EAU22 in Amsterdam: Special in so many ways

Our Secretary General looks ahead to this year’s Annual Congress

By Chris Chapple
EAU Secretary General

It is a great pleasure to welcome you to the 37th Annual EAU congress, held in Amsterdam from 1-4 July. It seems so long since we last had the opportunity of meeting face-to-face, and we very much look forward to welcoming you to Amsterdam.

This is the first regular congress since EAU21 in Barcelona, over three years ago. Clearly, the covid crisis has had a significant impact on everybody, and we are sure that you, like us, are looking forward to meeting face-to-face. We realise that several of our friends and colleagues will still not be able to attend due to current restrictions and we will miss them.

“We can now offer a congress experience to those who are unable to join us while still creating a live and interactive in-person event for those who travel to Amsterdam.”

Aside from a pleasurable reunion with all of our members, colleagues and friends, a congress in Amsterdam marks a return to a city that has played an important part in the EAU’s foundation and development. Not only was Amsterdam the site where the association’s founding statutes were signed in 1973; it was also the site of the 1990 congress that opened the door to new visitors and members after the fall of the iron curtain and the opening up of Europe.

EAU22 is our first so-called ‘hybrid’ annual congress that we have offered our delegates. We are welcoming visitors and faculty in-person in Amsterdam, while also using lessons learned from the past two virtual congresses to reach new audiences. We can now offer a congress experience to those who are unable to join us while still creating a live and interactive in-person event for those who travel to Amsterdam.

The EAU is adapting with the times and amending its services to continue meeting the needs of its members. Beyond our Annual Congress, we will continue to offer a combination of online and in-person events to address the needs of all of our members in accessing educational resources and developing their careers.

Congress highlights

The most notable change for our annual congress this year is that it takes place on four, rather than five days. The congress will now start with Plenary Sessions on the first day and end after a full day of scientific sessions on Monday. This more concentrated congress structure was introduced for EAU21 and is now used as a template for the in-person congress as well.

At the congress, there will be 2,586 presentations by 900 speakers, 56 courses and hands-on training programmes by the European School of Urology, numerous industry sessions and workshops. Each of the eight Plenary Sessions will end with an opportunity to ‘meet the experts’ in the post-plenary session and ask some further questions you might have after their talks. Several of the plenary sessions are preceded by a game changer session with the very latest developments and trial results so keep an eye on the scientific programme for those last-minute additions.

The EAU22 Exhibition will feature over 350 booths. As ever, you will be able to pick up a hard copy of the latest EAU Guidelines, this year’s congress gift and a variety of other publications at the EAU Booth, so be sure to visit booth D60 for any questions you might have.

We also like to cater for specific parts of our membership (and beyond!). Parallel to EAU22 we have EAURO22: the 22nd International Meeting of the European Association of Urology Nurses. We have a day-long programme dedicated to young urologists, YUORDay22 on the Saturday. This brings together the Young Urologists Office (YUO) and the European Society of Residents in Urology (ESRU) for a session that addresses the career and educational needs of younger urologists. YUORDay22 also features the hotly contested Guidelines Cup, a competition which will determine which EAU junior members know the EAU Guidelines the best.

For the first time we have an in-person edition of the Patient Day, a special programme devised by the recently formed EAU Patient Office. On Monday the 4th, there will be a series of patient information sessions, roundtable discussions with patient representatives and other activities designed to bring further awareness to the patient’s perspective.

Since it would be impossible to attend every session, the daily highlights will be summarised every day in the EAU TV news shows. Key opinion leaders will discuss the presented developments in the on-site TV studio. These will be broadcasted online that same day.

“Several of the plenary sessions are preceded by a game changer session with the very latest developments and trial results so keep an eye on the scientific programme for those last-minute additions.”

Anniversary

We are using this return to Amsterdam after 32 years to mark the beginning of an anniversary year for our association. With important founding events taking place in both 1972 and 1973, we felt that starting an anniversary year in Amsterdam and ending it in Milan for EAU23 was a suitable way to commemorate this 50-year golden jubilee.

Don’t miss this year’s Opening Ceremony. Of course, this is where the best and brightest are honoured with the EAU’s prestigious awards, but this year it will also mark the start of this anniversary year with special talks and the unveiling of our anniversary logo. You can read all about the 50th anniversary activities at EAU22 and how the association was founded in 1972-73 on page 3.

So, I once again welcome you, on behalf of the entire EAU, to our Annual Congress, whether you are joining us in Amsterdam or following from across the world. Look forward to four days of essential and up-to-the-minute latest urological science, but also a chance to meet like-minded colleagues and exchange experiences in a truly international forum.

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EUT Editorial Office
PO Box 30016
6803 AA Arnhem
The Netherlands
T +31 (0)26 389 0680
F +31 (0)26 389 0674
EUT@uroweb.org

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Patient Day at EAU22
Collaborations to optimise care and treatment

After the success of the inaugural Patient Day last year, the EAU Patient Office is pleased to welcome delegates to this year’s edition at EAU22. Patient Day will take place on Monday, 4 July 2022 in historic Amsterdam, the Netherlands. Expect no less than vital insights into the patients’ perspective and contemporary updates on their urological care and treatment.

With the core aim of stimulating innovations and promoting positive impact, Patient Day is made possible through the collaboration with the European Cancer Leagues (ECL), euroGEN, Europa Uomo, the International Kidney Cancer Coalition (IKCC), the World Bladder Cancer Patient Coalition (WBPCPC) and the World Federation for Incontinence and Pelvic Problems (WFIPP). Patient Day encourages open dialogue, underscores the needs of patients and their care system, and incorporates the crucial role of health care professionals into patient-centred care.

Consisting of themed sessions led and co-created by patients and patient advocates we encourage you to come along and hear from those at the sharp end of surgery. Learn how to best meet patients needs.

Explore what the Patient Day has to offer you via www.eau22.org/patients.

Check out the Patient Information Award winners in the Awards spread found on pages 4 and 5.

EAU Patient Day is supported by an unrestricted grant from Pfizer Oncology.

Monday, 4 July, 07:45 - 17:30
Patient Day
Grey Area, Room Emerald

07.45 - 08.45 Patient poster presentations
09.00 - 10.30 Roundtable: Sustainable continence care
10.45 - 11.45 Roundtable: Fatigue in prostate cancer patients
12.00 - 13.00 Functional urology
13.15 - 14.15 Kidney cancer session
14.30 - 15.30 Bladder cancer session
15.45 - 16.45 Prostate cancer session
17.00 - 17.30 Life after cancer

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The EAU is celebrating its 50th Year
Amsterdam Congress marks the start of anniversary year for the Association

By Leok Keizer
Delegates in Amsterdam won't be able to miss the fact that the European Association of Urology is entering its fifth decade. From the opening ceremony onward, special attention will be drawn to this golden jubilee. The EAU is celebrating this milestone in the period between its two Annual Congresses EAU22 (Amsterdam) and EAU23 (Milan).

The first steps to create the EAU were taken in 1972, with the final constituent assembly taking place in Amsterdam in 1973. Another major milestone for the EAU’s history is its first congress, which took place in 1974. As a result, the EAU decided to celebrate its golden jubilee in the period between EAU22 in Amsterdam and EAU23 in Milan, rather than selecting a single date to mark the occasion.

Activities in Amsterdam
During the opening ceremony of EAU22 (Friday, 1 July, 18:00-19:45), the anniversary will be officially kicked off. The anniversary logo will be unveiled, and the ceremony will conclude with special attention to the occasion and some of the people who made it possible.

During the congress, delegates can visit the Congress History Area, in the Green Area, for a video presentation on the first decades of the EAU. Not only will it feature highlights from the EAU’s history but also place those events in the context of contemporary events and developments. In addition, the EAU History Office’s special session will feature guest speaker and former Secretary-General of the EAU, Prof. Frans Debruyne for his personal take on the history.

In every edition of EUT between congresses it will feature highlights from the EAU’s history but also place those events in the context of contemporary events and developments. In addition, the EAU History Office’s special session will feature guest speaker and former Secretary-General of the EAU, Prof. Frans Debruyne for his personal take on the history of urology.

Already in 1970, prominent European urologists discussed the need for establishing a European society, a continent-wide counterweight to the American Urological Association, a much older (1910) and established society at the time. The first concrete steps in the foundation of the EAU took place in the wings of the 6th Congress of the Association Française d’Urologie (AFU) in September 1972. Prof. Giorgio Ravasi (1920–1993), chair of urology in Padua assembled ten urologists from across Europe for a lunch at the urology department of Hôpital Necker in Paris.

It was at this lunch that the ambitions for what would become the EAU were discussed and put on paper: the society would be headquartered in Zurich. Indeed, the make-up and character of the founding fathers. Statutes were accepted in 1973 by the association’s first members.

The next major step in the foundation of the society was in November 1972, at the ‘Nouvel Hôtel’ in Zurich. The ambition was to create a European congress that could provide a forum for discussion, exchange of information, and collaboration, and that would become the EAU were discussed and put on paper: the society would be headquartered in Zurich. Indeed, the make-up and character of the founding fathers. Statutes were accepted in 1973 by the association’s first members.

On 3 and 4 July, 1973 the Hotel Schiller in Amsterdam was the site of the final constituent assembly. This took place during the 15th congress of the Société Internationale d’Urologie (SIU). The statutes were accepted and the first list of 259 members was submitted for approval. The first European congress was scheduled to take place in Padua, Italy in September 1973. The EAU was off to a flying start in its first decade!

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2. The EAU is celebrating its 50th Year
3. EAU22 Award Gallery
4. How COVID-19 has changed the world of urology
5. Use of access sheaths in children
6. Eponyms and Dutch urological innovations in perspective
7. Sexual function after augmentation surgery in childhood
8. Key updates on mCRPC treatment
9. Systemic treatment options for mCRPC
10. How to build successful prospective trials
11. How to become a good consultant
12. EUUF: What we know about outpatient surgery in Europe
13. Simulation: How do we train in the future?
14. A new early detection strategy for prostate cancer
15. SUO Lecture 2022: Data gaps in HPV-driven penile cancer
16. Antibiotic prophylaxis in female pelvic surgery
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20. When and how to de-escalate surveillance in LR-NMIBC
21. PSA PET for recurring prostate cancer
22. PSA PET/CT for advanced prostate cancer
23. EAU22 Scientific Programme
24. What’s new in the EAU Guidelines 2022 on Urolithiasis?
25. Revival of shock wave treatment
26. Highlights: What went wrong with PSA and PCA3
27. Management of testicular non-germ cell tumours
28. Penile epididymis reconstruction techniques
29. Two hands in one glove
30. The right dose of antimicrobials
31. Urinary tract infections of viral origin
32. Transgender and gender non-conforming health care today
33. Penile prosthesis in Peyronie’s disease: An update
34. Management of recto-urethral fistulas
35. Circumcision practices in monotheistic religions
36. EAU RF: SATURN registry reaches target of 1000 recruited patients
37. Recruitment rate for VENUS registry is accelerating
38. ERM eUROGEN Special Session at EAU22
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40. Syndromic infertility and cancer predisposition
How COVID-19 has changed the world of urology

An EAU perspective

Prior to 2019 few urologists (myself included) would have known much detail about the new coronavirus and indeed cared far less about the subject. Coronaviruses are enveloped, single-stranded RNA viruses that can be subdivided into four different classes, i.e., α-, β-, γ-, and δ-. COVID-19 belongs to the 𝜒-coronavirus family, and it has been noted that there is a close similarity between the genomic sequence of human COVID-19 and a virus seen in bats; however, the intermediate host between bats and humans has yet to be identified. (Fig 1)

In recent years, several coronaviruses have caused epidemics. In 2002–2003 the SARS-CoV epidemic in China and in 2012 there was the MERS-CoV epidemic in Saudi Arabia. The appearance of the new viral SARS-CoV-2 (COVID-19) strain in 2019 is thought to have originated in the Wuhan region of China and has resulted in a global pandemic which, as we all know, is ongoing.

The latest worldwide statistics at the time of writing this article in early January 2022 are: 325,059,702 cases (Deaths: 5,555,516, recovered: 263,073,838). (www.worldometers.info/coronavirus/)

It goes without saying that COVID-19, and particularly COVID-19 after surgery was significantly increased. It was clear early in the pandemic that the mortality across the globe as they do their very best to deal with the virus leads to page disruption.

The COVID-19 crisis has produced major challenges in the delivery of healthcare. The EAU has been able to adjust to this with the innovative use of technology.

In addition, the drastic reduction in face-to-face teaching and interaction due to a combination of travel restrictions and the consequences of lockdowns has taken a considerable toll on feelings of wellbeing not only in the population at large but in clinicians of all disciplines. We are all now resigned to wearing masks at work, social distancing, conducting a large proportion of clinical consultations virtually by phone or video link, and having to prioritise our clinical activity.

Management decisions are now being made based on institutional guidelines, albeit with consensus regarding the prioritisation of medical procedures, including those in the outpatient setting, urological emergencies, and many inpatient surgeries for both oncological and non-oncological conditions. This has certainly been in keeping with the prioritisation guidelines provided by the EAU consensus document. Certainly, if one reviews the different areas of urological practice it is clear that patient safety is the critical factor in all decision making and is something that is not always evident during the pandemic. During the pandemic, triage decisions have required even more inter-specialist coordination and communication than usual, in particular, emphasising the importance of ensuring that patients are free of Covid prior to elective procedures.

1. Uro-oncology: Oncological patients appear to have an estimated two-fold increased risk of contracting Covid-19 than the general population. Whilst the diagnosis and timely treatment of cancer patients should not be compromised, during this pandemic, there has been severely impaired access to hospitalisation and many surgical interventions have been deferred or postponed. Certainly, in appropriate instances, administering neoadjuvant therapy as a way of deferring surgery can decrease risk to the patient and preserve health care resources.

2. Minimally-Invasive Surgery (MIS): Concern over the use of minimally-invasive techniques has been raised due to a potential risk of viral transmission via the creation of a pneumoentoporn. Conversely, the use of laparoscopy during the pandemic can reduce the length of stay and blood loss as compared to open surgery, and thus increase the availability of beds. Overall, MIS appears to have proven beneficial, as long as adequate precautions are taken to reduce aerosol production through trocars and to wear of full personal protective equipment (PPE).

3. Endourology: In the case of an obstructed/infected kidney, urgent decompression of the system is suggested, which can be achieved safely via either stenting or percutaneous nephrostomy. Obviously emergency department upper tract stone presentations are usually characterised by severe pain. Whichever possible, the ureteral stent or nephrostomy tube should be placed under local anaesthesia, sparing a general anaesthetic.

4. Reconstructive and Functional Urology: Most cases cannot be assessed for clinical priority, except where renal deterioration is a major concern, and this is an area of urological practice which has been severely affected.

5. Kidney Transplantation: Concern can clearly be expressed about the safety of kidney transplantation during the COVID-19 pandemic, particularly related to immune-suppressive therapy. Decisions should be made on a case-by-case basis according to the patient’s situation. Managing immunosuppression in these patients is challenging. Suspending kidney transplantation during the COVID-19 pandemic has been recommended, especially for high-risk older recipients with comorbidities.

A very important additional factor is the massive impact that the pandemic has had on all aspects of medical training, particularly surgical training, not only in the operating room but also in outpatient clinics. At the EAU we have attempted to address urological education by providing educational activities online. The EAU’s 2020 annual congress had to be held in a virtual format as an abbreviated meeting. Based on our experiences, in 2021 we held a full congress designed as a virtual programme broadcast from Amsterdam. We used the modern tools of webinar technology, with all the scientific content of the meeting transmitted online via real-time or on-demand streaming. This proved to be a very effective meeting as evidenced by the following statistics. (Fig. 3)

We have also used these technologies to maintain an active and effective series of educational programmes provided by the education office of the EAU, the European School of Urology (ESU).

In addition, our family of European Urology journals led by Profs. Catto, Gratzke, Briganti and Waltz have identified and prioritised a large number of pertinent articles of particular importance to our management of patients on www.europeanurology.com/covid-19-resource

In conclusion, the current COVID-19 pandemic has forced urologists across the world to react to the unforeseen crisis situation and has shown the importance of updating many aspects of urology practice. From patient consultation to the triage of urologic surgeries in order to ensure the safety of their patients and staff. The EAU has led the urological world with new COVID-19 focused treatment guidelines. In addition, the association has embraced teleconsulting and online education, and a recent expert discussion paper can be an alternative to face-to-face meetings in delivering ongoing education and personal support.

Due to space constraints, the entire reference list can be made available to interested readers upon request by sending an email to: communications@eurouroweb.org.

Prof. Chris Chapple
EAU Secretary General
Sheffield (GB)

c.chapple@uroweb.org

Figure 1: The structure of the SARS-CoV-2 coronavirus, the virus that causes COVID-19

Figure 2: The EAU Guidelines Office’s Rapid Reaction Group

Figure 3: Some statistics from the successful EAU Virtual Congress, held on 8-12 July 2021

Available at www.wileyonlinelibrary.com
Journal homepage: www.europeanurology.com
Use of access sheaths in children

While boundaries are pushed, care must be taken to ensure safe placement

Unilateral access sheaths are increasingly used while treating kidney stones via ureteroscopy. There are several advantages to it especially avoiding multiple passes in the ureter to remove stones, maintaining a low intrarenal pressure and temperature while having a good vision. It also decreases the risk of urinary tract infections (UTIs) and sepsis. Their sizes range from 9.5-10F in outer diameter. Care must be taken while inserting it as ureteral perforations and rarely avulsions are known to happen with their improper use. [1,2]

There is an increasing trend of kidney stone disease (KSD) related intervention in the paediatric age group. [3] Ureteroscopy is becoming increasingly popular with excellent results for kids. [4] While it has become safer, large stones and stones in the lower pole are also being treated with good outcomes. Some of these relate to the use of a ureteral access sheath (UAS) which has allowed a widening of indications for ureteroscopy in kids. [5]

There are several published papers on the use of UAS in paediatric patients. While the risk of ureteral trauma still remains, major injury or avulsions are now rare due to the use of small size UAS, better training and increased sub-specialisation. [6] The use of UAS has also allowed for treatment of large and lower pole stones (LPS) in children. [8] In a recent paper on FURS for LPS in 52 paediatric patients, UAS was used in 42%, with a final SFR of 98.2% and minor Clavien I complications related to UTI in 2 patients. This is despite 54.4% having multiple stones and a post-operative stent rate of only 54% which is much lower than what is cited for adult literature.

While ureteroscopy has proven its safety in paediatric patients, the risk of failure to access and complications are higher in patients <6 years of age. The risk of failure to access was found to be 4.4% and complication rate of 24% in <6 years compared to 1.9% and 13% in the older age group. [9] Care must be taken before the use of UAS in younger age group.

“UAS has allowed endourologists to push the boundaries for ureteroscopic stone treatment in the paediatric setup.”

Recently with the advent of smaller 7Fr ureteroscopes, it might be possible to decrease the size of UAS further and still have the advantages it offers especially in the paediatric setting. This would minimise the ureteral trauma or the need for pre-stenting in certain situations. It would also allow for reduced need to post-operative stenting. While the role of alpha blockers has shown to increase the success rate of UAS placement in the adult setting, safety and efficacy of this is still lacking in the paediatric setting.

UAS has allowed endourologists to push the boundaries for ureteroscopic stone treatment in the paediatric setup. However, care must be taken to ensure their safe placement and avoid ureteral injuries. Perhaps, more studies of access sheaths in paediatric patients will encourage modification of equipment, to further optimise its use in this population.

References:

Monday, 4 July 03:00 – 10:00 Plenary Session 08 Grey Area, eURO Auditorium 2
Eponyms and Dutch urological innovations in perspective

Origins of terminologies and procedures involved

An eponym is a person, place, or thing named after (or believed to be named after) someone or something. Discoveries and innovations are often named after the discoverer or an influential person. Examples of these include Alzheimer's disease and the Apgar score.

All urologists know famous names such as Bricker and Millin, which are indeed typical examples of eponymes. Bricker and Millin did not invent nor describe uretero-ileal stoma and retropubic prostatectomy, respectively. How come their names are associated with these procedures? Who were the urological surgeons who pioneered these procedures many years before?

The Dutch urologist, Dr. Willem J. van Stockum (1860-1913) started to do prostatectomy operations in the early years of the 20th century. On November 3, 1908 he performed the first “Prostatectomia Suprapubica Extravesicalis” and published this method in the Zentralblatt für Chirurgie journal in January 1909.

The Irish urologist Dr. Terence Millin (1903-1980) performed a similar operation, the “Retropubic Prostatectomy” and published this “new extravesical technique” as a report on 20 cases in The Lancet, Dec. 19;850(6396):693-6,1945. He was aware that this operation was performed some decades before and correctly referred in his paper to the case reports of van Stockum.

The Dutch urological surgeon Dr. Hendrikus J. Zaaijer (1876-1932) was working in the University Hospital of Leiden when he performed the first uretero-ileal-cutaneo-stomy in 1911 on a patient with total incontinence because of a vesico-vaginal fistula. Unfortunately, she died 11 days later due to extensive malignancy of the cervix. The second case was a patient with carcinoma of the bladder. This patient died six days postoperatively from peritonitis.

“Eponyms for surgical procedures or tools are handy but sometimes inappropriate”

Dr. Eugene M. Bricker employed urinary diversion by an uretero-ileal stoma method in hundreds of patients since 1950. Bricker was probably not aware of the two aforementioned patient cases of Zaaijer. This may be explained by the fact that Zaaijer did not publish his cases in literature. Nonetheless, Zaaijer was quite famous in the Netherlands because of his surgical innovations. In 1908, he was also the first to perform a successful long-term autotransplant of the kidney in a dog. This dog lived another eight years. It may have been possible that Zaaijer’s stoma operation was discussed during European congresses.

Later, Dr. L. Seiffert from Neunkirchen made a conduit with the use of jejunum. He performed this operation on two patients. The first patient survived for three years, while the second one died of renal failure. In 1950, Dr. Heinz Haffner from the St. Louis City Hospital in the United States created an ileal conduit when he was “unable to use coecum as a reservoir and was forced to use an isolated segment of the ileum alone” during an operation. Perhaps he was inspired by Zaaijer or Seiffert? One will never know for sure.

Why was the eponym for the retropubic prostatectomy operation “Millin” instead of “van Stockum”? It is because Millin popularised this operation and published many cases.

In the case of the uretero-ileal cutaneo-stoma operation, the eponym became “Bricker” and the name Zaaijer is totally unknown to most urologists. This is mainly because Zaaijer did not publish his first two cases, probably because he was disappointed about the complications and outcome which is an outstanding example of “publish or perish”.

I must confess, I am not a true advocate for the use of eponyms. It seems odd to me that a name of a person should live on as a kind of trademark or glorification. On the other hand, it is easier to refer to and discuss about scheduled operations e.g. “Mr. Johnson will undergo a Bricker” is shorter than “Mr. Johnson will undergo a uretero-ileal-cutaneo-stomy”.

However, my personal concern against the use of eponyms is that my family name would be unsuitable for an eponym.

Saturday, 2 July 11.00 – 13.30
EAU History office
Grey Area, Room G107

Urologist asks for medical instrument that was invented by Dr Dik

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Towards a better understanding of the transition of our patients to adulthood

Spina Bifida (SB), the incomplete closure of the neural tube, is very common and is diagnosed nowadays in 1-4/10,000 births. However, it is difficult for children with SB to live into adulthood. This improvement in overall survival is likely to be secondary to advances in healthcare. Up to 50% of SB patients with untreated urological problems had evidence of kidney damage, which increases with advanced age. Degree of incontinence, pelvic floor [def] or sphincter dyssynergia [DSI] when not properly treated. The early management with Clean Intermittent Catheterisation (CIC) is the Gold Standard to achieve a low-pressure reservoir that is safe for the upper urinary tracts of the SB patients.

It has been shown that high leak point pressure (>40cmH2O), decreased bladder capacity as well as detrusor overactivity are associated with kidney damage. Bladder and bowel management are important to preserve renal and bladder function but also key points in a better quality of life (QoL) in this group of patients regarding urinary continence, infection-free rates, independency and a better self-esteem.

Augmentation Cystoplasty (AC) offers a solution to achieve a better continence and preserve the renal function by decreasing the bladder pressure. Generally, the SB patients who undergo this surgery have high bladder pressure, upper tract deterioration and urinary incontinence, not responding to intermittent catheterisation, oral or intravesical anticholinergic medication and/or intra-detrusor injection therapy with BOTIDX.

One of the main problems these patients face is when they transition from paediatric to adult care. This, on the other hand is also a difficult process for the untrained physicians, the SB patients and their carers. Highlighting the importance of the concept of life-long congenital urology. It seems that the systems currently exist in place do not facilitate enough discussing such issues. A joint responsibility is needed here to address this matter with our patients, as self-esteem and the idea of their own sexual desires and sexual satisfaction are based on individual expectations and variations between them.

Spina Bifida “SBiafa” since over 20 years and mother of a girl with a neurogenic bladder.

Diversity, urinary incontinence and sexual life
Men with SB have difficulties in maintaining sexual activity, self-esteem being one of the most prominent concerns. There is a consensus between the literature, the clinicians consulted and the patient group representative that incontinence is an important limitation for the sexual life of the SB patient.

