MEDI-GLOBE GROUP

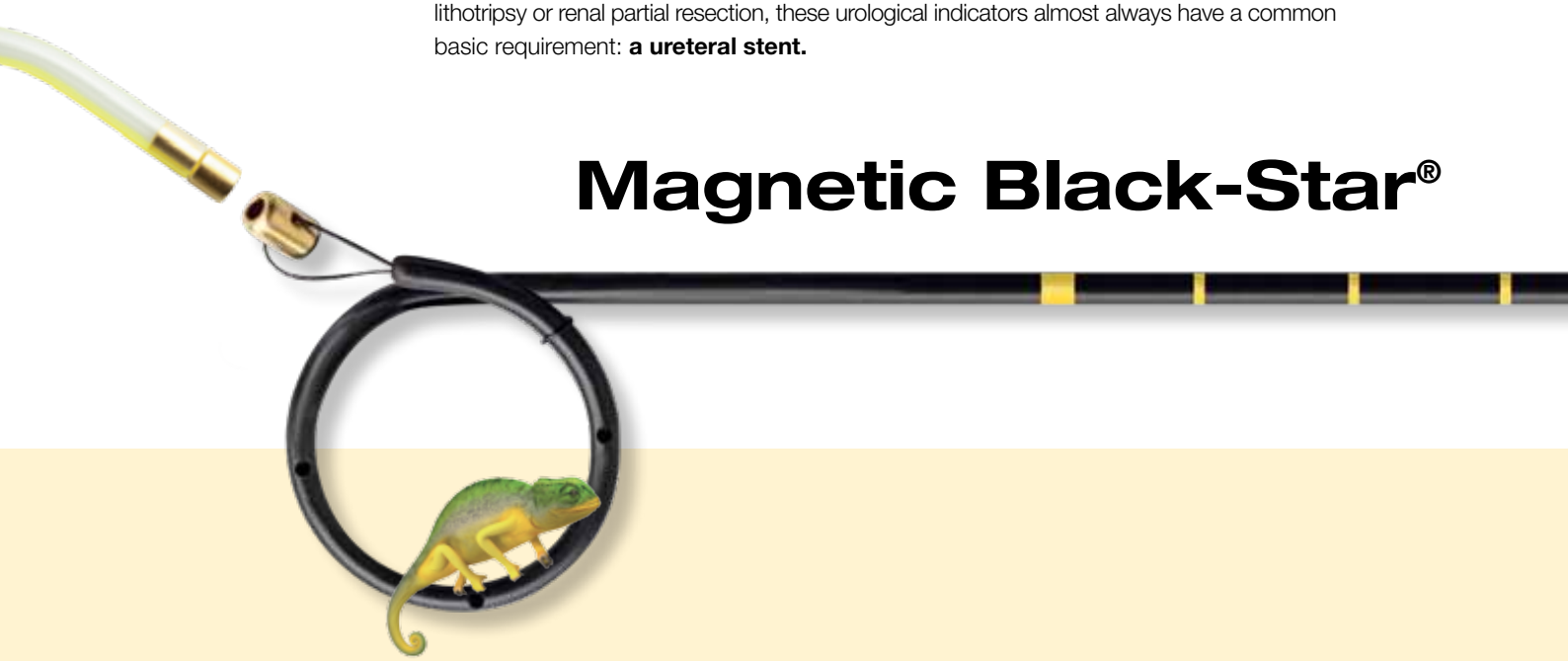
UROTECH

Mastering medical challenges by innovation.

Safety, comfort and efficiency redefined

Urinary problems are widespread. And they are becoming more widespread: for example, urinary stone disorders today afflict approximately 5 % of the German population, making them one of the most common disease types.

Whether urolithiasis, acute or chronic obstruction of the urethra, a urinoma following a fornix rupture, preparation for extracorporeal shock wave lithotripsy (ESWL), intracorporeal lithotripsy or renal partial resection, these urological indicators almost always have a common basic requirement: **a ureteral stent.**



Magnetic Black-Star®

A step into the future

1966

The ureteral stent was used for the first time in Germany in 1966.

1978

A technological breakthrough came in 1978 with the development of the ureteral stent.

Today

UROTECH takes a step into the future with the development of a ureteral stent which can be quickly and easily removed using magnets. The programme is called: **Magnetic Black-Star®**

However the magnetic “click” is not the only thing that distinguishes this innovative ureteral stent. Study results have confirmed that the Magnetic Black-Star® is quick, safe and efficient.

There are so many good reasons to take a closer look at the most innovative ureteral stent. Read on to discover more.

Magnetic Black-Star® has revolutionised ureteral stenting

The use of endo-urological devices is an integral part of everyday life for urologists. Ureteral stents have been used over 100 million times worldwide. Complications are ever-present, however. But improvement is in sight: innovations in materials and methodology result in greater comfort.

