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a new way of thinking about everyday life in medicine and in the clinic

STIMULI FROM ORTHOPAEDICS AND THE PROFESSIONAL FIELD – FOR PHYSICIANS, SPECIALISTS AND EXECUTIVES

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«3D planning significantly helps gain information»

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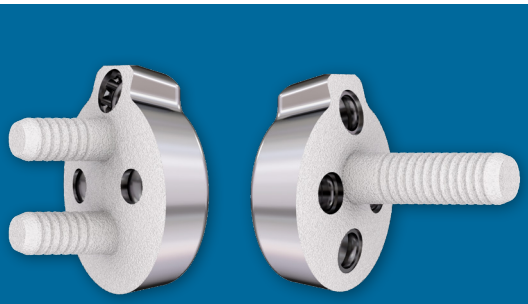
Affinis Inverse with new metaglene system



From the professional field

Fighting pain with humour?

When laughter is the best medicine

«3D planning significantly helps gain information»

Three-dimensional planning does not merely allow an accurate reconstruction of patient anatomy. The surgeon obtains precise information prior to the surgery regarding the optimal size and positioning of the implant.

Dr Philipp Rehbein

has been the medical director of the Centre for Orthopaedics, Spine and Trauma Surgery (ZOWU) at the St. Josef Hospital in Wiesbaden since 2019. More than 1'200 hip endoprostheses are implanted annually by Dr Rehbein and his team in the largest endoprosthetics clinic in Hessen. The hip expert received his orthopaedic training at the St. Georg General Hospital in Hamburg and at the Institute for Biomechanics at the Technical University Hamburg-Harburg. He has also worked at the Orthopaedic Clinic / Park Clinic, Grosshansdorf and the University Orthopaedic Hospital, Friedrichsheim Foundation, in Frankfurt am Main.

Dr Rehbein, what are the main challenges in hip surgery and how can accurate planning help improve the clinical outcome of a hip prosthesis?

Using an experienced approach – my preferred approach is the anterolateral approach in the supine position which can also be performed less or minimally invasively – the surgeon must have an optimum overview. The information regarding implant size and orientation, obtained by means of preoperative planning, can be best implemented in this way. The precise planning helps restore the functional anatomy, the force ratios, and stable mobility.

«The planning of optimys using mediCAD 3D Hip enables the precise determination of the important femoral neck osteotomy.»

You are already using the innovative software module mediCAD 3D Hip for your work. What are your reasons for using this planning software?

Two-dimensional preoperative endoprosthesis planning has been well established now for decades. It is an integral part of the surgery, among other things as a criterion for certifications or guidelines. Three-dimensional planning represents an enhancement that significantly improves the acquisition of information for surgical planning. Particularly in the case of complex anatomical variants, such as dysplasia, past history of repositioning surgeries, etc., planning with mediCAD 3D Hip, as compared to conventional 2D planning, offers fascinating opportunities, such as dynamic movement simulation.

Which benefits and functions of mediCAD 3D Hip do you value – particularly in the case of short stem planning?

The philosophy of the optimys short stem prosthesis is the metaphyseal anchoring, which is implemented through the «bone preservation» concept with the benefit of a bone-sparing femoral neck osteotomy. The planning of optimys using mediCAD 3D Hip enables the precise determination of the important femoral neck osteotomy. Another point is the assessment of the femoral offset in the three-dimensional space. While the offset and the proximal anterotation are reconstructed by a rotation of the implant itself in the case of a conventional straight stem prosthesis, the short stem prosthesis achieves this through the anatomical reconstruction of the femoral neck. With regard to this point, 3D planning is superior in all circumstances to 2D planning.

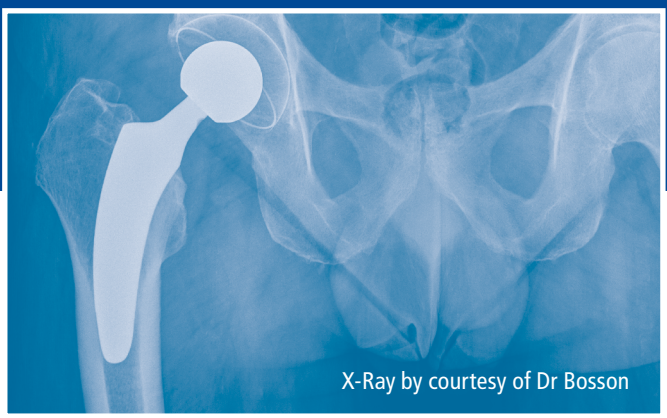
A durable hip prosthesis is the result of various factors; how crucial is the interplay between you as the surgeon, the prosthesis, and the planning?

The course of an operation is decisively influenced not least of all by a less invasive and tissue-sparing approach and by the experience of the surgeon. The optimys short stem prosthesis is also a crucial factor that contributes to this. The following is achieved through the interplay between the tissue-sparing approach and the way in which the prosthesis is placed in the bone while preserving the important muscle and tendon insertion points:

- optimum ranges of movement (ROM)
- stability
- protection against dislocation
- best muscle function

«The optimys short stem prosthesis is also a crucial factor which contributes to this.»

