archives of Pathology and Laboratory Medicine, which consolidates alleged non-asbestos-related causes of mesothelioma into a single document. Current evidence on alternative causes is widely inconclusive. We consider, therefore, the likelihood that mesothelioma, not caused by asbestos, has an identifiable cause.

Any comments or feedback can be sent to Boris Cetnik or Charlotte Owen.

As always, warmest regards to all.

SUBJECTS

‘Good Reason’ to Depart: Jallow v Ministry of Defence [2018] EWHC B7 (Costs)

In this article, we report on another High Court authority, which has ruled on whether there was ‘good reason’ to depart from an agreed budget. As recently as edition 225 (here), we reported on the judgment of Nash v Ministry of Defence [2018] EWHC B4 (Costs), which dealt with the same issue. Jallow v Ministry of Defence (Jallow) [2018] EWHC B7 (Costs) is the latest case to examine the impact of a costs management order (CMO) and the powers of costs judges at detailed assessment.

The claimant had suffered ‘Non-Cold Freezing Injuries’ to his hands and feet during a tactical exercise with the British Army. Liability was agreed between the parties, but quantum was disputed. Subsequently, a CCMC was listed on 12 October 2015 and heard by Master Leslie.

The claimant’s budget was reduced to a single figure of £120,000 from around £148,000, of which £78,500 were budgeted costs and the remainder were incurred. It was the view of the defendant that the budget had been set by Master Leslie on the basis that the claim had been valued at £300,000. Claimant counsel, however, argued that quantum had been calculated twice in the schedule of loss: £185,000 and £312,000.

After numerous Part 36 Offers, the claimant accepted an offer for £90,000, four weeks before the hearing on quantum.

At detailed assessment, the claimant served its bill of costs, seeking in the region of £188,000. Master Rowley, who handed down his reserved judgment, reduced the hourly rates in respect of incurred costs. The question was whether the reduction, in principle, provided ‘good reason’ to depart from the claimant’s approved budget. The defendant also argued that the reduction in damages, by 70%, constituted ‘good reason’ to depart. Had the ‘true value’ of the claim been known at the time of the CMO, the defendant submitted that the approved figures would have been much lower. Counsel for the claimant attributed the reduction in valuation to the risks of litigation.

Master Rowley dealt, firstly, with the ‘valuation issue’.

The claimant’s position was that the defendant should have appealed the order of Master Leslie at the CCMC, as opposed to arguing that the CMO was inappropriate at detailed assessment.

The judge, sitting in the Senior Courts Costs Office, applied the ‘previous regime regarding proportionality’, in the Court of Appeal case of Lownds v Home Office [2002] EWCA Civ 365, to the new regime. He further stated that what was relevant to his decision was:

‘... whether it was reasonable for the claimant to believe that his case was worth the sum that he claimed. It is only if he could not reasonably have had that belief, because his claim was exaggerated in some way, that the budget might be considered to have been set on a false premise and as such should be departed from on assessment’.

As such, Master Rowley reasoned that the claimant had not exaggerated his claim and rejected the defendant’s argument on the valuation tranche. There was no ‘good reason’ to depart from the budget on this basis.

Master Rowley went on to consider the defendant’s second submission on the ‘hourly rates issue’. He acknowledged that judges at costs and case management are ‘exhorted’ by Costs Practice Direction 3E paragraph 7 to approve total figures of budgeted costs:

‘That approval is not achieved by undertaking a detailed assessment of the costs in advance but by considering whether the budgets as claimed fall within a range of reasonable and proportionate costs. If they do not, he or she will revise the budgets until they do so’.

In doing so, the judge reasoned that hourly rates are not fixed or approved. They are ‘for reference purposes only’.

Harrison v University Hospitals Coventry & Warwickshire NHS Trust [2017] EWCA Civ 792 established the concept of ‘good reason’, but did not define what might amount to it. Davis LJ did, however, suggest that it is a sensitive matter to be judged on a case by case basis, taking into account the individual facts. The judge also cautioned against costs judges adopting a lax or overindulgent approach to the need to find ‘good reason’. We examined this decision in edition 182 (here), much of which was echoed by Mrs Justice Carr in Merix v Heart of England Foundation NHS Trust [2017] 1 Costs LR 91.

Claimant counsel argued that the ‘good reason’ test is essentially the same as the ‘significant development’ test. Master Rowley did not favour this interpretation, however, reasoning that the ‘good reason’ test has a wider scope. Instead, he opined:

‘It seems to me that a similar test to the “genuine issue” test is intended by the “good reason to depart” terminology in CPR 3.18. In place of the solicitor’s certificate is the approval of the budget by the court. In either situation, the judge at the detailed assessment is not going to entertain a challenge unless something is raised which is specific to the case before the court. There is nothing specific to this case regarding the hourly rates challenge. If they are reduced here, exactly the same point would apply in any other case. That, in itself in my view points to the conclusion that a reduction in the hourly rates ought not to be a good reason to depart from the budget’.