A risk factor in ureteral stenting is the second intervention necessary to remove the stent during a cystoscopy. The intervention is not only time-consuming and costly; in addition to the anaesthetic risk, it is also impossible to rule out the possibility of infection from the instrument or injuries to the urethra and bladder.

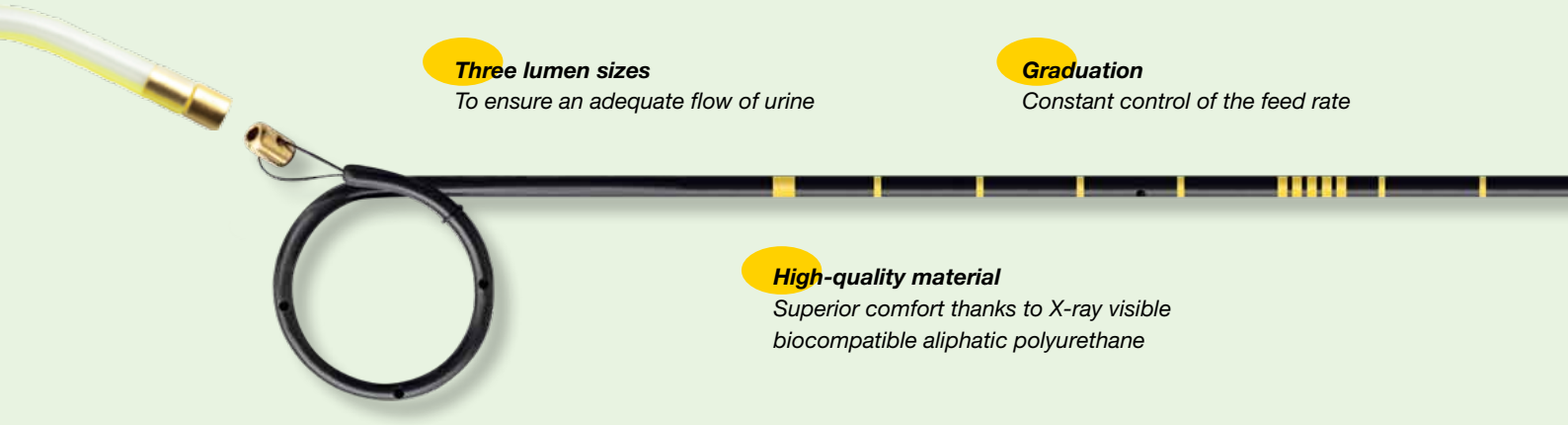
The innovative method of magnetic stent removal, which is becoming increasingly established internationally in urological practice, offers benefits for both doctors and patients.

The effective and ingeniously simple system has been developed by Urotech, which has made a name for itself in the field of advanced medical devices over the past 25 years. In close cooperation with the internationally experienced urologist Prof. William Taylor (Vancouver), Magnetic Black-Star® has emerged, a ureteral stent which can be removed in next to no time with the associated retrieval device and without the need for a cystoscopy. This means:

Risks minimised thanks to magnetic stent removal

Economical and comfortable methodology
Painless and operation-free stent removal in 30 seconds

Perfect DJ design
Conical tip facilitates access into the ureter



Three lumen sizes
To ensure an adequate flow of urine

Graduation
Constant control of the feed rate

High-quality material
Superior comfort thanks to X-ray visible biocompatible aliphatic polyurethane

Better than a cystoscopy

Clinical studies have documented the speed, low rate of complications and economic efficiency of the new Magnetic Black-Star® ureteral stent. One study showed successful removal in less than 30 seconds in 19 out of 20 patients. The patients reported almost no problems (measured by the Ureteric Stent Symptoms Questionnaire, USSQ). At the 32nd Annual EAU Congress in London in March 2017, Dr Hakan Özveri (Istanbul) reported on experiences from an as yet unpublished study with 120 patients: a simple ureterorenoscopy with subsequent unilateral ureteral stent insertion was carried out in patients. Ureteral stents were removed between a period of four days and two weeks later. No sedatives or painkillers were used, and the removal was performed in under 30 seconds for 95 patients.

Magnetic Black-Star® in gynaecology

At the EAU 17, Dr Marc Seybold (Hospital Federation Kempten Oberallgäu) reported on his first experience with the Magnetic Black-Star® in gynaecological use.

The pioneering Magnetic Black-Star® system is now being used protectively in his clinic for various operations such as in patients with uterus and cervical cancer. The benefits of the magnetic ureteral stent have also been proven in such cases: no second operation needed for stent removal, superior comfort, relevant reductions in cost.

