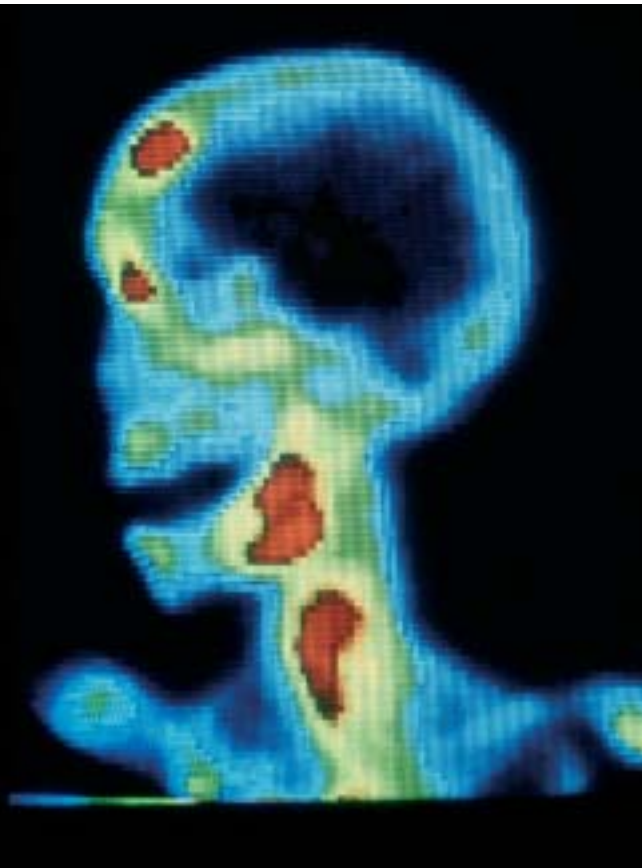


Are Pre-Cancerous conditions significant when assessing life and disability cover?



How does an underwriter assess an applicant where a pre-cancerous condition is disclosed? It is a complex and difficult subject, more so where disability cover has been applied for. Many cases will need to be referred for a medical opinion and in this article our Chief Medical Officer discusses the factors which will need to be considered before a decision can be made.

Pre-Cancerous conditions

Pre-Cancerous conditions are conditions in human and animal tissue that are capable of becoming malignant

tumours. Some, of course, do; while others, thankfully, do not.

Normal tissue consists of cells, often very different, which share a number of similar properties. They grow, divide and, if damaged can undertake repair. These are all fairly complex processes which need to be, and are, controlled. Controls of growth and division are usually programmed in the nuclear material of the cells but they may also be capable of responding to external signals, perhaps chemical or hormonal.

Tumour cells are those that are characterised by uncontrolled growth,

uninhibited division and two dangerous properties, the ability to invade local tissue and to spread to distant sites (metastasise). Not all tumour cells do this; many of them die and some potentially malignant cells never really 'get going'.

So how do normal tissues change to become malignant? Well, mistakes may occur 'naturally', bringing about genetic damage in cells but it is well known that external factors are capable of causing such changes. Radiation is a good example. After atom bombs were dropped on Hiroshima and

Nagasaki scientists watched carefully for adverse effects occurring among the survivors. It was found that, for example, the incidence of leukaemia was highest, for a few years after the bombs, in those nearest to the explosion. The further the distance survivors were from the bomb the less likely were they to develop leukaemia. Thus the dose of radiation received by the bone marrow determined whether or not the necessary change would occur to initiate leukaemia.

In the early days of radiology, when very little was known about x-rays, radiologists' hands were often exposed to a very high dosage. Many of them developed local cancers and lost fingers as a result.

Long standing exposure to certain chemicals has also long been recognised as a risk of cancer. Cancer of the skin of the scrotum in chimney sweeps used to occur because of the local effects of carcinogens in the soot. Tobacco products and lung cancer; dyes used in the rubber industry and bladder cancer; and tar products on the skin all have well known associations.

Another risk factor, more widely recognised in recent years, is the effect of too much ultra violet light on the skin and the development of melanoma.

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The truly enlightened reassurer

The cause or, more precisely, the causes of many cancers are not known. It is thought that more than one insult in a cell is necessary before it will become malignant – this is known as the 'two hit' theory. For example, while people with chronic hepatitis B have a high risk of developing liver cell cancer, the risk is very much greater if in addition they are also exposed to a fungus product, aflatoxin, which contaminates foods grown in some parts of the world. This is why liver cancer is so common in East Africa and China.

Other viruses are known to cause infection which, in the presence of so far unknown factors, can lead subsequently to tumours in some individuals. The Epstein Barr virus is known to be associated with the development of Burkitt's Lymphoma in certain parts of Africa. In recent years the roles of the human papilloma virus and the herpes virus are becoming clearer in the initiation, probably many years after infection, of cancer of the cervix.

