The challenge of malignant disease in the elderly

- S Levenstein



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Curriculum vitae

Dr Stanley Levenstein obtained the MB ChB (Pretoria) in 1970. He has been in active general practice in Cape Town since 1972, and is closely involved in under- and postgraduate education in general practice, including a leadership role in 'Training the Trainers' workshops in Vocational Training programmes in Natal/KwaZulu and East London/ Ciskei. He is a former chairman of the Western Cape branch of the Academy of Family Practice/Primary Care, and has been a member of the National Council of the Academy since 1981; the founder president of the SA Balint Society and a member of the administrative council of the International Balint Federation. Dr Levenstein is the author of numerous papers and articles relating to general practice, one of which was awarded the Louis Leipoldt Medal (1977), and two of which were the winning entries in the British Balint Society essay competition (1983, 1985).

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Summary

The incidence of malignant disease rises sharply with age, and the GP's role in this field is dealt with. The author discusses the etiology, the preventive aspects, the use of appropriate drugs, the psychological factors as well as the caring aspects and management of dying patients. Two patient vignettes illustrate some of these aspects.

The incidence of malignant disease rises sharply with age. In the United States¹, for example, 50% of all cancers occur in the oldest one-eighth of the population, and 60% of all cancer deaths occur in people 65 years of age and older.

The World Health Organisation² lists malignant neoplasms as the third most common cause of death in people over the age of 65 in both developed and less-developed countries.

In 1979³, malignant disease accounted for the deaths of 21% of whites in South Africa, 10% of coloureds, 8% of Asians, and 7% of urban blacks.

It is still not entirely clear why cancer affects the elderly so much more commonly than it affects younger people. Amongst the theories¹ put forward to explain this fact are: environmental exposure to carcinogens over an *extended* period of time, e.g. the incidence of lung cancer in smokers depends on dose rate of the carcinogens and duration of exposure; failure of immunological surveillance – an age-related decline in cellular immunity, the primary immunological defence against cancer, has been well-documented.

Whatever the truth may be, the number of older patients with cancer is likely to continue increasing, since the number and proportion of elderly people in the population are increasing, and other conditions such as circulatory and infectious diseases are becoming more manageable and relatively less common causes of death.

Cancer in the elderly thus represents a major public health problem which will need to be fought with even greater vigour on all fronts in the future. In fact, it would seem to be more appropriate to speak of the *challenges* of malignant disease in the elderly, as there are so many disciplines and fields of endeavour inside and outside the medical profession that have a role to play in combatting this scourge. Further progress is needed in molecular biology, pharmacology, epidemiology, screening and preventive measures, clinical and attitudinal skills, community resources, environmental control and even national and international decisionmaking.

An overall approach to the management of cancer should logically begin with the cell and end with the patient and his environment. To begin with *molecular biology*, much attention is being focused⁴ on the question of why neoplasia is more prevalent in the elderly by addressing the mechanisms of *cellular ageing*. It is believed that the rising risk of malignancy with age reflects the lifelong accummulation of DNA re-arrangements or other somatic cell mutations that can occasionally cause cell transformation.

Marc Weksler⁴ of Cornell University School of Medicine strikes a sanguine note when he says: 'Now is an exciting time to be an oncologist. Within the next few years, an understanding of the molecular basis of malignant transformation may come within our grasp ... The tools of molecular genetics show that the biology of senescence and malignancy are converging.' Weksler describes the involution of the thymus as the 'central event in the senescence of the immune system'. He also describes recent work from his laboratory that suggests that chromosomal instability is increased in lymphocytes from elderly patients as compared with young ones. He suggests that the phenomenon may be related to the age-associated increase in cancer. A relationship between chromosomal aberrations and neoplastic disease is becoming clearer. Many investigators now believe that most, if not all, tumour cells, have characteristic chromosomal aberrations, and such chromosomal re-arrangements are believed to confer selective advantages to neoplastic cells for cell growth.

Patients with malignant disease remind doctors of their own mortality

Studies on the cells of old persons indicate increased susceptibility, not only to chromosomal re-arrangement but also to the toxic consequences of irradiation and radio-mimetic drugs. The degree of cell cycle arrest or chromosomal damage induced by 3H-thymidine may be used as a 'chromosomal tolerance test' to judge the susceptibility of persons to cancer and drug therapy. 'In the future', suggests Weksler, 'oncologists may choose therapies not only on the basis of sensitivity of the tumour-cell to cytotoxic drugs but also on the basis of lack of toxicity of these drugs for normal cells'.

