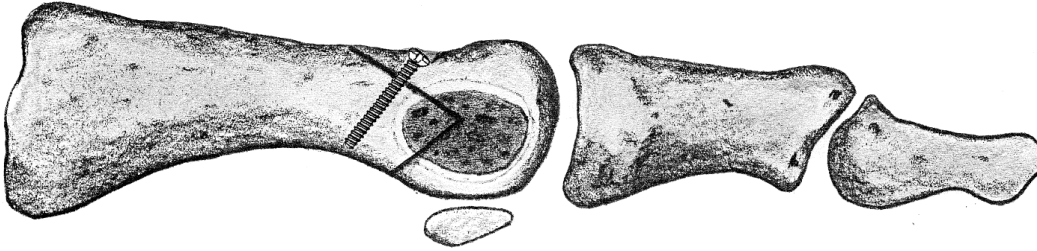


THE TOP 10 INDICATIONS

1. CHEVRON OSTEOTOMY

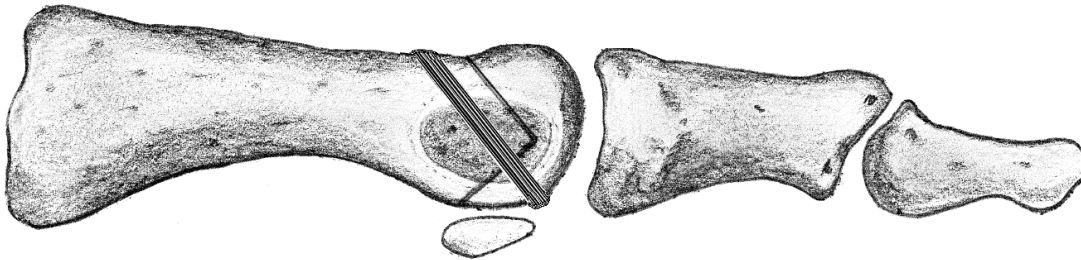
1A) Chevron osteotomy with 2.7 mm ActivaScrew™



This version of chevron osteotomy can be fixed with single 2.7 mm screw that is passed from dorsal distal to plantar proximal. Implant hole is drilled and tapped through to reach the secondary cortex with screw. Angle of the chevron cut is reduced creating more cortical platform for the screw with longer dorsal arm.

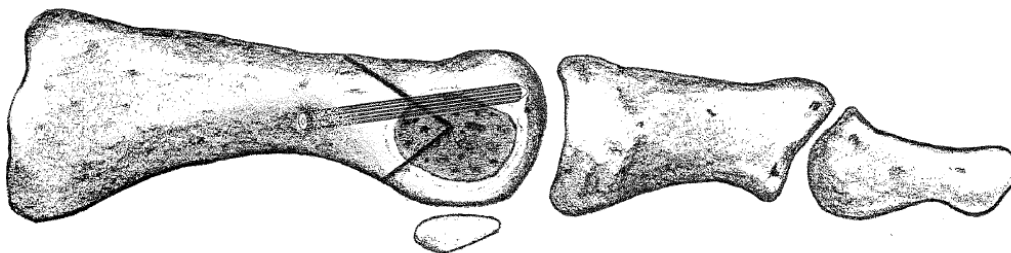
Only light countersunk or overdrilling of the dorsal cortex will be needed because of the small size of the screw head. Screw head and/or protruding distal end can be smoothed after insertion by High Temperature Cautery (B-HTC-1000) if needed.

1B) Chevron osteotomy with 2.0 mm ActivaPin™ (lengths 30 mm and longer)



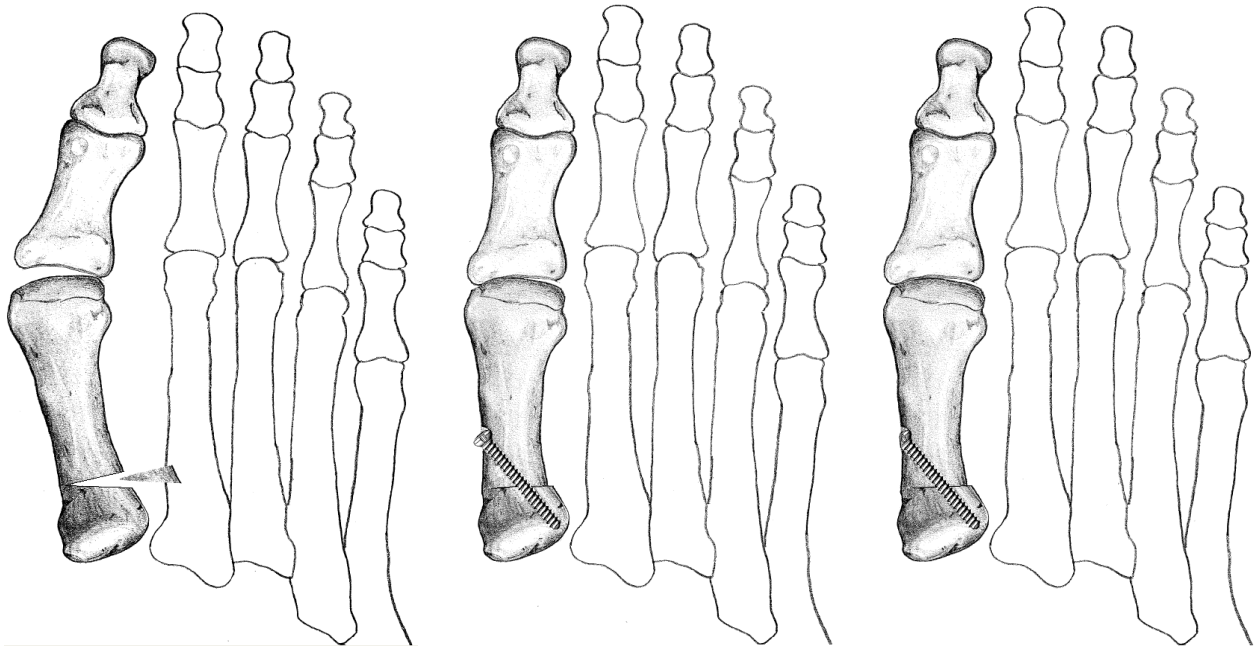
There are several variations of chevron osteotomy fixation with ActivaPin™. With transarticular technique pin is inserted from distal plantar to proximal dorsal reinforcing the impaction of the osteotomy. Both ends of the pin can be resected by High Temperature Cautery (B-HTC-1000) to improve stabilization and create compression lock.

