Dear Readers,

most people feel uncomfortable discussing urological conditions. That’s why many people suffering from them have difficulty seeking help when they experience symptoms, which is truly unfortunate, as effective treatment methods are now available for most complaints. Whether it is a benign or malignant prostate disease, male or female incontinence or kidney disease – effective therapy is possible in most cases. Where possible, we use modern and gentle procedures like AquaBeam, laser, ultrasound or the surgical robot da Vinci for the benefit of our patients. There are several excellent urology clinics here at Asklepios in Hamburg, with others in central Germany and Bavaria as well. We have used them as examples in this newsletter to give you an impression of the services we provide.

Wishing you the best of health!

Regards,

Dr Thomas Wolfram
Chair Group Management Asklepios Klinik GmbH & Co. KGaA

Asklepios as a clinic operator

Asklepios is one of the largest operators of private clinics and healthcare facilities in Germany. Founded more than 30 years ago, the clinic group follows a responsible and sustainable strategy geared towards a high level of safety and quality. The group currently has more than 160 healthcare facilities spread across Germany between the Island of Sylt in the North Sea and Lindau by Lake Constance and employs more than 47,000 people. In the 2017 fiscal year, Asklepios treated around 2.3 million patients.

Medical quality management at the highest level is an area in which Asklepios particularly excels. The clinic operators benefit from the group’s structure to promote knowledge transfer between the facilities and to provide particularly high treatment quality. The results are also published regularly. Medical quality is assured increasingly as well. For instance, a clinic within our group, the Asklepios Klinik Barmbek, has been officially voted “World’s Best Hospital for Medical Tourists” for the second time in a row.
Urinary incontinence – Effective help is almost always possible

Urinary incontinence can place an extreme burden on everyday life and even lead to social isolation. It affects many people, and not just older members of society. Patients are often shy of discussing the issue with their doctors and instead use pads or nappies – or they withdraw from public life out of a sense of shame. Nonetheless, modern urology has many ways to ensure the effective treatment of incontinence.

Very different factors can cause incontinence. They include chronic inflammation, age-related changes in the bladder muscles, weakness of the pelvic floor, as well as gynaecological or neurological diseases. Specialists from five specialist fields therefore work together in the Continence and Pelvic Floor Centre at Asklepios Klinikum Uckermark to identify and implement the ideal therapeutic strategy for each patient.

Treating urinary incontinence is a routine task for the urologist Professor Rüdiger Heicappell and his team in the certified Continence Centre at Asklepios Klinikum Uckermark in Schwedt an der Oder. The specialist centre brings together experts in urology, gynaecology, neurology, surgery and other specialist departments that collaborate closely on providing lasting assistance to patients suffering from urinary or faecal incontinence.

Thorough diagnostics is the first step in selecting the right treatment strategy. Besides a detailed consultation with the patient and analysis of his or her drinking and urination habits, Heicappell and his colleagues can draw on the complete spectrum of modern medical technology, from ultrasound to urethrocystoscopy and even urodynamic testing. The last procedure involves four measurements: Pelvic floor electromyography uses surface electrodes to measure the electrical activity of the pelvic floor and abdominal muscles, while the flow of urine is controlled. Cystometry involves the insertion of a catheter to measure bladder pressure, as well as its elasticity, capacity and stability. Uroflowmetry is a procedure that measures the speed of the urinary stream. Pressure flow measurement ultimately determines the force exerted by the bladder during micturition. Finally, residual urine measurement identifies the quantity of urine that remains after voiding the bladder.

The therapies provided include:
- Pelvic floor gymnastics
- Medicinal incontinence therapy for the treatment of overactive bladders
- Botox® injections into the bladder to treat hyperactivity when tablets are insufficient
- Transorburator sling for the treatment of male and female stress incontinence
- Tension-free vaginal tape (TVT) for female stress incontinence
- Anterior vaginal wall repair/collopascropexy for the correction of bladder prolapse in the vagina
- Artificial sphincter for severe forms of urinary incontinence or after surgical procedures (e.g. prostatectomy)

In virtually all cases, the right treatment strategy can now heal urinary incontinence or at least control the condition so efficiently that it no longer detracts from the person’s quality of life. What really counts is that patients do not simply resign themselves to incontinence, but that they seek help from specialists like Professor Heicappell.
Fusion biopsy, da Vinci robot and focal therapy: State-of-the-art therapy for the fight against prostate cancer

Prostate cancer is among the most frequent forms of cancer affecting men in the western world, but the progression of the disease differs significantly from case to case. Optimum diagnostics are necessary in order to select the correct treatment strategy and to plan the therapy individually. For a long time, it was standard practice to conduct a prostate biopsy according to a set procedure to substantiate or exclude the suspicion of a tumour as soon as an elevated PSA level was discovered. But this meant firstly that many tumours remained undiscovered, while secondly leading to the unnecessary removal of tissue in many instances.