Studies of the ageing process are also of importance in order to improve the use of *drugs* in elderly patients. Age-drug interactions may result from age-dependent changes in organ function⁴. 'Functional changes that occur with ageing may change the pharmaco-kinetic elimination which is characteristic of drugs. At this stage, relatively little is known about the influence of ageing on tolerance to cytotoxic chemotherapy. This is all the more important because elderly patients often have more than one chronic disease, so that it is not unusual for them to be taking several medications simultaneously. This poly-pharmacy has the potential for deleterious drug interactions. These considerations are particularly relevant to the elderly patient who is taking anti-neoplastic drugs that have narrow therapeutic indices'.

The avoidance of adverse drug reactions in the elderly is a worthwhile goal. Careful attention to the special jeopardy of the elderly patient can minimise these reactions. As Bressler says, 'Further studies of pharmaco-dynamics and pharmacokinetics of anti-cancer drugs in the elderly are clearly needed.'

Having considered some of the basic science aspects which require and hopefully will be receiving attention, it should be borne in mind that it is essential to have reliable *information* on the incidence of the various malignancies in the elderly in different areas. Unfortunately, the situation is very often far from satisfactory regarding this. The data on malignancies in black South Africans⁵ is incomplete.

In this regard, the establishment of a National Cancer Registry⁶, effective from 1 January 1986, is a gratifying development. The Registry is pathology-based and registers all malignant tumours diagnosed in all laboratories of anatomical pathology and haematology (including university departments). This is certainly a positive step, but it seems certain that a large number of cases will still escape this net.

Then the question arises as to the *effectiveness* of programmes of cancer *prevention*, even with adequate epidemiological data. In an editorial in South African Medical Journal⁷, Walker and Silber state that for most common cancers, gains are disappointingly small. Mass screening and educational programmes, for example, which were embarked upon with great enthusiasm at first, failed to deliver the hoped-for results in the majority of instances.

However, this does *not* mean that the concept of cancer prevention in the elderly should be abandoned. For example, it has been estimated³ that more than 80% of cases of lung cancer would not occur without cigarette smoking. Moreover, elderly patients who give up smoking, *even after many years*, significantly reduce their risk of developing carcinoma of the lung¹. The fact that the 'pap' test for early detection of cervical cancer in *young* women has been emphasised to a much greater extent than for their older counterparts, could explain why carcinoma of the cervix presents in a more advanced stage in older women than in young¹ women.

Another very promising area of cancer prevention

in the elderly is that of colorectal carcinoma (73%⁴ of colorectal carcinomas are found in patients over 50 years of age). The American Cancer Society is undertaking a major campaign to reduce mortality from this disease, the premise of the campaign being that early detection can save the lives of 75% of patients with colorectal cancer¹. The use of the stool occult blood test has particular value in this regard. A study⁸ undertaken under the auspices of the Research Group of the South African Academy of Family Practice/Primary Care supports these expectations.

Patient-compliance is a major problem with such screening procedures. Mass publicity and educational campaigns have had only limited success in this respect. Much will thus depend on the individual practitioner to gain the cooperation of the patients under his care. Studies on patient compliance with doctors' recommendations for treatment have demonstrated that a most important variable affecting success is the quality of the doctor/patient relationship9. It does not seem an unreasonable inference that the same is likely to be true with regard to screening procedures. The trouble is that many *doctors* seem to lack the motivation to involve their patients in these kinds of procedures, even though these procedures are painless and inexpensive. This is probably due not primarily to negligence or ignorance, but perhaps because traditional medical school training has conditioned doctors to experience as rewarding the more dramatic therapeutic interventions, rather than the unspectacular and abstract hopes of saving lives through preventive medicine. It therefore appears that if we are to talk of educating the public about cancer prevention, we must begin with our own profession.