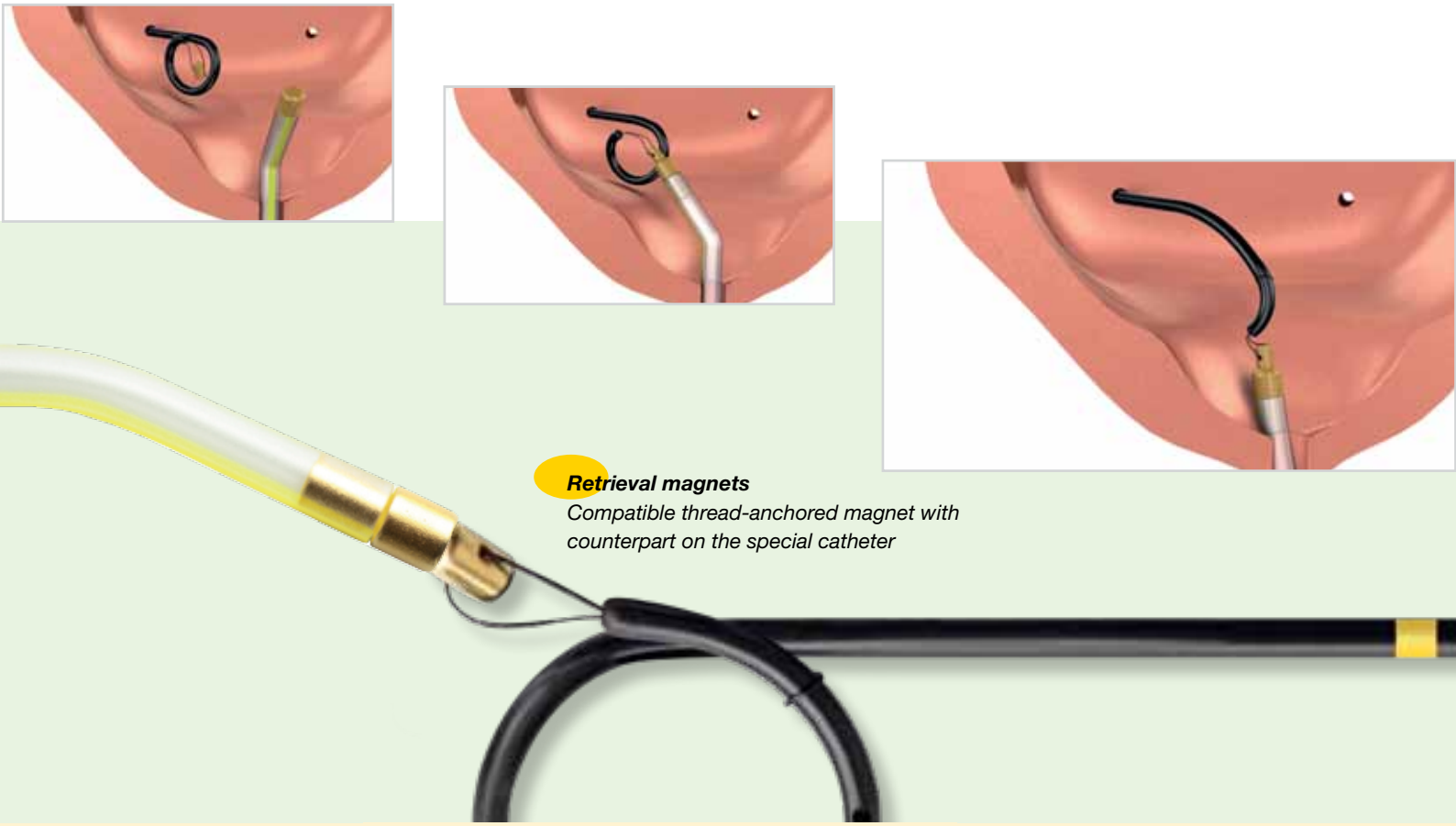
Photo: Department of Urology, University Hospital Mannheim

Effectiveness and profitability

The Magnetic Black-Star® system consists of a black ureteral stent, at the distal end of which is a thread with a small magnet, and a special Tiemann catheter with a magnetic tip as a retrieval device. There is a strong magnetic field between the magnets, so they can easily find each other and establish a stable connection. The stent, which is inserted for a period of up to 30 days, can usually be removed without complications in under 30 seconds.

Easy to handle

The Magnetic Black-Star® is inserted using Seldinger technology as standard. Care must be taken to ensure that the magnet is threaded onto the guide wire before the Magnetic Black-Star® is inserted into the renal cavity under radiographic control. The pusher and guide wire are then removed. During removal, the retrieval device is introduced through the urethra into the bladder and rotates in a 360° movement, which joins the two magnets. The secure connection is clearly felt and can even be audible in thin or cachectic patients. The stent is then removed with a slow continuous pull. Advantage: no cystoscopy is required for removal.