An interesting point, yet not addressed in literature or brought up by the experts is a potential difference in the opinion concerning the burden caused by incontinence between women and men. This should be addressed in future studies looking into gender differences of treatment. From the experience of the experts, which is supported by the literature, we infer that urinary incontinence improves sexual function to a solution to urinary incontinence that leads to improvement of body image, self-esteem and the better ability to cope.

The patient group representative pointed out that female patients placed greater importance on a stable partner, on sexual relationships than the severity of the procedures they underwent or urinary incontinence. Unlike men, who place more emphasis on the negative impact of feeling ashamed.

Impact of the stoma on perception of body image and self-esteem
No doubt the stoma is an important issue to discuss in sexual education, which may influence the self-esteem and therefore the ability of patients to start a relationship. Based on the experience of the consulted experts and the patient representative, it appears to be a less common concern in males than in females. However, this must not be an impediment to address this matter with our patients, as self-esteem and the idea of their own sexual desires and sexual satisfaction are based on individual expectations and variations between them.

Specific female concerns on fertility and recurrent urinary infections
Fertility might be impaired in women with SB, and antenatal complications, foetal loss as well as neural tube defect in their offspring are more frequent. This is the main reason that we should focus on this area as the main concern of the patient group. The treatment of ED in SB patients is possible and effective. It is highly important for a healthy and happy sex life, self-confidence, and maintaining long-term relationships. Men with ED often respond to established therapies, including oral medications.

People with SB experience sensation differently, with “normal” sensation reported in only 20% of cases. In men, only 42% have normal erections, with ambulant men more likely to report normal erections than those in a wheelchair. Additionally, those with SB are less likely to have feelings of sexual excitement consistent with orgasm compared to the general population.

An innovative method of enhancing sensation with regards to sexuality is the TOMAX procedure, involving a microsurgical connection between the ilioinguinal nerve and the dorsal penile nerve. While it clearly requires a special set of expertise it has been shown to be effective in a relevant proportion of patients.

Regarding fertility, subfertility is common concern, despite the fact that testosterone levels have been reported to be normal, there seems to be a failure on the level of Sertoli cells or germinal cells.

Conclusions
We do not intend to conclude evidence-based recommendations but to raise awareness of every important topic that currently is scarcely documented in the literature. Therefore, our conclusions are based on the opinion of experts respected in their field and should not be standardised in the clinical practice, but considered for further study.

Patients with SB find impediments to develop normal sexual relationships due to variety of reasons, including impaired self-esteem and dependence on caregivers. From the work that our group performed regarding this topic we can highlight the challenges that our SB patients have to face when they start sexual activity.

Self-esteem and urinary incontinence are very important concerns. Urinary diversion seems to improve sexual life by offering a solution to urinary incontinence. Many patients found it important to have a stable partner for a fulfilling sexual relationship, while men stress feeling ashamed or pressured by urinary incontinence. Recurrent UTIs and those related to intercourse in women are a common urological consultation. Patients and their representatives express their concern on the lack of sexual education.

Physicians should be encouraged to ask all post-pubertal patients if they have any urinary, fecal, or sexual concerns at every visit to both establish a solid physician-patient relationship.

Acknowledgements:
We would like to thank Mrs. Hinterzieer, chairwomen of the Austrian Spina Bifida Patients Group, as well as the experts we consulted for their support and willingness to answer our questions. Furthermore we would like to acknowledge the contribution of Masur Šeljek Silaj, Anne Françoise Spinioit as members of the Pediatric Urology Group of the EAU Young Academic Urologists and Tom Marthaler for his help with conceiving the questions and performing the literature search.

The work presented in this article is published in the International Journal of Impotence. Research:
Prostate cancer progression is a continuum and patients experience different stages in their disease journey. The term ‘nmCRPC’ refers to prostate cancer in a patient with no symptoms of disease progression, no evidence of detectable metastases, and no clinical evidence of disease progression. It is a stage that represents the transition from nmCRPC to mCRPC, which is characterized by the presence of metastases or the development of PSA progression.

**Clinical Trials**

The efficacy and safety of different agents in the treatment of nmCRPC have been evaluated in clinical trials. The European Medicines Agency (EMA) has approved several agents for the treatment of nmCRPC, including apalutamide, enzalutamide, and darolutamide. These agents have been shown to improve outcomes in terms of progression-free survival (PFS) and overall survival (OS) compared to placebo.

**Comparative Studies**

The efficacy of different agents in the treatment of nmCRPC has been compared in several trials. For example, a meta-analysis of three phase III trials comparing apalutamide, enzalutamide, and darolutamide showed that darolutamide had a higher rate of progression-free survival (PFS) compared to enzalutamide and apalutamide.

**Adverse Events**

All three agents have been associated with a range of adverse events, including diarrhea, asthenia, and hypertension. However, the rates of severe adverse events were similar across the different treatment arms.

**Conclusion**

The treatment of nmCRPC requires a multidisciplinary approach, and the choice of agent should be guided by individual patient characteristics, including the presence of comorbidities, the patient’s performance status, and the likelihood of disease progression. It is important to monitor patients closely for adverse events and to adjust the treatment plan as needed.

**References**


**Key Table**

**Table 1:** Comparison of the second-generation androgen receptor antagonist agents for nmCRPC

<table>
<thead>
<tr>
<th>APALUTAMIDE</th>
<th>ENZALUTAMIDE</th>
<th>DAROLUTAMIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half-life</td>
<td>2–4 days</td>
<td>5–8 days</td>
</tr>
<tr>
<td>Status</td>
<td>FDA &amp; EMA approved</td>
<td>FDA &amp; EMA approved</td>
</tr>
<tr>
<td>Dose</td>
<td>240 mg po once daily</td>
<td>160 mg po once daily</td>
</tr>
<tr>
<td>Blood-brain penetration</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CYP induction</td>
<td>Strong - CYP3A4</td>
<td>Strong - CYP3A4</td>
</tr>
<tr>
<td>Increase of serum testosterone level</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Key phase trials</td>
<td>SPARTAN</td>
<td>PROSPER</td>
</tr>
</tbody>
</table>

**Table 2:** Cross-trial efficacy comparison in nmCRPC

<table>
<thead>
<tr>
<th>APALUTAMIDE</th>
<th>ENZALUTAMIDE</th>
<th>DAROLUTAMIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>medium (months)</td>
<td>26.4 (25.0–36.3)</td>
<td>28.8 (26.8–36.8)</td>
</tr>
<tr>
<td>low (months)</td>
<td>11.1 (10.1–12.1)</td>
<td>13.0 (11.0–14.0)</td>
</tr>
<tr>
<td>medium (months)</td>
<td>27.4 (26.3–36.3)</td>
<td>30.0 (28.0–38.0)</td>
</tr>
<tr>
<td>low (months)</td>
<td>12.9 (11.9–13.9)</td>
<td>15.0 (13.0–17.0)</td>
</tr>
</tbody>
</table>

**Notes:** EMA, European Medicines Agency; FDA, Food and Drug Administration; CYP, cytochrome P450 enzyme system; nmCRPC, non-metastatic castration-resistant prostate cancer.
Is there a single one-size-fits-all sequence approach?

1. Sequencing two consecutive lines of AR- targeting agents in the mCRPC setting. Multiple approaches have been made to answer the question of using abiraterone/prednisone or enzalutamide/docetaxel as initial mHSPC treatment with the addition of one of the novel hormonal agents was not the standard. Many studies have shown that answering this important question was of retrospective nature (34) and only one phase 3 trial addressing this specific sequence question. Several trials have shown that abiraterone for at least 2 years after the addition of abiraterone and enzalutamide will have a higher rate of PSA > 50% response, but overall the PFS was short (14). One of the above-mentioned trials might be since after enzalutamide high rate of AR amplification has been reported and AR biology is linked to resistance. (35) There are prospective data from the PLATe trial that shows abiraterone after enzalutamide is only beneficial to patients with higher risk. The latter large trials gave us evidence that sequencing two ARTAs is not giving benefit to mCRPC patients. Both the PROfound study (28), investigating olaparib in patients with hormone-deficient response (HRD) versus a second ARTA and the CARD study (39), randomising cabazitaxel versus second line of hormone-deficient efficacy is low when sequencing two ARTAs. The question remains if these mechanisms of resistance of two ARTAs can be extrapolated in the mCRPC – mCRC setting. When we consider the data from subsequent trials from the ARANews trial, 51% of patients received a second ARTA in the mCRPC setting after progression under docetaxel and enzalutamide in mHSPC. One should be curious how these patients performed when using the second ARTA after docetaxel failure. (41)

2. What to have then change? Chemotherapy (CHT) and strategies

Docetaxel has proven efficacy in mCRPC as the first drug approved in 2014, showing an OS benefit in two phase III trials. (2,11) The recommended dose and schedule is 75 mg/m2 every three weeks according to the reported trials. Since 2011, a number of agents have been approved adding a chemotherapy or androgen deprivation therapy to mCRPC agents with a varying approval according to local authorities (Figure 1). The clinical rationale for each treatment line is based on high evidence of activity and OS benefit when given after docetaxel and remains standard until the approval of olaparib in 2018 (19). In the phase III IMPACT trial, 177Lu-PSMA was available in high-volume centres associated with waiting time for treatment until it is more widely available.

PARP inhibitors in a subgroup of mCRPC patients are now best to test. The PROfound study was the first phase III randomised trial showing an improvement in outcomes with an alteration of the DNA repair (HRD) mechanisms, treated with olaparib after at least one ARTA versus hormone switch, even if a substantial subgroup of patients had more than 30% of patients with an objective response as primary endpoint was randomised. (29) In addition, olaparib versus hormone switch, even if a substantial subgroup of patients had an objective response as primary endpoint was randomised. (30) In addition, olaparib versus hormone switch, even if a substantial subgroup of patients had an objective response as primary endpoint was randomised. (31) Therefore, the results from PROfound and the current guidelines, olaparib should be used after one ARTA and prior to a taxane if a BCR-A2 mutation has been identified (depending on local regulatory approval) by somatic or germline testing. Therefore, a next-generation (NGS) assessment of DNA repair and the latest in the mCRPC setting in identifying patients eligible for a PARP-inhibitor.

Recently, two phase III trials in first-line mCRPC have been presented at ASCO GU 2022 combining a PARP-inhibitor with abiraterone/prednisone. The PRoFAR study (32) enrolled patients independent of the homologous recombination repair (HRR) status to randomise the patients with abiraterone/prednisone or abiraterone/prednisone plus placebo and reached its primary endpoint PFS for this “all-comer” population with no benefit of the PARP-inhibitor of any of the two arms. In contrast, the MAGNETIC trial (33) prospectively enrolled by the HRH status and the preplanned futility analyses in the HRH - arm revealed no benefit of adding mirabegron to abiraterone/prednisone preplanned for the last primary endpoint PFS. Thus, the trial reached its primary endpoint PFS in abiraterone/prednisone and an ongoing PFS was seen especially in the BRCA2 positive patient cohort. The OS of both trials is still ongoing and the question of combining a PARP-inhibitor to abiraterone/prednisone is not yet standard of care.

Immunootherapy – first approach with Sipuleucel-T – failure to be integrated as routine standard of care Sipuleucel T was the first approved immunootherapy that was approved in 2004 based on results of the IMPACT trial, which reported a 1.4-mo OS benefit in men with mCRPC with no evidence of visceral metastases. (34) After initial approval no further phase III trials were obtained approval because of logistics with production. Other approaches to bring immunotherapy forward in metastatic prostate cancer (mCpa) have failed so far, at least with checkpoint inhibitors in monotherapy in unselected patients against enzalutamide and radium-223. (35) For a very small proportion of mCRPC patients (about 3% as reported by Abeda et al. [36]) with metastases instability- negative MSI and a high degree of DNA repair deficiency (HRMR), pembrolizumab is authorised by the U.S. Food and Drug Administration (FDA) after approval on prior treatments. Thus, combination trials are ongoing mostly with ARTAs in mCRPC and results must be awaited.

3. Finding the optimal sequence Despite the existing concerns showing non- superiority of cabazitaxel to docetaxel in first-line mCRPC, no prospective phase III trial in mCRPC has addressed a sequencing question.

The physician’s choice of doxetaxel or abiraterone (enzalutamide or abiraterone) in treatment-naïve mCRPC patients is still a common practice. The latter setting was mainly based on the more favourable side-effect profile and more convenient oral administration. The patient’s grade of symptomatology from his PCa since formally CDP-AU-302 [37] and PREVAIL [38] included only asymptomatic or mildly symptomatic patients. Since 2014, we have high-level evidence that adding doxorubicin to docetaxel (40) in a phase III trial (about doxetaxel plus abiraterone/prednisone or plus darolutamide) in some patients, prolonging OS when added to abiraterone. In contrast, most patients with mCRPC receive one or is some cases two of the approved agents in mCRPC already in phase II. This information has therefore not influenced the treatment setting to the drug classed not being used in mHSPC or even mCRCab. Cabazitaxel and radium-223 remain exclusive options in mCRPC not having evidence in the HSPC setting. Thus, progression has been made and other types of agents have shown benefit in later lines of treatment such as mirabegron in mHSPC and other strategies.
How to build successful prospective trials
A BURST-inspired model

Collaborative research is being undertaken at a pace never before seen as its strengths and benefits are realised, resulting in good quality practice-changing research. With several surgical initiatives being developed, urology has seen the rise of collaborative research over the last few years. Our lecture “How to build collaborative prospective trials” during the EAU22 congress session “YUORDay22: EAU Young Urologists Office (YUO) & European Society of Residents in Urology (ESRU)”, will focus on how to utilise this collaborative model to build successful prospective trials. In order to build such a trial, the foundation of strong collaboration is key.

The British Urology Researchers in Surgical Training (BURST) [1], is an international research group comprising of urological trainees, medical students, core surgical trainees, consultants, methodologists and basic scientists. The aim of the BURST Research Collaborative is to produce high impact multi-centre audit and research which can improve patient care. Although it retains its British core, the BURST Research Collaborative has become an international organisation with a broad reach with over 500 collaborators from around the world since its official launch at the British Association of Urological Surgeons in 2015. The first large international cohort study launched by BURST was MIMIC (a Multi-centre Cohort Study: Evaluating the role of inflammatory markers in patient’s presenting with acute ureteric colic) [2] (Figure 1), led by Mr. Taimur Shah. This established the BURST network and led to the formation of a number of national and international collaborations. It has developed into a prize-winning collaborative that has presented work around the world and impacted urological research and practice.

We have continued to build trials with the strength of this cooperation and our relationship with our collaborators. Since MIMIC, we have successfully completed and published IDENTIFY (The Investigation and DEtection of urological Neoplasia in patients referred with suspected urinary tract cancer: A multicentre analysis) (Figure 2) [3]. The high-quality data collected by these trials will also lend itself to calculators that can be used in practice: a spontaneous stone passage prediction tool and a urinary tract cancer prediction tool.

We are currently recruiting for our prospective international trial on improving quality in transurethral resection of bladder tumour (TURBT) surgery with randomised feedback to sites: Transurethral REsection and Single instillation intra-vesical chemotherapy Evaluation in bladder Cancer Treatment (RESECT). This is the largest ever study on TURBT ever performed, with over 6000 TURBT cases already entered in our database. Recruitment for RESECT is still open, www.bursturology.com/Studies/Resect/Overview/ for more information or email us at resect@bursturology.com. You will receive PubMed indexed collaborative authorship, with the opportunity for mainline authorship for our highest recruiters. In addition, you get access to a free data collection and reporting tool to audit your own practice, and you can use your own data as you wish. The success of our previous trials is testament to our high-quality work and research output. Participation in this trial will help you understand the workings of a collaborative research model closely and allow you to reap its benefits first hand. We are conducting a collaborator engagement meeting during the conference to discuss the progress of RESECT and future plan. This would be a good opportunity to meet the team face to face. Please join us at EAU22 to understand how BURST produces prospective international trials that change practice. For more information, please visit our website www.bursturology.com/about/about-burst and join us in our currently recruiting trial RESECT.

Due to space constraints, the entire reference list can be made available to interested readers upon request by sending an email to: communications@uroweb.org.

Figure 1: MIMIC was our first prize winning prospective international trial

Figure 2: With over 11,000 patients IDENTIFY was the largest ever study of its kind
Let us start with the fundamentals. The first (and most obvious) step in coping with residency and becoming a good consultant is to study hard. During residency, you should get to know the basics by heart and learn the craft. To try to find a residency in a hospital with a large volume of patients, as this will enhance learning and is more likely to deliver a rewarding experience.

I would strongly suggest that, after completing the registration, you should find a fellow who can work one subspcially and give yourself a good opportunity to fulfill a specific role within a team. Nowadays such training is highly valued as the trend is towards working in specialties. Read and get to know all the literature of your subprofessional, including grey areas and likely future trends as a basis for starting research lines. Go abroad and open your mind to new ways of thinking. Enrol in as many studies as you can. These steps will also give you the chance to increase your network, which will be valuable in launching your career.

As you go through each stage in the process, be as fully engaged as you can. Once you become a consultant, this comprehensive preparation will help as you start to think about how to become a good one. From an academic point of view, this pathway will open up excellent career opportunities, but you have to be vigilant and cautious with regard to your physical and mental health. The incidence of burnout is rising sharply among residents and urologists worldwide. It is a reality that has affected many of us. I experienced burnout myself during my residency and learned that coping with residency and becoming a good consultant both require adherence to the same principle: take care of yourself! We know that this job involves long hours of work, but do not pass the threshold where you lose sight of your personal life or your physical and especially, mental health.

Found below are my suggestions as to what you can do to avoid becoming embroiled in such a terrible scenario. These can help improve your performance and efficiency, and enable you to become a good team player. Most of these activities can all be done during a busy day and will give you a better overall quality of life.

First of all, sleep! This is a must. Try to make it eight hours per night, and avoid sleep time for at least one and a half hours before sleeping. I know this is hard as we spend hours in the hospital, but you will rapidly see how you become more lucid, active and creative – qualities crucial in enhancing your performance in the operative room. In this way, make sure you give yourself breaks from social media and set “virtual boundaries”. Avoid the hoax of “FOMO” (fear of missing out), set limits on your phone or put it down and out of reach on occasion.

...after completing the residency, you undertake a fellowship to master one subspecialty and give yourself a good opportunity to fulfill a specific role within a team.”

Start practicing meditation. In my case, this was a game changer. Studies have shown that 80% of thought processes are repetitive and mostly negative. You can start with just 10 minutes of meditation per day, or perhaps download an app (I recommend Headspace or Calm) to guide you in how to stop ruminative thoughts. I have found that many ideas for studies and the enthusiasm to perform them are products of having a “quiet mind”.

In addition, a couple of weeks of meditation have been known to reduce stress, aggression and irritability [2]; the result will be that you are far more able to cope with patients, huge workloads, and burnt-out co-workers who need your reliability and empathy. Further proven benefits are enhanced focus on work tasks, reduction in job-related stress and increased job satisfaction. [2]

Try to get your sun (or bright light) exposure daily, and not simply through a window. Take a walk in the park or coffee break. As you can see, a lot of good quality papers have shown the beneficial impact of this practice on metabolism and well-being through its effects on neurotransmitters and hormones. [3]

If meditation is not for you, you can always go to the gym or perform some outdoor activities. Exercising is always recommended.

“I learn from your mistakes, do not judge or be too hard on yourself.”

Avoid the vending machine at the hospital. Let me put it another way: eat healthy and avoid processed foods (which are only the products offered by vending machines). A cup of coffee per day is enough (better drink it in the mornings). Try to opt for freshly-brewed coffee and avoid coffee from the vending machine. Also, remember to drink water throughout the day.

From an academic point of view, be up to date. Look for opportunities to engage in continuous medical education, to read the latest, to meet colleagues about your and their practice. Be engaged in your subspecialty community so that you can collaborate in studies. The sense of community and social connection among urologists is wonderful.

Some of my colleagues enjoy reading about medical errors and ethics (I would recommend any book by Atul Gawande, such as “Complications” or “The Checklist”). I also encourage listening to some podcasts focused on well-being during your commute, and comic relief is healthy, too.

Finally, and especially at the beginning of your surgical learning curve, learn from your mistakes but do not judge yourself and do not be too hard on yourself. Be gentle and compassionate when complications occur (because they will). You have to learn to work in a team, and this will make you less judgmental of others and more compassionate and supportive of colleagues when they make mistakes. It will also enhance your connection with your patients and your appreciation of their needs, particularly when things go wrong.

In conclusion, I would emphasise that taking care of yourself should be your top priority. This will make you a good consultant. You can then focus on your practice, your patients and your team.

References
Simulation: How do we train in the future?

The importance of metrics and standardisation

Prof. Dr. Anthony Gallagher & Prof. Dr. Anthony Melle (IE)

The art of progress is to preserve order amid change and to preserve change amid order.” – Alfred North Whitehead (1861-1947). From the series Great Ideas of Western Man.

The acquisition, maintenance and application of skill in surgery and procedure-based medicine are matters of concern to all: patients, trainees, surgeons, and public interest on methods that may be used for quality assurance of surgical performance.

Agents of change: Traditionally, procedural skills have been acquired in a formal, structured approach. Surgeons were not trained in a formal setting, but in the operating room (OR). This approach was based on a model developed by William Stewart Halsted at Johns Hopkins at the end of the 19th and beginning of the 20th century. The apprenticeship phase in surgery and procedure-based medicine is often thought of as an apprenticeship period, but this can be (unfairly) used against the trainee to constrain training progression or indeed completion. There also seems to be a universal agreement amongst the different procedural-based disciplines that simulation-based training is a better way to train. However, in some cases, an agreement on how best to use simulation. There is even more disagreement amongst the different professional groups as to what constitutes an appropriate level of simulation fidelity for it to be useful and usable.

Effectiveness of simulation training: Quantitative evidence already exists which demonstrates that simulation is a better way to train. [2] These results clearly demonstrate that simulation is effective for skills acquisition but the impact of proficiency-based progression. [3-12] These results clearly demonstrate that simulation training is effective for skills acquisition but the impact of proficiency-based progression results on the impact of proficiency-based progression simulation training on performance outcomes. [6,7]

The performance metrics should be explicit and binary scores, and not Likert scale assessments. Despite the voluminous reports on Likert scale assessments, they have been demonstrated to be unreliable, [7] and thus, by default not valid. PBP validated metrics are then used to provide the same explicit, normative feedback during training, thus accelerating their learning using deliberate practice [3] training settings. Furthermore, requiring the trainees to engage in repeated practice. Furthermore, PBP training is delivered by faculty who know and can score the metrics with an RRR > 0.8 and have been taught in a train-the-trainers course how to use the metrics for deliberate rather than repeated practice.

Deliberate practice and standardisation: VR computer and other types of simulation means that surgeons have to develop surgical skills by using the exact same metric-based, deliberate practice curriculum for all trainees. This approach to training necessitates a standardised, simulation-based, skills curriculum for all training, surgeons had first to develop surgical skills by using the exact same metric-based, deliberate practice curriculum for all trainees.

The metrics explicitly identify observable performance before, during, and after the surgical procedure. They are then validated initially at a Delphi consensus meeting and then construct validity. The latter requires that the metrics can be scored reliably by independent raters (i.e., with an interrater reliability (IRR) >0.8) and the performance assessments reliability difference between the objective measured performance of experienced and less experienced surgeons. Only when all of these validation criteria are met, then proficiency benchmarks can be quantitatively defined, based on the mean performance of the experienced practitioners. In addition, the performance metrics should be explicit and binary scores, and not Likert scale assessments. Despite the voluminous reports on Likert scale assessments, they have been demonstrated to be unreliable, [7] and thus, by default not valid. PBP validated metrics are then used to provide the same explicit, normative feedback during training, thus accelerating their learning using deliberate practice [3] training settings. Furthermore, requiring the trainees to engage in repeated practice. Furthermore, PBP training is delivered by faculty who know and can score the metrics with an RRR > 0.8 and have been taught in a train-the-trainers course how to use the metrics for deliberate rather than repeated practice.

Conclusions: Training with metric-based simulation ensures learning to a quantitatively defined performance level and greater homogeneity in trainee skill sets. [6] Evidence from prospective, randomised studies shows that a PBP approach to training produces trainees with skill sets that are 40-60% better than trainees using a traditional approach to training. The studies also show that trainees who receive the exact same curriculum but without the quantitatively defined performance benchmark perform only marginally better than those receiving traditionally training. [3,9-12]

References:
A new early detection strategy for prostate cancer
High time to implement our knowledge of 30 years of research

Renée Hogenhout, MD/PhD candidate
Dept. of Urology
Erasmus MC Cancer Institute, Rotterdam (NL)

m.roobol@erasmusmc.nl

For almost two decades, we had to wait for the first results of the two leading randomised trials for prostate cancer screening to be published. In 2009, the first results of the Prostate, Lung, Colorectal and Ovarian (PLCO) trial in the United States (US) and the European randomised study of Screening for Prostate Cancer (ERSPC) did not end the debate on whether prostate cancer screening affects disease-specific mortality. In fact, it was fuelled by their contradictory results [1,2]. The debate in question ended in 2016 when reanalysis of the PSA testing rates in the PLCO trial showed significant contamination [3]. Shortly after, microsimulation models that accounted for such conditions, found compatible evidence among the ERSPC and PLCO trials that screening reduces prostate cancer-specific mortality [4]. Hence, from this moment on, we have level 1a evidence that PSA-based screening reduces prostate cancer-specific mortality. Updates on the ERSPC show an even larger benefit with longer follow-up in terms of absolute reduction in prostate cancer mortality and thus a decreasing number needed to invite (see fig. 1) [5].