Some of the reluctance on the part of doctors to involve their patients in cancer prevention is due to a sense of futility as to the outcome. A classic example of this phenomenon is the attitude of doctors to their smoking patients. Many doctors seem to err either at the extreme of an authoritarian, bullying approach on the one hand, or by adopting an attitude of resigned indifference on the other. Fortunately, a new weapon has come to the aid of the defeatists in our midst, in the form of the nicotine-containing chewing-gum ('Nicorettes'), which has recently become available in South Africa. Overseas studies have shown^{10, 11, 12} that about one third of patients who give up smoking and then use the nicotine-gum as a form of substitution-therapy, have not resumed the habit after one year. Since cancer of the lung is the major cause of cancer deaths in men aged 65 to 804 (and this is true of coloured and Asian South African males as well), it would seem that the nicotine chewing-gum is likely to save many more lives than any new cytostatic drug or radio-therapeutic technique. The burning question is the extent to which doctors will make use of it!

Before leaving the topic of potentially preventable causes of cancer I wish to mention a neglected, but possibly important aspect, namely, the *psychosocial* determinant. Colin Murray Parkes in his classic study on bereavement¹³ has this to say: 'I accept the evidence that bereavement can affect physical health, and that complaints of somatic anxiety symptoms, headaches, digestive upsets and rheumatism, are likely, particularly in widows and widowers in middle age. Finally, there are certain potentially fatal conditions, such as coronary thrombosis, *blood cancers, and cancer of the neck of the womb* (my italics), which seem in some cases to be precipitated or aggravated by major losses'.

In the same book, Parkes cites a remarkable study in which women suspected of having cancer of the cervix were 'diagnosed' by a psychiatrist with striking accuracy. These women had been admitted for investigation after a routine vaginal smear had revealed the presence of ugly-looking cells which might or might not indicate cancer. At this stage, nobody knew whether a cancer was present or not.

Medical school training conditions doctors to experience success only when dramatic therapeutic interventions take place

The psychiatrist, who was as ignorant as anyone of the true situation, interviewed each woman and asked about her feelings about any recent losses in her life. When he found evidence of both *loss and feelings of helplessness or hopelessness* he predicted that this woman would, in fact, be found to have cancer. In 71% of cases his diagnosis proved to be correct!

Referring also to the high rates of loss which have been reported in cases of leukaemia, Parkes says that 'these results cannot be ignored and it is hoped that the necessary work will soon be done to establish the chain of causation. It will indeed be remarkable if psychiatrists have discovered a cause of cancer'.

To my mind it is much more remarkable that results, such as those cited have, to a large extent, been ignored, and that little, if any of the 'necessary work' which Parkes asks for, has been carried out. What can be the explanation for this neglect? The link between psyche and soma has been clearly demonstrated in virtually all other major illnesses, e.g. ischaemic heart disease14, asthma15, diabetes15, and even infectious diseases13, so it is hard to imagine why it has not been more closely investigated in malignant diseases. Certainly the rather miserable overall track record in the fight against cancer thus far, would scarcely seem to provide grounds for such a narrow approach to the understanding and management of this highly complex problem.

Here and there publications along these lines, for the most part ignored, have appeared. One of these is a book¹⁶ called 'Cancer – a psychogenetic illness' by Roger Garcia, a Mexican psychoanalyst and gastro-enterologist. The book describes research carried out since 1946, and involving 962 patients who were suffering from cancer. In 16 of these patients the author carried out psychoanalytic treatment for a maximum period of 22 years, and a minimum period of 8 years. He claims to have established a direct link between the psychic conflicts of the patient and the onset of symtomatology and gastric radiological images.

Naturally, sceptics will raise their eyebrows, but it must be clear at least to some, that there is more to the etiology of cancer than meets the microscopist's eye. In fact, it appears painfully obvious that unless and until a more *holistic* view, encompassing social and psychological, as well as biological aspects of the causation of cancer is adopted, we will not have begun to meet the challenge of malignant disease in the elderly (or any other age group, for that matter).

Having discoursed at some length on various possible approaches to cancer prevention in the elderly, it remains true that however skilfully doctors practise preventive anti-cancer measures on organic, occupational, and psycho-social levels, malignant disease in large numbers of elderly patients will remain a reality for the forseeable future. The profession will then still be faced with the challenge of *managing* these patients in the most optimal way.