Tension, in this area of costs law, exists on one side, with the certainty of recovery afforded by the CMO, and on the other side, with the need for reasonable and proportionate costs, afforded by detailed assessment proceedings.
In the case of RNB v London Borough of Newham [2017] EWHC B15 (Costs), reported in edition 197 (here), Master Campbell made reductions to the hourly rates claimed for incurred costs and considered that this constituted a ‘good reason’ to depart from the budget. Master Rowley shared Master Campbell’s concern over a lack of court scrutiny on assessment:

‘If it is the case that the receiving party can claim any hourly rate (as long as it does not offend the indemnity principle) in the budgeted costs without it being assessed by the court, that does not sit easily with the assessing judge’s responsibility to allow only reasonable and proportionate costs on an item by item basis. This is all the more so where that judge has already found that the hourly rates claimed in the incurred costs parts of the bill were unreasonable. Assuming they are the same rates in the budgeted parts then then they are, by definition, unreasonable hourly rates. This is essentially the high watermark of the defendant’s argument’.

Master Rowley rejected the defendant’s remaining argument. There was no ‘good reason’ to depart from the budget, even though the hourly rates had been reduced, in respect of incurred costs:

‘The assumption on the part of the defendant is that if each item is claimed at an unreasonable hourly rate in the budgeted part of the bill, then the totality of the items in each of those parts must equally be unreasonable. This would be so in a conventional detailed assessment. However, the budgeted part of the bill is not dealt with by a conventional detailed assessment. The court has to accept that the budgeted figures for taking the case to trial (as recorded in the CMO) are reasonable and proportionate. Therefore, if the sums subsequently claimed in the bill are within that budget they are, on the face of it, also reasonable and proportionate. Where, as here, the case got to within a short period before trial, and therefore it can be assumed that much, if not all, of the work had been done within the various phases and the costs were still within budget, the presumption is all the stronger in my view that the costs incurred are reasonable and proportionate’.

On reflection of the somewhat contradictory judgement, the judge professed that ‘two odd numbers added together will still make an even number’.

On the contextual landscape of cost budgeting and detailed assessments, the judge concluded:

‘My concern, and I suspect Master Campbell’s, is that the lack of scrutiny at a detailed assessment of the hourly rates claimed will encourage parties to incur costs up to the budget set for each phase on the basis that they are unlikely to have to withstand scrutiny at a detailed assessment. As such there will be an inflationary element which is only kept in check by conventional detailed assessments. But this concern is something which has to yield to the aims of costs management in making detailed assessments shorter. For a long time, the work of the costs judge has been described as the compounding of “much sensible approximation” to achieve justice. Ultimately the use of CMOs is simply a further example of that pragmatism’.

Full text judgment can be found here.

Cold Calling Ban
Accepted by the House of Lords

We last discussed the Financial Guidance and Claims Bill in edition 223 (here), when we reported that MPs were considering amendments, during the committee stage of the Bill. A clause was inserted, prohibiting live unsolicited direct marketing telephone calls in relation to claims management activities, except where the recipient has given explicit consent to receiving such calls.

The Financial Guidance and Claims Bill underwent its third sitting last week, with the Government and opposition still in disagreement over whether the Government’s proposed ban goes far enough. As mentioned in previous editions, the Labour position is to implement a ‘complete ban’ on cold-calling, including communication by text message.

At the 3rd sitting, Jack Dromey, Labour Frontbench Spokesperson, said:

‘Around 51 million personal injury-related calls and texts are sent by regulated claims management companies each year. The Association of Personal Injury Lawyers has long called for a ban on personal injury cold calls from CMCs, especially as solicitors themselves are already banned from cold calling.

Ironically, only recently, the justice secretary said that there would be a ‘forthcoming ban on cold calling’ when discussing personal injury claims. If the justice secretary believes that there is a forthcoming ban, why do we not act now and include it in this bill?’

In response, Treasury Minister, John Glen, assured that the Government would ‘continue to have a meaningful dialogue on the outstanding concerns …’

This week, the Bill entered into the ‘ping pong’ stage, with the House of Lords able to amend, reject or accept existing amendments but add no extras. By this stage, any opportunity to institute a total ban was likely to have passed.

In the minutes of proceedings, Department for Work and Pensions Minister, Baroness Buscombe, told peers:

‘This amendment takes the onus away from the individual to opt out of such calls being made to them and puts the responsibility back on the organisation to do its due diligence before making such calls … I am confident that the amendment will have the effect of making unwanted calls about claims management services unlawful’.

She went on to say that:

‘The measures in the bill will be complemented by existing and
forthcoming data protection legislation. Where personal data is obtained through an unlawful cold call, the further use of that data—for example, to make further calls in the future—would be contrary to the Data Protection Act. The Information Commissioner’s Office can issue fines of up to £500,000 for breaches of the Data Protection Act, although this will be raised significantly—to approximately £17m or 4% of a company’s turnover—through the forthcoming General Data Protection Regulation and the Data Protection Bill that is currently going through Parliament’.