MRI fusion biopsy ensures clarity
Professor Roman Ganzer and his team at Asklepios Klinik Bad Tölz routinely select what is known as MRI/ultrasound fusion biopsy instead. Combining multi-parameter magnetic resonance imaging of the prostate with an ultrasound examination, this innovative technique is a better method of diagnosing and localising significant prostate carcinoma. It allows doctors to extract precise tissue samples from suspicious areas. Recent studies confirm that this procedure offers vastly improved detection of clinically significant prostate carcinoma, while also ensuring that unnecessary biopsies are avoided. Fusion biopsy can be performed under local anaesthetic via the rectum (transrectal) or the perineum with the KOELIS Trinity system used in Bad Tölz. The specialists in Bad Tölz make their individual therapy decisions based on the location and aggressiveness of the tumour.

Gentle prostate removal using the da Vinci robot
When treating patients with a life expectancy of ten years who are suffering from clinically significant tumours, Ganzer uses a robot-assisted surgical procedure to remove the prostate; he also removes the pelvic lymph nodes if there is an elevated risk of lymph node metastasis. Today, the state-of-the-art da Vinci robot system allows surgeons to conduct these procedures in an extremely gentle form. The nerves required to achieve erection are preserved as far as possible. Other benefits include low blood loss, a short period of hospital admission and improved complication rates. The high-resolution 3-D view and the outstanding agility and ergonomics of the instruments enable extreme precision and hence ideal preservation of the anatomical structures that are responsible for maintaining continence and sexual function.

Focal therapy melts tumours
The specialists in Bad Tölz offer focal therapy as part of studies for the treatment of small, local tumours. This does not involve treatment of the entire prostate, but only the area in which the tumour is located. Proceeding in this way reduces the side effects even further. For focal therapy, Professor Ganzer uses the Focal One® system, the most recent advancement in the field of high-intensity focused ultrasound (HIFU). The procedure applies MRI image fusion to enable precise treatment of the area affected by prostate cancer. The focused ultrasound is emitted in the direction of the prostate by a probe introduced into the rectum. Depending on the relevant region, the treatment lasts between 30 minutes and one hour. In most cases the patients will be discharged from the clinic two days after the procedure.

Focal therapy is still an experimental treatment method for prostate cancer, so it is currently only performed as part of studies that require regular follow-up examinations on site. Besides screening of the PSA level and palpitation of the prostate, this involves another MRI examination of the prostate after six to twelve months, as well as a repeat prostate biopsy. Professor Ganzer and his team at Asklepios Klinik Bad Tölz are important contributors to major studies on this issue.

Asklepios Klinik Bad Tölz is located around 50 km south of Munich and is a popular holiday destination in Upper Bavaria with its towering Alpine foothills, lakes and verdant valleys. International patients are assigned accommodation in comfortable single and double rooms within a modern ward that is laid out in the style of a hotel.

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Pioneers of innovative laser and ultrasound techniques

Laser is used increasingly to treat benign cases of prostate enlargement around the world, as these interventions are associated with lower blood loss than conventional surgical techniques and also cause fewer complications like urinary incontinence or impotence. Even though many types of laser are available, only three have become established methods. One of them, the thulium laser, was introduced at Asklepios Klinik Barmbek in Hamburg in 2006, from where it went on to conquer the world. Back then, Chief Physician Professor Andreas Gross recognised that this laser was superior to other types in certain areas. Gross explains that the short to medium-term treatment results using Greenlight laser were somewhat disappointing. This is why it tends only to be selected now if there is a greater susceptibility to bleeding. Holmium laser enables complete removal of the prostate, but the procedure is difficult to learn and is complicated due to the physical properties of the laser. Neither of these issues apply to the thulium laser, the prestigious expert emphasises. Gross and his team have since performed 5,000 operations using this laser and are wholly convinced by its benefits. More than 200 urologists around the world have already been trained in this method at Asklepios Klinik Barmbek. What’s more, Professor Gross and his team hold national and international surgery seminars to qualify additional specialists.

Besides conventional prostate removal, the urologists at Asklepios Klinik Barmbek also apply gentle procedures for the treatment of prostate cancer. But this is only possible if the cancer is detected at an early stage. Senior Physician Dr Dietrich Pfeiffer is among Germany’s pioneers in what is known as the HIFU procedure. He started using this technique successfully in 2002 and has contributed to its advancement since then. The experts from Asklepios Klinik Barmbek have now performed more than 500 HIFU treatments and established north Germany’s largest HIFU centre. HIFU stands for "High-Intensity Focused Ultrasound". It involves the use of acoustic lenses to focus high-energy ultrasound waves on the prostate by means of a spoon-shape probe that is inserted into the rectum. Arriving at their target, these sound waves generate temperatures of around 90 °C that permanently destroy the cancerous tissue. The procedure is computer-assisted to ensure precise treatment in a millimetre range. The latest generation of HIFU devices destroys even tiny tumours with extreme precision, preserving the adjacent, healthy tissue and thus ensuring that complications like urinary incontinence or erectile dysfunction are avoided.