However, the remaining issue is the harmful overdiagnosis that comes with screening. The rate of overdiagnosis estimated by the ERSPC was 59%, which is the price that was paid for the reduced rate of death from prostate cancer [2]. Therefore, the benefit of traditional PSA-based screening for prostate cancer does not outweigh its harms.

“The traditional PSA-based screening strategy from 1993 has become outdated with the rise of new stratification tools like MRI and risk calculators.”

What happens if we do not screen?
To overcome the harmful and beneficial still forms one of the leading arguments against prostate cancer screening. However, the disagreement by the US Preventive Services Task Force in what happens if we let prostate cancer run its course. Namely, in subsequent years, a stage migration was observed to more advanced cancer at the time of diagnosis [6]. Furthermore, to date, prostate cancer has become the most frequently diagnosed cancer among men in 22 countries and after lung cancer, the second leading cause of male cancer death [7]. The increasing burden of prostate cancer on society sparked public awareness on this matter. This expanding awareness in the absence of an organised early detection program paved a way for opportunistic screening. Compared to organised PSA-based screening, opportunistic screening does not go with reduced mortality as the benefit of screening but does go with even more overdiagnosis. To illustrate, the number of men needed to be diagnosed to prevent one prostate cancer death with this unstructured way of screening is expected to be almost twice as high [8].

The way out
In view of the foregoing, traditional PSA-based screening, opportunistic screening, and no screening programme at all do not appear to be desirable scenarios. Besides, a lot has happened since the first screening trials were established. The PSA-based screening strategy from 1993 has become outdated with the rise of new stratification tools like MRI and risk calculators. Against this background, an algorithm was recently developed for an organised prostate cancer screening strategy that uses the proven benefit of PSA testing and tackles overdiagnosis at the same time by applying further risk stratification using these new tools (see fig. 2) [9].

The algorithm
The algorithm starts with offering PSA testing to well-informed men in certain age groups (fig. 2A). Optimal testing intervals are dependent on previous PSA level, age, and comorbidity. The idea behind this is that the risk of developing clinically significant prostate cancer in the given time intervals (or remaining life expectancy) is not negligible. Therefore, more frequent testing is redundant. Further risk stratification is indicated for men with an elevated PSA level (fig. 2B). For those men, an individualised risk assessment of biopsy-deletable prostate cancer can be made by using risk calculators and MRI. The presented steps all aim to detect clinically significant prostate cancer at an early stage and reduce the number of unnecessary diagnostic procedures that will lead to less negative screening outcomes and insignificant cancer diagnoses. Important to realise is that for every step, a small number of diagnoses of clinically significant cancers will be missed. Therefore, the algorithm contains a safety net after every “negative screen” in terms of clinical follow-up. On the other hand, overdiagnosis of insignificant cancers will always remain to some degree. To prevent subsequent overtreatment, these men can be offered active surveillance to postpone or avoid active treatment.

Aspects to keep in mind and future challenges
Not all steps presented in the algorithm are based on studies in a screening setting or with the highest level of evidence. Also, the consensus is lacking on which diagnostic pathway and risk stratification tools are best. Fortunately, several screening trials are currently running that include the new stratification tools in different ways. Although these trials require, like the ERSPC and PLCO, a long follow-up to assess the effect on prostate cancer mortality, their preliminary results are promising when it comes to adequately detecting clinically significant prostate cancer and limiting overdiagnosis [10]. Another aspect to take into account is that some risk stratification tools will not, or not yet, be fully available in every region (e.g. high-quality MRI, expert readers, biomarker panels, or calibrated risk calculators). However, starting with applying the easily obtainable biomarker PSA density, as a simple, inexpensive, but strong predictor yields a huge gain compared to the purely PSA-based strategy.

Europe’s Beating Cancer Plan

The rise of prostate cancer in the list of cancer incidence and mortality rates reflects the necessity of implementing an organised early detection programme in the very near future. With this increasing burden of prostate cancer, we cannot wait another decade or longer for the long-term outcomes of the new screening trials to be published. Besides, as discussed above, the public awareness in combination with no organised screening at all paves the way for opportunistic screening, the situation right now, and does not go with any benefit and is related with even greater harm in terms of overdiagnosis. Thirty years of research has provided us with level 1a evidence of the positive effect of PSA-based screening on prostate cancer-specific mortality, and indirect evidence that points towards a solid early detection strategy, with much improvement compared to the PSA-only strategy. This sound is heard by the Europe’s Beating Cancer Plan committee who now encourages the Council to consider including prostate cancer screening in the update of the Council recommendations in 2022.

Summary
Traditional PSA-based screening reduces prostate cancer-specific mortality but goes with significant overdiagnosis. However, no organised screening at all paves the way for opportunistic screening which is an undesirable alternative due to the lack of benefit and the even greater harm in terms of overdiagnosis. Besides, prostate cancer incidence and related mortality continue to rise. New risk stratification tools such as risk calculators and MRI are the cornerstones in a new, balanced early detection strategy for prostate cancer. Although the optimal pathway for using these tools is not yet known, awaiting for the long-term outcomes of the new screening trials to answer, most important to stop is the increasing burden of prostate cancer in the very near future by disconnecting the link between PSA and immediate biopsy. This necessity and our current knowledge gained from thirty years of research on early detection of prostate cancer are

Friday, 1 July 10:30 – 13:30
Special Session Prostate Cancer
Orange Area, etPOI Auditorium

EUT Congress News
EUA 2022 Industry Satellite Symposium
Advancing patient care in the evolving prostate cancer treatment landscape
Sunday 3 July, 2022 • 17:45 – 19:15 (CEST)
Green Area • Room 1

Join us to hear these experts discuss recent advances in the nmCRPC and mHSPC treatment landscape

Agenda
Overall survival and delaying progression to mCRPC:
Are these endpoints gold standards for prostate cancer treatment?
17:45 Welcome and introduction
Bertrand Tombal
17:50 nmCRPC: Can we improve OS and time to mCRPC while maintaining QoL?
Martin Bögemann
18:15 mHSPC: Does early treatment intensification improve survival and delay progression to mCRPC?
Bertrand Tombal
18:35 Case studies in nmCRPC and mHSPC:
Translating data to practice
Christian Gratze
18:55 Panel discussion and Q&A
All
19:10 Closing remarks
Bertrand Tombal

Note: Reprinted from Eur Urol, 2021; Vol 76/issue 1. Hugosson J et al, A 16-yr Follow-up of the European Randomized study of Screening for Prostate Cancer. Copyright 2021, with permission from Elsevier.
Firstly, I would like to thank the European Association of Urology (EAU) and the Société Urologique Européenne (SUEO) for the distinguished honour of delivering the SUO lecture at the EAU annual meeting 2022.

The topic which I will be speaking about at the meeting pertains to “What are the data gaps in HPV-driven penile cancer?” Prior to embarking on this topic, I would like to highlight that I do not have any financial disclosures relevant to the subject matter and I only have a membership status at the Grey Area of the NCCN bladder and penile cancer panel, the president of the Global Society of Rare Genitourinary Tumors, and a member of the ASO/EAA panel on penile cancer.

The outline of my talk will be to review the biological pathways of relevance in penile cancer as well as pathological classification, discuss if there is a role of human papillomavirus (HPV) vaccination in prevention, highlight some of the data gaps emerging in standardised HPV testing, assess if there are any therapeutic implications of HPV status in treatment, and determine if there is any prognostic value of HPV testing in screening and surveillance.

Biological and classification

Prior to discussing the diagnostic and therapeutic implications of HPV in penile cancer, I would like to conduct a brief review of the important cancer biologic concepts central in understanding this malignancy. The concept of a cancer immunogram was initially described and popularised by Blank et al. and has great relevance in understanding cancer biology. [1] In this model of carcinogenesis and progression, a number of important host and tumour characteristics, and biological parameters, predict if and how cancer will occur. This includes tumour genotype, host immunity, and mutational load, in addition to the sensitivity to immune effectors, as well as innate host immune environment characteristics: lymphocyte count, intra-tumoral T-cell, PD-L1 status, absence of soluble inhibitors, and the absence of inhibitory tumour metabolism.

“...it is critical to appreciate that penile squamous cell carcinomas are not one group of homogeneous tumours, but are classified as HPV dependent or HPV independent tumours.”

As has been deciphered, there is significant interplay between the tumour and host environment that drive the likelihood and pattern of progression of penile neoplasia. These include the presence of HPV and the interplay of two key genes: E6 and E7. HPV-related squamous cell carcinoma of the penis is driven by these E6 and E7 proteins, thereby inducing genomic instability and the loss of the HPV ONCOLOGY, whereby inducing genomic instability and the loss of oncogene with these mediated through E6 and E7 proteins. [2] It is critical to appreciate that this can be dichotomised into immune inflamed or immune excluded tumours.

HPV contributes to a host of other malignancies including cervical, head and neck, anal, vulvar, and vaginal cancer.”

As we explore and discuss the data gaps in evolving to an HPV driven diagnostic and therapeutic paradigm, we can take reflection of some important concepts which come into play, the care of head and neck squamous cell carcinoma. In a prior study by Dahlstrom et al., the authors proposed a staging system for patients with both head and neck and cervical cancer which was personalised to the biology and pattern of progression of these tumours. [3] This work was critical in popularising the concept that a subclassification of HPV head and neck tumour staging by HPV status had scientific merit and this work was subsequently validated by the International Collaboration on Oropharyngeal cancer Network for Staging.

Unfortunately, no such scientifically rigorous HPV driven staging system is developed in penile cancer, with only a subclassification of penile cancer intraepithelial neoplasia developed, again missing the scientific rigor and prognostic robustness that has been so elegantly developed in oropharyngeal carcinoma.

HPV vaccination

One of the greatest areas of enthusiasm as it relates to penile cancer and many HPV related cancers, is that they are believed to be in large part preventable. The efficacy of HPV quadrivalent vaccines in preventing many HPV related cancers are well established, like head and neck, as well as cervical cancer. Although the rates of HPV vaccination remain disappointingly low worldwide including North America and Europe, with the limited access and education on the merits of HPV vaccination in many parts of South America and Africa being of significant concern. The landmark HIMS study by Furlan et al. established the safety and efficacy of quadrivalent HPV vaccine in 4,064 healthy boys and men in preventing HPV infection and the subsequent development of external genital lesions. [4] It is of note however, that although this study was impactful, it did not show a decreased prevalence in the incidence of penile cancer attributable to HPV vaccination among high-risk males. This most likely is a direct consequence on the rarity of this cancer and ultimately underperforming of the study constituting a limitation and clear gap in our knowledge on the subject matter.

HPV testing

Over recent years, many assays have been developed and commercialised for HPV testing. Only a certain subset of these tests are approved by North American or European governing bodies, and they also vary significantly in their diagnostic performance and level of peer reviewed literature supporting their clinical value. In this regard, the lack of standardisation in approved HPV testing assays and inconsistencies across studies make this an area of concern and a knowledge gap in global diagnostic standards.

Conclusions

There has been an exciting advance in our understanding of the biological pathways in penile cancer. Although HPV plays a critical role in penile carcinogenesis and we have made promising advances in our HPV directed strategies, there remains a plethora of unmet needs and knowledge gaps which must be overcome in making the next leap in our diagnostic and therapeutic strategies in penile cancer.

References

2. Eich ML, Rodriguez-Pena M, Schwartz L, et al. HPV, morphology, p53, and HPV status on the outcomes in squamous cell carcinoma of the penis. [J] On Cox multivariable logistic regression analysis, the strongest predictor of recurrence was perineal invasion. For metastatic progression it was lymphovascular invasion and the presence of HPV-related tumours based on histology (favourable predictor). And lastly, for overall mortality, it was lymphovascular invasion and urinary involvement.

“This... the lack of standardisation in approved HPV testing assays and inconsistencies across studies make this an area of concern...”
Selection, timing, dosing and redosing are four rules for effective result

Antibiotic prophylaxis in female pelvic surgery

The primary rationale for antimicrobial prophylaxis is to decrease the incidence of surgical site infection and other preventable perioperative infections, with the secondary goal of reducing antibiotic overuse. (1)

The choice of a correct pre-operative antibiotic prophylaxis is of primary importance in female pelvic surgery, especially when mesh is implanted, and this is even more if the mesh is positioned by the vaginal route.

Postoperative infectious complications related to the prosthesis have been recorded, (2) wound infection (3-6%), urinary tract infection (UTI) (1.5-13.2%) mesh infections (1%), vaginal infections (13-38.4%), and pelvic abscesses (1-2%). On these bases and taking into consideration that approximately one third of urological-neurological surgical procedures for pelvic organ prolapse (POP) or stress urinary incontinence are performed using a mesh material, antibiotic prophylaxis is recommended (2) as the choice of a correct regimen is of paramount interest.

Effective prophylaxis

Shapiro in 2017 (4) demonstrated that gynecologic surgeons overuse antibiotics for surgical prophylaxis without adhering to the American College of Obstetricians and Gynecologists (ACOG) and many surgeons indiscriminately use antibiotic prophylaxis for all surgeries even when evidence-based medicine indicates otherwise. Indiscriminate antibiotic prophylaxis can lead to multidrug resistant (MDR) pathogens, higher medical expenses and unnecessary exposure to adverse reactions or toxicities. (5-6)

There are four major rules to obtain an effective prophylactic: (i) correct antibiotic selection, (ii) timing of administration, (iii) dosing, and (iv) redosing. Goede reported that 79% of cases were missing correct application of at least one of these four components. (7)

Antibiotic selection should consider the most likely infectious organisms associated with the site(s) of surgery (the lower urinary tract, vagina, and intestine) and with the local antibiotic resistance patterns.

The optimal duration of antibiotics prophylaxis in female pelvic surgery is not known. Studies comparing single dose to multi-dose antibiotic prophylaxis regimens in patient undergoing prolapse surgery with mesh are lacking (8) and it is unclear if these women have any additional benefit. The correct timing is the administration within two hours prior to the incision.

To make the best choice also in accordance with Antibiotic Stewardship it is useful to create multi-disciplinary round tables and make a joint decision between surgeons, infectious disease specialists, and pharmacists.

The American Urological Association (AUA) and The American College of Obstetrics and Gynecology (ACOG) published their guidelines on the use of antibiotic prophylaxis in POP surgery taking into consideration some differences between abdominal and vaginal surgery. Female pelvic surgery is considered clean-contaminated procedure and we should consider that vagina could favour the spread of germs with the need of additional anaerobic coverage. (Table 1)

Due to emerging MDR, all the recommendations remain in flux; clinicians are urged to consult their local antibiograms and local infectious disease experts where needed. We all know the tremendous variability of bacteria susceptibility in clinical practice, with variation from hospital to hospital and provider to provider. The absence of strong evidence to support such variations, lead to rapid changing paradigms in perioperative prophylaxis in different setting.

Finally, high-level evidence in the choice of the right prophylaxis and regimen is still lacking and the recommendations are subject to changes.

References


Table 1: American Urological Association (AUA) and American College of Obstetrics and Gynecology (ACOG) recommendations

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*Due to space constraints, the entire reference list has been made available to interested readers upon request by sending an email to: communications@uroweb.org.*
There is great uncertainty regarding the best treatment for women with recurrent, or persistent, stress urinary incontinence (SUI) following a primary treatment. PURSUIT is a UK National Institute of Health Research (NIHR)-funded randomised controlled trial (RCT) which has been designed to assess the relative effectiveness of the currently available, high-quality clinical and scientific evidence to inform practice and guide decision-making for women and healthcare professionals.

Women are often reluctant to seek further treatment after experiencing a failed primary continence procedure. In addition, inconsistent classification by researchers means that exact rates of recurrent and persistent SUI are unclear. Many women with this condition have lived with symptoms, which severely affect their quality of life, for a significant period of time. Experience of having an unsuccessful treatment can cause considerable distress and there are substantial cost-implications associated with ongoing symptoms.

To address this, we are undertaking a study that provides evidence for the treatment options available for women presenting with recurrent SUI in the future.

**Study design**

PURSUIT is a two-arm RCT set in urology and urogynaecology units in 24 NHS hospitals across the United Kingdom. Women aged ≥18 years with bothersome recurrent or persistent SUI following a primary surgical intervention who are seeking further treatment are randomised to receive either endoscopic bulking injection(s) or a surgical operation. (Figure 1)

Women randomised to the surgical arm decide which operation to have through a preference-based shared decision-making process with their surgeon. Surgical treatment options include all those available under usual NHS care (as described above). All women receive their allocated treatment and are followed in hospital in accordance with routine NHS clinical practice.

A total of 250 women will be recruited over a 2-year period and followed up for 3 years, with equal numbers joining each treatment arm. The trial includes an integrated Quietness Recruitment Intervention (QRI) aimed at reassessing and optimising recruitment and informed consent and implementing recruitment intervention strategies, if needed. A nested qualitative interview study is also being conducted to explore clinicians’ and patients’ views on the treatment options and to understand patients’ experiences of their intervention.

The primary objective is to identify whether surgical treatment achieves a superior symptomatic outcome compared to endoscopic bulking injection treatment at 1-year post randomisation using the validated reported outcomes measure (PROM) (EuroQol Group’s 5-dimension health status questionnaire (EQ-5D-5L)); the safety of each intervention (adverse events) and the likelihood of re-treatment; the cost-effectiveness from an NHS and societal perspective at 2-year post randomisation and from a secondary care NHS perspective at 2-years post randomisation; women’s expressed views of interventions and associated quality of life (EQ5D-5L) and clinicians’ views of interventions.

**Progress and challenges**

PURSUIT opened to recruitment in January 2020 but was paused only 10 weeks later with the emergence of the COVID-19 pandemic. At the end of September 2020, the study received the go-ahead to re-start recruitment, but the impact of the pandemic on clinical and research teams at open and planned hospital sites is long-lasting and their capacity to conduct the study has still not returned to pre-pandemic levels even now, nearly 2 years on.

In addition to the direct impact of the pandemic, the prevalence of Surgeons’ (RCS) clinical classification is not life-threatening.

The results from PURSUIT will be of great benefit to healthcare professionals and women presenting with recurrent SUI in the future.

**References**


**Funding Acknowledgement**

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**Department of Health Disclaimer**

The views and opinions expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

**Sponsor Acknowledgement**

This study is sponsored by North Bristol NHS Trust.

We have questioned the appropriate use of a high-quality RCT classification for women with recurrent SUI. Their symptoms often started after childbirth, they have already had a treatment which has failed, and some of these women have also undergone removal of vaginal mesh which may have caused their symptoms to deteriorate to a level worse than when they first presented. The women eligible for PURSUIT have had chronic problems, affecting them for years or even decades. Despite multiple medical interventions, they also experience embarrassing leakage, which profoundly affects their self-esteem, relationships, and their occupation. These severe symptoms are marginalised by the focus on treatment and associated quality of life (EQ5D-5L) and clinicians’ views of interventions.

**Conclusion/impact on healthcare**

The results from PURSUIT will be of great benefit to healthcare professionals and women presenting with recurrent SUI in the future.
Potentiating immunotherapy with improved oncolytic viruses

Unleashing full potential of OVs in combination with other treatments

Clinical problem
Prostate cancer is the most common cancer in males and the third cause of cancer-related death in men in Europe. [1,2] Current treatments of primary prostate cancer with androgen deprivation therapy are initially very effective. However, beneficial responses are followed by tumour recurrence at distant sites leading to incurable, metastatic castration-resistant disease.

Prostate and bladder cancers are highly prevalent and constitute a major health burden in Europe. [2] Despite the prevalence and high economic costs, bladder cancer is still relatively understudied. [3] For patients with metastatic UC, systemic cisplatin-based chemotherapy is the standard-of-care. [4] This treatment has considerable side-effects and approximately 30% of patients either fail to respond or suffer recurrent disease within five years.

Immunotherapy has emerged as a viable and attractive strategy for the treatment of solid tumours, including those of the human bladder and prostate. Despite the success of immuno-therapeutic approaches in several tumour types, prostate cancer has remained largely unresponsive. Moreover, only about 30% of patients with metastatic bladder cancer will respond to immune checkpoint inhibition and the development of novel therapies for the treatment of solid tumours, including bladder cancer, has remained largely underinvestigated. [5-9] This treatment has considerable side-effects and approximately 30% of patients either fail to respond or suffer recurrent disease within five years.

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Oncolytic virotherapy

Currently, several immunotherapy approaches and combinations are under investigation in numerous clinical trials and various clinical scenarios, including immune checkpoint inhibitors (ICIs), cell-based therapy, and cancer vaccines. [5-9] ICIs encompass antibodies blocking the PD-1/PD-L1 pathway. These compounds have shown impressive and durable responses in several clinical trials. [10-21] Prostate and bladder cancers frequently escape from immune surveillance by creating an immune-suppressive tumour microenvironment. As a result, tumours from these patients remained largely unresponsive to treatment. [22-24] A few, however, more effective therapies for high-risk, advanced or metastatic patients are warranted.

Oncolytic viro-immunotherapy is a promising cancer treatment in which replication-competent oncolytic viruses are used that specifically infect, lyse malignant tumour cells, while minimising harm to normal cells. [25-26] Infection of tumour cells by oncolytic viruses (OVs) is now also realised for their immunotherapeutic potential by promoting strong antitumour and antitumour immune responses. Genetically engineered or naturally-occurring OVs can be exploited to kickstart the immune system either alone or combined with current immunotherapies for the treatment of bladder and prostate cancer patients. Worldwide, multiple OVs are under investigation and various clinical trials are ongoing with adenoviruses (Ad5), Newcastle Disease virus (NDV), Reovirus (RV) and Herpes simplex virus (HSV). Although OVs were originally designed to function as tumour-killing therapeutics, they have now been shown to initiate systemic antitumour immune responses (immunogenic cell death or ICD).

Upon oncolysis, tumour cells release damage-associated molecular patterns (DAMPs) [27-28] and pathogen-associated molecular patterns (PAMPs) [27-28] and DAMPs and PAMPs are recognised by antigen presenting cells and presented to T-cells thereby initiating a systemic, adaptive immune response. [29-33]

It is no longer considered critical for viruses to directly infect and kill every tumour cell. [29,33] Successful virotherapy results in inducing more effective anti-tumour immunity responses and/or reduction of immune suppression that shield tumour cells from the immune system. [34,35] OVs may, therefore, enhance anti-tumour responses in patients that fail to respond to current immune checkpoint blockade.

The outcomes of clinical trials highlight that the efficacy of oncolytic virus-immunotherapy varies between patients, depending on the tumour type and the applied oncolytic virus. [36] The observed heterogeneous anti-tumour responses to oncolytic viruses emphasise the clinical need for better stratification of cancer patients for viro-immunotherapy by selecting the most promising candidate OV in future clinical trials.

Developing oncolytic viruses for clinical use: a consortium approach

To rapidly develop and implement viro-immunotherapy as a treatment modality for cancer, multiple academic institutions collaborate in the Dutch Oncolytic Virus Immune Therapy Consortium (OVIT). The OVIT consortium consists of multidisciplinary teams of researchers and clinicians of three Dutch universities that are experts in virology, cancer immunology, (uro)oncology and surgery. [41] The major aim of the OVIT consortium is to develop an efficacious, safe and affordable viro-immunotherapy for patients with pancreatic, urothelial or glioblastoma tumours using promising oncolytic viruses from the participating groups, i.e., optimised Adenovirus, mammalian Reovirus and Newcastle disease virus strains.

Our data show that the variable responses to OV therapy is related to the susceptibility of the tumour cells to virus-induced oncolysis and the efficiency with which the immune system is activated upon OV infection of the tumour. Considering the variety of OVs, the multi-tide of genomic modifications in tumours and the diversity of tumour microenvironment immune landscapes, there is a clear need for platforms with predictive potential.

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Oncolytic viro-immunotherapy in urological cancers

At the Leiden University Medical Center (LUMC), we have isolated and identified a novel, promising candidate OV in future clinical trials. [41,42] Furthermore, we recently isolated and identified a novel, promising candidate non-human primates Adenovirus (NHP-AdV203) with strong oncolytic properties across multiple human cancer cell lines. [43,44] Non-human primate-derived adenoviruses form a valuable alternate for the use of human adenoviruses in vaccine development and gene therapy strate-gies by virtue of the low serorelevance of neutralising immunity in the human popula-tion. [44,45]

Selected Adenovirus and Reovirus strains display oncolytic properties in human Pca and BCA cell lines and ex vivo cultured, patient-derived tumour tissues. [41,46] Moreover, the tested viruses induce multiple mediators of immune cell death and immunostimulatory genes, but responses vary among the used OV and tumour combinations. [41,47] The latter observations highlight the importance of OV-tumour matching, hence a more personalised approach.

