

and advanced stages. However there is a paucity of data regarding staging and follow up recommendations. The later are mostly supported by observational studies. Currently there is only high evidence level 1b for imaging follow-up in Stage I NSGCT.

Treatment in reference centers and within clinical trials provides better outcomes especially for intermediate and poor prognosis patients.

Treatment of early stages GCT results in excellent cure rates whatever the treatment. However base don long-term toxicity data, retroperitoneal prophylactic radiotherapy is not recommended as first option Stage I seminoma.

The extreme rare incidence of Non Germ Cell testicular cancers limits the level of evidence.

Specifically for follow-up the panel emphasized that only minimal recommendations were given.

**Conclusions:** The EAU guidelines on Testicular cancer have become a valuable document translated to most of the languages of the EU. The guidelines contain information for standardized management of patients with testicular cancer based on the latest scientific insights. Cure rates are excellent but treatment effects on infertility, quality of life and second cancers incidence require careful counseling and long term follow up. Treatment in early stage will have to be tailored according to individual circumstances and patient's preferences.

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# **What is New in the Systemic Treatment of Urological Malignancies**

Abstract not received

*Society Session (Sun, 25 Sep, 16:45–18:15)*

## **European Society of Surgical Oncology (ESSO) – Tailored Treatment for Older Cancer Patients – A Multidisciplinary Approach**

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# **Past Present and Future of Geriatric Oncology – a “Time Bomb”**

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The global population of older people is growing at its fastest rate ever. The United States Census Bureau calculated there were just over half a billion over-65s in 2008. It is predicted that this number will more than double to 1.3 billion by 2040. Around 14% of the world's population will be at retirement age. The number of elderly Americans is expected to rise from 40 million in 2009 to 70 million by 2030. People live longer, have fewer children and the number of elderly will soon outnumber the young for the first time in human history.

With the exception of 18 countries termed by the United Nations 'demographic outliers' [1] this process is taking place in every country and region across the globe. In the entirety of recorded human history, the world has never seen as aged a population as currently exists globally. Further, the twenty-first century will see an acceleration of the ageing process exceeding that of the twentieth century. The ageing of the world population is combined with a longer life expectancy and, more interestingly, with a remarkable healthy-life expectancy of almost 10 years at age 65 in most European countries (stretching beyond 15 years in Scandinavia).

While anyone can develop cancer, the risk of getting the disease increases with age. With the only exception of cervical cancer, all malignancies prevail in the older population. This has huge implications and deep socio-economical repercussions. In the assumption that the cost of treatment will grow annually only at a 2% rate, the largest increases in cost will be for breast cancer at 32% and prostate cancer at 42%, simply because more people will be living longer with these diseases [2]: while the cost of treating breast cancer remains relatively low (compared to other tumour types), in the US this cancer will incur the highest costs by 2020 (\$20.5 billion) as many more women live with the disease.

Who is old? Most developed world countries have accepted the chronological age of 65 years as a definition of 'elderly' or older person, but like many westernised concepts, this does not adapt well to the situation in Africa. While this definition is somewhat arbitrary, it is often associated with the age at which one can begin to receive pension benefits. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60+ years to refer to the older population.

In the scientific literature, a threshold of 70 years is commonly used, with the term "oldest olds" referring to the population above age 80–85, the fastest growing age sub-group.

Why "Geriatric Oncology"? For many reasons, older cancer patients have different needs than younger adults with the disease. Treatment for older adults needs to consider many issues. For example, older adults:

- May be less able to tolerate certain cancer treatments (pharmacokinetics/dynamics)
- Have a decreased reserve
- May have other medical problems in addition to cancer (multiple medications)
- May have functional problems, such as the ability to do basic activities (dressing, bathing, eating) or more advanced activities (such as using transportation, going shopping or handling finances)
- May not always have access to transportation, social support or financial resources (reduced compliance to state-of-the-art treatments)

Such substantial differences greatly impact on treatment planning and the individualization of therapeutic options; patients' needs and priorities may differ from younger patients, hence the understanding of what treatment implies can be hampered. Neglecting or withholding these aspects is an ageist approach.

Most importantly, there is very little scientific evidence to support specific options as virtually all treatments have been designed and tested only through Randomized Clinical Trials on much younger cohorts of patients. The issue of enhancing the recruitment of older patients into clinical trials is an oncological priority as the older patient with cancer represents a uniquely different clinical situation. A close collaboration with geriatricians over the last 10 years has allowed better understanding of the interaction between geriatric syndromes and cancer management. The identification of frailty has been advocated when treating onco-geriatric patients. In a dream world this could be framed through a Comprehensive Geriatric Assessment (CGA) but this is time consuming and impossible to fit into our busy clinical practice. Quicker tools have thus been developed (GFI, VES13, TUG) with the purpose of screening older cancer patients for frailty. Anagraphic age is not sufficient to characterize these patients [3].

