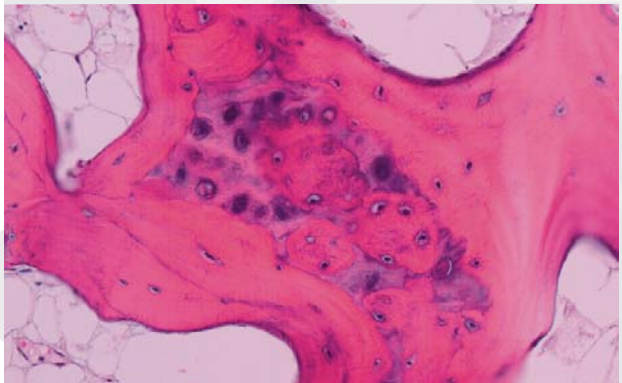
IBRA International Bone Research Association

FLASH
01/2013

Content



Foreword

Dear Reader,

2012 has been an important year for the sustainable development of the IBRA, especially in regard of our future activities in the fields of Structures, New Segments, Education and Trainings, Scholarships, Collaboration with our Training Centers, Collaboration with national and international Organizations specializing in Head (CMF) and Upper Limbs.

Particular emphasis was given to the future trend of our Course Format and the further development of our Education Events. We have, for example, implemented the use of electronic voting systems, enabling the Speakers and the Participants to better interact when discussing cases and evidence.

The intended enhanced presence in the Americas by the means of new Courses and Events starting this year as well as the growing amount of Seminars, Symposiums and Workshops that are organized by the IBRA throughout the World, was reason enough to reinforce our Administration Office in Basel by an Event Coordinator.

Our activities in the field of Research were purposely reduced in favor of our refined Education Plan. We are, however, working with great determination on new ideas that will be presented soon.

2013 has taken off equally exciting and we are looking forward to facing the many different challenges that are awaiting us. In this respect, we want to thank you all for your loyalty, collaboration and valuable commitment.

Hermann Krimmer
IBRA President

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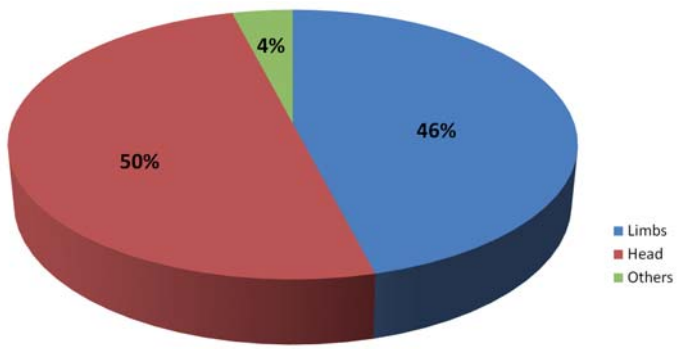
Members

With Members from about 30 countries, IBRA can revert to a worldwide network of professionals working towards the common goal of future-oriented advancements in maxillofacial and orthopaedic research and continuous education. The limbs share is increasing steadily and we now have an optimal balance between the two main sections.



As an IBRA Member, you have access to a selective range of valuable benefits and services that can support you in your daily clinical practice and also help you to improve the care management.

We invite all our Members to use their access to the Global Member Directory to locate and communicate with colleagues all over the world. This will not only extend our common international network, but also increase the individual contact within our community.

Education Committees

As stated in our Articles, Committee Members are appointed for 3 years and can be re-elected for an additional term of office (maximum 6 years).
A new composition of the Education Committees has to be defined and appointed by our Board of Directors.
In order to better fulfill the increasing demand for Educational Services and as enrichment of our Education Committees, the Board of Directors has increased the number of Committee Members by one additional Member in the Head and the Limbs sections.