The House of Lords accepted the ban in its present form, rejecting Labour’s proposals to go further. The Bill will insert a provision into the Privacy and Electronic Communications (EC Directive) Regulations. Liberal Democrat peer, Lord Sharkey, who had previously pursued amendments, was satisfied with the Government’s commitments.

Updated Claims Portal MI

The Claims Portal has recently released its latest management information (MI) for March 2018.

In March, 696 disease claims entered the Portal. Of these 696 claims, 325 left it at Stage 1. The majority of these, 268 were because of the time to reply expired. 57 cases were denied or admitted with an allegation of contributory negligence. The following graph shows a 12 month rolling summary of the number of CNFs that left the Portal at Stage 1 in 2017-2018. A 12 month summary takes into consideration the total sum of CNFs for each month, adding them together and then subtracting the last month before adding the next month’s amount to get the overall number for the previous 12 months. This is why the numbers in the graph below do not constantly increase.


The figures include CNFs that have not had a response at the end of Stage 1 – CNFs where liability has not been accepted and CNFs where liability has been accepted with contributory negligence. The figures do not include CNFs that were taken out of the process using the Exit function during Stage 1.

7 claims left the Portal at Stage 2 for reasons other than settlement. 342 were exited from the Portal: amongst these, 34 were duplicate claims and 31 were because of an incomplete claim notification form. 165 claims left the Portal because the claim required further investigation.

Consistent with the trend seen throughout the past four years, March has shown a decreasing number of claims settled through the Portal, registering a low of 44. Meanwhile, 4 additional cases saw court packs completed so the court was able to adjudicate on quantum. Of those claims that have settled through the Portal, the average amount of damages in March 2018 was £4,167, £663 more than the amount recorded in March 2017 (£3,504). In January of this year, when we last reviewed portal figures (here), the average general
damages payment was £4,234, £67 more than March 2018 damages. The table below shows the trend in the amount of damages secured from 2015-2018:

![Graph showing damages trend](image)

**IIAC Information Note on Occupational Risk of Urolithiasis**

The Industrial Injuries Advisory Council (IIAC) has published an information note on the occupational risks of recurrent kidney stones (urolithiasis). The note was published following an inquiry into a former seaman, who had served long periods in hot regions and developed urolithiasis. Currently, urolithiasis does not appear on the list of prescribed diseases for which disability benefit may be claimed.

Urolithiasis is the formation of stones anywhere in the upper urinary tract, including the bladder, the ureter or the kidneys. Stones most commonly originate in the kidneys, and often cause no symptoms. The stones may cause pain, known as ureteric colic, when they move from the kidney or obstruct the flow of urine. Sudden-onset, intense ureteric colic is fairly common, and affects 1-2 people per 1000, every year. Around 12% of men and 6% of women will have one episode of ureteric colic at some stage in their life, and over 80% of stones are passed within a month without requiring treatment. In two-thirds of men, the stones can be recurrent. As the pain is usually intense, most people with stones seek medical attention. An individual could claim they were disabled by stones if they have caused significant damage to the kidneys or ureter, and perhaps if they had frequent recurrent episodes of ureteric colic.

There have been a few studies of occupational risks, which may cause stones to form. These studies are based on self-reported data. The incidence or prevalence of stones recorded may therefore be less reliable.

The Council did not find any published systematic reviews of occupational risk factors of urolithiasis, so it undertook its own review, and found the evidence to be limited. The review found that several occupational exposures have been described, but few associations have been replicated in other studies. The strongest evidence in support of occupationally induced urolithiasis is in those whose work entails exposure to renal toxins and in those who work in hot environments and suffer from dehydration. Although these groups showed the strongest evidence, the evidence could not be described as strong. The Council’s review focused on three areas: cadmium, other chemical exposures, and work at high ambient temperatures.

Cadmium is known to have toxic effects on kidney function. Two Swedish studies have reported that the risk of kidney stones increases with increasing exposure to cadmium: a study of soldiers found that prevalence of stones was highest in those with the highest levels of blood cadmium, and; a study of male employees at a battery factory found that incidence of stones was higher in those with highest estimated cumulative exposure to cadmium. Similarly, a study from Glasgow found that the prevalence of stones in coppersmiths exposed to cadmium was 40%, compared to 3.5% in an unexposed population.

Chemical exposure was also identified as potentially increasing the risk of kidney stones. 18% of workers in a plastics factory, exposed to trimethyltin, a chemical used in the manufacture of PVC, developed kidney stones, compared to 6% in another factory where there had been exposure. The prevalence of renal colic in Norwegian workers exposed to oxalic acid, which was used to clean railway carriages...
before repainting, was 53%, compared to 12% in co-workers who were not exposed\(^6\). It is also possible that exposure to ethylene glycol may cause changes in urinary chemistry that could lead to the formation of kidney stones\(^9\), but the incidence in exposed workers has not been studied.

A few studies of work in hot conditions have provided useful estimates. A study of Brazilian steel industry workers found that the prevalence of kidney stones was 8% in those working in temperatures hotter than 45\(^\circ\)C, compared to 1% among other workers\(^11\). In a study of machinists in an Italian glass factory, the prevalence of kidney stones was 8.5%, compared to 2.4% in employees working at normal temperatures. In workers exposed to heat stress, the prevalence of stones was 39%\(^12\).

