March 2006 - N° 19

ECHO

Spotlight on research

Give it a break!

With the arrival on the market of targeted drugs and the adaptation of treatment to each patient, cancer may, in time, be transformed into a chronic complaint... ! This, in a few words, is what came out of a report on this disease in a major Swiss weekly. When asked about progress in research, its aims and expectations, the persons consulted by the journalists gave the impression that this is the path medicine is taking. For a very long time all this research has produced only a few specific results despite all the energy and resources deployed in the fight against this disease. Today the matter seems to have changed (see « What's new, doctor? »). If the researchers and doctors have their way, this still fatal disease will become chronic. The disease might not necessarily be cured, but it could be controlled and managed so that patients can live with it. There is still a long way to go, but it is a turning-point that seems desirable and is already well under way. This view and that of the Chairmen of the Cancer & Solidarité Fondation provide support for the stance we have taken since 1991 and we will be delighted if this hope, guided by research, allows a positive outcome to « the fight against cancer ».

Thierry F. Ador et Olivier Ador

Living proof

In the medical world, the saying that « early detection means a cure » is no longer a dogmatic truth. According to Prof. Pascal-André Sappino, *« to be valid, large-scale screening must attack a public health problem with a test that is sensitive, specific and inexpensive. It must especially allow a reduction of the mortality of the condition that is to be detected. Now, for some cancers this screening essentially allows us to spot «mild» tumours, leaving the more aggressive forms to forge ahead. More precisely, the efficacy of detection is acknowledged for cervical cancer and cancer of the colon. For the skin, regular inspection of the epidermis is useful. On the other hand, in the case of lung cancer it has not been demonstrated that high-resolution scans performed on smokers reduce mortality. In the case of breast cancer, there are two opposing positions; an annual mammogram certainly reduces mortality, but to a less significant degree than claimed by its supporters. However, the controversy is particularly fierce about prostate cancer. Screening here consists of a simple blood test to measure PSA. The problem is that a high level of this antigen is not always a sign of cancer. And to operate at any cost is not always advisable in view of the serious consequences for the patient. »*

Source: TdG, February 2006

What's up, doc?

Now that one person in three will develop cancer during their life, research is exploring a thousand ways to repulse the disease. Immense advances in biology have contributed to the development of new strategies. Even if surgery, chemotherapy and radiotherapy will not disappear from the scene, new and more targeted methods will be used in addition at other times during the course of the disease. Genetics has allowed us to understand why some people are at greater risk of having cancer. This has allowed doctors to propose prevention on a more individual basis, which is better than any type of less specific mass screening. A second approach is to stop the tumour developing by depriving it of what it needs to grow. Some substances have already been marketed, but no-one can yet be cured by this method. A third approach, on which much hope is pinned, explores the potential of our immune system. This includes the use of « tumour-killing » white blood cells, bone marrow grafts, vaccines, etc. Doctors and researchers are confident that these treatments will be effective in future, but remain cautious in the face of those who think that cancer will be relegated to a chronic disease within a few years from now. Recent discoveries in medicine and genetics have thrown light on the complexity of cancer. Real caution is required.

Source: TdG, February 2006

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On the front line

The Cancer & Solidarité Fondation is financing the work this year of ***Mr. Aurélien Dupuy,*** ***at the Institut Curie in Paris, France.*** *His research project concerns the role played by the protein Rap1 in the dynamic control of cell adherence, a biological process that is deregulated during the formation of metastases. To study the role of this protein he is looking at mitosis. This is a dynamic process, during which the cells and more particularly the epithelial cells (from which the majority of solid tumours develop) shrink and then spread out again after cell division. During mitosis, cell structure losses are correlated with inhibition of the protein Rap1, whereas the active Rap1 level increases when the daughter cells produced by the division spread out. In addition, his studies have shown that activation or inhibition of the signals controlled by this protein modifies the cell reaction at the start of mitosis. All these results together show that Rap1 is a major regulator of the dynamics of adherence during mitosis.*

Planet research.

- **Cervical cancer:** a vaccine this year. The American company Merck has announced that its experimental vaccine, Gardasil, is 100% effective against this type of cancer. It blocks two types of papillomavirus, namely HPV 16 and HPV 18. It is estimated that these two are responsible for 70% of cervical cancers. The tests were performed on 12,000 women aged 16-26 years. The results showed that none of them developed the precancerous lesion associated with papillomavirus. The company is only waiting for FDA authorisation before marketing this product.

  Source: Parents No. 442

- A team at Inserm has just made a major discovery. **Some of us have « friendly » cells in our immune system that prevent some cancers from developing metastases.** The researchers analysed 959 tumours and showed that when these cells, called memory T lymphocytes, are present, the outcome is favourable in 70% of cases. Conversely, the chance of a cure is only 40% if they are absent. If we can learn why these cells are found in some patients, it will be possible, in time, to stimulate their production.

  Source: Top Santé, February 2006

Vital statistics

Having become generally applied in France since 2004, organised breast cancer screening is still far from achieving its objective. Only 41% of « invited » women take part in it. To persuade the others, unpaid women volunteers called relays, supported by health professionals, work with the sole aim of providing information and encouragement for women aged 50-74 years, for whom they perform free screening every two years.

Five good reasons to have a mammogram:

- If 70% of eligible women participated, breast cancer mortality could be reduced by 25%, which represents 3,000 deaths a year;
- The equipment used is modern and thus of good quality;
- The mammogram will be « read » by two radiologists trained in screening;
- There is every chance that an early cancer can be cured: a tumour of 1 cm is curable in 80% of cases;
- The earlier cancer is detected, the better is the chance of saving your breast.

Source: Top Santé, February 2006

- Companies in a frantic race against cancer. **400 substances are currently being studied in the field of cancer treatment.** This sector may become, in 2008, the number one pharmaceutical market with an estimated annual turnover of 41 billion dollars, i.e. almost twice as much as today. The competition is fierce and companies are trying to minimise the duration of research on these drugs. Even now it takes about twelve years to develop an anticancer drug. This effervescence may well convert cancer from a fatal disease to a chronic one.

  Source: Actualité Match Economie, Winter 2006

Researchers solve medical problems, we solve their money problems

ISSN 1422-2116

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