The Education Committee Head consists of the following members:

- Johannes Kleinheinz, Münster, Germany (Chairman)
- Andreas M. Neff, Marburg, Germany
- Oliver Ploder, Feldkirch, Austria
- Mario Francisco Gabrielli, Araraquara, Brazil
- Klaus Breuer, Basel, Switzerland (Representative Medartis)

The Education Committee Limbs consists of the following members:

- Rainer Meffert, Würzburg, Germany (Chairman)
- Jörg Grünert, St. Gallen, Switzerland
- Christoph Pezzei, Vienna, Austria
- Lars Peter Müller, Cologne, Germany
- Klaus Breuer, Basel, Switzerland (Representative Medartis)


Johannes Kleinheinz


Andeas Neff


Klaus Breuer


Rainer H. Meffert


Jörg Grünert


Oliver Ploder


Mario Gabrielli


Christoph Pezzei


Lars P. Müller

The Education Committees are responsible for the planning, financing, and realization of all of the organization's educational activities.

Each Committee meets two times a year to develop strategies for supporting academic fellowships and clinical trainings through its various scholarship programs and to organize national and international scientific events and clinical courses in the related clinical fields.

The Members of the Committees make every effort to identify existing needs for education in this field, and also to evaluate the content and quality of each educational project.

We are very happy and thankful to have such competent professionals in our Committees who dedicate their time and skills to the IBRA.

Scholarships and Training Centers

Dr. Joshua Hunt, Australia

IBRA SCHOLARSHIP REPORT ST GALLEN,
SWITZERLAND, AUGUST 2012

Visiting St. Gallen for the IBRA "All about the radius" conference in November 2011 and meeting Prof Grünert and all the hand and plastic team confirmed that I should have a good fellowship experience in the unit. My wife and I packed up with our 4 children to make the move from Newcastle, Australia to St. Gallen, Switzerland.

I had been immediately welcomed to the unit, working with Prof Grünert and the 4 other hand and plastic surgeons. There is a 7.40 am meeting which reviews all the previous days cases and discussion is held on the upcoming cases through the week. After this meeting, there is a quick chance for a coffee that enabled the getting to know the whole team. There are 2 dedicated theatres that combine both the hand and plastic cases. These occur every day throughout the week, so there is a large and varied caseload.

From the hand surgery perspective, there is a wide variety of both elective and traumatic cases. These have included soft tissue and bony cases. I have participated in replantations, internal fixation of phalanx, metacarpals, scaphoids (percutaneous and open) and distal radius fractures, collateral ligament repairs, extensor and flexor tendons. I was fortunate enough to participate in the pollicization of an index finger after a traumatic amputation of a thumb. There has been a wide range of elective operating. This has included arthrodesis of the wrist, 4 corner fusions, trapeziectomy with suspension arthroplasty, ulna and median nerve releases, corrective osteotomies of the radius, stabilization of the DRUJ., ulna shortening osteotomies. With this also being a plastics unit, I have also been able to assist in plastics cases which have included multiple skin grafts and latissimus dorsi flaps.

There is an outpatient clinic every day where both new and follow up patients are seen. This gives an excellent opportunity to question Prof Grünert about the management of the varied cases which come through. The clinic is never rushed with adequate time between each patient to discuss the finer points of the cases.

Every Thursday, there is a grand round where each of the patients are reviewed by the Professor and the entire team. The patients' progress and management plans are determined during this time. There is a general team breakfast after this ward round.

My timing at being in St. Gallen has been very fortunate as I was able to participate in a joint orthopaedic and hands and plastic hiking day. We were able to go hiking after a bus ride and had lunch and dinner as an entire unit.

I have been able to start a research project in the biomechanical lab in the hospital looking at the fixation of distal ulna fractures. I am also looking at the long-term outcomes of the Medartis wrist fusion plates which are used in the unit.

From a social perspective, my 4 children have been able to go to integration classes in the local schools. This is where the focus is on the German language. My wife has also been doing German for mothers language classes. St. Gallen has a wide range of activities that are available in the local region and the bus and train system in Switzerland is excellent to get around everywhere.