A study from Glasgow compared kidney stone patients with the local population, and found that 67% of patients had occupational exposure to hot metals, compared to 26% of the local population\(^13\). In Singapore, a study found that the prevalence of kidney stones was 5 times higher in outdoor workers than in indoor workers, with 5.2% versus 0.85% of workers affected\(^14\).

The Council only found one study relevant to seamen, published in 1965. In a study of 350 Royal Navy personnel with confirmed urolithiasis, between 1958 and 1964, the estimated prevalence among non-officers was highest in engineers and cooks, which are the two occupations in which workers are exposed to the highest temperatures. In respect of all personnel, the rates were highest in those who had served in the Middle East or Far East\(^15\).

The Council concluded that both working with renal toxins and working in a hot, dehydrating environment probably increases the risk of urolithiasis. However, this assumption is based on a small pool of evidence, which lacks quality. Thus, the Council concluded that there was insufficient evidence to recommend that urolithiasis should be added to the list of prescribed diseases.

IIAC Information Note on Non-Melanoma Skin Cancer and Occupational Exposure to Ultraviolet Radiation

The Industrial Injuries Advisory Council (IIAC) has released an information note on non-melanoma skin cancer (NMSC) and occupational exposure to natural ultraviolet (UV) radiation\(^16\). An information note on melanoma is also going to be released, as a separate document. In this article, however, we discuss the IIAC’s debate on the proposed addition of NMSC, caused by exposure to occupational sunlight, to the list of prescribed diseases. This was considered in the wake of an enquiry into a former seaman, which was also the basis of the IIAC information note on urolithiasis, above.

‘Primary carcinoma of the skin’: following exposure to arsenic or arsenic compounds, tar, pitch, bitumen, mineral oil (including paraffin) or soot, currently appears on the list of prescribed diseases. The entry on the list does not include skin cancer arising from exposure to sunlight during outdoor working.

The main types of NMSC are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). Both are much less dangerous than melanoma, as they are less aggressive and less likely to spread to other parts of the body. Around 3% of SCC spread from the primary site and around 2% cause death. Of the NMSCs, approximately 75% of cases are BCC and the remaining 25% are SCC. Single or multiple SCC and BCC tumours are generally treated successfully with surgical excision, usually with ‘excellent’ or ‘good’ cosmetic results. Any secondary tumours that appear, in the rare event that the cancer spreads, are treated by excision and, in some cases, radiotherapy. Thus, there are likely to be very few cases of NMSC, particularly BCC, that would qualify as being significantly disabling.

Occupational Exposure to Sunlight

Both BCC and SCC are caused by UV radiation from sunlight. However, measuring occupational exposure to sunlight has its difficulties. Different studies apply different methods to estimate sun exposure. Some simply classify workers as outdoor workers without being more specific as to the exposures faced. Other difficulties with measuring sunlight exposure include overestimation, or incorrect/poor recollection of exposure, as well as mitigating factors, such as the optional application of skin protection against UV rays.

The Council noted that studies conducted at lower latitudes than the UK were only indirectly relevant to its decision, as the duration and intensity of UV radiation is much higher in those regions.

Basal Cell Carcinoma of the Skin

The information note refers to a high quality, systematic review of the relationship between BCC risk and occupational UV exposure, published in 2011\(^17\). The review included 24 relevant studies that gave considerably varied risk estimates, partly due to latitude. There was some evidence for a dose-response relationship. 2 studies were undertaken at latitudes similar to the UK and showed a doubling of risk. These were examined in more detail by the Council. One of these studies referred to ‘outdoor workers’, but there was no information on the type or duration of such work\(^18\). The other study referred to ‘frequent or sometimes’ occupational UV exposure\(^19\). Again, there was no mention of the type or overall duration of such employment to clearly gauge the presence of a dose-response relationship.

The Council also conducted a review of the literature published post-2011. Few informative studies were found and were limited by the methods of occupational exposure assessment. A case-control study from Southern Germany reported an increased risk with tanning\(^20\), and a case-control study with participants from several European countries found that there was increased risk with farm or construction work.
of any duration. There was also an increased risk in patients with more than five years of outdoor work experience.21

Squamous Cell Carcinoma of the Skin

The Council found a high quality systematic review and meta-analysis of the risk of SCC with occupational UV exposure, published in 201122. Similar to the findings for BCC, the risk estimates varied considerably between studies, due, in part, to the quality of exposure assessment and differences in latitude. The Council selected studies from latitudes similar to the UK to analyse in greater depth. In a study of Finnish seafarers, the incidence of BCC and SCC together was increased in those whose cancer was identified 20 or more years after first employment, and in those with 10 or more years on board the vessel23. The risk was more than doubled in male deck officers, but not in male deck crew.

