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Point of View

What Do We Know on Variables Influencing Clinical Decision-making in Elderly Cancer Patients?

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IN THE last 5 years there has been a growing awareness in the oncological community about the size of the problem of cancer in the elderly. Nevertheless, only some are aware that in the year 2000 approximately 60–70% of all cancers will occur in persons aged 65 years or more [1]. If we take as a point of reference the *l'accuse* of Fentiman and associates "Cancer in the Elderly: Why So Badly Treated" in the *Lancet*, issue of April 1990 [2], the number of papers published on this problem after this article in the United States and Europe is considerable and certainly higher than in the preceeding 5 years. Information concerning treatment has mainly been collected on cancer chemotherapy in general [3–5] and on chemotherapy for specific tumour types with emphasis on non-Hodgkin's lymphomas [6–13] while very little has been reported on radiotherapy [14] and even less on surgery [6].

At present, can any useful point be distilled and made available for clinical oncologists? Out of all this work, it has been confirmed that, in selected populations of elderly cancer patients, results and tolerance of chemotherapy are not different from younger adults [3,4]. So far, no specific treatment regimens studied for elderly patients have been shown to be superior to those actually used in other adults. The recommendation that, whenever possible, elderly patients should enter clinical trials is still valid, but the results obtained in a selected elderly population with cancer will probably not be reproducible and applicable to the majority of elderly cancer patients.

If we imagine the population of elderly cases as an iceberg with at the base all elderly cancer patients and at the top only those who are selected for entry into clinical trials, then in order to understand and improve the present clinical decision-making process in all elderly cancer patients, attention should rather be turned first to the base of the iceberg and then to its apex. This should help in devising treatment models for patients unfit to enter clinical trials, or needing conventional treatment, as a consequence of associated comorbid conditions or for other reasons.

Aside from tumour type and extent of disease, a number of variables influence, in clinical practice, therapy decision-making

in elderly cancer patients. These factors will be considered briefly here, although their analysis needs further investigation through carefully planned studies.

1. CHRONOLOGICAL AGE

The assumption that chronological age *per se* should not be used as a criterion of exclusion from trial entry or from the administration of conventional aggressive therapy, and that physiological age should be the main criterion for decision is not a dogma. This principle is applicable for chemotherapy and radiotherapy in most instances up to the age of 80–85 years, but probably not in very old patients. The belief that selected elderly patients can tolerate intensive treatment is based on retrospective trials in which only a very small minority of patients was older than 80–85 years. In patients older than 80 years, before the beginning of chemotherapy, "biological age" is of course still an important factor to be taken into consideration, but 20–30% lower drug dosages than those used in adults have been employed by oncologists who have been specifically studying the problem of chemotherapy in very old age [15].

2. ACCEPTANCE OF THERAPY BY THE PATIENT

Older patients in Europe have, on average, a lower level of education than younger ones and therefore may be less aware of medical achievements and less confident in the results of treatment. A recent report from the U.S.A. has shown that, in a cancer centre setting, older adults do not differ from their younger counterparts in terms of acceptance of chemotherapy. However, when treatment is scheduled, they differ in terms of willingness to "trade" survival for current quality of life [16]. These interesting results need to be interpreted with caution, since in this study there was only a limited sample of patients aged over 75 years, and it has to be taken into account that a cancer centre might have attracted patients who preferred an aggressive treatment. The lack of knowledge about personal preferences of older cancer patients needs to be investigated further.

3. ACCEPTANCE OF THERAPY BY THE FAMILY MEMBERS

Raising this issue in the absence of any data may completely open the door to criticism, but any clinical oncologist dealing

even with older patients, in Italy and in Europe, knows that the final green light for starting treatment comes often only from the relatives of the old patient. This is not surprising since the old patient needs the family's support for treatment and follow-up. Unfortunately, frequently there appears to be a perception among family members that older patients are less likely than younger ones to benefit from treatment and less likely to tolerate therapy.

4. PHYSICIANS' ATTITUDE

Ageism is a cultural bias that might inappropriately dissuade family physicians and, to a lesser extent, physicians working in general hospitals from recommending active and/or aggressive treatment. This is even true for clinical oncologists. No studies are presently available concerning attitudes among different categories of doctors.

5. REFERRAL CENTRES POLICY

Treatment of elderly cancer patients may vary according to health structures to which they are referred. Few data are presently available in Europe on specialised referral to cancer centres and their treatment policy for elderly cancer patients [1]. However, it is likely that elderly cancer patients may be approached differently in general hospitals than in cancer centres. To some extent, the institution where the older patient is referred again depends heavily on the family and the physician's attitude: pessimism regarding the results of cancer treatment and/or concern on geographical distance may result in the admission of a patient in a division of surgery or medicine of a general hospital rather than in a division of medical oncology or in a specialised cancer centre.