It seems that the genetic changes necessary to cause malignant transformation of a cell require more than one mechanism to both start the process and then keep it going.

Some fairly common medical conditions are known to be capable, in the course of time, to proceed to become malignant. If these are recognised early, either localised lesions can be removed or, treatment can be given to prevent the change occurring. Underwriters will be familiar with a number of these conditions. Some of the most noteworthy of which are considered further:

CIN – Cervical Intra-epithelial Neoplasia

This is a term frequently encountered in medical records. CIN I to III represents different stages of cervical dysplasia which in simple terms is the presence of abnormal cells present on the surface of the cervix. Progression of CIN I to CIN III is estimated at about 25% over two years.

If CIN III is allowed to progress untreated perhaps 30-40% will develop invasive cervical cancer within 20 years. There are various ways of eliminating CIN and thereby the risk of subsequent cancer. This, of course, is the basis of cervical screening which in developed countries has been a highly successful initiative.

For all cover where the lesion is classified as CIN III we would not offer terms unless a histology report confirms that there was no invasion of surrounding tissue, that the lesion has been completely excised and that there has been a subsequent normal cervical smear.

Barrett's Oesophagus

This is a name appearing more often in front of Underwriters and causes worries about what terms should be offered – like most potentially malignant conditions it is particularly important for Critical Illness cover.

Norman Barrett was a thoracic surgeon who described the appearance of the lower end of the oesophagus when acid had refluxed upwards from the stomach and caused the lining of the oesophagus to change its character. The particular change that Barrett described has a high potential for developing malignancy and when found it needs to be carefully watched. Biopsy will reveal whether the changes are benign or malignant or show various stages of dysplasia in between the two extremes.

It is difficult to determine the true incidence of Barrett's oesophagus since most individuals have no symptoms. Perhaps a third of all patients undergoing upper gastro-intestinal tract endoscopy are found to have it to some degree. Around 10% of patients with frequent gastro-oesophageal reflux will have a long segment of this condition.

The risk of oesophageal cancer is probably about forty times greater than in the normal population with an annual incidence of around 0.8%.

Treatment of this condition is aimed at trying to prevent reflux of acid and bile from the stomach into the oesophagus. Medically this can be largely achieved by using drugs which suppress acid production by the stomach. Surgically,



operations to prevent reflux may succeed. The usual approach to management includes regular endoscopy to monitor the state of the lining of the oesophagus for dysplasia and if signs of malignant change are identified removal of part of the oesophagus may be required.

For disability coverage and in particular critical illness cover, it may be necessary to exclude gastric or oesophageal cancer. This will depend on the histology findings, the number of years that the symptoms have been present and if these symptoms have remained static, worsened or improved.

Certain skin lesions

It is a fact that certain skin lesions are known to be potentially malignant. They are very easily identified because of their position and can usually be removed to prevent the risk of cancer. These are atypical naevi or moles. Benign naevi are common, symmetrical, regular in outline and uniform in colour. They are usually smaller than the blunt end of a pencil and similar to other moles on the surface of the skin.

Atypical naevi on the other hand are irregular in outline, larger and variably pigmented. People with a large number of atypical moles may have the atypical mole syndrome and are at increased risk.

As there are numerous different skin lesions, it is essential that we establish a precise diagnosis before deciding what terms can be offered.

Colon Polyps

They are known to be pre-malignant conditions. It is likely that almost all colon cancers arise in a polyp. Theoretically if a polyp is found when it is young and very small its removal should prevent a possible cancer.

Sporadic polyps are very common. Rare, hereditary forms of polyposis coli, when thousands of polyps are found in a single individual, invariably gives rise to colon cancer. This occurs at a very young age and can only be prevented by removal of the entire colon.

Colorectal cancer is the fourth most common malignancy and second only to lung cancer as a cause of cancer death. The incidence and mortality rates in Europe and North America have started to decline but around 5% of the population will develop this disease in their lifetime.

Since colon polyps are known to be the most important risk factor, programmes to identify and remove them before they become malignant are needed.

Consideration of when or indeed whether it is appropriate to offer insurance, particularly disability cover should be discussed with the Chief Medical Officer. It is very likely that an exclusion will need to be imposed for disability cover.

This is most certainly a most complex subject and one from which we can only gain greater understanding through increased knowledge of the subject. Some of the commoner pre-cancerous conditions will indeed be familiar to underwriters and most of these are more relevant to critical illness cover than life policies because they can be recognised early, treated and potentially cured.

For all of these conditions information gathering is crucial, not only to protect ourselves but also to protect the proposer. It is in everybody's best interest to determine whether cover can be offered and the extent of that cover at the point of sale rather than at the point of claim.

Dr Robert Knight
Chief Medical Officer
Hannover Life Re (UK)



The Expanding 'Silver Market' – How Can Reinsurance Help?