Overall, I am very happy here with my fellowship. There are highlights and lowlights. The highlights are the excellent team and the welcoming manner that I have fitted in. The hand caseload is very good and very varied and I have been exposed to techniques that I have not previously encountered. There is a good opportunity to learn.
I decided to spend a total of 12 months in St. Gallen of which 3 months were an IBRA-scholarship and I am very thankful that IBRA and Prof. Grünert have given me this opportunity.

Joshua Hunt

Event Highlights

IBRA Symposium und Workshop in Kiel, Germany

„Frakturen und Bandverletzungen des Handgelenkes“

15 – 16 June, 2012

Christian-Albrechts University, Kiel, Anatomical Institute

Just as the famous annual sailing event “Kieler Woche” officially started, IBRA opened its doors to the 2nd Symposium and Workshop in Kiel, focusing on fractures and ligament injuries of the wrist. The course took place in the facilities of Christian-Albrechts University in Kiel – an ideal location for both the Symposium as well as the Workshop.

The Anatomical Institute was founded in 1994 by Professor Bernhard Tillmann. It was the first institutionalized facility in Germany where such medical continuous training courses could be conducted by the means of close collaboration between clinicians and anatomists.

As can be gathered from the original title of the course, it was an event held in German and it specifically addressed the experts from Germany and adjacent countries.

A total of 88 participants thus enjoyed to further enhance their knowledge during this Symposium and Workshop that was chaired by Dr. C. Ranft (Lubinus Clinic, Kiel) and Prof. H. Krimmer (Center for Hand Surgery, Ravensburg).

The course was CME accredited by the Medical Association of Schleswig-Holstein, giving us an indication of the significance of the event.

Participants thus received 8 CME credits for the Symposium and 11 for the Workshop participation.

The Symposium took place on the first day, being the perfect preparation for the Workshop on the following day. Topics such as complications, treatment mistakes, malunion and correction possibilities were the main focus of the Symposium and were successfully conveyed to the participants by the highly experienced Faculty. A total of 19 working stations, 1 specimen and 2 participants each, were the setting for the workshop. The renowned and dedicated Faculty guided the participants through various exercises and cases. Treating methods on distal radius, scaphoid, RSL-fusion, four-corner-fusion were shown at the master table and transmitted via several large-format screens to all. Thereafter, the participants went to their working stations where they could complete the same under the supervision and guidance of the Faculty.

It was thanks to the professional support of the experienced team of the Anatomical Institute, headed by Professor Dr. Jobst Sievers, and the commitment and expert knowledge of the whole Faculty that the 2nd IBRA course in Kiel was so successful.

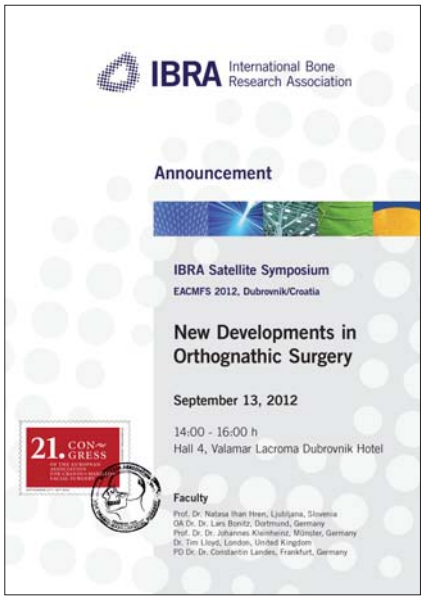
→ www.ibra.ch

Review EACMFS in Dubrovnik

IBRA Satellite Symposium – EACMFS Congress, Dubrovnik

New Developments in Orthognathic Surgery

13th September 2012



The 21st Congress of the European Association for Cranio-Maxillo-Facial Surgery was once again very successful. 1400 specialists from all over the world flew to Dubrovnik to participate at the Congress. Most of the participants met at the "Hotel Valamar Lacroma Dubrovnik" in the widely spread Congress Center where they had the perfect opportunity to interchange with their colleagues in a casual atmosphere.