Combination therapy with oncolytic viruses

Various clinical trials have demonstrated that oncolytic, replication-competent mammalian reoviruses and human adenoviruses are safe for patients and can display antitumour efficacy-ori-in a variety of malignancies. Full responses of these monotherapeutic approaches, however, were found in only a minority of patients. It is, therefore, crucial to understand how OVs can be exploited in combination with existing treatment modalities, i.e., chemotherapy and immunotherapy, to unleash their full potential.

Due to space constraints, the entire reference list can be made available to interested readers upon request by sending an email to: communications@uroweb.org.

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Use of circulating tumour DNA could be used for “live” monitoring of treatment response

At the time of diagnosis, approximately one quarter of the patients with muscle invasive bladder cancer (MIBC) presents with metastasis or fixed tumour and are thereby not candidates for local curative intended treatment with cystectomy or radical radiotherapy of the remaining approximately 75% of MIBC patients with supposedly localized disease, between one third to two thirds will experience metastatic relapse despite intended radical local treatment.

The main reason for this is the presence of occult metastatic disease at the time of diagnoses. These micro deposits of metastasis is not visible despite modern FDG-PET/CT or other currently available imaging modalities. This will inevitably lead to a recurrence visible on imaging if left untreated which ultimately can lead to a fatal outcome.

Selection of patients for adjuvant treatment

In order to reduce the high treatment failure rate in MIBC patients, neoadjuvant chemotherapy has been recommended to high-risk patients prior to local radical treatment. Another strategy is to offer adjuvant systemic treatment after surgery patients with a high risk of recurrence based on conventional risk parameters (e.g. non-organ confined disease or remnant MIBC following neoadjuvant chemotherapy).

However, both strategies will inevitably lead to both overtreatment in classical high-risk patients as well as undertreatment in a fraction of the classical low-risk patients. This is based on the fact that not all apparently high-risk patients experience recurrence while these patients could do without a potentially harmful and expensive treatment if better selection was possible.

One very promising biomarker in modern molecular medicine is circulating tumour DNA (ctDNA). The tumour DNA contains tumour-specific parameters (e.g. non-organ confined disease or remnant MIBC following neoadjuvant chemotherapy).

Regarding the concept of ctDNA as a biomarker, it is important to recognize that the techniques for identifying ctDNA in its current use is based on a highly specialized individual design of assays designed individually to each patient or expensive sequencing approaches. This is time consuming and requires advanced laboratory and bioinformatic methods. However, the techniques and facilities are constantly evolving, leading to a more and more available method in studies and hopefully in a near future daily practice.

At this time point, the metastatic burden is higher, the disease is more molecularly heterogeneous, and therefore theoretically more treatment refractory compared to treatment close to the radical local treatment. If all patients with metastatic disease, and only these, instead could be treated at a very early time point this will reduce the number of patients suffering superfluous and potentially harmful treatment along with a reduction in cost as the non-recurrent high risk patients will be omitted from further treatment. Moreover, these patients have been lacking the but the future looks bright regarding this with the development of new molecular methods for detection of circulating tumour DNA (ctDNA).

While identification of the highly tumour-specific and patient-specific mutations in blood samples is associated with an extreme high positive predictive value (and a positive quantity related correlation with tumour burden) the negative predictive value is not perfect. Thus, selection of new tumour clones during ongoing systemic treatment can result in false negative findings or at least a nonlinear correlation between ctDNA dynamics and tumour burden. It is therefore important to continue to use conventional imaging in parallel to the introduction of this promising diagnostic technique, at least until more prospective studies and clinical trials have been conducted.

ctDNA in selection of patients for additional treatment following radical cystectomy cTMA represents the mutational spectrum of the tumour and is thus highly tumour-specific. Detection of cTMA following local radical treatment has proved to be associated with certainty of remnant carcinoma cells and thus leading to recurrence following a variable lead time. In a previous study, this lead time was proven to be variable between few months to years, but in all important, very positive findings in patients lead to a later or simultaneous clinical recurrence.

In the TOMBOLA setup, multiple time points for cTMA measurement are used over the whole standard-of-care follow-up period after cystectomy, but the long-term hope is that we will be able to identify the majority of high-risk patients by positive cTMA very early, a short time after CX in order to have the longest possible lead time to the time where a recurrence would have been visible on the first or second (μm8/m) conventional imaging. This will in theory lead to prolonged relapse-free survival, better long-term outcome and will reduce the current logistic challenges in the postoperative setting. Furthermore, a “continuous” monitoring surveillance scheme may be associated with a better quality of life.

A somewhat similar study is the ongoing IMeGirota 01 where also using positive cTMA to trigger early immunotherapy. In the IMeGirota 01, the patients are restricted to the classical high-risk patients that otherwise typically all would undergo adjuvant treatment. Introduction of widespread standard use of adjuvant immunotherapy can actually hamper the field of cTMA as studies will be forced to show non-inferiority of selected use of immunotherapy compared to a very liberal use. Introduction of new diagnostic methods like cTMA therefore calls for an intellectual reset of knowledge learned from studies without the use of these techniques. In the IMeGirota study, randomization is fortunately made against no adjuvant treatment, thus making it a superiority study.

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When and how to de-escalate surveillance in LR-NMIBC

Clear guideline recommendations exist regarding follow-up surveillance for low-risk non-muscle-invasive bladder cancer (LR-NMIBC), including the EAU Guidelines for NMIBC [1]. Nevertheless, there is evidence to suggest that such patients have more frequent cystoscopies than recommended by the Guidelines which in turn not only leads to more transurethral resection of bladder tumour (TURBT) but also an increased number of pathological specimens with no cancer [2]. Studies of active surveillance in LR-NMIBC have confirmed the rate of progression to muscle-invasive bladder cancer (MIBC) in LR-NMIBC under observation is extremely low [3]. This supports the notion that de-escalating surveillance in LR-NMIBC would not lead to “missing” patients who might progress to MIBC.

Options for de-escalating surveillance in LR-NMIBC

Less frequent cystoscopy

The current EAU Guidelines for NMIBC recommend that LR-NMIBC patients should undergo cystoscopy at three months post TURBT and if clear, again at nine months later and then annually for five years. However, this is a weak recommendation as only one months later and then annually for five years.

Recent studies have suggested that surveillance could be de-escalated without increasing the risk of recurrence or progressing to muscle invasive disease [4]. This supports the notion that de-escalating surveillance in LR-NMIBC have confirmed the rate of progression to muscle-invasive bladder cancer (MIBC) in LR-NMIBC under observation is extremely low [3]. This supports the notion that de-escalating surveillance in LR-NMIBC would not lead to “missing” patients who might progress to MIBC.

Unnecessary cystoscopy

Similarly, a recent study by Niwa et al. [5], 166 patients with LR-NMIBC were divided into two groups: one for ultrasound and one for ultrasound surveillance [6]. Both groups had a similar five- and 10-year recurrence-free survival although as expected, the time to first recurrence was shorter in the ultrasound group. Such an approach has in fact been adopted by the EAU Guidelines for NMIBC as an option for elderly frail patients who may find regular cystoscopic surveillance challenging [1].

Future developments

The recent development of low-cost, single-use flexible cystoscopy has introduced an intriguing paradigm in terms of de-escalating surveillance for LR-NMIBC, at least from the perspective of the urologist and health economics. Single-use scopes are simple and require minimal investment. This raises the possibility of “re-inventing” flexible cystoscopy as a true office procedure which could be carried out during a traditional outpatient consultation rather than in a dedicated endoscopy suite with its associated costs and staffing requirements. The potential benefits of such a “de-escalation” warrant further investigation.

References

DUODART 
(dutasteride/tamsulosin HCl) Capsules
Avodart dutasteride

LONG-TERM EVIDENCE

11,868 patients studied in landmark trials, with 6,909 patients on dutasteride as monotherapy or in combination with tamsulosin.

Abbreviation: 5-ARI, 5-alpha reductase inhibitor; LUTS/BPH, lower urinary tract symptoms secondary to benign prostatic hyperplasia.

In the Netherlands the registered trade name for dutasteride is Avodart and for dutasteride-tamsulosin is Combodart.

Abbreviated Product Information – Avodart (dutasteride)
Indication: Treatment of moderate to severe symptoms of benign prostatic hyperplasia (BPH). Reduction in the risk of acute urinary retention (AUR) and surgery in patients with moderate to severe symptoms of BPH. Dutasteride can be administered alone or in combination with the alpha-blocker tamsulosin (0.4mg). Adults: 1 capsule (0.5mg dutasteride) daily. The capsule should be swallowed whole and not be chewed or opened. Contraindications: Women, children and adolescents. Hypersensitivity to dutasteride, other 5-alpha reductase inhibitors, soya, peanut or any of the other excipients. Patients with severe hepatic impairment. Precautions: Combination therapy should be prescribed after careful benefit risk assessment. A study (REDUCE) has shown an increased incidence of Gleason 8-10 prostate cancer compared to placebo. A regular evaluation for prostate cancer must be performed. The mean serum prostate-specific antigen (PSA) concentration during treatment is reduced by 50% after 6 months of treatment. After 6 months of treatment, a new PSA baseline should be established. Digital rectal examinations must be performed for detection of prostate cancer prior to initiating treatment and periodically thereafter. In two 4-year clinical studies, the incidence of cardiac failure was marginally higher among subjects taking the combination however data from trials and other sources do not support a conclusion on increased cardiovascular risks with combination. Caution in mild to moderate hepatic impairment. Patients should be instructed to promptly report any changes in their breast tissue such as lumps or nipple discharge. Dutasteride is absorbed through the skin, therefore contact with cracked and leaking capsules should be avoided. Interactions: Verapamil, diltiazem, rifampicin, indinavir, nefazodone, itraconazole, ketoconazole administered orally. Pregnancy and lactation: Contraindicated. Using a condom is recommended if the partner is or may become pregnant. Reduced male fertility cannot be excluded. Side effects: Common: Dizziness, impotence, altered (decreased) libido, ejaculation disorders, breast disorders. Uncommon: Heart failure (collective term). Overdosage: In volunteer studies, single daily dose of 40 mg/day for 7 days had no significant safety concerns. There is no specific antidote for dutasteride, symptomatic and supportive treatment should be given as appropriate. Please refer to the Avodart SmPC for full information. (Based on Avodart UK SmPC effective May 2020)

Full SmPC of AVODART (19 May 2020) for UK is available at - https://www.mhra.gov.uk/csv/docs/ 4e9e7ef5a24d6cc7056b6b81805705299

Full SmPC of AVODART (16 April 2020) for Netherlands is available at - https://www. geneesmiddeleninformatiebank.nl/smpc/h10317_smrc.pdf

Abbreviated Product Information – Combodart/Duodart (dutasteride + tamsulosin)
Indication: Treatment of moderate to severe symptoms of benign prostatic hyperplasia (BPH). Reduction in the risk of acute urinary retention (AUR) and surgery in patients with moderate to severe symptoms of BPH. Dosage, adults: Adults: 1 capsule (0.5mg dutasteride/0.4mg tamsulosin) daily. May be used to substitute concomitant dutasteride and tamsulosin hydrochloride in existing dual therapy to simplify treatment. The capsule should be swallowed whole approximately 30 minutes after the same meal each day. Should not be chewed or opened. Contraindications: Women, children and adolescents. Hypersensitivity to dutasteride, other 5-alpha reductase inhibitors, tamsulosin (including tamsulosin-induced angio-edema), soya, peanut or any of the other excipients. A history of orthostatic hypotension or severe hepatic impairment. Precautions: Combination therapy should be prescribed after careful benefit risk assessment. A study (REDUCE) has shown an increased incidence of Gleason 8-10 prostate cancer compared to placebo. A regular evaluation for prostate cancer must be performed. The mean serum prostate-specific antigen (PSA) concentration during treatment is reduced by 50% after 6 months of treatment. After 6 months of a new PSA baseline should be established. Digital rectal examinations must be performed for detection of prostate cancer prior to initiating treatment and periodically thereafter. In two 4-year clinical studies, the incidence of cardiac failure was marginally higher among subjects taking the combination however data from trials and other sources do not support a conclusion on increased cardiovascular risks with combination. Caution should be used in severe renal impairment and mild to moderate hepatic impairment. Patients should be instructed to promptly report any changes in their breast tissue such as lumps or nipple discharge. Orthostatic hypotension may occur during treatment; caution should be exercised when given concomitantly with drugs causing hypotension. Discontinue treatment 1-2 weeks prior to surgery for cardiac due to risk of intraoperative floppy iris syndrome (IFIS). Dutasteride is absorbed through the skin, therefore contact with cracked and leaking capsules should be avoided. Contains Sunset Yellow (E110), which may cause allergic reactions. Verapamil, diltiazem, rifampicin, indinavir, nefazodone, itraconazole, ketoconazole administered orally. Pregnancy and lactation: Contraindicated. Using a condom is recommended if the partner is or may become pregnant. Reduced male fertility cannot be excluded. Side effects: Common: Dizziness, impotence, altered (decreased) libido, difficulty with ejaculation, breast disorders. Uncommon: Headache, Heart failure (collective term), palpitations, orthostatic hypotension, rhinitis, constipation, diarrhea, nausea, vomiting, urticaria, rash, pruritus, asthma. Overdosage: Acute overdosage with 5mg tamsulosin hydrochloride has been reported. In volunteer studies, single daily dose of 40mg/day for 7 days had no significant safety concerns. There is no specific antidote for tamsulosin. Symptomatic and supportive treatment should be given as appropriate. Please refer to the Combodart SmPC for full information. (Based on Combodart UK SmPC effective May 2020)

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Full SmPC of COMBODART (16 April 2020) for Netherlands is available at - https://www. geneesmiddeleninformatiebank.nl/smpc/h10435_smrc.pdf

For medical questions about this product, please contact the operating company in the country of your residence or call +31 (0)33-2081100 or email to ri.medischvraag@gsk.com for the Netherlands. Please report adverse events to the operating company in the country of your residence or call +31 (0)33-2081100 or email to ri.bewekevng@gsk.com for the Netherlands.

For the use of registered medical practitioner or a Hospital or a Laboratory only. Avodart/Duodart is for use in men only. Avodart/Duodart trade marks are owned by or licensed to the GSK group of companies.

GlaxoSmithKline BV, Van Asch van Wijcklaan SH, 3811 LP Amerstroom, The Netherlands

PM-GBL-DTT-ADVT-220001 Date of preparation: January 2022.
Staging and monitoring techniques and guidelines for investigating PCa in different clinical settings [1,2], and scan positivity increases with treatment changes and thus possibly a better role in improving patient outcome.

Prostate-specific membrane antigen (PSMA) is highly dependent as low as 2.3% in patients with PSA levels 0.2-0.49 ng/dL). [12] The pooled sensitivity and specificity of CT for LN detection as malignant. A meta-analysis reported overall specificity of PSMA PET/CT for nodal staging were 55% despite negative CI. The overall accuracy of PSMA PET was 95% for osseous lesions and 60% for soft-tissue lesions.

According to these results, it may be suggested that PSMA PET leads to an earlier detection of metastasis compared with CT and a change of clinical subtype, which may trigger earlier or different treatments. However, further prospective studies with an adequate outcome in terms of overall survival and quality of life has yet to be determined and further studies are warranted.

References
1. EAU Prostate Cancer Guidelines 2021: https://uroweb.org/guideline/prostate-cancer/

Figure 1. 67-year-old patient, PSA persistence (10.8 ng/mL after RP) (left, 18F-fluciclovine; right, 68Ga-PSMA with 11 months recurrence). PET/CT showed pelvic disease in 44%, including 24% with local prostate bed recurrence and distant metastasis in 59% despite negative CI. The overall accuracy of PSMA PET was 95% for osseous lesions and 60% for soft-tissue lesions.
**EUA22 AMSTERDAM 1-4 July 2022**

### Saturday, 2 July

**EUA22 Scientific Programme**

#### Plenary Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Game changing session 1</td>
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<tr>
<td>09:00</td>
<td>Game changing session 2</td>
</tr>
<tr>
<td>09:30</td>
<td>Going viral in urology</td>
</tr>
<tr>
<td>10:00</td>
<td>Post plenary discussion 'Challenges in renal cancer'. Meet the experts</td>
</tr>
<tr>
<td>10:45</td>
<td>Post plenary discussion 'Going viral in urology'. Meet the experts</td>
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#### Special Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>08:30</td>
<td>Prostate cancer early detection: What men need to know</td>
</tr>
<tr>
<td>10:30</td>
<td>Controversies on EAU Guidelines for PCa</td>
</tr>
<tr>
<td>12:15</td>
<td>New technologies and urological applications</td>
</tr>
<tr>
<td>13:45</td>
<td>Minimally invasive Young Academic Urologists (YAU)</td>
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<tr>
<td>14:00</td>
<td>Active surveillance for intermediate risk prostate cancer. What urologist and patients should know</td>
</tr>
<tr>
<td>18:00</td>
<td>EAU Opening Ceremony</td>
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#### Video Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:15</td>
<td>Evolutionary surgical technologies in prostate cancer</td>
</tr>
<tr>
<td>10:45</td>
<td>Functional urology. The Full Monty</td>
</tr>
<tr>
<td>11:15</td>
<td>Training models and complication management</td>
</tr>
<tr>
<td>14:00</td>
<td>EAU Session Meetings</td>
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<tr>
<td>10:45</td>
<td>Evolving surgical technologies in prostate cancer</td>
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<tr>
<td>11:30</td>
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<tr>
<td>11:45</td>
<td>Different approaches to RARP</td>
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#### Abstract Sessions

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:15</td>
<td>Affordable techniques in urology - High quality at low costs</td>
</tr>
<tr>
<td>10:25</td>
<td>Modern education and resident's clinical training in 2022</td>
</tr>
<tr>
<td>10:35</td>
<td>Infections - Bench to bedside</td>
</tr>
<tr>
<td>10:45</td>
<td>Localised kidney cancer: Treatment outcomes and complications</td>
</tr>
<tr>
<td>11:45</td>
<td>NMBRC early diagnosis and improvement of cancer management</td>
</tr>
<tr>
<td>12:30</td>
<td>Searching the evidence in urology: Systematic review and meta-analysis</td>
</tr>
<tr>
<td>12:45</td>
<td>Risk stratification and treatment for recurrent disease</td>
</tr>
<tr>
<td>13:15</td>
<td>Post plenary discussion 'Challenges in renal cancer'. Meet the experts</td>
</tr>
<tr>
<td>14:05</td>
<td>NMBRC - Advancements in diagnostics, follow-up and treatment</td>
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### Sunday, 3 July

**EUA22 Scientific Programme**

#### Plenary Sessions

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<tr>
<th>Time</th>
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<tr>
<td>07:30</td>
<td>Game changing session 3</td>
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<tr>
<td>09:00</td>
<td>Game changing session 4</td>
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<tr>
<td>09:30</td>
<td>PCa high-risk local treatment</td>
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<tr>
<td>10:00</td>
<td>Personalised surgical management of mRCC</td>
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<tr>
<td>10:30</td>
<td>Post plenary discussion 'PCa high risk local treatment'. Meet the experts</td>
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<tr>
<td>11:00</td>
<td>Post plenary discussion 'Personalised surgical management of LUTS/BPO. Meet the experts</td>
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#### Thematic Sessions

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:15</td>
<td>Semi-viwe surgery: Robotic reconstructive surgery</td>
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<tr>
<td>10:45</td>
<td>Management of mRCC</td>
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<tr>
<td>11:15</td>
<td>Tests in cancer: Pushing boundaries in diagnosis and treatment</td>
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<tr>
<td>11:45</td>
<td>Semi-lii surgery: Transition of urological conditions - From childhood to adulthood</td>
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<tr>
<td>12:15</td>
<td>Prostates in reconstructive urology: Business as usual or still experimental</td>
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<tr>
<td>12:45</td>
<td>Already prime time?</td>
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<tr>
<td>13:15</td>
<td>Female stress urinary incontinence: Practical surgical management</td>
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<tr>
<td>13:45</td>
<td>Controversies in pelvic urology: Men's health. An update on hypogonadism management in all urology</td>
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#### Video Sessions

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<tr>
<td>12:45</td>
<td>Video sessions</td>
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<tr>
<td>10:15</td>
<td>Evolving surgical technologies in prostate cancer</td>
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<td>16:45</td>
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<tr>
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<td>Post plenary discussion 'Challenges in renal cancer'. Meet the experts</td>
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<tr>
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<td>NMBRC - Advancements in diagnostics, follow-up and treatment</td>
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### Monday, 4 July

**EUA22 Scientific Programme**

#### Plenary Sessions

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<tr>
<th>Time</th>
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<tr>
<td>07:30</td>
<td>Game changing session 5</td>
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<tr>
<td>08:00</td>
<td>Game changing session 6</td>
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<tr>
<td>08:30</td>
<td>Liquid biomarkers in 2022 and beyond:</td>
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<tr>
<td>09:00</td>
<td>Stones: The sky is the limit</td>
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<tr>
<td>10:30</td>
<td>Post plenary discussion 'Liquid and markers in 2022 and beyond: Ready for prime time? Meet the experts</td>
</tr>
<tr>
<td>11:30</td>
<td>Post plenary discussion 'Stones: The sky is the limit'. Meet the experts</td>
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#### Thematic Sessions

<table>
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<tr>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Guidelines session: Urinary tractulation</td>
</tr>
<tr>
<td>11:30</td>
<td>Guidelines session: Complications of prostate cancer treatment and their management</td>
</tr>
<tr>
<td>12:30</td>
<td>Key questions in advanced treatment of bladder cancer</td>
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<tr>
<td>13:00</td>
<td>Semi-viwe surgery: Robotic cystectomy</td>
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<tr>
<td>14:00</td>
<td>Game changing session 7</td>
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<tr>
<td>15:00</td>
<td>Complications in stone treatment</td>
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<tr>
<td>16:00</td>
<td>Management of defects in genetic and epigenetic factors influencing the male reproductive potential</td>
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<tr>
<td>17:00</td>
<td>Androgen receptor and cellular plasticity in prostate cancer: How to improve therapies</td>
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#### Video Sessions

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<th>Time</th>
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<tbody>
<tr>
<td>10:15</td>
<td>Pathology review on mpRCC</td>
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<tr>
<td>11:00</td>
<td>NMBRC - Advancements in diagnostics, follow-up and treatment</td>
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<tr>
<td>11:45</td>
<td>Video sessions</td>
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<tr>
<td>12:15</td>
<td>Partial nephrectomy roadmap</td>
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<tr>
<td>12:50</td>
<td>Novel approaches in retroperfusion and transplant surgery</td>
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#### Abstract Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>12:15</td>
<td>Best EUA22 abstracts selected by the Scientific Committee</td>
</tr>
<tr>
<td>13:15</td>
<td>Liquid- and tumour biomarkers in prostate cancer</td>
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<tr>
<td>14:00</td>
<td>The patient’s choice of how to treat</td>
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<tr>
<td>14:30</td>
<td>Trauma and urogenital reconstruction</td>
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<tr>
<td>15:00</td>
<td>Optimisation of treatment in locally advanced disease</td>
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<tr>
<td>15:30</td>
<td>Stones and endourology: Perioperative and urologic care</td>
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<tr>
<td>16:30</td>
<td>Guidelines, evidence-based medicine</td>
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<tr>
<td>17:30</td>
<td>Advanced urological cancer - Organs, nerves, and tumour biomarkers</td>
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<tr>
<td>18:30</td>
<td>Modern renal transplantation</td>
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<tr>
<td>19:00</td>
<td>Rare diseases with special focus on von Hippel-Lindau</td>
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<tr>
<td>19:30</td>
<td>Novel therapies and biomarkers in renal cancer</td>
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<tr>
<td>20:00</td>
<td>Improving functional outcome of prostatectomy</td>
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<tr>
<td>21:00</td>
<td>ERUSURS - Experience in the world of robotic surgery</td>
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<tr>
<td>21:30</td>
<td>Improved functional outcome of prostatectomy</td>
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<tr>
<td>22:00</td>
<td>Prostate cancer</td>
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<td>22:30</td>
<td>Life after cancer</td>
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#### Special Sessions

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<tbody>
<tr>
<td>17:45</td>
<td>Best of EU22 session</td>
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## Schedule of ESU and HOT Courses at EAU22

### Friday, July 1

**9:00 - 12:00**
- **HOT Course 58**
  - ESU/ESFU Hand-on Training Course in Urodynamics
- **ESU Course 34**
  - Flexible ureteroscopy and retrograde intrarenal surgery: Instrumentation, techniques, tips, tricks and indications

**10:00 - 13:00**
- **ESU Course 24**
  - Therapeutics in prostate cancer
- **ESU Course 01**
  - Advanced vulvar reconstruction

**12:30 - 15:30**
- **ESU Course 05**
  - Robotic pelvic pain in men and women

**14:30 - 17:30**
- **ESU Course 03**
  - Prostatic urethra dysfunction and urethrodynamics
- **ESU Course 02**
  - Lower urinary tract dysfunction and urethrodynamics

**Saturday, July 2

**8:30 - 10:30**
- **ESU Course 07**
  - How to write the introduction and methods
- **ESU Course 09**
  - Treatment of small renal masses
- **ESU Course 10**
  - Oligometastatic prostate cancer

**8:30 - 13:30**
- **ESU Course 11**
  - Prostatic urethra dysfunction and urethrodynamics

**12:00 - 14:00**
- **ESU Course 12**
  - Robotic-assisted laparoscopic prostatectomy
- **ESU Course 15**
  - Practical approach to perineal urethra surgery

**15:30 - 17:30**
- **ESU Course 16**
  - Urethral trauma and genitourinary trauma
- **ESU Course 18**
  - Urinary tract infection and microbial urology

**Sunday, July 3

**8:30 - 11:30**
- **ESU Course 08**
  - Metabolic workup and non-surgical management of urinary stone disease
- **ESU Course 25**
  - Male genital diseases
- **ESU Course 26**
  - Metastatic prostate cancer

**8:30 - 11:30**
- **ESU Course 27**
  - Focal therapy in prostate cancer

**15:30 - 17:30**
- **ESU Course 42**
  - Practical tips for pelvic laparoscopic surgery: Cystectomy, radical prostatectomy adenomectomy and sacrocolpopexy

**18:00 - 18:00**
- **HOT Course 09**
  - ESU/ESUFT/ESUI Hands-on Training Course in Urodynamics

**18:00 - 16:30**
- **ESU Course 25**
  - ESU/ESUI Hands-on Training Course in Basic laparoscopy

**18:00 - 16:30**
- **ESU Course 23**
  - ESU/ESUI Hands-on Training Course in Endoscopic stone treatment

**Monday, July 4

**8:30 - 11:30**
- **ESU Course 43**
  - Updated renal, bladder and prostate cancer guidelines 2022: What has changed?
- **ESU Course 44**
  - Prostate management and female pelvic floor problems

**14:30 - 17:30**
- **ESU Course 45**
  - The fertile couple: Urological aspects
- **ESU Course 46**
  - Advanced course on urethral strictures surgery

**12:15 - 15:15**
- **ESU Course 54**
  - Update on stone disease

For the complete list of Hands on Training ESUs and E-ESUS courses on Monday 4 July, check the scientific programme at www.eau22.org/scientific_programme

**June/July 2022**

**EUT Congress News**
The European Association of Urology (EAU) Urolithiasis Guidelines were first published in 2000. The guidelines cover most aspects of the disease, which is still a cause of significant morbidity despite technological and scientific advances. Every year an international group of clinicians with expertise in urolithiasis scrutinises the available evidence, discusses discrepancies, agrees on goals and identify areas that require more detailed analysis and refreshing.