There is more to the etiology of cancer than meets the microscopist's eye

Here too, the medical fraternity cannot truthfully claim to have covered itself in glory thus far. Perhaps it is the very lack of glory which the care (as opposed, to cure) of elderly cancer patients entails, which largely accounts for doctors' singular lack of enthusiasm in this area of their work. As nentioned earlier, medical students have as their role models charismatic figures who exude an air of omnipotence and omniscience, who can make brilliant and exotic diagnoses, and who perform the most breath-taking procedures. It is therefore perhaps not surprising that to many of them the prospect of treating an 'incurable' patient is unexciting, if not frightening and infuriating. Equally unsurprising then, is the tendency of many of them to avoid contact with these patients as far as possible.

Yet ironically it is these 'untreatable' patients who can often prove to be the most rewarding for the doctor! Even though 'cure' may be impossible, there is invariably much that can be done to alleviate the patient's suffering, physical and mental, and much assistance that can be offered to his/her family. For not only can malignant disease of the elderly create much physical discomfort, but it is often a very frightening and isolating experience as well. For the patient to know that he has a doctor who is willing to reach out to him openly and without fear, and who is willing to listen and respond to his suffering and his fears, can be of inestimable value to him.

I would like to report briefly on two people from my own practice:

 Mr V aged 71, a pensioner who lived with his wife, had terminal carcinoma of the lung. Despite his poor condition and the difficulties in caring for him at home, he begged to be allowed to stay at home and not to be sent back to hospital.

Is patient-care really part of the undergraduate curriculum?

There were several problems. His dyspnoea was getting worse by the day and he required an oxygen cylinder at home, which he could not afford to hire from a private business. This difficulty was overcome by contacting the local branch of the National Cancer Association who agreed to pay for hiring the oxygen cylinder.

Then he developed oesophageal obstruction with the result that he could no longer swallow food or even liquids, nor take any medication by mouth. We contacted the hospital ward where he had previously been treated and they agreed to supply drip-sets and vacoliters of dextrose free of charge. A well-disposed neighbour who had had some experience as a ship's medical orderly and who had been providing the patient and his wife with a good deal of assistance collected the dripsets. I visited the patient every evening (he preferred to have his 'meal' at night rather than in the daytime) and set up the IV infusion and also gave him sedation for the night. His neighbour stayed with him during the night to check that there were no problems with the drip, etc. This procedure was repeated nightly (including weekends) for about two weeks until he died.

2. Mrs T, aged 60, married with two adopted twin daughters, had terminal carcinoma of the breast. I was called to see her one day at about midday. She was extremely weak and dyspnoeic, but she told me she felt the oral morphine, etc. she had been taking, had been prescribed too frequently on discharge from hospital, (i.e. every 2 hours). She said that this 'knocked her out' too much

and asked if she could take it less frequently, i.e. every 3 or 4 hours. I said it would be in order, but she should know that it might mean she would become more breathless as a result. She smiled and thanked me for agreeing to the longer intervals between dosages of medication. It was as though this was extremely important to her. It then occurred to me that this patient was still very frightened of dying, and that she feared she might die sooner as a result of more frequent medication (she may have been quite correct in thinking this). Also, it seemed that she felt that in asking her to take the medication so frequently, her doctors had 'written her off', and placed her symptom-relief above her desire to stay alert and alive as long as possible. While this may very often be appropriate, the fact was that in this case it was not her wish, and the fact that I was respecting her preference indicated to her that I still acknowledged her as an individual with her own feelings and right to make her own choices. I was not trying to brush her aside and 'blot her out' with medication until she died.

Her husband then said he thought that her bed should be moved to the opposite side of the room, as this would make it easier with her eating, washing, etc. I turned to her and she frowned and said, 'I've become used to this corner'. I said I felt she should be allowed to stay there. I explained to her husband later that her world had become extremely constricted at this stage and that for her, a move to the opposite side of the room would be like a move to another country for someone else.

Almost 60% of all cancer deaths occur in people aged 65 and older

Before leaving the house, I took the opportunity of speaking with her children (whom I had been attending for many years) about their feelings on their mother's condition. I wondered what feelings they might have about being 'abandoned' by yet another 'mother' and hoped that I might get an opportunity to discuss this with them in the future. (As yet I have not; partly, I think, because the strength they have been able to draw from each other has made it unnecessary for them to ask for my help. But I am sure they know that I will always be available if ever they should want to speak to me).