**The past:** Over the last decades large evidence has been collected to confirm how the standard of care is lower for older patients: delayed diagnosis, minimal staging, and inferior treatment inevitably result into a reduced cancer-specific survival. Figures are surprisingly consistent across all geographic areas [4].

The reason behind this substandard performance rests on our lack of knowledge: we were unable to tailor treatment. The risk was to over-treat frail patients or to under-treat fit ones. Understandably, physicians were prepared to risk under-treating older patients in order to avoid excessive treatment-related morbidity or even mortality. 15,000 older cancer patients in the UK die prematurely from cancer each year, due to this ageist approach. A clear example is the management of breast cancer in older women: since the introduction of endocrine treatment in the early 80's, several surgeons have prescribed Primary Endocrine Treatment even on patients who were sufficiently fit receive a surgical operation. It has been computed that this ageist attitude has resulted in 2,000 excess deaths/year in the UK.

**The present:** As the inequality has been identified, action has been undertaken to amend the situation. In 2008 the Deutsche Kreshilfe priority programme allocated 8million Euros toward therapeutic studies in patients of advanced age or medically unfit. One year later the French National Cancer Institute allocated 2million Euros toward research projects on older cancer patients: this generated resources for the Oncodage Study which developed the G8, an 8 item screening tool, tested on a prospective cohort of 364 cancer patients aged >70 years. A threshold of 14 has been identified (90% sensitivity, 60% specificity). The preliminary results were subsequently validated on 1,650 patients from 23 French cancer and geriatric units. Sensitivity of G8 was superior to VES13 (76.6%, 95% CI [74.0%; 79.0%] vs 68.7%, 95% CI [65.9%; 71.4%]) although its specificity was inferior (64.4%, 95% CI [58.6%; 70.0%] vs 74.3%, 95% CI [68.8%; 79.3%]). When G8 and VES13 were used together (at least one abnormal test), sensitivity increased to 86.6% but specificity decreased to 53.2%.

In the UK much research was developed to substantiate the urge for an improved management in oncogeriatrics. The National Cancer Equality Institute, well supported by an All Parliamentary task force, has been essential in moving things forward. Macmillan Cancer Support joined forces with the Department of Health, to fund studies on older cancer patients with a grant of £1 million and full support from AgeUK. The one year pilot programme will introduce:

- new ways of assessing an older person for cancer treatment
- short-term practical support for older people undergoing cancer treatment
- address any age discrimination in cancer services

These projects are presently ongoing, however the indirect benefit of raising awareness has already been achieved.

It is reassuring to know that numerous researchers across Europe have been adopting frailty assessment tools in the day-to-day management of older patients with cancer. Geriatric Oncology has raised from a minor area of scientific interest, to a newly introduced and widely available novell approach.

Other crucial aspects have also been investigated; a common problem for the elderly cancer patient is malnutrition which is due to the coexistence and/or potentiation of the metabolic alterations related to sarcopenia with

underlying cancer cachexia. Both processes lead to loss of body weight, lean body mass, and muscle function, as well as a progressive deterioration of function of many organ/systems, a poor quality of life and finally to a poor adaptation to any stress event. Although neither sarcopenia nor cancer cachexia may be reduced to a condition of simple starvation, an adequate nutritional intake is the *conditio sine qua non* which can make possible any attempt of aggressive oncologic therapies which are validated in adult subjects [5].

**The future:** As numerous studies have been set, it is only a matter of time till the results will be made available and an accurate screening for vulnerability is close to hand. The momentum has generated vivid interest: ASCO dedicates sessions to this topic. A Geriatric Oncology subspecialty has been set up in 10 USA Institutions who are recipients of a Geriatrics/Oncology Training Program Development Grant. Similar examples are also available in Europe; a Diplôme Universitaire d'Oncogériatrie is awarded by three French Institutions. These Programs aim to provide optimal cancer care for senior adults and help patients to overcome the special challenges that this population faces in battling the disease. Oncogeriatric education is essential for physicians as well as nurses: EONS has a well established Curriculum for cancer in older people. Crucial to the above mentioned progress has been the International Society of Geriatric Oncology (SIOG) whose purpose is to advance the art, science and practice of oncology in elderly patients and disseminate knowledge in order to maintain a high common standard of healthcare in elderly cancer patients. SIOG was founded in 2000 with the aim to improve research in the field of geriatric oncology, promote education in order to ensure a high standard of qualification for health professionals, maintain liaison with other medical and health professionals associations, cancer leagues, Universities and, where appropriate, the pharmaceutical industry. Numerous task forces have been organised to summarise the state of the art on numerous specific onco-geriatric aspects; SIOG is firmly intended to draft guidelines as soon as hard data will be made available with the unrolling of presently ongoing research.