Professor M. Virag, Director of the Department of Maxillofacial Surgery of the University of Zagreb, had the overall scientific responsibility. While 30 degrees Celcius outside, the Speakers and participants lectured and discussed about the complete and complex subject of Cranio-Maxillo-Facial Surgery within the 4 well air-conditioned congress halls. Face transplants and tumor surgery were given specific attention. Furthermore, several companies offered the participants the possibility to extend their knowledge in "Hands-On-Workshops". The IBRA Satellite Symposium addressed the subject "New Developments in Orthognathic Surgery". After having organized 5 IBRA International Orthognathic Surgery Forums in Interlaken, Prof. J. Kleinheinz was the right choice to chair and organize this event. Outstanding speakers like Mr. Timothy Lloyd (GBR), Prof. C. Landes (GER), Dr. L. Bonitz (GER) and Prof. N. Ihan Hren (SLO) who held remarkable talks on contemporary problems in orthognathic surgery contributed significantly to the success of our event.

Review IBRA Symposium in Marseille

IBRA Symposium on Surgery of the Head, Marseille, France

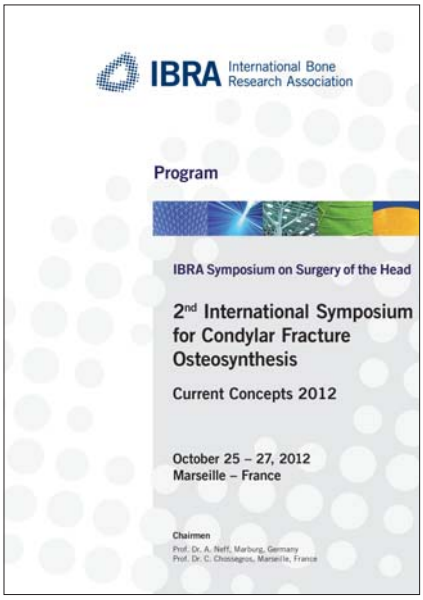
2nd International Symposium for Condylar Fracture Osteosynthesis

25 – 27 October, 2012

Marseille was chosen to be the host city not only because of to the excellent facilities, but also because Marseille is the second-biggest city in France, elected European City of Culture in 2013 and it offers many stunning facettes such as the old harbor, ancient historic background or the Mediterranean lifestyle and cost.

After the successful first meeting in Strasbourg back in 2007 organized by Prof. A. Wilk, we were honored to welcome 68 international participants to the 2nd International Symposium for Condylar Fracture Osteosynthesis in Marseille, France, chaired by Prof. C. Chossegros and Prof. A. Neff.

The pre-organization was demanding because of the two different facilities where the Symposium and the Workshop took place – the Marseille University and the Timone's Medical School. Main focus was given to the new structure of the course that implemented additional elements to increase the interactivity and discussion between faculty and the plenum. This was well achieved by using an electronic voting system and by formulating a clear and ranked Consensus-Statement for the most important open questions related to the endoscopic assisted surgery, pedriatic treatment and complications.
Those statements were vividly discussed during the round table sessions and adapted where needed. At the end, the faculty and also the plenum were asked for their final agreement as consensus for every single statement. These qualified answers were collected and are going to be published as a Consensus Paper.



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IBRA Seminar and Workshop – Miami, USA

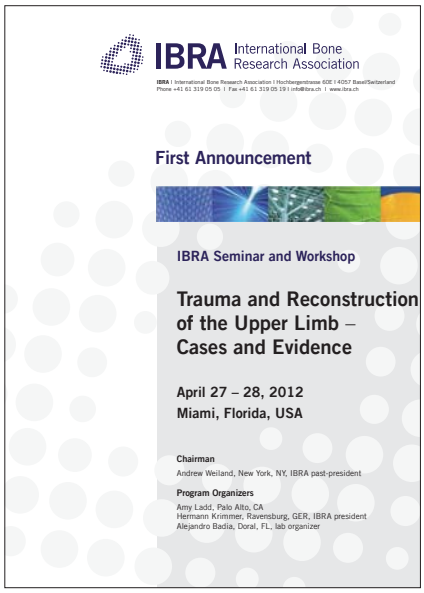
Trauma and Reconstruction of the Upper Limb – Cases and Evidence