Mrs T died at 9 pm that night. Her husband phoned me soon afterwards and thanked me for coming earlier that day.

It will be seen that in both cases I was not able to influence the outcome of the patient's illness, and in the second case I did not even help relieve her physical symptoms. Yet, in both instances I felt I was able to be of help to these patients because I was willing to relate to *their* perceptions and needs, rather than anyone else's, including my own.

There have been some valuable contributions to our understanding and management of dying patients by various authors. On the level of physical treatment, 'Care of the Dying' by Cicely Saunders¹⁷ is particularly noteworthy, perhaps especially for her contribution on the management of *pain* in cancer patients. The classic by Kübler-Ross 'On Death and Dying'¹⁸ deals with the various *stages* experienced by dying patients, viz 'denial and isolation', 'anger', 'bargaining', 'depression', and 'acceptance'. Unfortunately the insights contained

Many patients highly value a doctor who is willing to reach out to them openly and without fear

in this book have been interpreted too rigidly by some, but the fact remains that it offers many doctors a clearer understanding of the feelings of dying patients than would otherwise be the case. John Hinton¹⁹ and Richard Lamerton²⁰ have also written lucidly and instructively on this subject.

Yet, in spite of the spate of publications, symposia, etc on terminal care, it has to be admitted that many, if not most, doctors do not rise to the challenge. Why should this be so? It seems to me that for many doctors the problem of dealing with patients with malignant disease touches too closely on their problems with their own mortality. This is particularly true of elderly patients, where the doctor is confronted with his fears of ageing as well as his fear of dying. The elderly patient with malignant disease, perhaps more than any other category of patient, is a challenge to the doctor's narcissism - it imposes on him in the most stark way the harsh reality that not only is man mortal, but his body and spirit can decay in the most ghastly way in his own lifetime. The famous psychologist, Adler, postulated that many doctors chose their profession because they had been sick as babies or small children, and that they (unconsciously) hoped that by becoming doctors they could achieve a mastery and power over sickness and death which they felt a frightening lack of, when they themselves had become ill. It would be wrong to suggest that this was true of all or even the majority of doctors, but the fact is that many doctors behave as if they were motivated by the desire to achieve immortality. How else can one explain the apparent coldness and aloofness of many doctors when they are faced with seriously ill patients? It is as if these doctors are at some level desperately protecting a perhaps long-buried, extremely vulnerable, terrified, part of themselves. If only they could be helped to understand this they

might not be so frightened, and they might be able to learn to *listen* to their patients, instead of always worrying about what to *tell* them. Since patientcare is supposed to be the object of medical training, should this not form an important part of the undergraduate curriculum? Will the medical schools meet the challenge? So far they appear hardly even to have recognised it.

Perhaps it would be easier for doctors working in the community if they realised that they are not all alone in dealing with seriously ill patients. I am referring particularly to the **Hospice** movement, an organisation which has responded to the challenge of malignant (and other) disease in the elderly (and others) in a most admirable way. Here is an example to the entire profession: a group of selfless people whose concept of medicine could perhaps be expressed by the aphorism 'you can't sup with the bishop until you've cleaned up the vomit on the floor!' There is no place for exaggerated selfimportance and self-aggrandisement in this philosophy.

To many medical students the prospect of treating an 'incurable' patient is unexciting, frightening and sometimes infuriating

It is my belief that the degree of cooperation between doctors, especially in private practice, and Hospice workers, is still not optimal. This may be partly due to the perennial fear on the part of private practitioners that their patients will be 'taken over' on the one hand, or an over-eagerness to 'dump' such patients on the other. Perhaps the existence of the Hospice movement arouses vague guilt feelings in certain doctors – as if its presence indicates that they, the doctors, have not been doing their jobs properly. It can only be to the detriment of the patient concerned if misunderstandings and even mutual hostility take the place of cooperation and open contact.

Another favourable aspect of the Hospice movement is that it involves lay people as volunteers in their work. Any endeavour which actively encourages non-professional people to play a part in the health care of the community, is to be commended.