The three-dimensional planning perfects this interaction between the surgical approach and the philosophy of the short stem prosthesis by optimising the placement. The positioning can already be assessed during the planning under simulated dynamic conditions as well and an



X-Ray by courtesy of Dr Bosson

unimpeded situation, which is important for durability can thus be created. Durability ultimately means not only a long service life, but enabling perfect, resilient function for decades.

«I primarily see the added value for patients.»

In your opinion, what is the added value of mediCAD 3D Hip for hospitals and also for patients?

I primarily see the added value for patients. Even in old age, there are significant demands regarding activity and physical mobility, and this is also true in younger patients. Through the three-dimensional prosthesis planning with mediCAD 3D Hip, important conditions for meeting these demands can already be created. The rate of risks and complications should also be kept as low as possible, of course. This benefits not only patients but also hospitals, whose quality data are presented in an increasingly transparent manner in registries and quality reports.

«The three-dimensional planning perfects this interplay between the surgical approach and the philosophy of the short stem prosthesis by optimising the placement.»

Which trends and developments could be ground-breaking in the future in the planning of hip replacement surgery?

Even if three-dimensional planning is superior to two-dimensional planning in many areas, it is very time-consuming. Software solutions with simple and user-friendly workflows which keep the time factor as brief as possible will be ground-breaking here. I am certain that the control of millimetre-precise planning data during the surgery will also have to be adapted in the future to the precision of the planning. Nowadays, this is actually performed by the surgeon only through visual/subjective consideration and assessment of the image from the intraoperative X-ray or image converter.

The millimetre-precise control during the surgery of the biometric data obtained from planning can then actually only be done digitally: these are likely developments which go in the direction of navigation or even robotics. Although endoprosthetic surgery with the right approach and the right implant already represents a very safe and successful procedure, I nonetheless see potential here for even more precise intraoperative quality control through digitisation. An improvement of this type could expand the spectrum of indications for endoprosthetic surgery.

Dr Rehbein, thank you for talking to us.

Affinis Inverse with new metaglene system

«Something that works well should not be changed radically.»

This was the rationale for the further development of the two new Affinis Inverse Metaglenes, but we did «tweak the screws» a little.

In inverse shoulder prostheses, strong bone anchoring coupled with a stable bone-implant interface forms the basis for long-lasting glenoid components. With the Affinis Inverse Metaglene, various factors contribute to a stable glenoid component: firstly, the optimisation of the metaglene to create a double-peg design without an inferior screw eliminates inlay screw notching. Secondly, an increased impingement-free range of movement is achieved thanks to a systematic glenosphere overlap.

Two metaglene options – one screw design

The Affinis Inverse Metaglene is available in two new versions:

- The Metaglene DP (Double Peg) as the standard solution for primary implants.
- The Metaglene CP (Central Peg) with its central peg that is designed for larger defects, deformities or revision surgery.

Both new metaglenes have a carefully thought-out and standardised screw design using compression screws that can also be fixated to the base plate using locking caps to ensure angular stability.

The core of the novel development: the new screw design

With the Metaglene DP version, the two anterior/posterior screws can be placed more centrally and also in a converging orientation, thus enabling deep anchoring in the anterior as well as in the posterior bone stock. Superiorly, the screw is then locked to the base plate after insertion using a locking cap to create angular stability. All of the screws are allowed a certain amount of freedom during placement in order to achieve the best possible anchoring in cortical bone.

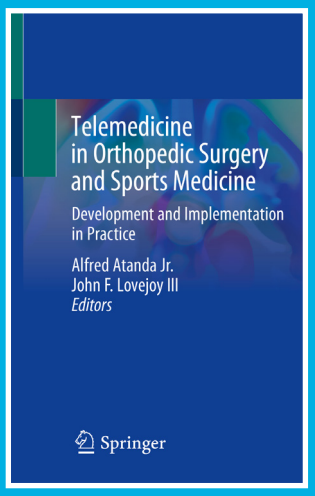
The new Metaglene CP for larger defects, deformities or revision surgery

The Metaglene CP offers more options in the treatment of larger defects or deformities or for revision surgery thanks to its slightly thicker central Pressfit peg, which is available in four lengths. The Metaglene CP is a suitable solution even if bone augmentation is required. For stable anchoring, the Metaglene CP features a central peg and the same screw design as the Metaglene DP does. With the Metaglene CP, however, four compression screws are used, which are inserted superiorly and inferiorly and then, after insertion, secured might be better to a locking plate to ensure angular stability.

Preservation in motion

Practical guidelines for video consultations and the like

The coronavirus pandemic has boosted telemedicine. Virtual consultations are a challenge in orthopaedic surgery and sports medicine.