27 – 28 April, 2012

Demanding cases and their discussions lead by an experienced group of specialists were again in the main focus of the third Miami event. The other most interesting aspects of this annual event that contributed significantly to the success of this event were the closeness to the Faculty, their gripping presentations as well as their distinct willingness to engage in dialogues and discussions. The Workshop, an important part of this event, was held at Miami Anatomical Research Center and enabled the participants to exercise on the specimens, allowing them to profit and learn from their experienced colleagues and vice versa.

At the end of the event, the participants were handed out a survey and they had to evaluate the Seminar and Workshop by the means of several given criteria. The results made us very proud since we reached an overall rating of 96% in regard of educational and organizational aspects and the Workshop.
This result was extremely important for us, especially considering the fact that this educational event was acknowledged by the American Society for Surgery of the Hand to its members. Furthermore, it proves to us that the IBRA course structure is also successful overseas.

Miami as is an attractive place to host such an event, especially from a geographic point of view. It is well accessible not only for US surgeons, but also for their colleagues from Latin America. This is the reason why we chose Miami once more for the 2013 follow-up course. Chairmen will again be Andrew Weiland from New York and Richard H. Gelberman from St. Louis, actively supported by the Program Organizer Amy Ladd from Palo Alto.



Electronical voting to encourage interactive lectures

Electronic Voting Systems (EVS) have been used in education in a variety of disciplines since years in large group lectures. But does EVS technology really offer significant advantages over the more traditional lecture format?

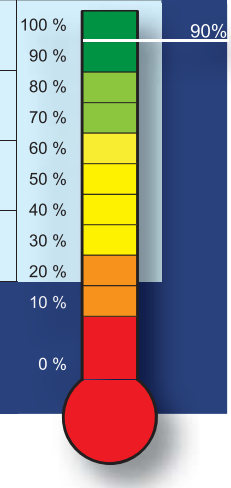
There are also deficiencies in the outcome of this approach, for example that its use could lead to an audience response that does not offer an added educational value.

However, we are convinced that the use of an EVS based on wireless technology permits the participants of our courses to respond anonymously to questions asked by the lecturer create a more active environment. Class responses can be graphically displayed during the lecture, permitting surgeons to gauge where they are in relation to their colleagues. We see the main benefit of the use of EVS in the implementation of qualified answers that can induce the discussion between the faculty and the audience, what - at the end - is our target and intention.
The time required to ask questions and to obtain, display and discuss responses may require the lecturer to cover less material. The use of EVS thus helps to clearly identify the “right” questions and to define and classify the answers. This results in deeper interchange and participation of the audience.