Having discussed the role of various professionals, and even non-professionals, in dealing with the challenge of malignant disease in the elderly, we have to concede that a problem of this magnitude cannot be dealt with by the profession (and its helpers) alone. We are also dependent on the help of the authorities and the law – and policy-makers everywhere. For example, can we ever calculate how many lives might be saved if there were to be a total clamp-down on tobacco advertising? There are also the numerous carcinogenic industrial and other pollutants which can and should be dealt with on the highest level. For example, the greatly increased risk of workers in blue-asbestos mines in the North Western Cape of contracting carcinoma of the lung compared to the rest of the population was recently pointed out. And then there is the vital question of government funding of projects which are likely to reduce the incidence of malignant disease in *all* sections of the community.

To what extent will governments world-wide meet the challenge? To what extent will they allow considerations of expediency, economic motives, etc to take precedence? Perhaps these are to some extent idle questions, for is it not up to the public who (usually) elect their governments to put pressure on them to act in the interests of their own health? How much longer will 'ordinary' people who pay the taxes which fund the medical schools and hospitals, etc, sit back and wait for things to change to their satisfaction. The challenge of malignant disease is the responsibility of not only the medical profession, or the legislators, but of each and every member of the public. Perhaps it is part of the 'imperialism' of the medical profession that it seeks to derogate to itself the responsibility (and the power) for health care rather than encouraging patients to share it with them. Since it is the public who are to be the beneficiaries (or otherwise) of this care, this seems to me to be a grievous error.

The battle against malignant disease will continue on many fronts. Each day, newspapers report new 'breakthroughs' (a recent report describes a 'magic bullet', a genetically engineered protein called Interleukin-2, against cancer). It is to be hoped that workers in all fields will continue to apply their minds creatively to this problem. There is plenty of scope. For example, general practitioners are ideally placed to look more closely at the relationship between stress e.g. loss of one kind or another, and the development of malignant disease. They are also in a position to observe how psycho-social variables influence the response to treatment. And perhaps workers in other fields, such as Psychology and Sociology, will also be able to bring their insights to bear on the problem in a meaningful way.

The incidence of malignant disease rises sharply with age

Yes, the work must continue. And it would be churlish not to acknowledge the efforts of so many people so far. But the harsh truth of the matter is that even with an all-out renewed effort in the directions suggested thus far (and many others), the problem of malignant disease in the elderly will remain a sad and huge fact of life for the forseeable future. Barbara Neilan¹ puts it succinctly: "The medical profession will continue to be faced with a growing number of ageing patients with cancer. Today, 11% of the population, or 23 million Americans, are 65 years of age or older. In 50 years, this percentage is expected to rise to 18%, or 55 million. Moreover, significant age shifts are occurring within the older segments of our population, so that a greater number of persons will be 75 years and older'.

This comment brings us to the final, and to my mind the most neglected challenge in respect of malignant disease in the elderly, and that is the challenge of accepting our limitations. This may seem to some to be a negative, even defeatist, approach to the problem, but I would disagree. For one thing, it would have saved many a patient an undignified death surrounded by a tangle of tubes and a multitude of machines, while his attending physicians struggled frantically (and neurotically) to keep him alive. If doctors were to accept their limitations, it would also relieve them of the burden of guilt and gnawing inadequacy which inclines them to turn their backs on patients with whom they felt they could not achieve 'successes'. Perhaps the most important advantage of recognising limitations would be that it would remind doctors that they are human, just like their patients, and they can then discover that the most meaningful expression of being human is to reach out to others in their (human) suffering.

Doctors should be helped to **listen** to their patients instead of always worrying about what to tell them

Recognising our limitations may also help to put the whole problem of malignant disease in the elderly into clearer perspective. For even if cancer were one day to be eradicated entirely, might it not be replaced by something even more terrible (as indeed malignant disease itself arose largely as the result of eradication of other, e.g. infectious diseases)? The point is that the ultimate limitation is that of the inevitability of ageing and death. The acceptance of that inevitability is a challenge much greater than the futile attempt to overcome it.

Accepting our own limitations is a necessary step in acquiring *humility*. True knowledge is impossible without humility, for it then becomes merely knowledge for its own sake. To my mind, our greatest challenge (and our greatest opportunity) is to acquire humility through our contact with our patients. And I believe that there are no patients from whom I have learnt more than from my elderly patients with malignant disease.

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