## References

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## Where and Why we Fail to Offer Appropriate Treatment to Older Cancer Patients

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**Background:** The number of elderly cancer patients is increasing rapidly in most industrialized countries. The proportion of cancer patients aged 65 or older has increased with over 50% since 1995 and 70–80% has serious co-morbidity. Elderly cancer patients are often excluded from clinical trials and therefore evidence is scarce about the tolerance and outcomes of treatment, whereas this information is highly relevant for medical doctors and patients.

**Methods:** Population-based studies.

**Results:** Previous population-based studies have shown that increasing age and co-morbidity had no influence on the resection rate when surgery is inevitable, like in patients with colorectal cancer, or in case of low risk surgery. In contrast, when less aggressive alternatives are available like in non-small cell lung cancer or prostate cancer, the resection rate decreased with increasing age and co-morbidity. Adjuvant treatment was also administered less often among elderly and those with co-morbidity. Elderly patients with small cell lung cancer or non-Hodgkin's lymphoma received chemotherapy less often. The most common motives for refraining from chemotherapy in these patients were refusal by the patient or family, short life expectancy or a combination of high age, co-morbidity and poor performance status. Studies have also shown that many elderly patients could not complete the full chemotherapy, mainly due to severe toxicity. Those who received standard treatment had a significantly better survival, even after adjustment for differences in age, co-morbidity and performance status.

**Conclusions:** Patient characteristics that are predictive for severe toxicity leading to a poor quality-of-life or even death should be identified. This would enable the medical doctor to better select patients for aggressive treatment. In this way, relatively fit elderly patients can benefit from standard treatment, whereas severe complications can be prevented by treating frail patients with best supportive care for achieving an optimal quality of life.

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## Multimodal Tailored Treatment to Older Rectal Cancer Patients

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In many surveys, elderly rectal cancer patients seem not to receive the treatment they are entitled to, according to local guidelines. Sometimes this finding is interpreted as if elderly patients are being undertreated, and treatment policy should be changed in order to let elderly patients benefit from up-to-date knowledge of rectal cancer treatment.

However, this principle being appropriate for younger patients certainly does not apply always to elderly. One of the most paradox findings in the Dutch TME study was that elderly rectal cancer patients assigned to the study arm (receiving 5×5 Gy preoperative radiotherapy followed by immediate surgery) had a significant better cancer specific survival compared to those in the control arm receiving only TME surgery. However, overall survival had not improved. The price for reduction of cancer related death was at the cost of an equal increase of other mortality causes.

Whereas, combined multimodality treatment has significantly improved rectal cancer outcome, it remains the question if multimodality treatment is the choice for elderly. The problem is that, although the highest incidence of rectal cancer is around the 8<sup>th</sup> decade of life, this age group is underrepresented in all rectal cancer studies.

In counseling rectal cancer patients the efficacy of treatment is often translated to numbers needed to treat (NNT), meaning that an absolute gain of 10% is acceptable even if you have to treat ten patients to benefit only one. In elderly it would also be realistic to talk about the number to harm or even kill. However, the magnitude of death related to other causes as result of treatment is poorly understood and therefore not communicated. Postoperative mortality is better understood and can be related to the acuteness of surgery, age, tumour classification and ASA classification. We showed that in the elderly cancer population the risk of postoperative mortality is doubled in the first six months. Furthermore, the level of functioning may be severely impaired. Rarely, the risk of not staying self-supportive or being able to remain the care taker for a frail partner is discussed.

In elderly it should be realized that the balance of cancer treatment and competitive death risk is completely different when compared to the younger. Treatment may not lead to a significant better odds ratio survival, but easily results in a significant worse functional outcome.

Since many years we lack the information, which outcome parameters should be used for rectal cancer treatment in the elderly. Without these parameters, prospective randomized trials cannot be designed. Therefore counseling should be more focused on functional rather than oncological outcome.

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## Cancer Clinical Trials in the Elderly – Are we Ageist?

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Improving life expectancy in developed countries has resulted in an increasing older population facing a diagnosis and treatment for cancer. There is extensive evidence across a range of cancers to demonstrate that compliance with treatment guidelines is reduced in comparison to younger patients. Compliance with guidelines in younger patients is generally high and, in recent years, the introduction of multidisciplinary teams and quality assurance programmes has increased guideline compliance with an expectation of improved outcomes. There is increasing recognition that failure to comply with treatment guidelines in older patients, results in under-staging and under-treatment in many cases is associated with poor outcomes. There are a number of potential reasons for this deviation from best practice and a key factor may be that clinicians perceive that a standard treatment may not benefit or be tolerated by older patients. A fundamental problem contributing to this phenomenon is the failure of research studies to include significant numbers of older patients. Previously, many studies have upper age limits for recruitment and therefore, it may not be appropriate to extrapolate the results of such studies to older patients. The incidence of comorbid conditions and frailty is increased in older patients which may reduce tolerance of certain therapies (for instance major surgery or chemotherapy) as well as reducing life-expectancy with increased rates of death from non-cancer related disease. Another factor