6. COMORBIDITY, MENTAL STATUS AND DISABILITY

The aforementioned variables are well known by clinical oncologists as factors influencing the clinical decision-making process. Even in the absence of specific studies, in clinical practice those factors are taken into consideration to make clinical decisions in the frame of an "enlightened empiricism". Nevertheless, there are other characteristics of the patients specifically related to old age—comorbidity, mental status and disability—which should be clinically considered, not only because they interplay with patients, families and physician's attitudes, but because they can influence directly the choice of treatment.

(a) Comorbidity

Several studies have shown that frequently the elderly present with several co-existing pathologies. For example, it has been reported that among individuals aged 65–74 years, the mean number of chronic diseases is 4–6. Over 50% of elderly have chronic arthritis, 33% backache, 32% visual deficit, 28% exertional dyspnoea, etc. [17]. Preliminary observations on cancer patients also confirm the co-existence of other diseases in elderly cancer patients [18]. Anyone who has dealt with elderly cancer patients knows that comorbidity may play an important role in preventing the administration of aggressive chemotherapy or at least in modifying treatment plans, for example in patients with cardiac deficit or impairment of renal and hepatic function. For patients needing surgery and, to a lesser extent radiotherapy, in the presence of comorbidity, necessary modification of treatment plans may already be determined, but the same is not entirely true for chemotherapy. The extent and severity of associated

diseases in older patients requiring chemotherapy can be interpreted differently when arriving at a decision. Well-defined exclusion criteria are, of course, provided for cardiac, renal and hepatic function for patients entering clinical trials, but no firm rules are available for the treatment of older patients presenting with other non-neoplastic associated conditions to be treated out of clinical studies.

(b) Mental status

It is obvious that the conservation of cognitive function or its deterioration may play an important role in the decision of the type of treatment plan, its application and follow-up. The same applies to the presence and degree, or absence, of depressive symptoms which frequently accompany old age. We do not know if, or how, elderly cancer patients with important deterioration of cognitive function and severe depression are treated. Thus, the acquisition of more information on the influence of mental status on the treatment of elderly cancer patients seems to be very important.

(c) Functional status

The ability to care for oneself is a factor to be considered in planning antineoplastic treatment of an older person. Measurement of the ability, not only in performing the basic activities of daily living (bathing, dressing, feeding, etc.), but also the instrumental activities of daily living (ability in telephoning, shopping, money handling, taking drugs, etc.) is considered by geriatricians as an important index for their choice of therapy and may represent, in older patients, an instrument more useful than the Performance Status (PS). Nevertheless, little information is available comparing PS with instruments of measurement of the activities of daily living [19].

In conclusion, treatment decision-making in elderly cancer patients is more complex than in younger adults because of several additional age-related variables. Currently, clinical oncologists are still not particularly aware of a need for the evaluation of all problems presented by elderly patients and not only of those relating to the presence of neoplasia. As a consequence, no appropriate models, taking into account several specific non-neoplastic accompanying clinical situations, have been developed to cope with the multifaceted aspects of old patients with cancer which potentially interfere with treatment decision-making. In this situation, clinical trials should be certainly left open for entry without age limits. However, at the same time, further clinical research should be conducted on treatment variations caused by different factors associated with or attitudes induced by age. "Patterns of care" studies of major tumours should be developed to characterise treatment of older patients who, because of their excess of comorbid conditions, are not eligible for entry to clinical trials [20]. This goal should be more easily pursued through representative samples of the entire population of elderly patients with cancer, not only those seen in specialised cancer centres.

A valid instrument to collect information on most of the aforementioned age-associated parameters could come from some of the multidimensional assessment tools used by geriatricians to evaluate elderly patients. An improvement in patients' care as well as in quality of life has been already demonstrated by the use of this instrument in elderly patients with non-neoplastic diseases. Only preliminary experience exists on the use of this tool in elderly cancer patients [19], but we believe that the application of this methodology could help in better measuring the non-neoplastic comorbid conditions, mental

status and disability in elderly cancer patients. This could also be of help in understanding how, in different situations, the clinical decisions should be taken. The next step could be a more precise suggestion to conduct studies on the optimal therapeutic approach for the main neoplasias in the most frequent patterns of "geriatric presentations". The results of these trials could then be used to develop appropriate "guidelines" for a broad spectrum of elderly cancer patients.

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