The UK population, along with the rest of the developed world is getting older. People are living longer and at the same time the birthrate is falling. The time is right for financial services providers to address the protection needs of the 'Silver Market' and hence to expand their business. This article examines some of the products appropriate for this market, the additional risks providers will face and how reinsurance can help mitigate these risks.

Financial services product brochures for older lives show happy, youthful looking people to reflect the fact that we all wish to live a long and healthy life. The reality for providers is, however, different as significant extra risks are run on such business. We are living longer, but the extra years are not necessarily as healthy as we may wish.

As longevity increases and the cost of pensions becomes more expensive, be they Government or privately funded, it is perhaps inevitable that we will have to work until older ages, reversing the trend towards early retirement. This will mean that, for example, we will need income protection products for longer. Life assurance will be required to older ages and demand for critical illness plans at older ages will grow. We are already seeing annuitants continuing to live longer and, due to medical advances, the number of people alive following serious illness will grow. The market for impaired annuities and long term care will therefore expand. Providers will be facing extended risks and will need to look to the reinsurance market for help.

At Hannover Life Re (UK), we provide advice and support in many areas relevant to the Silver Market, including product development, pricing, underwriting, claims handling and marketing. Our research into older age mortality and morbidity is already well advanced. We can design detailed financial programmes to mitigate and share the risk with providers.

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Alan Stockbridge joins the board



Congratulations to Alan Stockbridge who has been promoted to Hannover Life Re (UK)'s board of directors.

His new role as Operations Director will see him more involved in board matters as well as continuing to head our finance areas, including corporate actuarial, accounts and customer services.

Alan is the most recent recruit to Hannover Life Re (UK)'s senior management team. He joined the company in 2000 after 25 years experience with one of the largest direct life insurers in the UK. His previous role included responsibility for reinsurance matters and he has therefore been able to bring his very own brand of expertise to the business.

Working with Peter Savill, Managing Director, and David Brand, Deputy Managing Director, Alan will continue to help spearhead plans for the future expansion and development of the company.

We hope you enjoy In Focus and we welcome your feedback. Please forward any comments to Kirsteen Grant. If you wish to be added to our mailing list contact Kirsteen on 01344 846833 or email uk.marketing@hannover-re.com.

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As an example, consider the provision of life assurance. Improving longevity is naturally excellent news for existing business. We are already seeing increasing demand for life assurance from older lives at entry and to run to older cessation ages. There are varying reasons for this. We are beginning to have children later in life and hence they are dependent on older parents to an older age. With increasing wealth, inheritance tax is becoming a problem for a greater proportion of the population, historically, provision has not been made until almost too late. We regularly see requests for seven-year term assurance for terms stretching to age 90 or later. At these advanced ages there is little published data available. As reinsurers we have looked at worldwide studies and are already used to writing business in such areas.

The impaired annuity market is now beginning to expand rapidly with providers specialising in different areas, such as seriously impaired compulsory purchase annuities, 'lifestyle' risks (for instance smoking, or occupation and location) or the separate 'immediate needs' long term care market. The key question for a new product provider is how to underwrite and price these risks.

Underwriting at an advanced age is an especially complex art, be it in respect of life assurance or annuity business. There is almost no such thing as a clean proposal at older ages and the interaction between the various diseases people have had is a key factor in the risk assessment. Therefore, close liaison between the underwriter and actuary is vital.

To underwrite and price for the elderly is impossible without considering the wider social view. Under the 'Our Healthier Nation' initiative, the Government does have various priorities for improving mortality in the areas of heart disease, stroke, cancer, mental health and accidents.

Although this is targeted at working people under the age of 65 it will have an effect on future generations of older lives.

As the elderly population grows, and becomes wealthier, we can also expect their influence to expand. They will not be happy to settle for second best medical treatment or drug rationing. Instead, they will demand the best and, in many cases, be able to pay for it. The underwriting and assessment of old age mortality and morbidity is likely to become increasingly complex as improving mortality continues into old age. Perhaps those people now rateable with minor impairments will be viewed as 'standard' in the future and those who are disease free may be regarded as 'super preferred'.

For many Silver Market products a small variation around the expected lifespan can be extremely important to the profitability of a portfolio. This is particularly true of impaired annuities where, as the expected duration of an impaired annuity block is smaller, investment yield cannot be relied on to produce a similar contribution to profit than on a 'standard' annuity block. As reinsurers we have expertise in this area, including the build up of our own impaired life annuity mortality experience and the all-important shape of the mortality survival curve. This expertise is a major asset for our clients entering the market.

There are many products suitable for this market that can be developed with the help of reinsurance expertise. Pricing and underwriting will be the major challenges in designing profitable and competitive products. We at Hannover Life Re (UK) will continue to research this growing market in order to provide our clients with a competitive advantage in the years to come.

David Brand
Deputy Managing Director