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Laparoscopic partial nephrectomy for the treatment of kidney cancer

Advances in ultrasound and computer and magnetic resonance imaging ensure that kidney cancer is identified at a very early stage in increasingly frequent cases. At this point, they are often small enough to cut them out of their location in the kidney without removing the complete organ. Professor Christian Wülfing, Chief Physician in the Department for Urology at Asklepios Klinik Altona in Hamburg, has specialised in this partial nephrectomy to preserve the organ. There are many reasons to consider this gentler procedure, says Wülfing. For instance, several studies indicate that after a complete nephrectomy, patients – despite having one healthy kidney – experience an impaired long-term renal function more frequently than after surgery that preserves the organ. Patients also suffer from a significantly enhanced risk of life-threatening cardiovascular diseases after removal of a kidney. Laparoscopic techniques are becoming increasingly popular for the performance of partial nephrectomy, especially using the da Vinci surgical assistant robot. Wülfing and his team have already conducted around 500 of these procedures since 2010. Studies have meanwhile confirmed that they are gentler, but equally safe and effective as conventional open surgery.

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Professor Wülfing is using the surgical robot da Vinci with increasing frequency for the performance of partial nephrectomy, as it allows him to perform even complex procedures as gently as possible.
Water or laser beam: Innovative surgery for benign prostate enlargement

Approximately one quarter of men above the age of fifty have enlarged prostates. Typical symptoms include increased micturition, weak or delayed flow of urine, night-time urination, an interrupted stream, dribbling or incomplete voiding of the bladder. A variety of surgical techniques can be used to remove surplus tissue from the urethra if the patient experiences difficulty with urination despite medicinal treatment of the prostate. The tissue is stripped and extracted using an electrically heated wire sling (TURP) or laser nucleation, while laser vaporisation (e.g. Greenlight) vaporises the tissue. Professor Thorsten Bach, Chief Physician of the Department for Urology at Asklepios Klinikum Harburg in Hamburg, was a pioneer of a new, gentler procedure on the European continent: Developed in Silicon Valley, his AquaBeam robot shows remarkable precision in removing the excess tissue in a gentle procedure using an ultrasound-guided water beam.

AquaBeam is an absolutely new therapy concept, explains Bach: "Until now, the surgeon has looked through the urethra to view the surplus tissue that is removed using a sling or a laser. But the technique is difficult to learn, and so the results are highly dependent on the surgeon’s experience. In contrast, the visualisation is decisive in AquaBeam, says Bach. "The doctor marks the tissue for removal in the ultrasound image, and the robot then uses a water beam to remove the marked section in a fully automatic procedure. To do this, the high-pressure nozzle is guided incrementally through the urethra in a pendulum movement. The doctor controls the extent of the swing. Including planning, the whole intervention takes 20-30 minutes, and the operation itself is over in fewer than five." It’s a bit like an industrial application, explains Bach: “A computer is used to design a component, and then it is cut out of a metal block by means of a water or laser beam. Ultimately it’s no different here.”

Bach has now acquired several months of experience with the AquaBeam, during which he has treated more than 120 patients. His clinic therefore has experience with the method that is unrivalled anywhere else in the world. None of the patients reported complications, while 70 percent remained able to ejaculate and experienced significant improvement in micturition – even patients that had been dependent on a catheter before the surgery. These findings confirm the Water Study which was presented at the world’s largest urologist congress held in San Francisco in May and that compared the AquaBeam procedure with conventional TURP: The same effectiveness with shorter surgery times and fewer side effects.

Bach is completely convinced by the system: The new procedure reduces the risk of injuring the sphincter, lowers the unpleasant urge to urinate during the healing phase and promotes rapid recovery, as the tissue experiences minimal irritation during the gentler procedure. This improves the preservation of continence and ejaculation. Moreover, the results of the water beam procedure are just as good as with established methods. Bach is certain: “This gentle technical revolution will turn prostate therapy on its head in the coming years.”

Study indicates which procedure is best for which patient

Aside from the water beam technique, Professor Bach also uses gentle laser procedures for the treatment of benign prostate enlargement. Working on a major study, he and his colleagues from the Asklepios clinics in Altona, Barmbek and St. Georg collected the data from just under 2,700 patients that had been operated on using the three established procedures of TURP, laser nucleation or laser vaporisation. A comparison of their case histories showed that all surgical procedures fulfilled their purpose, reports Bach. But there are differences nevertheless: On average, patients receiving laser intervention spend one day less in the clinic than those treated with TURP. They were not as susceptible to involuntary urinary leakage and were significantly less reliant on medication. Asked whether they would agree to the intervention again, 97% of the patients treated with the laser procedure responded “yes”, while 91% of those who received TURP treatment answered in the affirmative. The fewest bleeding complications occurred among those receiving vaporisation with Greenlight laser, although many of the patients who underwent this procedure took anticoagulants and were hence more susceptible to the risk of haemorrhage. Laser nucleation proved to be the most effective method overall, especially in the treatment of significant prostate enlargement. Bach is convinced that the future belongs to this form of laser therapy. Today, every second patient at Asklepios Kliniken in Hamburg is treated using this technique, and laser vaporisation is applied to remove tissue on every fifth patient. Asklepios Kliniken are therefore pioneers in Germany, as only every tenth patient receives laser treatment elsewhere.

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