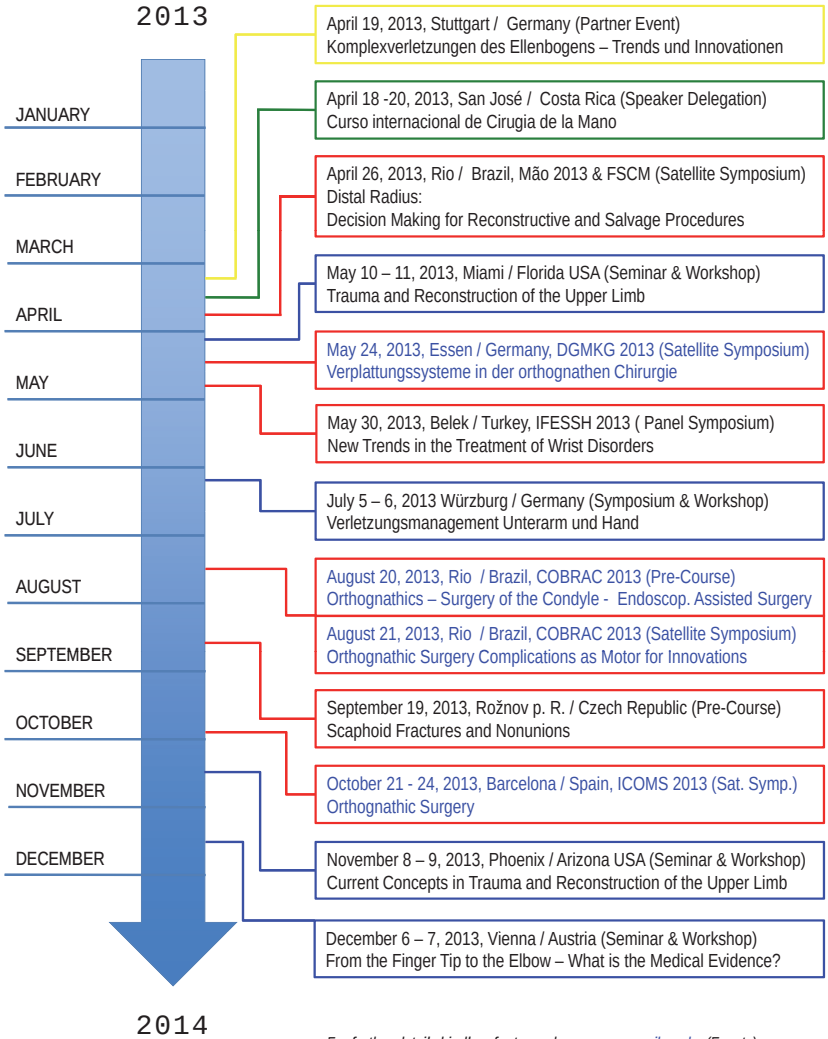
(Reference: www.biocentral.com)

Review IBRA Events 2012 and Outlook IBRA Events 2013

		Location	Participants	Period Type	Organization	Education	Workshop	Total Rating	OverallRating
Head	International Orthognathic Surgery Forum	Interlaken	62	bi-annual	93%	82%	84%	86.4%	
Head	Internatioal Symposium for Condyle Fracture Osteosynthesis	Marseille	68	quinquennial	91%	87%	89%	89%	
Limbs	German Symposium and Workshop Hand & Limbs	Kiel	71	annual	86%	87%	91%	88%	
Limbs	USA Symposium and Workshop Hand & Limbs	Miami	68	annual	98%	96%	94%	96%	



Just visit our Member Area as a "visitor" (counts also as password) and have a more detailed view!



For further details kindly refer to our homepage www.ibra.ch (Events)

→ www.ibra.ch

Olecranon Plates 2.8

One third of all fractures of the elbow prove to be proximal ulna fractures (olecranon). They are often unstable and as a rule require operative treatment. Depending on the complexity of the fracture, tension band wiring or a dorsal plate tends to be used for fixation. Both of these techniques promise high bone consolidation rates when used correctly.

However, because of the prominent plate position right below the skin on the dorsal aspect of the proximal ulna, soft-tissue irritation is common and subsequently implant removal rates are high. Though tension band wiring is a proven, convenient procedure, it is still technically demanding and thus subject to error. Common complications from tension band wiring are retrograde dislocation of the K-wires and insufficient stability in borderline fractures (oblique fractures, fractures with unsatisfactory interfragmentary buttressing).