Elsewhere, a Swedish study of more than 320,000 male construction workers found no increased risk of NMSC24. In the group with the highest outdoor exposure, there was an increased risk of lip cancer, but this was not statistically significant. Another study reported a more than doubled risk of SCC with outdoor work, without giving further details of exposure duration. There was also a study from Alberta, Canada, which showed a ‘strong trend toward increasing risk’ of SCC with outdoor occupational exposure25, while one study reported a more than doubled risk of SCC with outdoor work, but gave no further details about the work or exposure levels26. Nevertheless, a study of workers in several European countries found more than doubled risks of SCC with farm or construction work and with five or more years of outdoor work experience27.

As was also the case with BCC, the Council reviewed all literature published since 2011. A very large study from four Nordic countries noted an increased risk of SCC in 14 occupations. However, the risk was more than doubled only in male physicians and female administrators and among these workers, SCC was only diagnosed in subjects under the age of 5028. There were some increased risk estimates in farmers and seamen, but there was no evidence of increased risk in construction workers, gardeners or forestry workers. In a German study, researchers used a complex job exposure matrix to estimate the lifetime occupational exposure of participants29, but the Council considered this method to be impractical for use in the context of UK benefits assessment.

The Council concluded that it is probable that the risks of both BCC and SCC are augmented by outdoor work, e.g. in the farming and construction industries. In some cases, the risk is more than doubled. It is a precondition of the IARC that the risk must be doubled for a disease to qualify for addition to the list of prescribed diseases. However, the evidence for these elevated risks comes primarily from countries with more intense UV exposure than the UK; studies from latitudes similar to the UK suggest that the risk is less than doubled.

It is not possible at this stage for the Council to define occupational circumstances that would lead to a doubling of risk. Though some studies suggest that employees in farming, construction and seafaring work may be at an increased risk, no consistent evidence has been found which comprehensively associates risks with the duration of such work.

On this occasion, the Council did not recommend that SCC or BCC, caused by occupational exposure to sunlight, should be added to the list of prescribed diseases.

Lung Cancer Burden of Occupational Diesel Exhaust Exposure

A new study has estimated the proportion of lung cancers in Canada which occupational diesel engine exhaust fumes are responsible for30. The number of workers exposed to diesel engine exhaust fumes, between 1961 and 2001, were estimated using data from the Canadian Census and Labour Force Survey data, while the risks of lung cancer were calculated by pooling results from studies in the literature. The proportions of lung cancer due to occupational diesel fumes were calculated and assessed with respect to 2011 lung cancer statistics.

The analysis led to an estimate that 2.4% of lung cancers in Canada were attributable to occupational diesel engine exhaust exposure. This corresponded to approximately 560 (range 380 to 1570) new cases and 460 (range 310 to 1270) deaths in 2011. Overall, 1.6 million individuals alive in 2011 were occupationally exposed to diesel fumes between 1961 and 2001, 97% of whom were male. The occupations with the highest burden were underground miners, truck drivers and mechanics. Half of the attributable lung cancers were found in workers exposed to low levels of diesel fumes.

In 2012, the proportion of lung cancer deaths in the UK, onset by occupational diesel exhaust exposure, was estimated to be 1.84%. This corresponded to 695 (range 313 to 1269) new cases and 605 (range 272 to 1107) deaths31.

The attributable fraction derived from the Canadian study differs slightly from the study conducted in the UK. Differences in the number of diesel-related lung cancers, recorded in Canada and the UK, are down to variation in the number and proportion of workers occupying affected industries and job roles, variation in workplace practice, and variation in exposure prevention methods employed. Moreover, exposure to other lung cancer-causing agents, such as cigarette smoke, may have skewed the percentage of diesel fume-related lung cancer deaths.

The latest Canadian study was the first to quantify the burden of lung cancer attributable to occupational diesel exhaust fumes in the country. The authors concluded that their findings underscore a large potential for prevention and a significant public health risk.
Feature: Non-Asbestos-Related Causes of Mesothelioma

A new academic review, published in the Archives of Pathology and Laboratory Medicine (APLM), has identified evidence in support of non-asbestos-related causes of mesothelioma. Though it is well-known that many mesothelioma cases are due to the latent effects of asbestos exposure, it is also clear that not all mesothelioma is related to asbestos. In this feature article, we consider whether exposure to alternative substances, listed in the review, are also valid causes of mesothelioma.

ASBESTOS-INDUCED MESOTHELIOMA

Currently, most cases of pleural mesothelioma (70% to 90%) in European and North American men are attributable to asbestos exposure. The proportion is lower for peritoneal mesothelioma. In women, the proportion of asbestos-related mesothelioma varies geographically; in North America, few cases are attributable to asbestos. In Europe, the proportion is higher, and varies considerably by location.

Knowledge of asbestos-related diseases, such as mesothelioma, grew throughout the 20th century. Asbestos prohibition laws were first introduced in the UK in the 1980's. Indeed, in 1985, the Government banned the importation and use of blue (crocidolite) and brown (amosite) asbestos. In 1992, this ban was extended to include specific use of white (chrysotile) asbestos, which were subsequently extended in the Asbestos (Prohibitions) (Amendment) Regulations 1999, one month after the EU banned chrysotile.