In addition, topics are proposed to the Central Guidelines Office for consideration of systematic review. The purpose of the guidelines is to help urologists assess evidence-based management of stones/calculi in the urinary tract and incorporate recommendations into clinical practice. The full text version of the guidelines is available online and can be accessed through the EAU website: www.uroweb.org/guidelines/uro lithiasis. An abridged version intended as a quick reference document (EAU Pocket Guidelines) is also available, both in print and as an app for iOS and Android devices.

Summary of changes
As always, the literature for the entire previous guideline document (2020) has been checked, and whenever relevant, updated with references and supporting text. For 2022, two new sections have been added: radiation exposure and protection during endourology, and the follow-up of urinary stones. Throughout the text, passages on best clinical practice for the use of different interventions have been added to the relevant sections. In addition, medical expulsive therapy has been thoroughly revised, and the bladder stone guideline (previously a separate document), has been integrated into this text.

Four new algorithms have also been added this year:
• Follow-up duration of urinary stone patients after treatments (Fig. 1)
• Consensus on follow-up frequency and imaging modality to use after treatment (Fig. 2)

Table 1: Radiation protection measures

| Limitations of intervention involving radiation exposure to those that are strictly medically necessary. |
| Implement patient electronic record of medical imaging. |
| Make use of imaging studies with lower radiation doses (US, KUB, digital radiography), low-dose and ultra-low-dose CT scan. |
| Create and follow a precise radiation exposure protection protocol in your department. |
| Act in accordance with the as low as reasonably achievable (ALARA) principle. |
| Measure and report fluoroscopy time to the operating surgeon (use dosimeters and perform random monitoring). |
| Technical measures to reduce radiation exposure include: |
| Reducing fluoroscopy time; |
| Limiting time adjacent to patient; |
| Using low-dose radiation; |
| Irradiating only to observe motion; |
| Intra-operative use of pulsed fluoroscopy; |
| Reduced fluoroscopy pulse rate; |
| Collimated fields; |
| Avoid digital image acquisition and rely on last image hold and instant replay technology. |
| Use radiation protection instruments (chest, pelvic and thyroid shields, lead or lead-free gloves, protective glasses, lead protection under the operating table between the x-ray source and the surgeon). |
| The radiation protection instruments must be cared for appropriately as any damage decreases effectiveness and increases exposure risk. They should be monitored and measured regularly to ensure integrity. |
| Proper surgeon and operating room setup should be observed (follow the inverse square law, use the x-ray source under the patient’s body, decrease the x-ray source to patient distance, reduce magnification, avoid field overlap by not turning the C-arm in extreme angles, operate in the standing rather than the seated position). |

New sections

Radiation exposure and protection during endourology
The diagnosis and treatment of urolithiasis is associated with high levels of ionising radiation exposure to patients. Currently there are no studies estimating the lifetime radiation exposure of stone formers, or the subsequent risk of malignancy development. The radiation exposure of endourologists has been extensively studied, but there are no studies assessing the risk of radiation-induced malignancies in urologists or operating theatre staff members.

Current evidence from atomic bomb patients, prospective epidemiological data on medical exposure and modelling studies suggest an age and dose dependent risk of secondary malignancy from ionising radiation. The International Commission on Radiological Protection (ICRP) recommends a maximum annual occupational exposure of 50mSv. However, this radiation-induced malignancy follows a stochastic model having no known safe threshold of exposure. Taking this into consideration, as well as the length of a urologists career, the upper limit of 50mSv is still highly concerning.

Availability of fluoroscopy is mandatory for endourological procedures. There is an increasing interest on fluoroscopy and fluoroless-free operations in urology. Several RCTs have been published showing a good outcome in terms of stone-free and complication rates. These trials have been limited to non-complex cases and they were not sufficiently powered to show non-inferiority of fluoroscopy in PNL or superiority of ultrasound in URS.

The main reason for this lack of agreement is the lack of clinical heterogeneity of stone disease among patients. The EAU Urolithiasis Guidelines Panel performed a systematic review questioning the benefits and harms of scheduled follow-up for patients who underwent definitive treatment (extracorporal shock wave lithotripsy, ureteroscopy, percutaneous nephrolithotomy, medical chemo prophylaxis).

The panel aimed to answer three main questions regarding urolithiasis follow-up:
1. In patients with no residual fragments, does imaging follow-up after treatment for upper urinary tract stones offer more clinical benefits than harms compared with no scheduled follow-up?
2. In patients with residual fragments, does imaging follow-up after treatment for upper urinary tract stones offer more clinical benefits than harms compared with no scheduled follow-up?
3. Does biochemical urine analysis follow-up after treatment for upper urinary tract stones offer more clinical benefits than harms compared with no scheduled follow-up?

The panel used data from the eligible observational and randomised studies included in the systematic review to identify the time of patient discharge after follow-up according to stone disease status (stone-free patients, patients with residual stones, patients with metabolic abnormalities), and to come to a consensus on frequency of follow-up and use of investigations.

From a pooled analysis of 5,467 stone-free patients, the panel estimated that a safety margin of 90%, patients should be followed-up using imaging, for at least two years (radiopaque stones), or at least three years (radiolucent stones) before discharge, while for a safety margin of 90%, patients should be discharged after five years of no recurrence.

Regarding residual disease, patients with fragments <4 mm could be offered either surveillance for up to four years, based on intervention rates ranging between 29-36%, disease progression between 9-34% and spontaneous passage between 21-54% at 49 months. Patients with larger residual fragments should be offered further definitive intervention, since intervention rates are high (2a-100%).

Insufficient data exists for high-risk patients, but current literature dictates that patients who are adherent to targeted medical treatment seem to experience less stone growth or re-growth in residual fragments and may be discharged after 16-18 months of non-progressive disease on imaging. (See Fig. 3)

Conclusion
A panel consensus was reached after extensive discussion of data regarding frequency of follow-up. In the stone-free general population, the vast majority of patients remained stone-free during the 1st year, in contrast with patients with metabolic abnormalities not under targeted medical treatment, <4% were stone-free three years after follow-up. Therefore, a more extensive follow-up is proposed for patients with metabolic abnormalities.

Patients with small residual fragments (<4 mm), showed a spontaneous expulsion at 129-146% and growth rate at 101-125% during the 1st year, while patients with larger fragments (>4 mm) had only 9% of spontaneous expulsion at three years. Therefore, patients with small <4 mm, asymptomatic fragments should be followed-up or counselled for an intervention according to patient preference, while those with larger stones should primarily be offered re-intervention. Proposed imaging consists of plain X-ray KUB and/or US, based on stone characteristics and clinicians’ preferences. Computed tomography scan should be reserved for symptomatic disease or pre-operative imaging, in order to avoid extensive radiation exposure. (See Fig. 2)

New algorithms
Due to space constraints, Figures 3 and 4 are available upon request via: communications@uroweb.org

Conclusion
The 2022 EAU Guidelines have seen some significant changes and new sections added. This is part of the constant drive to improve the guidelines and provide recommendations and best clinical practice advice for colleagues based on the newest and highest levels of evidence possible.

For the 2023 update we have the following aims:
- Evaluate the highest evidence for best clinical practice and guidelines
- Perform a systematic review on patient and personnel radiation protection during endourology
- Question the accuracy of stone size as the surrogate index on deciding the treatment of urinary stones.

Monday, 4 July 13:30 – 12:00
Thematic Session 11
Grey Area, eURO Auditorium 2
GET ON BOARD TO APPRECIATE THE INFLUENCE OF PSMA ON PROSTATE CANCER MANAGEMENT

SYMPOSIUM PROGRAM

Improvements in metastatic prostate cancer: Focus on imaging and treatment
CHAIR: DR ALICIA MORGANS

→ PROF STEFANO FANTI
DIRECTOR OF NUCLEAR MEDICINE DIVISION AND PET UNIT AT S. ORSOLA POLYCLINIC HOSPITAL IN BOLOGNA, ITALY
What is PSMA all about?
20 min

→ PROF JOCHEN WALZ
HEAD OF THE DEPARTMENT OF UROLOGY AT THE INSTITUT PAOLI-CALMETTES CANCER CENTRE IN MARSEILLE, FRANCE
When does PSMA help me?
20 min

→ DR ALICIA MORGANS
MEDICAL DIRECTOR OF THE SURVIVORSHIP PROGRAM AT DANA-FARBER CANCER INSTITUTE IN BOSTON, USA
The future of prostate cancer management
20 min

→ Patient cases discussion and roundtable
30 min
The Leading
Prostate Focal Therapy
Controlled by Urologists

Target Localization
- Biopsy map
- MRI targets
- Elastic fusion with real-time U/S

Precise Planning
- Anatomical contouring
- Urologist-centered interface

Focal Ablation
- Dynamic Focusing
- Fully robotic
- Real-time adjustments

29MHz High Resolution
Real-time Visualization
300% improvement over conventional ultrasound for higher cancer detection and risk stratification

Transperineal or
Transrectal Approaches
All-in-one platform with 15-minute protocol for standard and targeted biopsies in the hands of the urologist

FusionVu™
Micro-Ultrasound / MRI
Cognitive Assist™ or full real-time MRI alignment to maximize the added value of both image modalities

Focal One®
Indicated for the treatment of localized prostate cancer. Focal One® is intended for the destruction of a localized adenocarcinoma of the prostate gland by high intensity focused rectal ultrasound. Manufactured by EDAP TMS, Focal One® is a regulated Class IIb medical device, which carries the CE mark under these regulations. Its conformity assessment was carried out by G-MED (0459). It is advisable to consult the user’s manual beforehand.

EDAP TMS
- 4, rue du Dauphiné - 69120 Vaulx-en-Velin - France
Tel. +33 (0)472 153 150 • www.edap-tms.com • contact@edap-tms.com
SWL in COVID-19 era - Reconsideration of its clinical value.

The unprecedented introduction of COVID-19 in February 2020 has dramatically influenced all parts of medicine and changed our practice patterns in stone management to a certain extent. Although the urologists did not know how to act in the very beginning of the pandemic without any preparation, based on the experience obtained over time recommendations were made to select the best approach for dynamics and urgent cases and on-resident or off-resident procedures to limit the risk of infection spread.

“Based on the facts and evident changes in the practice patterns, elective stone procedures such as RIRS and PCLN needed to be postponed during the outbreak of the pandemic. Regarding the treatment of obstructive ureteral stones, ureteral stents and nephrostomy tubes insertion were commonly preferred to drain the system in an urgent and effective manner.”

Experience gained during COVID-19 period has clearly demonstrated that the routine practice patterns for stone management were reported to be altered by the vast majority of the urologists. The possible reasons for such an alteration can be listed as follows: First of all, the elective surgeries were not allowed in most of the hospitals and non-emergent stone interventions were cancelled. Secondly, the anesthesia during the operation could be considered as an important risk factor for the dissemination of the viral infection not only for the patient but also for the health care professionals. Another important reason could be the possible unexplained risk of infection from the use of general anesthetics inspired by individuals. Furthermore, during the hospitalization of these patients, there may be an increased risk of acquiring infections in the hospital wards and other health care professionals, relatives, visitors of the patients.

Based on the facts and evident changes in the practice patterns, elective stone procedures such as RIRS and PCLN needed to be postponed during the outbreak of the pandemic. Regarding the treatment of obstructive ureteral stones, ureteral stents and nephrostomy tubes insertion were commonly preferred to drain the system in an urgent and effective manner. As the majority of the stone cases refer to the emergency department, shock wave lithotripsy (SWL) may have been altered in more majority of the patients during this period due to the absence of elective surgery centers. A significant proportion of stone cases may be COVID-19 infected cases. While timely management of these cases in the emergency department is crucial other management strategies including surgical management to some extent and widespread application of SWL (on an outpatient based manner) gained more importance. SWL was the only treatment choice which allowed stone management without any anesthesia and relevant risks for the spread of the infection.

In the light of all facts experienced during unexpected COVID-19 pandemic, as a non-invasive surgery and a procedure "emergency SWL" (allowing an efficient social-surgical distance for the patient and the endourologist) began to be applied more commonly than ever with safe and highly successful outcomes.

Future perspectives: Emerging technologies

Since the introduction of the Domier HM-3 lithotripter, advancements in terms of shock wave generation, focusing, patient coupling and stone localization. The implementation of multifunctional lithotripters has made SWL available to urology departments worldwide.

References
Highlights: What went wrong with PSA and PCa?

The proposed algorithm is a useful tool for a risk-adapted strategy

Prostate Specific Antigen (PSA) was originally meant to be a diagnostic and follow-up tool for prostate cancer but not a screening tool. The research on an antigen in the human semen started in the 1970’s and it was Dr. T. Ming Chu (US) at Roswell Park Memorial Institute who discovered a “purified human prostate antigen” in 1976. However, in the early 1990’s, PSA was introduced as a screening tool. The test was not expensive and required only minimal investment.

While the decrease in mortality from cancer has been shown to be the most significant for prostate cancer as compared to all other malignant tumours in the years 2005-2009, the over diagnosis and over treatment issue has meant that PSA testing was generally discouraged. This in turn led to the end of prostate cancer mortality in the USA, and even a small increase was recorded five years after the recommendations against PSA testing. In fact, in the USA and in Germany, more men die from prostate cancer than from breast cancer.

Late diagnosis

The increase in deaths has occurred because when less PSA testing is done, prostate cancers are detected more often in an advanced or metastatic stage, a phenomenon called “reverse stage migration.” As a consequence, prostate cancer is now the most prevalent cancer in Sweden and the number two in an increasing number of countries in the European Union.

While EU level guidance on cancer screening programs were recommended in 2003 by the European Council for breast-, cervical- and colorectal cancer screening programs were recommended in 2003 by the European Council for breast-, cervical- and colorectal cancer, these recommendations have never been adopted or implemented in any country.

The future

While the decrease in mortality from cancer has been shown to be the most significant for prostate cancer as compared to all other malignant tumours in the years 2005-2009, the over diagnosis and over treatment issue has meant that PSA testing was generally discouraged. This in turn led to the end of prostate cancer mortality in the USA, and even a small increase was recorded five years after the recommendations against PSA testing. In fact, in the USA and in Germany, more men die from prostate cancer than from breast cancer.

Prof. Hendrik Van Poppel
KU Leuven and EAU Policy Office Chair (Leuven) (BE)
hendrik.vanpoppel@kuleuven.be

Mrs. Sarah Collen
EU Policy Manager, EAU
Brussels (BE) s.colleen@eurweb.org

Friday, 1 July 10:30 – 13:30
Special Session Prostate Cancer
Orange Area, eURO Auditorium 1

Figure 2: An algorithm to illustrate the EAU’s risk-adapted strategy for the early detection of prostate cancer in well-informed men.

- Risk-adapted algorithm for the early detection of prostate cancer, adapted based on prostate cancer guidelines published by the EAU. The patient’s values and preferences should always be taken into account as part of a shared decision-making process.
- DRE = digital rectal examination; EAU = European Association of Urology; MRI = magnetic resonance imaging; PI-RADS = Prostate Imaging Reporting and Data System; PSA = prostate-specific antigen.
- *Healthy men ≤70 yr without important comorbidities and a life expectancy of ≥10 yr may continue PSA testing.
Management of testicular non-germ cell tumours
Treatment and follow-up recommendations

Dr. Christian Daniel Fankhauser
Lucerne Cantonal Hospital
Department of Urology

June/July 2022

Most testicular tumours are germ cell tumours (GCTs), whereas rare non-germ cell tumours represent the second largest group of primary testicular tumours and include Leydig, Sertoli, Granulosa or unspecified subtypes. [1,2] Another rare subgroup of testis tumours referred to as paratesticular tumours are variously classified as spermatic cord, tunica vaginalis, and spermatic cord sarcoma. [3] These tumours are less common than GCTs, [7] and the incidence of metastatic disease has never been reported in juvenile Granulosa cell tumours, men with the adult type may occasionally present with metastatic disease. [23] Survival of men with metastatic disease is poor, although reports of surgery has been occasionally reported. [2] Therefore, adjuvant RPLND for patients with stage I disease and the presence of pathological risk factors may also be indicated in selected men with Sertoli cell tumours.

Granulosa cell tumours
Whereas metastatic disease has never been reported in juvenile Granulosa cell tumours, men with the adult type may occasionally present with metastatic disease. [34] Therefore, adjuvant RPLND for patients with stage I disease and the presence of pathological risk factors may also be indicated in selected men with Sertoli cell tumours.

Spermatocytic tumours
These tumours are unrelated to germ cell neoplasia in situ (GCNIS) or secondary cancerisation of chromosome Y corresponding to the DMR1 gene. [2] Men with spermatocytic tumours predominantly do not exhibit elevated serum tumour markers. [2] As those tumours cannot be differentiated from a GCNIS by frozen section analysis, radical orchidectomy is the standard treatment option. Outcomes after testis-sparing surgery or adjuvant treatment are unknown and therefore not recommended. [2a] Metastatic disease is very rare and typically presents at or soon after initial diagnosis with limited survival. [2a]

Mesothelia of the tunica vagnalis testis
Mesothelia of the tunica vagnalis testis is a rare but aggressive disease. [5] Aside from older age, larger tumour size, presence of necrosis, angio-lymphocytic invasion or a high mitotic index, the only modifiable risk factor for metastasis is local recurrence. Therefore, aggressive local treatment with hemicolectomy is recommended. No clear suggestion can be made regarding adjuvant treatment. In the case of metastatic disease, the median overall survival is only a few months and a multidisciplinary approach is recommended.

Follow-up
After local surgical treatment is completed, attention turns to follow-up strategies with the aim of detecting early-stage tumour recurrence or secondary cancers at a stage when the suggestion can be made regarding adjuvant treatment. [17] Therefore, adjuvant RPLND for patients with stage I disease and the presence of pathological risk factors may also be indicated in selected men with Sertoli cell tumours.

In conclusion, given the rarity of those rare paraga- testicular cancers together with the poor prognosis in the metastatic setting, I suggest referral of these cases for multidisciplinary discussion including central imaging and pathology review.

References
16. Heng, B.L., et al., Follow-up analysis following completion of primary cancer treatment in adult cancer survivors. Cochrane Database of Systematic Reviews, 2020(1).
24. June 30, 2022 - 12:05 Thematic Session 03
Green Area, Room 1
Epispadias reconstruction techniques
An update from 326 patients treated from 2013 to 2021

Dr. Rados Djilovic
Sava Perovic Foundation
Center for Genito-Urinary Reconstructive Surgery
Belgrade, Serbia
perovicfoundation@gmail.com

Epispadias is very rare and most complex congenital anomaly of the penis, and its treatment presents a real challenge for many experienced surgeons; ideal functional and aesthetic result is still hard to achieve. It can be found isolated or joined with bladder exstrophy.

Contrary to traditional view that epispadias is only a urethral problem, in reality all penile structures are deviant: cavernosal bodies are triangular, separated and dorsally curved with reduced upper length; neurovascular bundle (NVB) is also split by urethral plate that is widely open dorsally and placed between cavernosal bodies; it continues into the dorsally opened glans; in proximal and majority of middle forms bladder neck is widely opened anteriorly and incompetent; penile skin is missing dorsally and is widely spread between scrotum and penile base ventrally, in rare cases of isolated epispadias symphalangism is present and bladder can be small.

During treatment of all mentioned problems should be faced and treated in order to create as normal as possible penis, which is somewhat shorter in majority of patients. (Fig. 1)

Long-term results of epispadias repair showed many remaining problems in adults who underwent repair in childhood - poor aesthetic outcome with multiple scars, severe dorsal curvature with penile entrapment; this makes sexual intercourse difficult and painful, sometimes even impossible. Glans, cavernosal bodies and/or penile skin necrosis caused by previous surgeries are not rare.

In our previous study we precisely described all anatomical features of epispadiac penis, which is the basis for our further investigation and improvement of surgical technique using our radical total disassembly technique.

Materials and methods
In the period from January 2013 till October 2021 we treated surgically 346 male epispadias and exstrophy patients (193 surgeries, excluding small procedures and endoscopies) aged between two days and 59 years. Penile reconstruction in 235 of them, 58 had isolated epispadias (12 distal, 15 midshaft and 32 proximal), 47 epispadias were corrected after previous bladder closure, 36 during full extrophy correction (11 in primary repair and 25 re-do) and eight patients with cloacal extrophy. Out of these, 187 were children younger than 14, and the remaining 87 were older children and adults (with adult size genitalia). Timing of penile surgery in primary epispadias and in children after primary bladder closure was between second and third year of age or later, and in re-do cases we did it after the first year. In all younger children with small penile size preoperative testosterone treatment was advised – 2% dihydrotestosterone gel or intramuscular testosterone injections in fully competent children.

Surgical technique
The main surgical techniques that are present nowadays for epispadias are the Cantwell-Ransley and Mitchell techniques. Due to lack of satisfying outcome, we started to make some changes in order to achieve improvements, all based on a deeper insight into anatomy achieved by radical penile disassembly. Surgery begins with wide penile degloving, leaving around 1 cm of the prepuce and continuing para-urethrally and laterally until scrotum. Skin is released from non-elastic deep dartos fascia to create wide elastic flap, taking care to preserve its vascularity provided by superficial and deep external pudendal vessels.

The penis, including whole depth of cavernosal crura and urethral bulb is fully released. Dissection continues dorsally deep under symphysis and partially under pubic rami with obligatory preservation of cavernosal arterial and venous elements and areas of the NVBs. Both NVBs and urethra are radically mobilised off the cavernosal bodies using combined sharp and blunt dissection. Then follows separation of the urethral plate from NVBs with careful excision of tight non-elastic fibers that are found between them, which greatly increase their elasticity and lengthening of the dorsal side of corpora. Separation continues deep into the plane of Buck's fascia, creating widely mobile glans wings. (Fig. 2)

The bladder neck is reconstructed in all incontinent children with appropriate bladder size the urethra is tubularised over silicone Foley catheter (size depends on patient's age). Seventy and points of dorsal curvatures are checked in artificial erection bilaterally and thickened dorsal triangular ridge of tunical albuginea is carefully excised. cavernosal bodies are additionally straightened by multiple transversal incisions of only superficial tunical layer dorsolaterally, taking care to preserve inner circular layer and cavernosal membrane; cavernosal bodies are rotated externally and joined, transposing previously tubularised urethra ventrally.