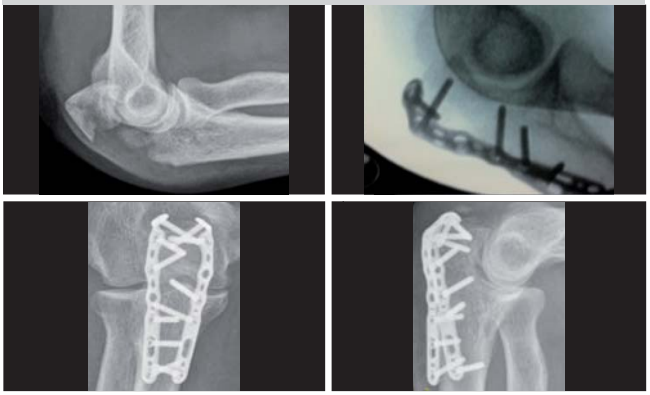
When using dorsal plates for comminuted fractures, possible arising complications are a challenge. On the one hand they entail the prominence of such relatively weighty implants directly beneath the skin, but also often the difficulty of being able to fix the different fragments from a single side. The main proximal fragment in particular is often very small and can seldom be adequately fixed with the existing implants so as to resist the extreme forces of the triceps. This can result in detachment of the proximal fragment from the anchored plate and screw construct.

Medartis has therefore developed alternatives to both the tension band wiring and dorsal plate systems that are designed to overcome the existing drawbacks.
In simple fractures providing some interfragmentary support, the Olecranon Tension Plate is an alternative to tension band wiring.

It aims to combine the benefits of tension band wiring, i.e. a thin implant for withstanding tension forces, with those of the plate system that uses screws to firmly anchor the implant in the bone. Two lag screws take the role of the K-wires in this implant, allowing for highly stable fixation and controlled compression. To protect these two lag screws from the considerable bending stress of the triceps, the tension from this muscle is absorbed by a thin plate anchored with screws distally.
For more complex fractures, Medartis has developed a lateral plate concept as an alternative to the dorsal plate.

Due to the more favorable biomechanical position, the highly resistant dorsal implant can thus be replaced by two lateral plates that are much smaller.
Not only is the exposed plate position on the central aspect of the proximal ulna avoided in such a way, but the surgeon is also enabled to fix and stabilize the fragments from two sides. Medartis has selected 2.8 mm screws for the olecranon plates in order to facilitate fixation of often very small fragments. In particular, this also permits a very small, proximal fragment to be fixed in a stable position with two screws per plate. For this reason, the Medartis plates have already been frequently used to revise fractures with sheared main fragment and dorsal plates.
These lateral plates come in two versions: one bent for proximal fractures in which the plates have to be positioned around the tip of the olecranon, and one straight for distal fractures in which an incision into the triceps attachment can be avoided.
The new treatment concept involving the Medartis olecranon plates has proven successful in the last two years of clinical practice, and preliminary clinical findings are soon to be published.

Treatment of a dislocated olecranon fracture using a double plate
Lateral position of the two plates permits the screws to be positioned perpendicularly against the tension of the triceps. Five angular stable 2.8 mm screws fix the proximal fragment.



Treatment of a simple olecranon fracture with Olecranon Tension Plate
The long lag screws crossing the fracture deliver high primary stability and allow for compression of the fracture. Tension on these screws is absorbed by the plate.

Cologne University Hospital

Distal Humerus Plates 2.8

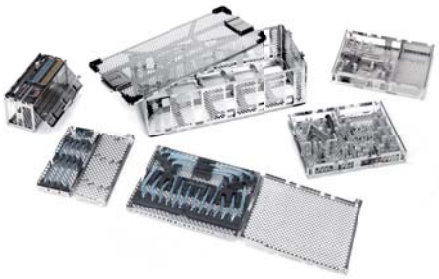
Due to its central position in the chain of joints of the arm, the elbow is important to the range of movement of the upper extremity. Functional impairment to this joint leads to a tremendous reduction in the functionality of the entire arm. Roughly one third of elbow fractures affect the distal humerus. Such distal humerus fractures represent, depending on the author, 1% to 6% of all bone injuries in adults. The elderly are affected in particular. If the demographic change continues, the future will bring an increase of surgical interventions of the distal humerus. Total joint fractures of the distal humerus with metaphyseal comminution (AO 13 C3) are problematic fractures and represent one of the greatest challenges to elbow surgery. The goal of mobilization-stable osteosynthesis in such cases is often difficult to achieve, and surgical interventions with the osteosynthesis materials available at present often result in unsatisfactory outcomes. Medartis used this situation as an opportunity to develop a plating system with multidirectional angular stability for treating distal humerus fractures as part of the APTUS Elbow concept.