The UK’s Control of Asbestos Regulations Act 2006 (as amended in 2012) combined all previously existing legislation (the Control of Asbestos at Work Regulations 2002, the Asbestos (Licensing) Regulations 1983 and the Asbestos (Prohibitions) Regulations 1992) into one single Act, prohibiting the use, supply and importation of all asbestos. However, the Law still allows for existing asbestos to remain intact if it is in good condition and is undisturbed.

As knowledge of alternative mesothelioma causes develops, such as those highlighted in the review, law making bodies may have to strengthen regulations to align with emerging exposure risks.

MESOTHELIOMA-CAUSING MINERAL FIBRES?

In certain locations, mineral fibres, such as erionite, fluoroedenite, and possibly balangeroite, may cause mesothelioma.

Erionite

Erionite is a mineral with physical properties similar to amosite and crocidolite. It is found in volcanic regions associated with rhyolitic tufts, such as parts of Turkey, Italy and the United States. In North Dakota, hundreds of miles of roads were surfaced with gravel that contained erionite, leading to high airborne concentrations of the mineral. An outbreak of mesothelioma in two villages in Turkey was studied, and was found to be the result of exposure to erionite fibres used in the whitewash on the walls of houses. Some asbestos has also been found in the region. It was determined that more than 50% of mesothelioma cases in the villages were caused by erionite, and some researchers have suggested that the families involved could have a genetic predisposition to fibre-induced cancers. However, other authors have challenged this view. In the United States, a high incidence of mesothelioma has been identified in rural areas with erionite contamination, and there have been several cases of Mexican-born residents of the United States diagnosed with mesothelioma. Considerable quantities of erionite fibres were found in lung tissue. Studies in experimental animals have also demonstrated increased risk of mesothelioma with erionite exposure.

Source: Erionite (Wikipedia)
Fluoro-Edenite

Fluoro-edenite has similar properties to lesser-used asbestos amphiboles, actinolite and tremolite. The mineral has been found in Sicily, and has been used in road paving and plaster and mortar construction of residential and commercial buildings. A study has found a 10-fold increase in pleural neoplasms in those who are exposed, while pleural plaques have also been reported.

Source: Fluoro-edenite (E-Rocks)

Balangeroite

Balangeroite is a mineral that has some similar physical properties to amphibole asbestos fibres. It is found as a contaminant in chrysotile, mined in Balangero, Italy. Some authors have attributed mesothelioma cases in this area to balangeroite. Others have questioned its toxicity. Crocidolite and amosite have also been found in lung tissues in Balangero mining workers, the source of which is likely to be South African amphiboles that were occasionally milled at Balangero. Since these workers were exposed to chrysotile, amphibole asbestos and balangeroite, it is difficult to determine the contributions of each separate mineral to mesothelioma cases.

Source: Balangeroite (Mineral-Forum)

MESOTHELIOMA-CAUSING MAN-MADE FIBRES?

A variety of man-made fibres, such as rock wool, slag wool, glass fibre and glass filament have been studied to evaluate whether they have the potential to induce mesothelioma in humans. Systematic reviews have found little evidence of any toxic effects. There have been anecdotal case reports of metals, beryllium and nickel, and crystalline silica, found in sugar cane, causing mesothelioma. However, this is insufficient to claim that there is an association.

MESOTHELIOMA-CAUSING RADIATION?

Radiation is a known cause of cancer. There are three different types of radiation exposure that have been linked with mesothelioma: radiation received as treatment for a previous cancer; use of the medical imaging medium, ‘Thorotrast’ (thorium dioxide); and work in the nuclear energy industry.

Radiation treatment for previous abdominal cancers, such as Hodgkin and non-Hodgkin lymphoma, Wilms tumour of the kidney and breast cancer, are associated with mesothelioma. The latent period has been shown to be between 5 and more than 50 years.
The radioactive material, Thorotrast, was used in X-ray imaging until the 1950s. It has been implicated in causing a range of tumours, including pleural and peritoneal mesothelioma. Thorotrast decays slowly in the body after it is administered, and emits radiation for the duration of its presence in the body.

A link between mesothelioma and work in the nuclear energy industry has also been suggested. British Atomic Energy workers, employed between 1946 and 1990, and workers at the Idaho National Engineering and Environmental Laboratory, have been found to be at increased risk of mesothelioma.

**MESOTHELIOMA-CAUSING INFLAMMATION?**

It has also been suggested that chronic pleural and peritoneal inflammation may be a cause of mesothelioma. There have been anecdotal reports of pleural mesothelioma following conditions, such as tuberculosis and emphysema, and of peritoneal mesothelioma in patients with disorders such as Chron’s Disease.

**MESOTHELIOMA-CAUSING VIRUSES?**

The SV40 virus has been suspected as a cause of mesothelioma, as there have been positive findings in animal experiments. However, the epidemiological evidence suggests that there is no causative role in humans.

