



Medicine for Managers

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Cancer in Younger Adults

Those of us who qualified medically in the sixties were trained to think of cancer as a disease of older people. Cancer in younger people was rare and it is still much more common in older people. However, in the UK the numbers of diagnoses in people under the age of 25 are rising by 1-2% a year and reached around 3,700 in the early 2020s, about 10% of whom die of their illness. In the under 50 group it is about 35,000 of the total.

It has traditionally been difficult to relate environmental factors or behaviours specifically to the acquisition of any particular cancers in some patients but factors such as smoking, alcohol, lack of physical exercise, the consumption of red meat and the lack of fibre in the modern diet have all been implicated in the genesis of disease.

Colorectal cancers, although previously considered a disease of people over 50, is now a leading cause of cancer-related deaths amongst younger patients.

Furthermore, younger women are also developing some cancers earlier, particularly breast and thyroid.

Research continues to identify any newer aggravating 'culprits' causing malignant disease. The only data which appears to show a parallel between incidence of occurrence and incidence

of disease is **obesity**. This has been the case since the 1990s. It appears that the development of excess fat may influence the production and output of some bodily hormones, such as insulin, which is believed to adversely influence the incidence of cancer.

In the case of bowel cancer, scientists have estimated that, for every 100 extra cases of bowel cancer, twenty appear to be due to being overweight although the other eighty are unexplained.

Other implicated factors have included:

- Modern lifestyle. The decline of the 'healthy diet' and the increased use of ultra-processed foods, combined with the rise in obesity and more physical inactivity.
- Changes in the organisms identified in the gut, possibly as a result of antibiotic use or dietary changes

- Modern chemicals such as microplastics weedkillers and air polluting agents
- Changes in family behaviour including the tendency for women to have fewer children later in reproductive life.

The result of knowing these traditional and more modern suggested causative factors has caused experts to suggest that someone who does not become overweight, does not smoke or drink, exercises regularly and eats a healthy diet may be up to 40% less likely to develop cancer.

The \$64,000 question is how can the increasing frequency of the cancerous diseases be recognised, and controlled. The obvious lifestyle causes are clearly in the hands of the individuals themselves but so is the early identification of any symptoms which 'just don't feel right'. So often people 'don't want to be a nuisance' or do not wonder why bodily changes may have occurred

Symptoms suggestive of cancer

Depending on the type and location of a tumour and the organ or tissue affected, symptoms may be very variable. In general, a good rule of thumb is to consult if any change or symptom is unusual, persists for more than two or three weeks and cannot be explained.

The symptoms may be non-specific such as a sudden unintentional loss of weight of more than (say) 10 lbs, increased fatigue, unexplained fever or pain without obvious cause.

Specific areas may be affected. Skin may show areas of colour change, lumps, changes in moles or areas where sores do not heal. A range of gut symptoms may suggest cause for concern

including such changes as difficulty swallowing, heartburn, loss of appetite or any persistent changes in bowel habit.

Persistent cough, breathlessness or hoarse voice may indicate a respiratory concern.

Unexpected or excessive bleeding in any area, particularly in the urine or from the bowel or vagina should raise concern.

The symptoms are largely the same whatever the age of the sufferer. Specifically in younger people, from their late teens to their 40s, eleven types of cancer are becoming more common in England and the UK, for reasons which remain obscure.

Bowel, thyroid, liver, kidney, gallbladder, uterine, pancreatic, mouth, breast, ovarian cancers and multiple myeloma are increasing. Despite that increase, they are still relatively rare.

Unfortunately, diagnosis is frequently delayed in younger patients. Indeed young people between 15 and 18 have, on average, some of the longest diagnostic waiting times, sometimes more than two months from first symptom to specialist or oncologist appointment. These delays may occur because:

- Younger patients are often dismissive of their own symptoms, attributing them to exam stress, excessive social life or dieting, rather than the possibility of significant or serious illness.
- Because cancers in the young are relatively rare, doctors may attribute

significant symptoms to common benign disorders such as stress, lack of sleep from partying, or diets.

Such delays may be serious, causing increasing depression or anxiety and increasing the risk that a tumour may advance to a more serious stage before diagnosis, resulting in the need for more intensive or complex treatment.

From a positive perspective, young people generally have better survival rates and it is estimated that, after diagnosis there is a one-year survival rate of 95% and a five year survival rate of about 88%.

Good recovery for the young is, however, influenced positively and negatively by various physical and psychological challenges.

- Possible long-term challenges. Because of treatments received when relatively young, they may experience chronic issues later in life including symptoms such as fatigue, pain or disability, as well as physical risks like cardio-vascular complications, fertility issues or the possibility of secondary cancers.
- Psychological consequences may result from missed education, and treatments that may compromise relationships or employment.

However, cure and survival rates are better in the group than in the older age groups.

Research in the specific factors causing cancer, especially in the young, is intensive because there is so much about the nature of the

disease and the way in which the DNA changes, leading to the development of cancerous cells, actually occur.

In terms of genetics, people who have an inherited predisposition to cancer tend to be diagnosed younger.

For example, women with hereditary breast cancer who have inherited the BRCA1 or BRCA2 mutation, are diagnosed on average about ten years younger than the general population.

Gastrointestinal tumours in people under 50 are found to have a hereditary reason for their development in up to a quarter of cases, although 75% are not related to family history or hereditary disposition.

Bowel cancer is increasing in people under the age of 50 worldwide and in the UK the disease has increased in the group by over 50% since the 1990s.

One of the international centres for study of the disease is St Mark's Hospital in London, where tens of thousands of bowel cancer samples have been stored for up to 100 years.

The samples are being analysed to try to identify the precise cause of the cancer and what has changed over the last century.

One suggestion is that a particular type of E coli bacterium has been identified in the bowels of young people, which wasn't present some decades ago.

The St Mark's collection has been described as a "real treasure trove" and hopefully the answer to cause of the disease might be getting closer.

The take home message is that, for those cancers with screening programmes, people should be screened because it may be lifesaving.

As the vast current research identifies additional factors and the measures that may be taken to improve early diagnosis or disease avoidance, increased screening at an earlier age may also be appropriate and also available in circumstances where there is a family history of disease.

Furthermore, a healthy lifestyle and a healthy diet gives positive advantages.

Hopefully, these risks in the young will be progressively reduced.

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