The APTUS Elbow System 2.8 is based on the proven TriLock technology, offering multidirectional angular stability of ±15°. The multidirectional approach is indispensable when it comes to the complex geometry of the distal humerus, enabling application of long, angular stable screws connected to the plate in the distal joint block. Special attention was paid to the anatomical design of the plate, using numerous anatomical studies as a basis. This very anatomical design provides the surgeon with essential support when treating especially multifragmented fractures of the distal humerus, since in complex cases the plates can act as reduction frames. Variable plate thicknesses along the length of the plate ensure maximum stability and minimize soft-tissue irritation, especially in the area of the exposed epicondyles. By tapering the thickness of the material towards the ends, the formation of stress peaks at the end of the plate near the shaft is also reduced. Despite their complex 3D geometry, the plates can of course be bent for individual anatomical adaptation. The surgeon has three plate types at his disposal, allowing for 90° as well as 180° configuration depending on the fracture pattern and preferred surgical technique.

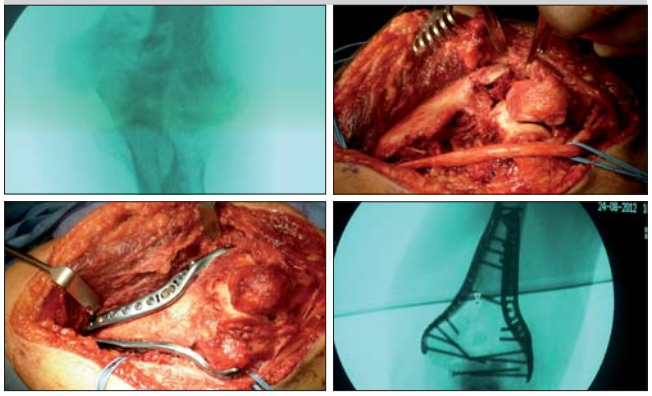
Distal fractures of the capitulum are easy to reach through the provided holes in the distal part of the posterolateral plates. The medial plates have a recess for protecting the ulnar nerve.

Due to their posterior position of the proximal end, the lateral plates permit lateral fixation of the epicondyle without having to detach the soft tissue laterally in the shaft area. Every plate has an oblong and a compression hole.
Up to 4 multidirectional TriLock screws can be placed in the distal joint block between the epicondyles. To ensure that the screws can be placed in the joint block securely, a simple aiming device has been developed.

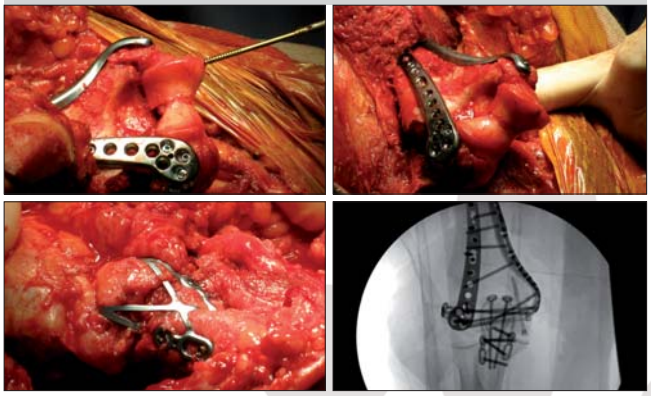
The standardized screw size of 2.8 mm and soft tissue protection from atraumatic screw tips are characteristic of the APTUS system. The APTUS Elbow system is rounded off with a new storage concept optimized for conditioning purposes.



80-year-old male patient with a complex C3 fracture of the distal humerus. Access via anconeus flap and treatment with a medial and lateral plate.



45-year-old female patient with a complex C3 fracture. Access via olecranon osteotomy. Treatment of a distal humerus fracture with medial and posterolateral plate; treatment of an olecranon osteotomy with the olecranon tension plate.



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