**Simian virus 40 (SV40)** is a virus that commonly infects Asian macaque monkeys. In normal monkeys, the infection is usually symptomless, but it can have different effects on other species. Tumour-causing effects have been reported in cell and animal studies.

Human exposure to SV40 is believed to occur as a result of polio vaccinations, prepared from infected monkey cells. The authors estimate that between 1954 and 1963, hundreds of millions of people may have been infected in the Soviet bloc, China, Japan and several countries in Africa. That means hundreds of millions could have been exposed to SV40 after 1963.

In 2004, the US Food and Drug Administration (FDA) was a defendant in lawsuits alleging that the SV40-contaminated polio vaccine used in the US has caused cancer.

In spite of cell and animal study evidence, researchers of the review are uncertain as to whether SV40 causes mesothelioma in humans, because SV40 it is difficult to detect. As such, the proportion of mesothelioma patients infected with SV40 is largely unknown and even if evidence of SV40 infection is detected in a mesothelioma patient, this does not mean that the virus is causative of mesothelioma.

**MESOTHELIOMA CAUSED BY GENETICS?**

There is also some evidence that genetics may play a role in mesothelioma development. There has been much recent interest in the role of the gene known as BAP-1 (BRCA1-associated protein-1). This gene produces a protein that is believed to function as a tumour suppressor, and it has been suggested that a mutation in this gene may be associated with mesothelioma onset. Mutations that may lead to increased susceptibility to cancer are hereditary.

Some sources claim that the mutation is found in an estimated 70% of mesothelioma cases. However, the review submits that studies of mesothelioma patients have shown only a small proportion to have such a mutation. In spite of this, experiments in mice have found that
these genetic mutations may make individuals with low level exposure to asbestos more susceptible to mesothelioma, inferring an interaction between genetics and asbestos exposure. Other studies have found that the mutation itself is enough to increase the risk of mesothelioma alone, i.e. without exposure to asbestos.

The reviewers are aware of only one study in humans in which the link between genetics and asbestos exposure has been investigated. In this instance, BAP-1 mutations were found in 9 of 150 patients with mesothelioma and a family history of cancer. Meanwhile, BAP-1 mutations were found in no patients, in a group with history of asbestos exposure but no family history of cancer. However, this study classified asbestos exposure as either exposed or not exposed. Unfortunately, when it is clear that factors, such as fibre type and exposure duration can have significant effects on the risk of mesothelioma, this study was insufficient to determine differences between the two groups of participants.

Although there are complex proprietary issues on the ‘right to control the use and disclosure of … genetic information’, it is possible that the BAP-1 gene could be adduced as a defense to liability in EL claims. Ortwein v Certainteed Corporation was the 1st case to rule on this. The claimant was a 50 year old woman suffering with pleural mesothelioma. At the California Superior Court, Judge Jo-Lynne Lee granted the defendant’s motion to compel production of the claimant’s lung tissue samples for genetic testing.37

MESOTHELIOMA-CAUSING NANOTUBES?

More recently, carbon nanotubes have emerged as a potentially new and emerging cause of mesothelioma. Carbon nanotubes are long, thin tubes that have a wide range of applications. Concerns have been expressed about its physical similarities with asbestos fibres. Though the findings from such studies do not necessarily indicate risks in humans, cell studies have shown toxic effects and rodent studies have shown development of mesotheliomas resulting from carbon nanotube exposure. In issue 208 of BCDN (here), we reported on a study in mice, in which 10% to 25% of test subjects exposed to carbon nanotubes developed mesothelioma. Then, in issue 221 (here), we reported that a small study had found cardiovascular effects in exposed humans. Some studies have found that carbon nanotube fibres may lead to inflammation, and the length of the fibres correlates with inflammation.

At this stage, there is little epidemiological information associating carbon nanotubes with mesothelioma. When mesothelioma has been the result of asbestos exposure, exposure occurred many years earlier. Quite simply, humans are yet to be exposed to carbon nanotubes for a long enough period of time. If carbon nanotubes can cause mesothelioma in humans, it is unlikely that significant epidemiological evidence will be available for several decades. At that point, it is assumed that latency periods will have begun to elapse. In the meantime, studies of carbon nanotubes in animals and studies into other adverse health effects in humans must be monitored carefully to understand the full extent of risks posed by nanotubes.

MESOTHELIOMA WITHOUT CAUSE?

The latest review reports that all of the etiologies discussed in the above sections account for a small proportion of mesothelioma cases, and, after excluding tumours caused by asbestos exposure, spontaneous onset of mesothelioma is the most common cause. Evidence in support of a ‘background’ rate of spontaneous mesothelioma includes:

- Lack of changes in the number of cases in women with time and commercial use of asbestos in the USA;
- The occurrence of mesothelioma in children too young to have undergone a latency period typical of asbestos exposure;
- Cases of mesothelioma in persons with no history of asbestos exposure, despite extensive investigation; and
- The spontaneous occurrence of various tumours, including malignant mesothelioma, in laboratory animals.
The review includes a table, which collates the proportions of mesotheliomas attributable to asbestos, recorded in each study. Different studies report different figures, due to varying study designs, different patient selection schemes, different views of which occupations entail significant asbestos exposure, and differences in the historic use of amphiboles and chrysotile in different countries. It can, however, be seen from the table that:

1. there is a definite fraction of mesotheliomas that have no identifiable cause;
2. this fraction is greater in women than in men (because more men had occupational asbestos); and
3. the fraction is greater in peritoneal than pleural mesothelioma.