Retrieval magnets
Compatible thread-anchored magnet with counterpart on the special catheter

Interview

Dr Marie-Claire Rassweiler (Department of Urology, University Hospital Mannheim) is director of a study investigating "Magnetic ureteral stent removal without cystoscopy – a randomised controlled trial", which was published in the prestigious Journal of Endourology in May 2017.[2)]

Which of the results of your investigation do you consider especially relevant for urological practice?

Dr Rassweiler: The magnets allow the Magnetic Black-Star ureteral stent to be removed quickly and easily, similar to a urinary bladder insert. The removal itself takes about a minute after adequate preparation. The patient can thus be spared a cystoscopy. In our study, we were able to demonstrate that the removal of the ureteral stent caused significantly less pain than cystoscopic removal.

How important is the aspect of quality of life here?

Dr Rassweiler: A ureteral stent affects the quality of life of patients, especially when associated with micturition problems or abdominal pain. Patients complained of similar symptoms with the Magnetic Black-Star, with the greatest pain intensity indicated to be predominantly in the abdomen. Most patients with a standard ureteral stent complained of flank pain.

How do you assess the use of the Magnetic Black-Star in cost-benefit terms?

Dr Rassweiler: The Magnetic Black-Star is more expensive than the standard ureteral stent, but the cost is mitigated by its simple, fast removal. We were able to show in a cost analysis in our clinic that savings of approximately €100 per case could be achieved through the use of the Magnetic Black-Star. There is no need for an intervention room or a cystoscope, or for the preparation of equipment or of the patient. Furthermore, the ureteral stent can be removed by nursing staff without involving a doctor.

Magnetic Black-Star®

The new way of stent removal

- without a cystoscopy
- fast and safe
- superior patient comfort
- more economical

The programme:

Open tip

Size (FR/CH)	Length cm	Size Stentmagnet	Order number without guide wire with retrieval device	Order number with with guide wire with retrieval device	Order number with guide wire without retrieval device	Order number without guide wire without retrieval device	Wire length (cm)	Diameter	Wire tip	Wire hardness
4,8	10	7	MR-414810	MR-364810	MR-304810	MR-404810	150	0.028”	straight	standard
4,8	12	7	MR-414812	MR-364812	MR-304812	MR-404812	150	0.028”	straight	standard
4,8	15	7	MR-414815	MR-364815	MR-304815	MR-404815	150	0.028”	straight	standard
4,8	18	7	MR-414818	MR-364818	MR-304818	MR-404818	150	0.028”	straight	standard
4,8	20	7	MR-414820	MR-364820	MR-304820	MR-404820	150	0.028”	straight	standard
4,8	22	7	MR-414822	MR-364822	MR-304822	MR-404822	150	0.028”	straight	standard
4,8	24	7	MR-414824	MR-364824	MR-304824	MR-404824	150	0.028”	straight	standard
4,8	26	7	MR-414826	MR-364826	MR-304826	MR-404826	150	0.028”	straight	standard
6	15	9	MR-410615	MR-360615	MR-300615	MR-400615	150	0.035”	straight	standard
6	18	9	MR-410618	MR-360618	MR-300618	MR-400618	150	0.035”	straight	standard
6	20	9	MR-410620	MR-360620	MR-300620	MR-400620	150	0.035”	straight	standard
6	22	9	MR-410622	MR-360622	MR-300622	MR-400622	150	0.035”	straight	standard
6	24	9	MR-410624	MR-360624	MR-300624	MR-400624	150	0.035”	straight	standard
6	26	9	MR-410626	MR-360626	MR-300626	MR-400626	150	0.035”	straight	standard
7	15	9	MR-410715	MR-360715	MR-300715	MR-400715	150	0.035”	straight	standard
7	18	9	MR-410718	MR-360718	MR-300718	MR-400718	150	0.035”	straight	standard
7	20	9	MR-410720	MR-360720	MR-300720	MR-400720	150	0.035”	straight	standard
7	22	9	MR-410722	MR-360722	MR-300722	MR-400722	150	0.035”	straight	standard
7	24	9	MR-410724	MR-360724	MR-300724	MR-400724	150	0.035”	straight	standard
7	26	9	MR-410726	MR-360726	MR-300726	MR-400726	150	0.035”	straight	standard

Retrieval Device

Size (FR/CH)	Length cm	Size Stentmagnet	Order number to be used for FR/CH 4.8	Order number to be used for FR/CH 6/7
09	40	9	R-Device-S	-
15	40	9	-	R-Device-L

[1] Rassweiler MC Michel MS, Ritter M. Magnetic Blackstar® Ureter Stent – Feasibility Study. Taipei, WCE 2014

[2] Rassweiler MC, Stephan-Michel M, Ritter M, Honeck P, J Endourol. 2017 May 6, doi: 10. 1089/end.2017.0051.

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