After excision of uneven medial mucosal tags, the glans is reconstructed in a few layers to avoid dorsal groove formation. NVBs are fixed paravaginally and joined dorsally, forming normal anatomical relations of the penis. Then follows reconstruction of the penile skin, which is tacked to the base of the penis, wrapped around and joined dorsally. A compressive dressing is applied and changed every two to three days for two weeks, when the Foley catheter is usually removed. Patients are advised to use vacuum device for postoperative penile stretching for six months, to maintain penile straightening and lengthening achieved by tunical attenuation.

Results
Follow-up was 6 months to 8 years (mean 4.5 months). Since a great majority of patients were from abroad, we are following them up for years by being regularly sent photos, videos while avoiding and in all necessary results/images by e-mail. This way showed to be sufficient for assessment of both aesthetic appearance (glans, penile skin, size, straightness and relationship with surrounded structures) and urine stream. (Fig. 3)

There was clear difference in outcome between primary and re-do repair, and also between epispadias and exstrophy patients (due to corporal divergence caused by diastasis). Scarring and tissue damage caused by previous surgeries (especially on dorsal side) made dissection in some cases extremely difficult. Considering all anatomical features of epispadiac penis we achieved good functional and aesthetic outcome in majority of patients.

However, we also had many problems: different degree of penile curvature or rotation remained in 24 patients. Urethral stricture was present in 16 and fistula in eight patients. Partial penile skin necrosis was present in 32 patients that was treated by frequent application of ointments which enable slow reepithelisation. Thirteen exstrophy patients had postoperative glangular venous stasis with dark glans due to compression of NVB, which was treated aggressively by frequent postoperative glangular puncturing with small bore needle to release trapped venous blood and prevent its coagulation and necrosis for a few days until glans color return to normal.

Eventually, there were no necrosis of glans or corpora in our series; erection is preserved in all patients. Additional small corrective surgery was done in 29 patients.

Conclusions
New insight into anatomical features of epispadiac penis revealed several important particularities, which enabled us to understand better all underlying problems and find a better solutions. Radical mobilisation of all penile entities is crucial to provide appropriate access for correction of all mentioned abnormalities and their re-arrangement into normal, tension free relations. Dissection is often very difficult with high risk of serious damage of neurovascular structures with devastating consequences, reconstruction can be equally complex. Glans and penile skin appearance are the most important for final aesthetic outcome. This kind of surgery should be reserved for highly specialised centres.

Saturday, July 16:30 - 14:00 Joint meeting of the ESTU, ESOU and the EUGIRS Grey Area, Room Emerald
Two hands in one glove
The “discovery” of the cavernous nerves

In the past, the anatomy of the pelvis has been described in several anatomical atlases in detail, but before the 1980s this “old” anatomical knowledge had not contributed to the (radical) surgical approach of the prostate. This procedure was unpopular because of the abundant, sometimes life-threatening, blood loss from the plexus of Santorini (the dorsal vein complex of the prostate). Radical prostatectomy was therefore performed with little enthusiasm. This hurdle, as I will explain later, was only overcome after modifications of the procedure by, among others, Patrick C. Walsh, professor at the James Buchanan Brady Institute of Urology at Johns Hopkins in Baltimore (US). The next hurdle was another problem of the procedure, the injury to the neurovascular bundles. Intact bundle(s) are a prerequisite for normal erections (nerve erigent). This is what Pieter Donker, emeritus professor of urology at the University of Leiden (NL) at that time, should be credited for.

Who was this Pieter Donker. Donker was born on March 2, 1914 in Schellinikhout, a small village in the province of North-Holland (NL). After completing secondary school in Hoorn, he studied medicine at the Municipal University of Amsterdam and began his surgical and internal training in 1938 at the Maria Foundation in Haarlem, interrupted by the mobilization of WNH in 1939. In 1942, Donker continued the training in the “Johannes de Deo” in Haarlem. He then went to the St. Franciscus Gasthuis in Rotterdam to complete his training (under the supervision of the surgeon P.A. de Vos).

In 1945, Donker left for Indonesia (a Dutch colony at that time) as a volunteer doctor. He was initially stationed in Jakarta as head of the surgical department. Then in 1946, he was stationed in Surabaya in the Marine Hospital as head of the surgical department.

In 1946, he returned to the Netherlands but was unable to practice his profession for a year due to an illness. Since the profession as a general surgeon was probably too arduous, fortunately, Donker decided to specialize in urology.

In 1949, Donker started training at J.A. Weijlant in Amsterdam. In 1951, he obtained his doctorate with the thesis “The treatment of perforating abdominal injuries”. In the same year, he established himself as a urologist at the St. Franciscus Gasthuis in Rotterdam and became a member of the Dutch Urological Association (DUA), which had 19 members at the time. In the 1950s he became a trainer in urology.

On April 1, 1962, Donker started at J.A. Weijlant in Amsterdam. In 1951, he obtained his doctorate with the thesis “The treatment of perforating abdominal injuries”. In the same year, he established himself as a urologist at the St. Franciscus Gasthuis in Rotterdam and became a member of the Dutch Urological Association (DUA), which had 19 members at the time. In the 1950s he became a trainer in urology.

On April 1, 1962, Donker started as an extraordinary lecturer in Leiden. Three years later, he became an extraordinary professor of urology. In 1968, he was appointed full professor of urology. Donker retired in 1979 and presented his farewell lecture “Cost control in clinical medicine” on September 21 of the same year. This was not the end of his interest in urology “in clinical medicine” on September 21 of the same year. This was not the end of his interest in urology.

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In 1977, Walsh had already adapted his technique (the binding of the dorsal vein complex of the prostate) in such a way that it became possible to perform a radical prostatectomy without too much blood loss. That same year, Walsh entered the American Association of Genitourinary Surgeons for the first time. The night before a conventional, Walsh went to a restaurant with his wife and “Standing in the shadows behind the maître d’, I spotted an older man. Impetuously I asked if he was also attending the meeting and whether he would like to join us for dinner.” The older man was Donker. This meeting was the beginning of a friendship.

Walsh had already adapted his technique (the binding of the dorsal vein complex of the prostate) in such a way that it became possible to perform a radical prostatectomy without too much blood loss. That same year, Walsh entered the American Association of Genitourinary Surgeons for the first time. The night before a conventional, Walsh went to a restaurant with his wife and “Standing in the shadows behind the maître d’, I spotted an older man. Impetuously I asked if he was also attending the meeting and whether he would like to join us for dinner.” The older man was Donker. This meeting was the beginning of a friendship.

A few years later in February 1981, Walsh attended a Boerhaave symposium in Leiden by invitation. The symposium was quite intensive for Walsh due to lectures and demonstrations in the OR. Nonetheless, he still wanted to see a bit of Leiden. Professor Udo Jonas, professor of urology in Leiden at the time, asked Donker, if he would show Walsh around but it never came to that: Walsh wanted to know what Donker was doing in his spare time instead.

Donker worked in the anatomical laboratory trying to map the innervation of the bladder in male foetuses. Upon learning this, Walsh was eager to see Donker’s work and asked him if he also prepared the innervation of the corpora cavernosa. Up until then, Donker had not looked for it. Three hours later, both saw that these nerve pathways (contrary to what had been claimed) which laid outside the capsule and fascia of the prostate, an essential find for future nerve-sparing prostatectomy. Armed with this knowledge, Walsh returned to the United States and laid the foundation for his well-known nerve-sparing technique of radical retropubic prostatectomy. In his articles, Walsh has always credited Donker for his contributions.

The drawings used for the original publication in the Journal of Urology in 1982 were considered lost. In 2010, thanks to Donker’s son, these beautiful pencil drawings of the male pelvis were discovered behind a cupboard when Donker’s widow moved out of their house!

What is less known is that Donker also mapped the innervation of the pelvic floor and internal genital organs of women. The surgical anatomy of the innervation of the female pelvis was not well known in the 1980s. At that time, the then unknown drawings of the female pelvis were a great find and fortunately, these were fully appreciated when these were discovered during the cleaning of the old anatomical laboratory. These exquisite drawings were printed in 2008 in the anniversary book of the DUA when the association celebrated its 100th anniversary.

For his services to the Dutch urology, the DUA has honoured Donker posthumously by instituting the Pieter Donker lecture which is held annually under the auspices of the Scientific Committee, on topics related to the experimental or clinical urology.

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Adequate antibiotic drug exposure in patients treated for bacterial infections of high importance because underexposure is associated with therapeutic failure and the development of antibiotic resistance, while overexposure may lead to toxicity [1]. Reducing the dose of renally cleared antibiotics for patients with impaired renal function is standard of care as it is incorporated in all clinical guidelines, aiming to prevent accumulation of the drug and to achieve antibiotic drug exposure equivalent to that in patients with adequate renal function [3,32].

However, significantly increased therapeutic failure and death were observed in patients with impaired renal function treated with recommended reduced doses of antibiotics [4]. Additionally, multiple antibiotics recently approved by the US Food and Drug Administration (FDA) carry precautionary statements in their labelling for reduced clinical response in patients with impaired renal function [5]. In clinical practice, prescribers often do not apply recommended dose reductions for patients with impaired renal function because they worry about underexposure [6]. Particularly patients in the intensive care unit (ICU) are almost always treated with regular doses instead of recommended reduced doses because underexposure is a big problem in these patients [3,8,5]. Also, inconsistency exists between different guidelines in the cut-off of renal function below which the dose per kg body weight per antibiotic should be reduced and in the degree of the dose reduction [50].

Efficacy of antimicrobial dosing
Pharmacokinetics (PK) describe the time course of antibiotics in the body, while pharmacodynamics (PD) describe the relationship between these concentrations and the antimicrobial effect.

The primary measure of antimicrobial effect is the minimum inhibitory concentration (MIC). The MIC is the lowest concentration of an antibiotic that prevents visible growth of bacteria in vitro. While the MIC is a good indicator of the potency of an antimicrobial, it indicates nothing about the time course of antimicrobial activity.

PK-parameters quantify the serum level time course of an antimicrobial. The three pharmacokinetic parameters that are most important for evaluating antibiotic efficacy are:

1. The peak concentration (Cmax)
2. The trough concentration (Cmin)
3. The area under the concentration-time curve (AUC)

While these parameters quantify the serum level time course, they do not describe the killing activity of an antibiotic. Integrating PK-parameters with the MIC gives us the opportunity to quantify the activity of an antimicrobial within PK/PD targets [32].

Systematic review on antimicrobial dosing
We wondered whether the recommended dose reduction of renally cleared antibiotics for patients with impaired renal function was adequate and whether they have been validated in clinical practice. Therefore, we performed a systematic review to summarise the available evidence on drug exposure or on PK/PD target attainment after dose reduction of antibiotics in patients with impaired renal function.

We systematically searched Ovid Medline and Embase from inception (respectively 1948 and 1972) through July 2019 for all studies reporting antibiotic drug exposure and/or PK/PD target attainment after dose reduction of antibiotics in patients with impaired renal function.

The reduced dose was considered adequate when the most relevant parameters of drug exposure or PK/PD target attainment in patients with impaired renal function were within a range of 80% to 125% compared to patients with adequate renal function receiving a regular dose (reference) or when PK/PD target attainment was attained in at least 50% of the patients with impaired renal function, regardless of the lack of a reference group.

Twenty-seven of the 4,212 identified studies were included. The quality of 15 of 27 studies was fair, and most studies were of low or moderate quality. Best evidence was available for meropenem: four studies were included, of which two studies were of good quality. Drug exposure for meropenem is 85% to 86% higher in patients with impaired renal function compared to regular dose and receiving reduced doses compared to patients with adequate renal function receiving regular doses. For all other antibiotics, a maximum of one good-quality study could be identified.

To conclude, no good-quality evidence on the recommended dose reduction of renally cleared antibiotics in patients with impaired renal function is present, with the exception of meropenem [32].

Ciprofloxacin
The fluoroquinolone antibiotic ciprofloxacin is frequently prescribed both in inpatient and outpatient settings and its activity mainly includes Gram-negative bacteria, of which Enterobacterales and Pseudomonas aeruginosa are the most clinically relevant. It is frequently used in the treatment of urinary tract infections.

Ciprofloxacin is primarily eliminated renally. Therefore, dose reductions are recommended for patients with an eGFR <30 mL/min/1.73m2. These dose reductions are based on extrapolations from small studies mostly investigating the PKs of ciprofloxacin after a single, full, and unadusted dose in volunteers with impaired renal function, but without an infection. However, ciprofloxacin is also metabolised and partly excreted through the biliary system. This alternative elimination pathway may compensate for reduced elimination through the kidneys in patients with impaired renal function. Therefore, the correlation between eGFR and total clearance of ciprofloxacin might not be directly proportional.

For ciprofloxacin, the PK/PD target is defined as the area under the concentration-time curve (AUC) over the minimum inhibitory concentration (MIC) of the causative microorganisms. Attaining the PK/PD target of AUC/MIC ≥25 is for total ciprofloxacin exposure associated with microbicidal and microbiocidal lower respiratory tract infections, bacteremia, wound and soft tissue infections, and complicated urinary tract infections, mainly caused by P aeruginosa or other Gram-negative bacteria [3,13]. However, it has been shown that AUC/MIC ≥12 is often not attained critically ill or in patients on general wards treated with recommended doses of ciprofloxacin (200-400 mg/day).

Therefore, we investigated:
1. PK/PD target attainment of ciprofloxacin (AUC/MIC ≥25) in the first 24 hours of treatment in adult patients on general wards with adequate and impaired renal function receiving regular and reduced doses of ciprofloxacin, respectively.
2. Drug exposure for patients with impaired renal function receiving the guideline-recommended dose reduction of ciprofloxacin compared to drug exposure in patients with adequate renal function receiving the regular dose.

We obtained three blood samples per patient for ciprofloxacin concentration measurement. Individual AUCs were calculated using a population PK model developed by non-linear mixed-effects modelling (NONMEM).

Forty patients were included, of whom eight had impaired renal function and were treated with a guideline-recommended reduced dose. Using the clinical breakpoint MIC of the most isolated bacteria (Escherichia coli, 0.25 mg/L), AUC≥MIC ≥25 was attained in 19/32 (59%) patients with adequate renal function receiving regular doses and in 8/18 (44%) patients with impaired renal function receiving reduced doses.

Median drug exposure (AUC≥MIC) for patients with impaired renal function was 2.0 (interquartile range (IQR) 1.2-2.3) mg/L-h, which was statistically significantly lower than that for patients with adequate renal function (29.3 (IQR 25.6-31.3) mg/L-h) (P < 0.01).

To conclude, AUC≥MIC ≥25 is not attained in the majority of adult patients on general wards for clinically relevant bacteria with MICs PK/PD just below the clinical breakpoint. The risk of not attaining the target appears to be highest in patients with impaired renal function receiving guideline-recommended reduced doses, as drug exposure is significantly lower in these patients [35].

New dosing simulations of ciprofloxacin
The rationale behind the guideline recommended dose reduction of ciprofloxacin in patients with impaired renal function is to achieve bioequivalence, defined as drug exposure equivalent to exposure in patients with adequate renal function receiving a regular dose. However, results from the above-presented study by our research group showed that drug exposure is not equivalent, but statistically different.
Urinary tract infections of viral origin
Viral orchitis, epididymitis and transplanted immunocompromised patients

The COVID-19 (coronavirus disease 2019) pandemic has shown that infectious diseases, especially viruses, have an enormous impact on the healthcare system and beyond. [1,2] Patients present with viral infections that are associated with numerous diseases in daily urological practice. Unfortunately, the therapeutic options in urological viral infections are often limited to symptomatic approaches or immunomodulation. That is why vaccination prevention could be an essential option for viral urinary tract infections, so far research on this topic is vital. [3]

Viral urological infections can appear very heterogeneously, reaching from recent reports that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) can cause kidney failure or thromboembolic complications like priapism, prostate- or kidney infections [3-5] to the association of human papillomavirus (HPV) with penile cancer. [3] However, urologists will mainly be confronted with viral infections in two cases: firstly, in viral orchitis or epididymitis and secondly, in transplanted immunocompromised patients.

Consequently, this article summarises the main facts of those two cases.

Acute, symptomatic urogenital infections – viral orchitis and epididymitis

Acute, symptomatic viral infections in the male genital tract have only been described in orchitis or epididymitis. [3,33] Different viruses are related to this disease, but most data are available for mumps. [3,33-36] Historical data show that orchitis appears in nearly 18% of the cases five to ten days following parotitis. [34] Since the introduction of vaccination, mumps orchitis has been a rare disease, but it is still possible even with a lower rate of symptoms. [35] Furthermore, it has been described that Coxsackie viruses can cause orchitis. [33,36] However, many studies only describe impetigo if it is only orchitis, epididymitis or epididymo orchitis because they only rely on palpation. A more precise method would be duplex-sonography, but two studies also describe an epididymitis in mumps orchitis in 39% or 56% of the cases. [38,39]

Conversely, in 60% of initial bacterial epididymitis, the tests is involved. [20] Unfortunately, only a few studies investigate a viral origin of epididymitis or only analyse mumps serology. [32,33,36,39] Only one study investigated polymerase chain reaction (PCR) in urine, blood and semen in 23 different viruses. In two of 250 patients, enteroviruses were prevalent in the semen, which were no longer detectable after healing the disease. [21] In summary, further research about viral origins in epididymoerchitis is necessary.

Viral urological infections in transplantation medicine – significance of BK polyomavirus (BKPyV) for urology

Urologists are often involved with viral infections in kidney transplantation. Viral infections are a very relevant problem in these immunocompromised patients. Relevant viruses are herpes virus (HSV), cytomegalovirus (CMV), Epstein Barr virus (EBV) and BK polyomavirus (BKPyV), but even influenza or parainfluenza viruses are important. [3,33]

Interestingly, CMV is one of the most severe viral infections in kidney transplant recipients, but luckily with adequate prophylaxis, the incidence is very low (<1%) in most transplantation programmes. [2a] Without adequate CMV prophylaxis, there is an incidence up to 70%, often leading to early graft failure. [25] Since CMV infections are mostly asymptomatic, it is essential to differentiate them from organ rejection so that kidney biopsies are frequently necessary. This is also why CMV plasma viral load should be detected via PCR during every hospital readmission in the first year following transplantation. [36] Therapy of CMV infection is applied according to the KDIGO (Kidney Disease Improving Global Outcomes) guidelines. [27]

Polyomaviruses are of particular interest to kidney transplant recipients. They are small DNA viruses that were first discovered in 1971. At present, 13 different types are recognised, but the most significant for renal transplant patients is BKPyV: the cause of BKPyV associated nephropathy (BKVAN). Furthermore, this virus can lead to hemorraghic cystitis and urer stenoses. [28,29,30] To put it in a nutshell, BKPyV is the most important polyomavirus affecting renal transplant recipients, and adequate management of this infection may significantly impact allograft survival.

The general population is exposed to BKPyV during childhood, and 80 – 95% of the adults are seropositive. The virus persists in different cells from which it can be reactivated. Sometimes the infection may be transmitted with the allograft. [29] Although BKPyV can be detected in patients with heart or liver transplantation and patients with human-immunodeficiency virus (HIV) infection or intestinal injury: consensus report of the 25th acute disease quality initiative (ADQI) workgroup. Nat Rev Nephrol 2020; 16: 747-64

Some of the proposed risk factors include older age due to waning of immunity, human leukocyte antigen (HLA) mismatches, acute rejection, steroid therapy and maintenance immunosuppression with tacrolimus. [29,35] However, the common surrogate to all these factors is BKPyV uropathia. [29,38] The infection (also reactivation is possible) is initially asymptomatic, so surveillance programmes are essential. The diagnosis then is based on quantitative PCR in plasma (serum) and urine (uraria) in the presence of acute renal failure. Unfortunately, no effective therapy is available, and screening remains the cornerstone for tackling BKPyV disease. [28,29]

Implications for further research

In summary, many questions in urinary tract infections of viral origin are open, and further research is essential since especially high-quality research is sparse. Promising new targets for further evaluation in research are virus-specific T cells with targeting the viral immune response or even the development of vaccination since these therapies might have less collateral damage than the classical antivirals, which also affect the host.

References


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Transgender and gender non-conforming individuals experience gender dysphoria, a significant mental, medical, or social challenge that they seek to address through various interventions. These individuals may seek counseling, medical care, or surgical procedures to manage their gender dysphoria. The latest version of the standards of care of the World Professional Association on Transgender Health (WPATH) states that for any further treatments (hormonal and surgical), patients must present with persistent and well-documented gender dysphoria, persistent and well-documented gender dysphoria, and the need for treatment to be consistent with their gender identity. Patients seeking gender-affirming care must undergo a comprehensive evaluation, including medical, psychological, and social assessments, to determine their eligibility for treatment. The model by which transgender care should be provided is a topic of discussion. One might argue that, in an effort to further include gender variant individuals in the daily social care, general assessments should be attended in the primary care setting without demanding any care standards from cisgender individuals that seek psychological counseling. In this setting, care providers could access their medical history and evidence-based information could already be provided. Given the high need for education and training in such care models, the need for gender-affirming care is recognized. Psychological support

The first pillar of care for transgender and gender non-conforming individuals is psychological support. This refers to a mental unrest resulting from an incongruity between the assigned biological sex and the gender identity an individual feels. They may seek psychological counseling that supports them in dealing with their feelings of gender incongruence, considering further steps in a gender transitioning process and its possible implications on relationships, employment, and social acceptance. Young and teenage individuals may benefit from treatments suppressing the effects of their body’s own hormones and secondary sexual characteristics. This gives them time to evaluate and explore a more gender ambiguous identity before shifting to treatments with permanent effects. Alternatively, older adolescents and adults may seek for masculinizing or feminizing hormonal therapies to bring their anatomical characteristics in line with their perceived gender identity. These hormonal treatments may be accompanied or followed by surgical steps to further define the external appearance.

Today, the care provided to transgender and gender non-conforming individuals is no longer a provider but rather a patient-based programme. The doctor-patient relationship is a key criterion. Requests that are considered to be the centre of care. Current treatment regimens aim to provide the patient what they wish for fully. This is in line with how patients should be. Logically then, a large part of the care requests lie in the spectrum between the binary gender idea. The model by which transgender care should be provided is a topic of discussion. One might argue that, in an effort to further include gender variant individuals in the daily social care, general assessments should be attended in the primary care setting without demanding any care standards from cisgender individuals that seek psychological counseling. In this setting, care providers could access their medical history and evidence-based information could already be provided. Given the high need for education and training in such care models, the need for gender-affirming care is recognized. Psychological support

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Erectile dysfunction (ED) is commonly associated with Peyronie’s disease (PD).[24] Direct ingrowth of fibrosis and plaque formation is thought to impair adjacent cavernosal arterial inflow. PD is also frequently associated with other risk factors for ED such as diabetes, hypercholesterolaemia, hypertension and hypogonadism.[25] Progressive curvature of the penis can be caused and these factors in combination cause the significant psychological morbidity experienced by men with PD.

The standard of care for men with concomitant PD and ED refractory to medical therapy is a penile prosthesis.[26] In some situations, a penile prosthesis may be the ideal early option and it should no longer be considered as the treatment of last resort.[1] However, the decision to insert a penile prosthesis is irreversible and men should be fully counselled and understand what is achievable (and what is not).

The aim of a penile prosthesis is to give the man a strong erection and straighten (or improve) the penile curvature to allow sexual intercourse. Historical techniques primarily focused on ameliorating these concerns but more recently, new approaches for penile lengthening have been developed to better address the loss of penile length associated with PD. Additionally, substituting grafting materials and no-grafting techniques have been proposed. These advances are briefly described in the following article.

Techniques for penile straightening

The process of inserting a penile prosthesis may straighten the penis although the success rate is determined by the severity of the initial curvature. [a] Modelling the penis is currently the preferred technique to further straighten a residual curvature. [b] Briefly, rubber shoes are placed on the tubing to the pump after inflating the prosthesis. Manual pressure is then applied in the opposite direction of the curvature and held for 30-60s. Traditionally, this is done twice, and no further intervention is necessary if the residual curvature is less than 30° before inflation. Nowadays, penile straightening with continued use and cycling of the device. Durability of the penile prosthesis is maintained but there is a small but significant risk (2%) of urethral injury.[a] The risk may be mitigated by compression of the distal urethra and fossa navicularis during the modelling process. The APSA has recommended this technique multiple times provided this “chicken choker” adaptation is used. [b] Another useful adjunct is to weaken the plaque intrinsically and extrinsically, the “scratch” technique (B) prior to modelling.

A small study showed that components of an inflatable penile prosthesis may be more likely to fail following manual modelling.[32] The same study compared patients inserting penile prostheses for PD independently predicted device failure. These risks were not identified in the much larger cohort studies of manual modelling but do warrant further investigation in a prospective study.