Video consultations enable traditional diagnostic procedures such as medical histories and the inspection and assessment of radiological findings. Even if the physical examination is not performed, postoperative monitoring is conceivable, such as wound monitoring. The reader obtains tips for ensuring that the virtual examination is as efficient as possible and satisfies both parties. Individual chapters in the 180-page book address key topics of telemedicine, such as regulation and licensing, billing and coding, as well as ethics and etiquette. Suggestions and considerations for digital patient consultations, telemedical services between various service providers and for training purposes are also presented. Finally, insights into the global implementation and research of telemedicine are provided.

Atanda AW, Lovejoy JF (Ed.)
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Fighting pain with humour? When laughter is the best medicine

An appropriate dose of humour in everyday clinical practice helps make conversations with patients more relaxed and also helps calm fears and even relieve pain. The downloadable checklist shows you which humour techniques are effective and compatible.

For a long time, people have said that laughter is the best medicine. We laugh when we are feeling cheerful and amused by the presence of a humorous person. Even in difficult situations, our mind surprises us with the possibility of taking a healthy step back with laughter. A current survey by Canadian researchers of cancer patients undergoing radiation therapy at The Ottawa Hospital Cancer Centre illustrates the great importance of humour and laughter when dealing with their own illness and in contact with the treating physicians. [1] The results of the study: 86 % of patients indicate that appropriate humour by medical staff is «important» or «very important». 79 % state that humour reduces their anxiety and 86 % confirm that laughter is of major importance in their lives. English scientists add: patients often want considerably more humour and levity from healthcare staff than they have experienced so far. Patients have a great need for interaction that has nothing to do with their own illness – and for a positive, humorous attitude to get through stressful examinations and treatments. [2]

Understanding and using styles of humour

Is humour allowed at the patient's bedside? Despite the seriousness of the situations in daily clinical practice and perhaps also particularly because of it, the answer is: yes. With one caveat: it is a matter of style. As a communication tool, humour enables good patient contact. In addition, laughing has been shown to have physiological effects; the chemical reactions in the body reduce stress and increase pain tolerance. Only appropriate humour, administered caringly and at the right moment, can be fully effective. [3]

A general distinction is made between two styles of humour and this is illustrated by an example: [4]

Patient:
«I'm not taking this medication.»
1st reaction by the physician:
«It's good that you're not accepting everything from me just because I'm a doctor.»
2nd reaction by the physician:
«Don't act like a child or I can send you straight to the paediatrician!»

The first response belongs in the category of **social humour**. Social humour is a caring, relaxing, enhancing humour. This is often used in a self-referential way. The second reaction represents **aggressive humour**. Aggressive humour is frequently associated with degrading another person or group of people. This style of humour has a destructive effect and has no place in patient communication. [4]

Relating to patients – and to oneself – with humour

Using humour when relating to patients in the hospital can be a challenge. Terminally ill adults sometimes wish for a reason to laugh at the ends of their lives. Using humour, sick children can be distracted from their fear prior to surgery. And patient compliance is higher when they are discharged from the hospital with a final humorous yet important piece of advice. But does one's own humour fit in these situations? Anyone who keeps a humour journal becomes acquainted with his or her humour: anecdotes from one's own daily life, icebreaker stories, or witty responses to patient questions can be collected. One's own experiences and stories from colleagues can also be included. In this way, humour is given a place and can be «pulled out of a hat» more easily. [5]

Nearly everyone possesses humour. What makes us different, apart from the style of humour, is the intercultural framework in which humour is learned and develops. [6] This results in humour which is highly physical in South America, Spain and Italy, while in northern countries, cognitive, verbal humour is prevalent. [5] Particularly when it comes to linguistic humour, one can be far off the mark if the cultural difference is not respected. By contrast, physical humour crosses borders – this is also proven by successful comedians such as Charlie Chaplin or Mr. Bean and hospital clowns with red noses who act in an exaggerated manner.

However, humour does not just act on patients like a carefully dosed remedy; it also has a positive effect on doctors and healthcare staff – for example, it is possible to face a verbal attack from a patient using humour and to calmly accept the little difficulties of daily life.

Our checklist shows you which humour techniques you can use in a way that is effective and widely compatible in daily clinical practice.

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Download

The checklist of «Using humour techniques» is available for you to download.

Further reading

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Humor, seriously: why humor is a secret weapon in business and life (And how anyone can harness it. Even you.)
Currency; Illustrated edition, 2021.

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Integrating clown-play into healthcare practice.
Routledge; 1st edition, 2013.

Brian King.
The laughing cure: emotional and physical healing? A comedian reveals why laughter really is the best medicine.
Skyhorse; 1st edition, 2016.

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move! is published by Mathys Ltd Bettlach – your competent partner for total arthroplasty. With new, useful information, ***move!*** is addressed to specialists in orthopaedics and traumatology in hospitals and practices, as well as all specialist and management staff in the medical field, nursing staff and general management in hospitals. We would like to thank all of those who have helped us in realising the publication of ***move!*** by making individual contributions, or providing information and photographs.