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Cystectomy and Urinary Diversion − Lessons Learned

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Radical cystectomy and pelvic lymph node dissection provides the best cancer specific survival for muscle invasive urothelial cancer and is the standard treatment with 10 year recurrence free survival rates of 50 to 60% and overall survival rates of around 45% [1]. Radical cystectomy with urinary diversion is a procedure in which reduction of morbidity, rapid postoperative rehabilitation, limited length of hospital stay and cost containment are difficult to achieve.
From a technical point of view, a radical cystectomy is a well established procedure [2]. A more debated topic is the issue of lymphadenectomy in patients in whom radical cystectomy is undertaken with curative intent. In all large radical cystectomy series about 25% of patients have node positive disease. We believe today that these patients have a chance for cure as long as the nodal invasion is limited and when in some cases adjuvant treatment is considered [3].
The indications for simultaneous "prophylactic urethrectomy" in male patients seem to be limited to those patients where invasion by TCC is present in the prostatic stroma while those with multifocal tumours, carcinoma in situ and even urothelial invasion of the prostatic urethra are not considered to absolutely indicate urethrectomy.
New techniques including prostate or seminal vesicles sparing cystectomies, aiming at preserving sexual function, are proposed but are by most not considered to be appropriate. Only single center series have shown the feasibility and sometimes also oncological safety.
With the advent of robotic assisted surgery also cystectomy has been done this way in a couple of expert centers. It remains unproven whether it is clever to do so and whether this is oncologically as safe both from an oncological point of view as when it comes to duration of the cystectomy and the urinary diversion [4,5].
While preoperative chemotherapy has shown to benefit to patients with more advanced stages, it is today not clear if all patients undergoing cystectomy for muscle invasive bladder cancer should be considered candidates for neoadjuvant chemotherapy. Definitely in patients with clinically obvious nodal disease chemotherapy is the primary (and sometimes only) treatment, but in some cases when an excellent response to chemotherapy is obtained, consolidation radiation treatment or surgery can be considered.
Most complications after cystectomy and urinary diversion are not due to the cystectomy but to the urinary diversion. While the postoperative mortality has been reduced to extremely rare cases in most expert centers, the morbidity of the procedure still remains high. There is certainly a relation between morbidity and surgical volume although not only surgical skills but also the availability of an integrated multidisciplinary surgical-anesthesiological team is needed [6].
The urinary diversion type should be discussed with the patient and depends on general condition, the underlying disease stage, the wish of the patient and the available surgical expertise. While bladder substitution could be considered in virtually all patients that can safely undergo a cystectomy, cutaneous diversion remains often applied in older patients where the reeducation of the bladder substitution is anticipated to be more difficult. Continent cutaneous diversion were pretty popular many years ago while today more surgeons will either go for a bladder replacement or a cutaneous Bricker diversion. Diversions of the uretero-sigmoidostomy type have become less and less popular due to many complications with ascending infections, electrolyte disturbance, anal problems and development of adenocarcinoma of the colon.

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Treatment of Small Renal Tumours − Surveillance Focal Treatment or Surgery?

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Small, solid renal masses (<4 cm in diameter, i.e. T1a) detected incidentally in asymptomatic patients constitute already about 50% of all renal tumours being diagnosed today. A retroperspective analysis of the histology of 287 lesions of this type subjected to surgery at our institution showed that that 21% are benign tumours. The rest are malignant, but with a diameter <2 cm only ~4% show evidence of more potential for progression. This increases rapidly with larger lesions, and of lesions 3−4 cm in diameter 26% are high grade tumours, 36% have extracapsular extension (pT3) and 8% metastases at the time of diagnosis.
With a potential of aggressiveness of this magnitude surgical removal is clearly indicated in any patient fit for surgery, and with an adequate life expectancy. Therapy of choice for T1a tumours today is therefore nephron-sparing partial nephrectomy, and in most cases this is now accomplished by laparoscopic/robot-assisted laparoscopic partial nephrectomy. The procedure carries major morbidity, however, with complication rates >15% even in the hands of high-volume experts. As in retrospective series the time to progression without therapy has been shown to be substantial, "Active Surveillance" has become a widely accepted option in infirm, older patients with limited life expectancy. Unfortunately the data this approach is based on is sketchy at best, as all retrospective series are small, follow-up is usually inconsistent and in the most cases no histology of the mass is available (~21% are benign!). Moreover follow-up by repeat cross sectional imaging has proven unreliable, as changes in tumour size correlate poorly to progression. In the Toronto series, the largest prospective trial on active surveillance of SRM undertaken today, 16% of SRMs progressed in size size over time, with a median follow-up of only 28 months (and were therefore operated), with no difference between malignant and benign tumours, and 1.3% developed metastases. Clearly this approach is only acceptable for very frail patients with very limited life expectancy, and requires precise follow-up.
The option between surgical removal and active surveillance lies with less invasive energy ablation, either by a percutaneous or laparoscopic approach. Radiofrequency has been utilized for this most extensively, usually by a percutaneous approach under CT guidance. With the more recent availability of needle cryoprobes cryoablation has gained attention, as the visibility of the "snow ball" permits simpler monitoring of the evolving lesion. In spite of multiple clinical reports with these techniques hard data on the results are scarce, with the main problem in most reports being again the lack of histology, short follow-up, insufficient definition of success and often not defining treatment failure (= residual/recurrent tumour) per treatment. Metaanalyses of published data document their poor quality, but in general conclude that cryoablation is more reliable than radiofrequency ablation and laparoscopy quided approaches give better results than percutaneous techniques, with comparable over-all complication rates.
In essence, we consider partial nephrectomy standard treatment in any patient fit for the procedure. In patients at moderately higher surgical risk with SMRs <3 cm in diameter we prefer energy ablative techniques, preferably laparoscopic cryoablation. In high risk patients peripheral, exophytic tumours are managed by percutaneous cryoablation, and only central lesion are managed by active surveillance. In all latter situations a biopsy is first obtained, as benign tumours require no treatment.

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The EAU Guidelines on Testicular Cancer

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Members of the Guidelines working group on Testicular cancer: P. Albers (Germany), W. Albrecht (Austria), F. Algaba (Spain), C. Bokemeyer (Germany), G. Cohn- Cedermark (Sweden), K. Fizazi (France), A. Horwich (UK), M.P. Laguna (The Netherlands)
Objectives: To present in the name of the European Association of Urology the current Guidelines on Testicular Tumours developed by the Association.
Methods: Guidelines were elaborated by a multidisciplinary working group following a comprehensive review of the literature on diagnostic, treatment and follow up of testicular cancer. MEDLINE, Embase and the Cochrane library databases were consulted. Data from the European Germ Cell Cancer Collaborative Group (EGCCCG) was also included.
References were weighted by the panel members and levels of evidence (LE) and recommendation grade (RG) were assigned.
The panel met once a year and communicated at least twice a year per e-mail.
Results: For staging the 2009 TNM classification is recommended. High quality RCT were supporting the recommendations on treatment in early

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.

215 INVITED
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 oncogeriatircs. The National Cancer Equality Institue, well supported by an All Parliamentary task force, has been essential in moving things forward. Macmillan Cancer Support joined forces with the Dapartment 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 awarenes 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 widly 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