Some patients (and surgeons) prefer to have a straight penis at the conclusion of the operation. The options are plicate the penis or incise the plaque. Plication sutures are placed before inserting the penile prosthesis and various techniques have been adapted (including the 3-stitch technique). Plication does shorten the penis in a significant number of patients (7%) but counter-intuitively, patients prefer it in fewer palpable nodules following surgery.[10] Alternatively, the Peyronie’s plaque can be incised at the point of maximum curvature. This was the preferred technique for penile straightening before the advent of manual modelling. Since then, plaque incision is usually reserved for a significant residual curvature after modelling. Grafting is recommended if there is a tunica defect greater than 2 cm after incising the plaque. Many alloplasts, xenografts, synthetic grafts and autografts have been researched. Clinical differences in outcome were found on systematic review of the literature.[12]

The newest graft that is gaining in popularity is the collagen flake. The PKS (Penile Implant Combination with Collagen Sealing) technique is quicker because there is no need to suture the collagen flake in place (and it is cheaper). [2] Early results are encouraging but comparative medium-term follow-up data are currently lacking. (g) Buck’s fascia must be closed well to provide support for the collagen flake and the device should be left semi-infalinated for an extended period.

More recent advances

The first description for “maximal” penile lengthening was in 1995 where a circumferential incision covered the penis up to an average of 1.5 cm. [24] Complications were common with 1 out of 5 men (20%) developing penile necrosis and 2 others (4%) required removal of their penile prosthesis due to infection. This highlights the technical difficulties associated with penile lengthening. More recently where the circumferential incision was made the point of maximal curvature showed a length gain of 2.8 cm but 20% of men complained that gins sensitivity was reduced after the procedure.[23]

The “sliding” technique gained a lot of interest as an option to lengthen the penises which it was proposed in 2012.[24] The technique improved on the concept of a circumferential incision. Instead, a dorsi-ventral incision was made in the tunica albuginea and the tunica was disassembled. The penis is then stretched to maximal length (usually limited by the neurovascular bundle) before inserting a penile prosthesis. The tunical defects are closed with grafts resulting in an average increase in length of 3.2 cm.

The modified sliding technique (MOST) added complementary relaxing longitudinal incisions (to restore girth) and closed the incisional defects with Buck’s fascia only (no graft). [24] Compression dressing is required for a week and an inflatable prosthesis is kept partially inflated for 2 to 3 weeks due to the high haemotoma risk. The MOST technique subsequently evolved into the “multiple slit” technique (MUST). [24] The technique still requires some penile disassembly, but the urethra is only mobilised over the distal half of the penis. Multiple semi-circular tunical incisions are then made on the concave (shorter) aspect of the penis. Grafting is not required. Multiple small longitudinal slits on the tunica albuginea at areas of narrowing can also be used to restore girth. Mean gain in penile length was 3.3 cm.

The most recent evolution of the sliding technique by Prof. Dr. Paulo Egea is the tunical expansion procedures (TEP).[73] The penis is degloved and disassembled. Multiple transverse tunical incisions of between 3 mm and 4 mm are performed along the predetermined mathematical formula. Vertical incisions can be made in areas of narrowing. No gins necrosis was reported in a large sample of 46 patients and a 3.0 cm gain in penile length was found.

Lastly, a novel approach to the sliding technique may reduce the risk of ischaemic complications. [24] The non-deglowing procedure adoption a peno-scrotal incision (no sub-coronal incision) may maintain vascularity to the gins by preserving the continuity of skin and dartos (in addition to the neurovascular and urethral). Grafting is not required. Preliminary results in 12 patients show a mean penile length gain of 2.6 cm with no vascular complications.

Penile lengthening operations are technically challenging and come with a risk for catastrophic complications including gins or penile necrosis and the loss of sensation. These techniques should only be offered to men who are willing to accept the risk (for potentially limited benefit) and even then, by a surgeon who is proficent in the techniques required.

Conclusions

Penile lengthening is a technically challenging procedure to lengthen the penis and ED refractory to medical therapy is a penile prosthesis (inflatable or malleable). In some centres of excellence). Previous penile surgery with sliding technique was commonly performed and come with a risk for catastrophic complications including gins or penile necrosis and the loss of sensation. These techniques should only be offered to men who are willing to accept the risk (for potentially limited benefit) and even then, by a surgeon who is proficent in the techniques required.

References

Due to space constraints, the entire reference list can be made available to interested readers upon request by sending an email to: communications@ uroweb.org.

Saturday, 2 July 14:15 - 18:00 Meeting of the EAU Section of Genitourinary Reconstrcutive Surgeons (EUGURS) Green Area, Room 4

Karim Fizazi, MD, PhD
Professor of Medical Oncology
Chairman of the University Hospital of Grenoble Medical Oncology, Grenoble University Hospital Grenoble, France

Cora N. Sternberg, MD, FACP
Global Chair of Urologic Oncology for EAU
Professor of Medicine/Hematology/Oncology
Sanford and Edward Cancer Center
Weill Cornell Medicine
New York United States

Kamil Fizazi, MD
MD, FACP
Professor of Medical Oncology
Chairman of the University Hospital of Grenoble Medical Oncology, Grenoble University Hospital Grenoble, France

Elena Castro, MD
Clinical Director of Medical Oncology Hospital Universitario Virgen del Rocío Principal Investigator: GI
Fundacional Research Group Instituto de Investigación Biomédica de Andalucía (IBIMA)
Málaga, Spain

Latest Developments to Treating Metastatic CSPC

CNS. Sterneburg

CNS. Sterneburg

Current and Emerging Options for the Treatment of Metastatic CRPC

E. Castro

O&A

The Metastatic PC Landscape, What is Changing?
K. Fizazi

Current and Emerging Options for the Treatment of Metastatic CRPC
E. Castro

Summary
K. Fizazi

PP-TAL-NLD-0049
Date of Preparation: May 2022
Management of recto-urinary fistulas
Surgical approaches and multidisciplinary teamwork

Recto-urinary fistulas are a rare complication that occur after radical prostatectomy, colorectal surgery, and cryosurgery. Recto-urinary fistulas are also observed in patients with Crohn’s disease or diverticular disease.

After radical prostatectomy, the estimated incidence is lower than 2%, and rectourethral fistula is the most common type with the highest percentage in case of combined treatment for prostate cancer with surgery and pelvic irradiation. Radiotherapy or lesion of the rectal wall during radical prostatectomy are the leading causes. If a fistula occurs during the surgery, primary closure is needed. However, in some cases, the urethral-fistula is noted in the postoperative period.

The management acquired recto-urinary fistulas represent a challenging task. A surgical repair is required in most of the cases. Several surgical procedures were described, including resection of the fistula tract and direct closure of the fistula with a perineal approach, muscular flaps, instillation of fibrin glue, endorectal advancement flap, a York-Mason operation, and fistula closure with an abdominal approach. The less aggressive procedures report good outcomes but not in complex fistulas. However, complex fistulas with previous surgeries or in patients with prior radiation may require the reposition of tissues in the management of fistula to achieve fistula closure and reduce the incidence of recurrence.

Among the tissues used for transposition in the recto-urethral fistula are gracilis muscle, rectus abdominis, omentum, darts, glutaeus maximus, and latissimus dorsi. The abdominal approach has the advantages of placing healthy well-vascularized tissue in the affected area. On the other hand, the abdominal approach has potentially significant perioperative adverse sequelae. Gore et al. described the technique in patients with vesicovaginal fistulas. The interposition of gracilis muscle is one of the procedures that provide satisfactory outcomes with limited functional limitation in the donor area as gracilis muscle has only a vestigial function. Transposition of a gracilis muscle flap may be used for the surgical management of rectovaginal, rectourethral, pouch-vaginal and pouch-urethral fistula.

“The management acquired recto-urinary fistulas represent a challenging task. A surgical repair is required in most of the cases... The less aggressive procedures report good outcomes but not in complex fistulas.”

The gracilis muscle is situated at the thigh’s medial part from the ischiatric branch to the ischiatric insertion forming the goosefoot. It is the most medial and superficial muscle of the inner thigh, fulfilling adduction functions, internal rotation, and flexion of the hip. The gracilis muscle has a very proximal pedicle consisting of the circumflex medial femoral artery, which allows adequate transposition to the perineal area. There is also a distal vascular pedicle from the deep femoral artery, which can be divided and ligated to achieve the flap’s correct rotation. Other minor pedicles can be dissected. The main advantages of a flap with the gracilis muscle include there is enough tissue provided from the donor site to correct interposition, limited functional loss, and low morbidity in the donor site. Moreover, when the procedure is carried out by an experienced surgeon, the dissection of the gracilis muscle is a simple technique.

When a complex urinary-rectal fistula is diagnosed, a local and urinary diversion is recommended. At the beginning of the procedure, urethro-catheterization may be performed as the fistula’s orifice may be close to the urethral meatus. The surgical procedure with transposition of gracilis muscle consists of a perineal approach with dissection above the transversus perineum muscle and below the bulbocavernous muscle. The dissection is carried out until the identification of the fistula. The edges of the fistula are resected to leave soft, viable tissue for the closure of the fistula. The rectal wall and the uretha is closed with absorbable stitches closed. The suture must be done using healthy tissues.

The gracilis muscle is dissected from the non-dominant leg and transposed to the perineum to preserve the proximal pedicle through a subcutaneous tunnel. For the gracilis muscle, harvesting an incision at the medial thigh is made immediately from the posterior to the saphenous vein from to 4 to 8 cm in diameter distal to the anterior superior iliac spine. The gracilis muscle is then interposed between the rectal and urethral closure of the fistula and fixed with absorbable suture. The surgery is associated with a complication rate of 0% to 3.4%. The most common complication is perineal wound infection or delayed healing.

Although the donor site morbidity of the gracilis muscle harvesting site is low, adequate control of the donor site in the thigh is essential during the postoperative procedure. This is to minimise the incidence of wound infection or delayed healing. It is necessary to inform the patients beforehand that urinary incontinence and fecal incontinence during the postoperative period are reported in 14% and 4.2% of patients, respectively.

The surgery must be carried out by a multidisciplinary team which includes a urologist, colorectal surgeons, and urological reconstructive surgeons with specific surgical skills in the perineal surgery. Repair of the recto-urinary fistula with transposition of the gracilis muscle is challenging as many patients have received prior radiotherapy and have had previous failed attempt to repair the fistula.

Monday, 4 July 10:30 – 12:00
Thematic Session 13
Purple Area, Room Elium 2
Male circumcision is one of the most common surgeries performed worldwide. According to the World Health Organization (WHO), approximately one third of the male population (1.2 billion) is reported to be circumcised (1). Today, in the United States, around 1.2 million newborns are circumcised in community hospitals annually (2). However, the true number is expected to be higher due to unreported circumcisions in private clinics. The Muslims are the most commonly circumcised community wherein 70% are circumcised.

In many regions of the world, circumcision is performed based on religious or cultural purposes. In some others, it is performed for medical purposes for better hygiene or protection against AIDS and other sexually transmitted diseases (STDs). Whatever the reason is, circumcision is still one of the most debated topics in medical conferences and political platforms such as the European Council.

In this article, we aimed to review the literature regarding male circumcision history in monotheistic religions, including Islam, Judaism, and Christianity. Historical perspective is the main target of this review and the medical or political perspectives are beyond our objectives.

Methodology

A non-systematic review was performed for the existing literature for male circumcision history in monotheistic religions. A comprehensive search was performed through PubMed and Google databases; and the results were analyzed and synthesized.

Circumcision history

Beyond the contemporary discussions, male circumcision is one of the oldest surgeries in history. It is forgotten or underestimated in the literature why or how this operation began. Anthropologists and historians do not agree on the origin of male circumcision and there are several theories about its initiation period.

The English Egyptologist Sir Graffton Elliot Smith proposed that circumcision originated from the heliotic culture about 15,000 years ago and spread worldwide afterwards (3). Some believed it has originated independently in different cultures. When Christopher Columbus found the “New World”, he observed that many of the male natives were circumcised. In the meantime, circumcision was also being performed in other continents including Africa, Australia, Middle East and Asia.

The wall paintings of the Egyptian history (5000 BC) clearly demonstrate and even outline how the circumcision was performed. Circumcision is performed at birth in some of the African tribes. In monotheistic religions including Judaism, Christianity and Islam, circumcision is attributed to Prophet Abraham’s tradition. In Judaism, it is performed on the 8th day after birth. In Muslim, the timing varies from one culture to the another but usually before puberty and as a rite of passage from childhood to young adulthood. In ancient Egypt, circumcision is believed to be a mark of slavery. This procedure is very common in many other cultures.

In summary, the real origin of circumcision will probably never be known exactly. However, the truth can only be elucidated when all the theories are gathered together.

Circumcision in Judaism

Prophet Abraham himself was circumcised at the age of 99 while his son Isaac was circumcised at 35 years old. It is also believed that Prophet Abraham circumcised his son Isaac when he was only eight days old. The Jews continued this tradition by circumcising their sons on the 8th day after birth.

The same tradition has been transmitted from one generation to the next and now, it has become contemporary practice. Jewish circumcision being performed by a non-medical practioner such as the father or more frequently, by a Mohel. Unlike in Islam, it is not an option to refuse circumcision if it is a commandment from God called “Brit Milah”.

Therefore, there is no debate within Judaism.

Even when death penalty was imposed on the Jews for performing circumcision in ancient Greece and Rome, and also during the Soviet Union period when circumcision was suppressed, the Jews continued to practice it. This clearly shows that circumcision is a vital component of Judaism.

Circumcision in Christianity

Jesus Christ himself was circumcised on the 8th day after his birth. However, it is not a common procedure in Christianity since it is believed that physical circumcision is not mandatory. This anti–circumcision position was confirmed at the first Council of Jerusalem in 48 AD and a new rite or sacrament was created to take its place: Baptism. In Christian philosophy, the spiritual circumcision of the heart triumphed over the physical circumcision of the foreskin. This was also the standpoint later adopted by Martin Luther and John Calvin.

In Victorian times, due to increasing numbers of STDs, an awareness about circumcision arose in the Anglo-Saxon populations. It was performed to improve hygiene and to protect individuals from STDs.

Today in the United States, male circumcision is a common practice especially in newborns for medical purposes. The American Academy of Pediatrics states that “the benefits of male circumcision outweigh the risks” in its latest published policy statement in 2012. In the United Kingdom, however, circumcision is more common among the well-educated upper-class.

After the rising prevalence of AIDS in 1980s, male circumcision became popular again and it was widely performed in Sub-Saharan Africa to prevent AIDS (4). There have been also other calls from the United Kingdom and Australia about initiating infant circumcision for long-term benefits (5, 6, 7).

On the contrary, nowadays there are anti–circumcision policies being set by some European countries. In Cologne, Germany, circumcision was banned on a young male under 14 years of age. This is to give a young male the chance to make his own decision with regard to his penis. It is also considered as his right of physical integrity.

The activists supporting this idea suggest that circumcision adversely affects the sensation of the penis and also diminishes sexual activity. There is no clear data supporting these; however, there is also no clear data supporting routine circumcision in existing literature backed by evidence-based medicine.

Circumcision in Islam

Circumcision was a common practice in pre-Islamic period in the Arabic world. The Arabic word used for circumcision for males is “khitan”. It is now certain that circumcision did not start with Islam but was performed previously. When looking into the chapters of Holy Quran, circumcision is not mentioned in any of the pages. However, there is strong evidence that Prophet Mohammed recognised and practiced this procedure in his saying which is called “hathir”. For that reason, although circumcision is not obligatory to become a Muslim, it is considered as “Sunnah” which means “Prophet’s tradition”.

Prophet Mohammed circumcised his grandsons Hasan and Husayn on the 7th day after birth. Although the Holy Quran is the main reference for Muslims, the “hathir” is also considered as another main reference especially for the practical way of living Islam. Therefore, circumcision is considered as a condition of becoming Muslim by Islamic communities. Again, if a non-circumcised non-Muslim man converts to Islam, and if he does not get circumcised, that does not exclude him out of Islam.

The age at circumcision in Islamic world significantly varies between different regions. There is no standard period of circumcision, however the vast majority of males are circumcised before puberty. In general, circumcision is performed by non-medical professional but there is an increasing trend and awareness of medical doctors performing circumcisions to decrease complications.

In 2015, the Turkish Ministry of Health banned circumcision by non-medical professionals and it is now only performed by medical doctors. However, unlawful circumcision is still performed occasionally in some rural areas.

Conclusions

Circumcision is one of the most common surgical procedures performed all over the world. In Islam and Judaism circumcision is widely performed for religious and cultural reasons. Although it is not mandatory in Islam to get circumcised, it is widely performed at different ages before puberty. In Judaism, it is mandatory to get circumcised and it is believed that it is a commandment from God. In Christianity, although Jesus himself was circumcised, circumcision is not a rule for the believers and only performed for medical purposes if necessitated.

References


Sunday, 3 July 14:00 – 15:30
Thematic Session 68
Green Area, Room 1

Circumcision practices in monotheistic religions

History, cultural beliefs and practices

Figure 1: A painting depicts the circumcision of Jesus Christ

Figure 2: A painting depicts the circumcision of Jesus Christ

Figure 3: Historical circumcison knife from Jewish Museum, London

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References


An application has been made to the EACCME® for CME accreditation of this event.

ESUR22
28th Meeting of the EAU Section of Urological Research
13-15 October 2022, Innsbruck, Austria
In collaboration with the EAU Section of Uropathology (ESUP)
www.esur22.org
Abstract submission deadline: 11 July 2022

ESGURS22
12th Meeting of the EAU Section of Genito-Urinary Reconstructive Surgeons
20-21 October 2022, Madrid, Spain
www.esgurs22.org
Abstract deadline: 21 July 2022

ERUS22
19th Meeting of the EAU Robotic Urology Section
26-28 October 2022, Barcelona, Spain
www.erus22.org

In conjunction with the 14th European Multidisciplinary Congress on Urological Cancers @ EMUC22

ESUI22
10th Meeting of the EAU Section of Urological Imaging
10 November 2022, Budapest, Hungary
www.esui22.org
Abstract Deadline: 1 August 2022

In collaboration with the 14th European Multidisciplinary Congress on Urological Cancers @ EMUC22
Today’s European Urology Events

Best Paper Awards 2022
Friday July 1st
11.30 - 12.00, Green Area side wall Green Room 5 / Ground Floor

BEST SCIENTIFIC PAPER AWARD
The Additive Diagnostic Value of Prostate-specific Membrane Antigen Postron Emission Tomography Computed Tomography to Multiparametric Magnetic Resonance Imaging Trage in the Diagnosis of Prostate Cancer (PRIMARY): A Prospective Multicentre Study
Volume 80, Issue 6 - Pages 682-689

BEST PAPER AWARD - CLINICAL RESEARCH
Shockwave Lithotripsy Versus Ureteroscopic Treatment as Therapeutic Interventions for Stones of the Ureter (TISU): A Multicentre Randomised Controlled Non-Inferiority Trial
Volume 80, Issue 1 - Pages 46-54

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Today’s European Urology Events

ESU Course 07
Saturday July 2nd, 8.30 - 10.30, Grey Area, Room G104

How to write the introduction and methods
Learning Objectives:
Understand how to construct a well written introduction and methods section for your manuscript. Learn how to work through examples of good and bad practices, and understand key points when writing. Obtain insight from editors on what they expect to see.
• To understand what makes a good introduction.
• To understand what makes a good methods section.
• To understand about systematic reviews and meta-analysis.
• To learn from experienced editors.
1 Welcome
2 Writing the introduction
Sarah Psutka, Seattle (US)
3 How to write the methods section
Giacomo Novara, Padova (IT)
4 Key features for a systematic review
Gianluca Giannarini, Udine (IT)
5 What to look for in the statistics section
Rodney Dunn, Ann Arbor (US)

ESU Course 13
Saturday July 2nd, 12:00 - 14:00, Grey Area, Room G104

How to write results and discussion
Learning objectives:
Learn the best way to draft the results and discussion section of a scientific paper. Understand how to work through examples of good and bad practices, to find the key points of the manuscript. Obtain insight from editors on what they expect to see.
• To understand what makes good results section and how best to present your data.
• To understand what makes a good discussion.
• To learn from experienced editors.
1 Welcome
2 Choosing and presenting your statistical analysis
Rodney Dunn, Ann Arbor (US)
3 How to write the results section
Jean-Nicolas Cornu, Rouen (FR)
4 Writing the discussion section
Malte Rieken, Zürich (CH)
5 What the editor looks for when reviewing the results and discussion
Giacomo Novara, Padova (IT)

Residents’ Corner Awards
Saturday July 2nd, 16:45 - 17:00
Room 1, Green Area

Is There a Detrimental Effect of Antibiotic Therapy in Patients with Muscle-invasive Bladder Cancer Treated with Neoadjuvant Pembrolizumab?
Volume 80, Issue - Pages 319-322

Effect of Simulation-based Training on Surgical Proficiency and Patient Outcomes: A Randomised Controlled Clinical and Educational Trial
Volume 79, Issue 1 - Pages 16-19

BEST PAPER AWARD - ROBOTIC SURGERY
A DROP-IN Gamma Probe for Robot-assisted Radioguided Surgery of Lymph Nodes During Radical Prostatectomy
Paolo Dell’Oglio, Meershrook P., Maurer T., Wit E.M.K., van Leeuwen P.J., van der Poel H.G., van Leeuwen F.W.B., van Oosterom M.N.
Volume 79, Issue 1 - Pages 124-132

BEST PAPER AWARD - FUNDAMENTAL RESEARCH
Integrated Expression of Circulating miR375 and miR3751 to Identify Tertatoma and Active Germ Cell Malignancy Components in Malignant Germ Cell Tumors
Volume 79, Issue 1 - Pages 16-19

BEST PAPER AWARD - ROBOTIC SURGERY
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5 What the editor looks for when reviewing the results and discussion
Giacomo Novara, Padova (IT)
The goal of this registry is to get insight into the female patients for the treatment of stress urinary incontinence (SUI). The objective of the SATURN registry is to evaluate the prophylactic use of the artificial urinary sphincter (AUS) implantation surgery for female SUI due to ISD.

SATURN Registry

The objectives of the SATURN registry are to evaluate the effects of surgical treatment of SUI with current available devices in common urological practice and to determine prognostic factors which may help to identify clinical and surgical variables that correlate with (un)favourable outcomes. Patient Reported Outcome Measures (PROMS), quality of life (QoL), and clinical data are collected from study visits at baseline, before surgery; at the time of surgery; and post-surgery up to year 10.

Study update

Nine countries (The Netherlands, Belgium, Czech Republic, Germany, The United Kingdom, Norway, Spain, Italy, Finland) are participating with a total of 28 centres. Despite potential setbacks due to COVID-19 restrictions, patient recruitment was completed ahead of time on the 30th November 2022 after the surgery of the 1000th eligible patient was recorded in the eCRF. Patients (94%) who signed the Informed Consent (IC) before the 30th November 2021 but did not have their surgery yet, were still allowed to be included in the registry.

An interim analysis of baseline data was performed based on a data export of October 5th 2021. At that day 980 patients gave IC of which 959 underwent surgery. On average, 11% of centers recruited > 25 cases/year, whilst 14% of recruiting centers included < 1 case/year. Average inclusion was 18 patients/month. Implanted devices included 2 types of AUS (AMS800 (66%), VICOR+ (3%)), non-adjustable Advance XP (21%), adjustable implants (ProAct 1%, Argus 2%), ATOMS (7%) and miscellaneous (9%). The primary cause of SUI was radical prostatectomy (8%), of which 56% was robot-assisted and 12% was laparoscopic. Further, primary RT (3%), and endoscopic UTS treatments (19%), and others (e.g. neurologically) (4%) were documented. Prior to study inclusion, 30% received one and 46% received > 5 previous AUS surgeries. In total, 30% had urological stricture and 87% of these received an AUS. Previous RT was noted in 39% of AUS patients, while this was 7% for advanced XP and was 2% for adjustable devices.

We want to congratulate all participating investigators and their staff members for reaching the goal of 1000 eligible patients (despite the COVID-19 crisis) the target of 2000 inclusions. Thank you for all your efforts and dedications that will make the SATURN Registry a great success!

For more information, please visit the EAU RF website http://uroweb.org/research/projects/.

Recruitment rate for VENUS registry is accelerating

Introduction:

The VENUS registry is a prospective non-controlled cohort study evaluating the outcomes of artificial urinary sphincter (AUS) implantation surgery (Robotic-assisted, Laparoscopic, Open or other) in female patients for the treatment of stress urinary incontinence (SUI) due to intrinsic sphincter deficiency (ISD).

The goal of this registry is to get insight into the clinical daily practice of AUS implantation surgeries and the short and long term follow-up outcomes e.g. efficacy, complications, quality of live, urodynamic parameters and sexual functioning within female patients with SUI due to ISD.

The main outcome will be the cure rate of AUS implantation surgeries, with cure rate defined as urinary continence with no pads used or use of 1 light security pad. A total of 950 patients will be recruited within 3 years whereas patients will be followed until the end of the registry.

Study update:

Due to the COVID-19 pandemic it is challenging to recruit patients for the VENUS registry as for most centres AUS implantation is considered non urgent and surgeries are postponed or halted.

Nevertheless the previous months we’ve noted a huge increase in patient selection. On the 30th November 2021 but did not have their surgery yet, were still allowed to be included in the registry. It is expected that this inclusion rate will be maintained as an additional 3 centres are initiated and ready to start including patients, further 5 other centres are in the initiation process or filing for ethical committee approval.

Interested to join the VENUS Registry? Please fill in the Feasibility Questionnaire at https://www.surveymonkey.com/r/ZTF8GFR or send an email to researchfoundation@uroweb.org.