<table>
<thead>
<tr>
<th>Author, y, Source</th>
<th>Country</th>
<th>Mesotheliomas Attributable to Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirat et al,1 1994, US Cancer Registries, Veteran Administration Hospital</td>
<td>United States</td>
<td>88% pleural mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58% peritoneal mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23% pleural + peritoneal mesothelioma – women</td>
</tr>
<tr>
<td>Rakes et al,2 2009, UK Cancer Registry and physician records</td>
<td>United Kingdom</td>
<td>86% mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>38% mesotheliomas – women</td>
</tr>
<tr>
<td>Price and Ware,3 2009, SEER</td>
<td>United States</td>
<td>78% mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;10% mesotheliomas – women</td>
</tr>
<tr>
<td>Offermans et al,14 2014, Netherlands Cohort Study</td>
<td>the Netherlands</td>
<td>32%–34% all cases</td>
</tr>
<tr>
<td>Lacourt et al,15 2014, population case-control study</td>
<td>France</td>
<td>87% mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65% mesotheliomas – women</td>
</tr>
<tr>
<td>Gennaro et al,16 2005, Liguria Mesothelioma Registry</td>
<td>Italy</td>
<td>85% mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42.5% mesotheliomas – women</td>
</tr>
<tr>
<td>Gorini et al,17 2002, Tuscany Registry</td>
<td>Italy</td>
<td>85% mesotheliomas – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26% mesotheliomas – women</td>
</tr>
<tr>
<td>Marinaccio et al,18 2012, Italian Mesothelioma Registry</td>
<td>Italy</td>
<td>86% pleural mesothelioma – men</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63% pleural mesothelioma – women</td>
</tr>
</tbody>
</table>

Abbreviation: SEER, Surveillance, Epidemiology, and End Results.

In edition 213 of BC Disease News (here), we reported on an Italian study, which found that 38% and 13% of female and male cases of pleural mesothelioma, respectively, were the result of ‘unknown’ or ‘not probable’ asbestos causes. The same was observed in 47% of females and 21% of males with peritoneal mesothelioma. The observations in the table above are consistent with the findings in the Italian study.

Consideration of age, sex and site of mesothelioma provides further evidence that mesotheliomas can arise without asbestos exposure. Recent analysis of mesotheliomas diagnosed between 2003 and 2008, in the USA, showed that male rates are declining as female rates remain unchanged. During this 5 year period, mesothelioma was more common in women than men below 45 years of age, of which 51% of cases were peritoneal. These findings suggest that there is a background of cases that are not caused by asbestos. In addition, recently updated trend analysis shows that the incidence of peritoneal mesotheliomas among both males and females has little or no association with commercial trends in asbestos use in the USA.

CONCLUSION

Overall, the proportion of mesothelioma cases attributable to asbestos varies according to sex, anatomic location, fibre type, occupation and industry. The APLM-published report concludes that the alternative causes of mesothelioma account for only a small proportion of cases, and that most cases not clearly attributable to asbestos are spontaneous, or the result of no particular cause. More research is needed to prove that the factors discussed are causative of mesothelioma if successful claims are to be brought, either in respect of public exposure, or workplace exposure.
References

1 Neil Rose ‘Government and Labour to keep talking on details of CMC cold-calling ban’ (27 April 2018 Legal Futures) https://www.legalfutures.co.uk/latest-news/government-and-labour-to-keep-talking-on-details-of-cmc-cold-calling-ban accessed 30 April 2018
2 John Hyde ‘Outright cold-call ban fails to make it through finance bill’ (27 April 2018 Law Gazette) https://www.lawgazette.co.uk/news/outright-cold-call-ban-fails-to-make-it-through-finance-bill/5065870.article accessed 30 April 2018
27 Ibid Trakatelli
Disclaimer

This newsletter does not present a complete or comprehensive statement of the law, nor does it constitute legal advice. It is intended only to provide an update on issues that may be of interest to those handling occupational disease claims. Specialist legal advice should always be sought in any particular case.

© BC Legal 2016.

BC Legal is a trading name of BC Legal Limited which is registered in England and Wales under company number 08963320. We are authorised and regulated by the Solicitors Regulation Authority. The registered office is 1 Nelson Mews, Southend-on-Sea, SS1 1AL. The partners are Boris Cetnik and Charlotte Owen. More details on the firm can be found at www.bc-legal.co.uk
Directors: B. Cetnik, C. Owen
Registered Office: 1 Nelson Mews, Southend-On-Sea, SS1 1AL
BC Legal is a trading name of BC Legal Limited which is registered in England and Wales under company number 08963320
We are Authorised and Regulated by the Solicitors Regulations Authority (SRA No 617698)