SATURN Registry reaches target of 1000 recruited patients

Prospective registry evaluates the cure rate of AUS implantation procedures for Male SUI

Introduction

Stress Urinary Incontinence (SUI) after surgical prostate treatment is an important and common problem in men with a potential detrimental impact on quality of life. If conservative therapy fails, implantation of the artificial urinary sphincter (AUS) is the recommended surgical procedure for men who have troublesome SUI. Nowadays, the AMS 800 device (Boston Scientific, Minnetonka, MN, USA) is most commonly used, even though there are alternative devices available. In recent years male slings have become a popular alternative surgery for male SUI. Male slings (fixed and adjustable) offer a minimally invasive treatment option and do not require the manual dexterity and sufficient mental function necessary to operate an AUS properly. With the advent of rapidly introduced new surgical options, the current management of male SUI often lacks science-based evidence since it is not clear which patient should get which procedure.

The main goal of this registry is to get insight into the male patients for the treatment of stress urinary incontinence (SUI) due to ISD. Prospective registry evaluates the cure rate of AUS implantation surgery for male SUI due to ISD.

The objectives of this registry are to evaluate the outcomes of surgical treatment of SUI with current available devices in common urological practice and to determine prognostic factors which may help to identify clinical and surgical variables that correlate with (un)favourable outcomes. Patient Reported Outcome Measures (PROMS), quality of life (QoL), and clinical data are collected from study visits at baseline, before surgery; at the time of surgery; and post-surgery up to year 10.

Study update

On the previous months the surgeries are postponed or halted. Nevertheless the previous months the recruitment was accelerated. On the 30th November 2021 after an interim analysis of baseline data was performed based on a data export of October 5th 2021. At that day 980 patients gave IC of which 959 underwent surgery. On average, 11% of centers recruited > 25 cases/year, whilst 14% of recruiting centers included < 1 case/ year. Average inclusion was 18 patients/month. Implanted devices included 2 types of AUS (AMS800 (66%), VICOR+ (3%)), non-adjustable Advance XP (21%), adjustable implants (ProAct 1%, Argus 2%), ATOMS (7%) and miscellaneous (9%). The primary cause of SUI was radical prostatectomy (8%), of which 56% was robot-assisted and 12% was laparoscopic. Further, primary RT (3%), and endoscopic UTS treatments (19%), and others (e.g. neurologically) (4%) were documented. Prior to study inclusion, 30% received one and 46% received > 5 previous AUS surgeries. In total, 30% had urological stricture and 87% of these received an AUS. Previous RT was noted in 39% of AUS patients, while this was 7% for advanced XP and was 2% for adjustable devices.

We want to congratulate all participating investigators and their staff members for reaching the goal of 1000 eligible patients (despite the COVID-19 crisis) the target of 2000 inclusions. Thank you for all your efforts and dedications that will make the SATURN Registry a great success!
As part of her update, she will note that on 1 January 2022, ERN eUROGEN has nearly doubled in size, with 29 full healthcare provider members joining following the 2019 call for applications to join ERN. On 14 January 2022, the European Commission adopted the second 2022 EUHealthwork programme, giving a budget of €42 million to the 24 ERNs (€28.3 million each). This will support specialised healthcare for rare diseases, clinical practice guidelines and clinical decision support tools, education and training (including our webinar and exchange visit programmes), research, our patient registry, and virtual multidisciplinary consultations using the Clinical Patient Management System.

**Workstream 1**

- Paediatric: Rare congenital
- rare urogenital conditions and complex conditions
- requiring highly specialised surgery, will once again coordinate a Special Session on rare and complex urology at the 2022 Annual European Association of Urology Congress.

**Network update**

Programme Manager Michelle Battey (NL) will present an overview of “ERN eUROGEN Developments” as well as co-chairing the session with Network Coordinator Prof. Wout Felz (NL).

**As part of her update,** she will note that on 1 January 2022, ERN eUROGEN has nearly doubled in size, with 29 full healthcare provider members joining following the 2019 call for applications to join ERN. On 14 January 2022, the European Commission adopted the second 2022 EUHealthwork programme, giving a budget of €42 million to the 24 ERNs (€28.3 million each). This will support specialised healthcare for rare diseases, clinical practice guidelines and clinical decision support tools, education and training (including our webinar and exchange visit programmes), research, our patient registry, and virtual multidisciplinary consultations using the Clinical Patient Management System.

**Lecture by Patient Advocacy Group**

Patients are at the heart of everything the ERNs do, with a mission to “Share. Care. Cure.” In a lecture on “Penile cancer – the way forward?” our European Patient Advocacy Group (ePAG) will give an overview on its initiatives. The ePAG works with John Osborne (GB) and Kenneth Manzie (GB), and male cancer information nurse specialist Robcomes (GB).

Penile cancer affects around 38,000 men globally each year. Due to its rarity, it is often difficult to provide a level of peer and psychosocial support following treatment, comparable with more common cancers. Working in conjunction with ERN eUROGEN the above ePAG advocacy has provided a pathway for the patient journey and highlighted key areas of improvement.

In addition, a new global penile cancer steering group is being developed, made up of allied health care professionals and survivors from around the world. The aim of this group is to create a global network and resource for information and virtual support, for anyone who has been affected or a friend or who is working within the field of penile cancer.

**ERN eUROGEN has also organised lectures for their three workstreams, encompassing several expert areas:**

**Workstream 2 - Paediatric: Rare congenital urogenital anomalies and their transition to adult follow-up**

Dr. Giovanni Mosiello (IT) will present a lecture on “Congenital neurogenic bladder dysfunction: What the adult urologist needs to know.” He will look at the causes of neurogenic bladder dysfunction (NBD) in children and adolescents, which are different to causes in adults. Spinal dysraphism (SD) is the most common cause, with defects such as occult SD and myelomeningocele. NBD in SD is variable and may occur at any time; in occult SD, most cases present later, in adolescence, with back pain, absence of perineal sensation, and lower urinary tract dysfunction. Other causes of NBD include sacral agenesis or caudal regression syndrome, often associated with anorectal malformation (ARM), ARM may occur as an isolated malformation or with other malformations (e.g., VATER/VACTERL association) and both bowel and bladder defects may be present. NBD is observed in cerebral palsy or Down syndrome but is often misdiagnosed or dismissed as a cause of distressing disabilities. NBD is reported in other genitourinary syndromes as Williams-Beuren and in congenital muscular dystrophies.

Due to the increased life expectancy of all these children, and considering acquired forms of paediatric onset (trauma, infection, iatrogenic), adult urologists must be aware that patients with paediatric NBD, who require lifelong supervision, will increase in the future.

The EAU and ESPU guidelines are helpful, but tailored guidelines for each pathology would be useful for these rare and complex diseases, particularly for surgery and defining specific transitional care programmes with a multidisciplinary approach, using cross-ERN activities.

**Workstream 2 - functional urogenital conditions requiring highly specialised surgery**

In this presentation, Dr. Mariangela Mancini (IT), will consider “Vesicovaginal fistula: Management strategies and keys to successful treatment.” As a large, pan-European network, ERN eUROGEN represents a new opportunity to discuss the current centre of expertise to provide and share advice for the management of vesicovaginal fistulas (VVF).

Antioxiology, incontinence score, fistula size, and timing of surgery are not correlated with successful VVF repair, although size is strictly associated with the length of the fistulous tract. When bladder reconstruction is necessary, the abdominal approach allows a definitive cure even in the most challenging cases and an extraperitoneal trans-vesical approach is safe and successful in most cases. Maximal results can be expected in centres of experience on the first attempt in a previously non-treated patient. When properly performed, minimally invasive techniques such as laparoscopio or robotic surgery can reduce the invasiveness of the traditional approach. The key to success is the standardisation of surgical key points based on experience and the centralisation of care in referral centres, connected in international networks of expertise such as ERN eUROGEN.

**Workstream 3 - Rare urogenital tumours**

Assoc. Prof. Hans Langenhuysen (NL) will present a lecture on “Expansions of the network with tremendous opportunities for rare urogenital tumours.” He will show that oncological treatment is optimised by the cross-border sharing of clinical knowledge, specialist education involving both experts and patient representatives, and research activities on large patient populations.

These cancers have an annual incidence of ≤ 1:500,000 and present a challenge to clinical management and research. At present, ERN eUROGEN covers four rare cancer expertise areas: penile cancer, testicular cancer, adrenal tumours, and abdominopelvic sarcoma.

In 2021, ERN eUROGEN included 29 full-member and 12 affiliated partner healthcare providers across 19 EU Member States (MS). Ten of the healthcare providers, one patient organisation and two supporting partners (EAU and ESPU) were actively involved in rare urogenital tumours. The cumulative patient population was 10,000 and the annual number of new patients increased from 848 in 2019, to 1,273 in 2021. These live educational webinars were broadcast, and eight publications appeared in peer-reviewed journals in 2019-2020. Due to the COVID-19 pandemic, the annual number of new patients flattened, and the UK’s exit from the EU resulted in the withdrawal of six members in 2019. Fortunately, the 29 new full members are now being integrated, which expands the network to 57 healthcare providers in 20 MS.

This offers tremendous opportunities for creating large long-term registries facilitating research and clinical guideline development. The ERN eUROGEN registry went live at the beginning of 2022 and the healthcare providers in the network are beginning to seek informed consent from their patients to include their data in the new registry. Furthermore, new initiatives aimed at improving patient care, such as cross-ERN collaborations, will be explored.

**COVID-19 impact**

As mentioned previously, the coronavirus pandemic has impacted healthcare systems worldwide and brought elective surgical activity to a minimum. During the ERN eUROGEN Special Session, Prof. Magdalena Fessum (DK), on behalf of her co-authors across Europe, will present “The COVID-19 Pandemic - Patient impact in 10 European centres for urorectal care.” Her presentation will give insight into the effect of changes in health care prioritisations on paediatric urology waiting lists, and how European centres dealt with the challenge in terms of logistical and financial prioritisations.

Ten European centres participated by gathering waiting list data for predetermined procedures over a one-year period, starting March 2020. Centres were surveyed at three-month intervals about operating room capacity and funding. Retrospectively, centres reported on total surgery and outpatient activity from 2019-2021. Outcome measurements and statistical analysis were based on waiting list tendencies, in both numbers of patients and time waiting.

The authors found a decrease in surgery and outpatient activity in spring 2020. Some paediatric urology centres were able to increase their budget 15% and staff working hours 20% during part of the study period. However, all centres increased the total number of patients waiting (15%), and accumulated days on waiting lists (15%), yielding a total of 6,126 accumulated waiting days in the study population. These results add to the ongoing debate about the morbidity and negative socioeconomic effects on paediatric urology patients and their caregivers in future healthcare crises.

**Panel discussion**

To finish the Special Session, all presenters will take part in a panel discussion giving their views on “Rare Diseases in 2020.”

ERN eUROGEN will also be present in the EAU22 Exhibition Centre with a shared stand at the EAU boot. Please do come to this fascinating Special Session and if you have any questions, then come and chat with us at the stand. In the meantime, for further information about the network, please visit our website: www.eurogen-ern.eu
Every single day is about Changing tomorrow.

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Dear Surgeons and EAU members,

I’m taking this opportunity to introduce myself as the new chair of the European Association of Urology Nurses (EAUN) and I’m asking for your help. The EAUN’s main role is to standardise the quality of urological nursing care across Europe. This was a similar reason the EAU was originally formed, as a platform for urologists to standardise practice in urological surgery.

For modern urological care to be improved, nurses need to be involved. But whilst most Urology departments have a number of EAU members, only a minority support their nurses to join the EAUN. This is a serious barrier to the development of true holistic care in urology and something every EAU member can change by encouraging or ideally funding at least one nurse from their department to join the EAUN.

EAUN membership offers opportunities that can benefit both the individual nurse and their Urology department:

Fellowship Programme
- Nurses looking to develop their practice or learn from service improvements in other countries may benefit from partaking in this programme. It provides an opportunity to visit a host institute to observe nursing care in another country. Eligibility and details of how to apply can be found in the Education section of the EAUN website.
- Special Interest Groups (SIGs) contribute significantly to the success of the EAUN. SIGs help develop guidelines, deliver state-of-the-art sessions at conferences, run ESUN (European School of Urology Nursing) courses and webinars.
- Guidelines: The opportunity to join guideline panels, building on the success of the previous guidelines which are used all over the world to standardised care.

Annual meeting
- Attend a 3-day nursing meeting and share papers on Research or Improvement. The nurses also have access to the EAU Congress. Allowing nurses to increase their knowledge and share this knowledge within their team.

Education
- EAUN runs webinars, e-courses & urological updates, recent ones include: bladder cancer care, catheter care, effects of androgen deprivation therapy (ADT), the role of exercise in prostate cancer patient care and shared decision-making in prostate cancer care. We also run ESUN courses (European School of Urology Nursing) – where 25 nurses across the world attended with the aim to return to their departments, share the knowledge and improve patient care.

EFUN (Educational Framework for Urological Nursing) EAUN, EAUN and ANZURS are developing an Educational framework for urological nursing. This collaboration across the world aims to standardise and improve nursing skills within the profession, develop urology care and the provision of research-based practice.

These initiatives will only work with the help of urologists and every urological department, supporting their nurses. We have some excellent Urology departments in Europe that are already doing outstanding work, leading the way in holistic multidisciplinary patient-centred care. But this needs to be shared so that it quickly becomes the standard of care throughout Europe.

Please encourage your nurses to join the EAUN, membership is 35 euros per year. There is also the option of group membership via national nurses societies. For further information on membership please contact Hanneke Lurink via eaun@ueaweb.org. The EAUN website can be found at uroweb.org. The EAUN website can be found at www.eau22.org.

When we all help one another, everybody wins

Urology nurses need the help and support of all urologists and urological departments

Special Interest Groups (SIGs)
- For nurses with a special knowledge about specific urological issues to exchange experiences and investigate urological nursing issues related to their topic group. The SIGs help develop guidelines, deliver state-of-the-art sessions at conferences, run ESUN (European School of Urology Nursing) courses and webinars.

Guidelines
- The opportunity to join guideline panels. Building on the success of the previous guidelines which are used all over the world to standardised care.

By Robert McConkey, SCO Member, Galway, Ireland

The ever-growing workload in urology has resulted in changes to the way urological care has traditionally been delivered. In many countries, nurse led clinics in urology manage and deliver holistic patient-centred care for a variety of benign conditions within the multidisciplinary team.

These can range from lower urinary tract assessment and treatment clinics, including trial without catheter clinics, performing invasive and non-invasive urodynamics, continence assessment and treatment clinics, intermittent self-catheterisation education, intravesical instillations, diagnostic cystoscopy and therapeutic intravesical botulinum toxin injections, amongst others.

Nurses with differing levels of autonomy may deliver these services. The scope of practice and level of responsibility of the nurse delivering the service is associated with their grade. The grade of the nurse, or role title, which carries with it a certain level of autonomy in decision-making, is related to their experience, education, and training. This however is not standardised internationally, and a myriad of role titles and levels of autonomy exist which may cause confusion. While role titles, grades, and bands of nurses, may have different meaning in different countries, the important consideration for nurses is that they work within their scope of practice.

On Saturday, 2 July at 15:45, State-of-the-art lecture 1 will examine the role of the nurse in delivering nurse led clinics to assess, treat, educate patients, and manage common benign urological conditions to improve patient’s quality of life. Ms. Margaret Tiernan, Continence Advisor in the Primary Care Centre in Roscommon, Ireland, will outline the functioning of her clinic and the pathways that she uses to manage continence issues in the community. Following this, Ms. Angela Ramell, Lead Nurse, Urogynaecology at King’s College Hospital, NHS Foundation Trust, London, UK, will explain the methods she utilises to meet patients expectations in relation to overactive bladder in her nurse led clinic. These nurse led clinics will demonstrate the valuable role that specialist nurses contribute to the management of benign urological conditions.

"If everyone is moving forward together, then success takes care of itself."
Syndromic infertility and cancer predisposition

The link between azoospermia and gene mutations involved in DNA repair

**NOA vs cancer predisposition**

**Genetic link**

- Fanconi Anemia-related malignancies: Head and neck squamous cell carcinoma; Acute myeloid leukemia
- General cancer predisposition

**DNA repair genes:** FANCA, FANCM, XRCC2, MCM8, TEX15, WNK3, MSH4, RAD211, MEIOB

**Associated malignancies:** Breast; Lung; Non-Hodgkin lymphoma; Leukaemia; Extragonadal germ cell neoplasia

**47,XXY**

*Dr. Celine Krausz
President of the European Academy of Andrology
University of Foi (IT)*

**Impaired reproductive function is clinically heterogeneous and may manifest as an isolated or a syndromic condition. Azoospermia is the severest form of male infertility and it affects about 2% of men in the general population. It can be the consequence of various aetiologies: (i) hypothalamic–pituitary axis dysfunction, (ii) primary quantitative spermatogenic disturbances, and (iii) orogenital duct obstruction.**

The large majority (99%) of Non-obstructive azoospermia (NOA) cases is due to primary testicular failure, which may derive from different testicular histologies: (i) complete absence of germ cells; i.e. Sertoli Cell only Syndrome (SCO); (ii) spermatogenic arrest; (iii) hypot spermatogenesis.

**“Besides Klinefelter syndrome, monogenic disorders may also lead to non-obstructive azoospermia (NOA) and impaired general health, especially when mutations in DNA repair genes are diagnosed.”**

Epidemiological studies suggest that NOA is associated with reduced life expectancy and higher morbidity, including cancer. (ii) The pathogenic mechanism for the above observations is likely to be related to endocrine and/or genetic factors, which may affect not only reproductive function but also general health. In the Klinefelter syndrome (KS), both low testosterone and altered gene dosage are involved in the pathogenesis of general health problems.

Besides KS, monogenic disorders may also lead to NOA and impaired general health, especially when mutations in DNA repair genes are diagnosed. (3,4)

The Klinefelter syndrome KS is a numerical karyotype anomaly (47,XXY), which in 10–20% of cases may present higher-grade aneuploidies (47,XXX or 47,XXXX), structurally abnormal X chromosome (47,Xq,Y) or mosaicisms (47,XXX/47,XXY). Its frequency is around 1:100–1:150 in azoospermic subjects. The clinical phenotype of KS males may vary from mild to severe forms depending on the number of supernumerary X chromosomes, the presence of mosaicism, and tests. All the number of CAG repeats in the androgen receptor.

The reproductive phenotype is characterised by very small and firm testes and in over 95% of cases by azoospermia. There is a progressive deterioration of the germinal epithelium and the testis producing Leydig cells. Nearly all patients show elevated LH levels and have either a subclinical or overt hypogonadism. In addition to recent meta-analysis, the success rate for the recovery of spermatogenesis through microsurgical TESE (m-TESE) in KS men is 34–44%. (5) Sperm retrieval rates by TESE in adolescents with KS aged 15 to 19 years old are comparable with those reported in young adults who are aged 20 to 30 years old. (6,7)

In KS we can observe a wide spectrum of comorbidities, some of them clearly attributable to hypogonadism (e.g. metabolic syndrome, osteopenia/osteoporosis, anemia etc). X-linked gene dosage effect or epigenetic factors related to the supernumerary X chromosome are most likely the cause of higher risk for deep vein thrombosis, lung embolism, autoimmune diseases, and some typical cancers.

Among the solid cancers, breast and lung cancer are more frequent in KS than in normal XXY individual. Regarding breast cancer, KS patients have a 4- to 5-fold increased incidence, but the absolute risk remains low now that male breast cancer is very rare. Moreover, it has an earlier onset in KS (58 years) compared to men with normal karyotype (60 years). According to the recent EAA Guidelines, it is recommended to perform breast examination (including mammary gland ultrasonography if necessary) and then a tailored follow-up as preventive measure. (7) In addition, haematological malignancies such as leukemia and non-Hodgkin lymphoma are significantly more frequent (standardised incidence ratio of 3.20 for NHL and a SIR of 3.62 for leukaemia).

Finally, an increased incidence of extraduodenal germ cell neoplasia (usually seminomas), mainly located in the mediastinum, have been observed in KS patients. These lesions may present with thorax symptoms and in younger boys with precocious puberty due to HCG production. No increased incidence of testicular germ cell tumours has been documented.

Andrologists should be aware of the increased risk of the above-mentioned cancers across an early detection and treatment of such malignancies in KS patients.

**Recent Whole Exome Sequencing studies allowed the discovery of genes involved in NOA with proven role in cancer prone syndromes such as Fanconi anemia or with potential role in cancer predisposition.”**

**NOA and cancer-prone syndromes**

As stated above, even 47,XY NOA patients seem to be at increased risk for various cancers. Both epidemiological and bioinformatic studies suggest significant genetic overlap between male infertility and particular types of cancer, including urologic neoplasms/carcinomas and B-cell lymphoma.

It is plausible that spertamagenesis and tumorigenesis may share common genetic factors, especially those involved in stem cell renewal/differentiation, mismatch repair mechanisms, and apoptosis. Particularly, genomal alterations in DNA repair genes, which are fundamental for maintaining the genomic integrity and stability in the early stages of the male gametocyte, may confer a high risk predisposition to impaired spermatogenesis and cancer. (3,4)

Spermatogenesis shares common biological pathways also with haematopoesis and in fact, patients affected by bone marrow failures syndromes often have spermatogenic failure as well. It has been hypothesized that if DNA repair is defective during replication of stem cells then a progressive depletion of both the hematopoietic and spermatogenic stem cells, may occur leading to anaemia and NOA, respectively.

Fanconi Anemia (FA) is a rare genetic disease. In the majority of cases, the clinical manifestation of FA appear during childhood. However, in 10% of patients the diagnosis is delayed until adulthood due to slow progressive Bone Marrow Failure (BMF). Late diagnosis may occur especially when individuals have no symptoms or present subtle findings that may be overlooked. In these patients the diagnosis is usually made because of the appearance of FA-related cancers. Therefore, diagnosing “occult” FA before the appearance of neoplasia has a relevance for cancer prevention/early surveillance.

FANCA is the most commonly mutated gene in FA. Starting from Whole Exome Sequencing (WES) followed by targeted gene sequencing, we have identified recessive FANCA mutations in 2/3 idiopathic NOA patients with SCOS and with slightly altered/borderline haematological parameters i.e. with no overt anemia. (8) None of these “occult” FA cases presented NOA-related cancers at the time of the diagnosis but thanks to the genetic diagnosis they are under strict surveillance by oncologists.

The SCOS phenotype reflects the lack of spermatogenic stem cells, which is the testicular equivalent of the bone marrow stem cell depletion. This finding indicates that andrological evaluation, especially in patients with SCOS, should not only include hormone measurement but also blood exam since this specific subgroup of patients are at higher risk for “occult” FA.

Apart from FANCA, there are 22 genes known to take part in the so-called FA pathway, and involved in DNA double-strand break (DSB) repair. Mutations in other FA pathway genes have also been recently reported in NOA. Among them, the testis-enhanced FANCM mutations were identified in patients affected by SCOS and oligozoospermia (for review see q). It is interesting to note that the Fanconi mutant mice displayed SOC tubules and a progressive loss of germ cells overtime; hence, it is likely that FANCM mutations may be a new cause of progressive impairment of spermatogenesis with clinical implications such as preventive sperm cryopreservation.

Other examples of shared NOA/cancer predisposing genes are MCM9 and TERK9, two other DNA DSB repair genes, and the X-linked WNK3 gene, involved in cell signalling, survival and proliferation. (4) DNA repair genes are also important for meiotic progression and in fact, in a selected group of patients with meiotic arrest, we identified mutations in TERK9, MSH5, RAD211 and MEIOB, all involved in the maintenance of genome integrity. (9) Long-term follow-up of these patients will be necessary to prove the concept about the potential genetic link between NOA and cancer predisposition (fig 1).

In conclusion, recent WES studies allowed the discovery of genes involved in NOA with proven role in cancer prone syndromes such as FA or with potential role in cancer predisposition. The clinical impact of discovering such “hidden” genetic factors is important not only in relationship with the reproductive function but also for the general health status of these men and their offspring.

References:

Saturday, 2 July 2022, 14:00
Meeting of the EAU Section of Andrological Urology (ESAU)
Purple Area, Room Elicium 1
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AIFA submission date 05/01/2022. Code 300170/A
ADT, androgen deprivation therapy. CI, confidence interval. HR, hazard ratio. mHSPC, metastatic hormone-sensitive prostate cancer. OS, overall survival. rPFS, radiographic progression-free survival.

*ERLEADA® (apalutamide) is indicated in adult men for the treatment of metastatic hormone-sensitive prostate cancer (mHSPC), in combination with ADT.

†Median OS not yet reached with ERLEADA® + ADT; the majority of patients were still alive at the time of the final analysis (after adjustment for crossover). HR: 0.52 (95% CI: 0.42–0.64) p<0.0001.

‡rPFS: time from randomisation to first imaging-based documentation of progressive disease or death, whichever occurred first. Median rPFS could not be estimated for ERLEADA® + ADT vs. 22.1 months with placebo + ADT; HR: 0.48 (95% CI: 0.39–0.60) p<0.001.