1C) Chevron osteotomy (optional technique) with 2.0 mm ActivaPin™



One optional method is the technique where the pin is driven from proximal medial to distal lateral into the capital fragment without entering the metatarsophalangeal joint.

2. PROXIMAL OSTEOTOMY OF THE FIRST METATARSAL



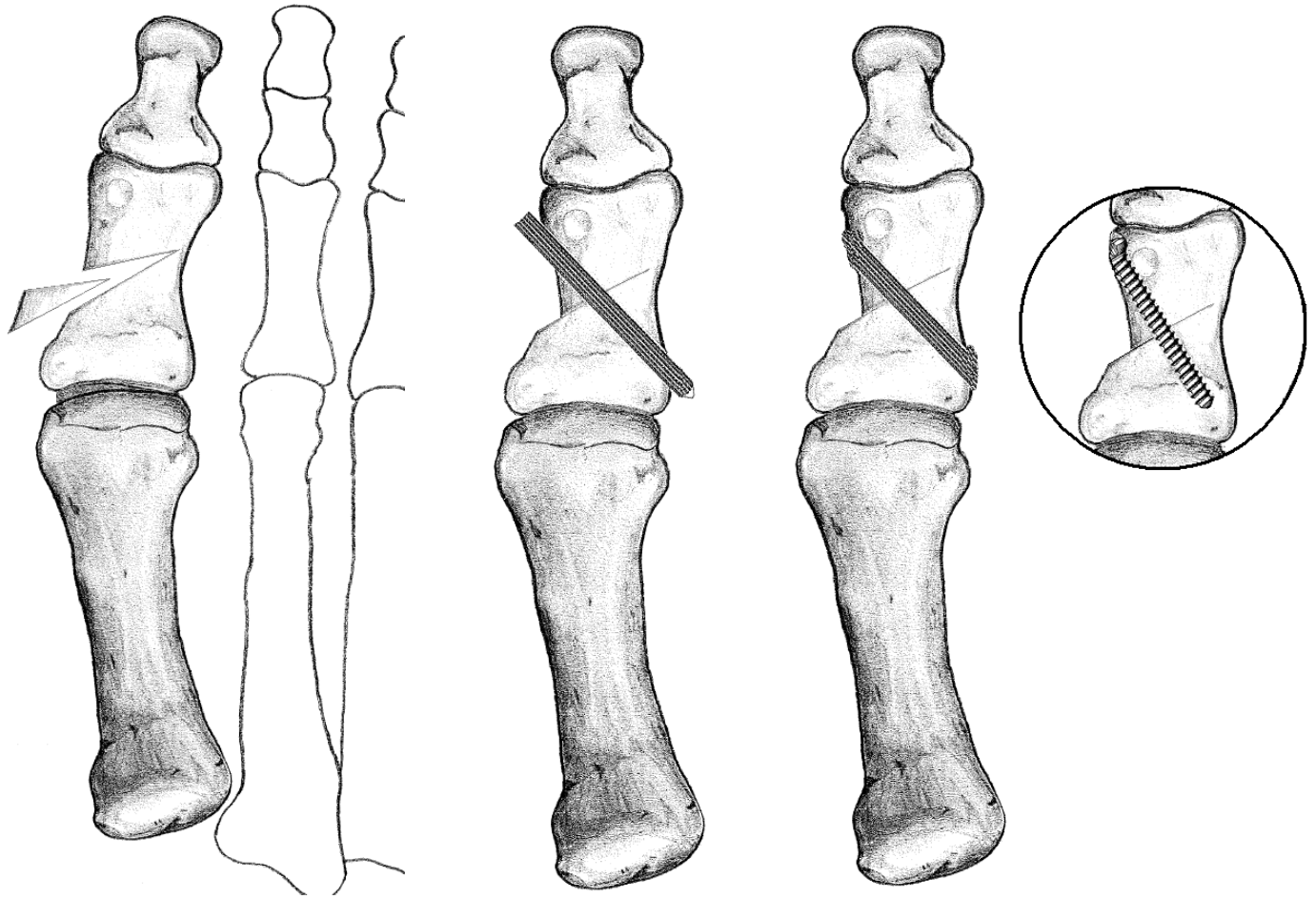
2.7 - 4.5 mm ActivaScrew™ can be used.

Wedge resection is done into the proximal metaphysis. Medial cortical hinge of bone is kept intact at the apex and one screw is inserted from the distal medial to proximal lateral.

Modified version with oblique osteotomy can also be used. The osteotomy is angled from proximal medial to distal lateral with the apex medial and base lateral. Besides reducing the intermetatarsal angle it can be used to shorten or lengthen and dorsiflex or plantarflex the metatarsal. If medial cortical hinge is resected to allow length modification osteotomy needs to be fixed with two 2.7 or 3.5 mm screws or with one screw and one pin combination.

With rigid fixation with 4.5 mm screw weight bearing can be allowed to the lateral side with out plaster cast or extra immobilization.

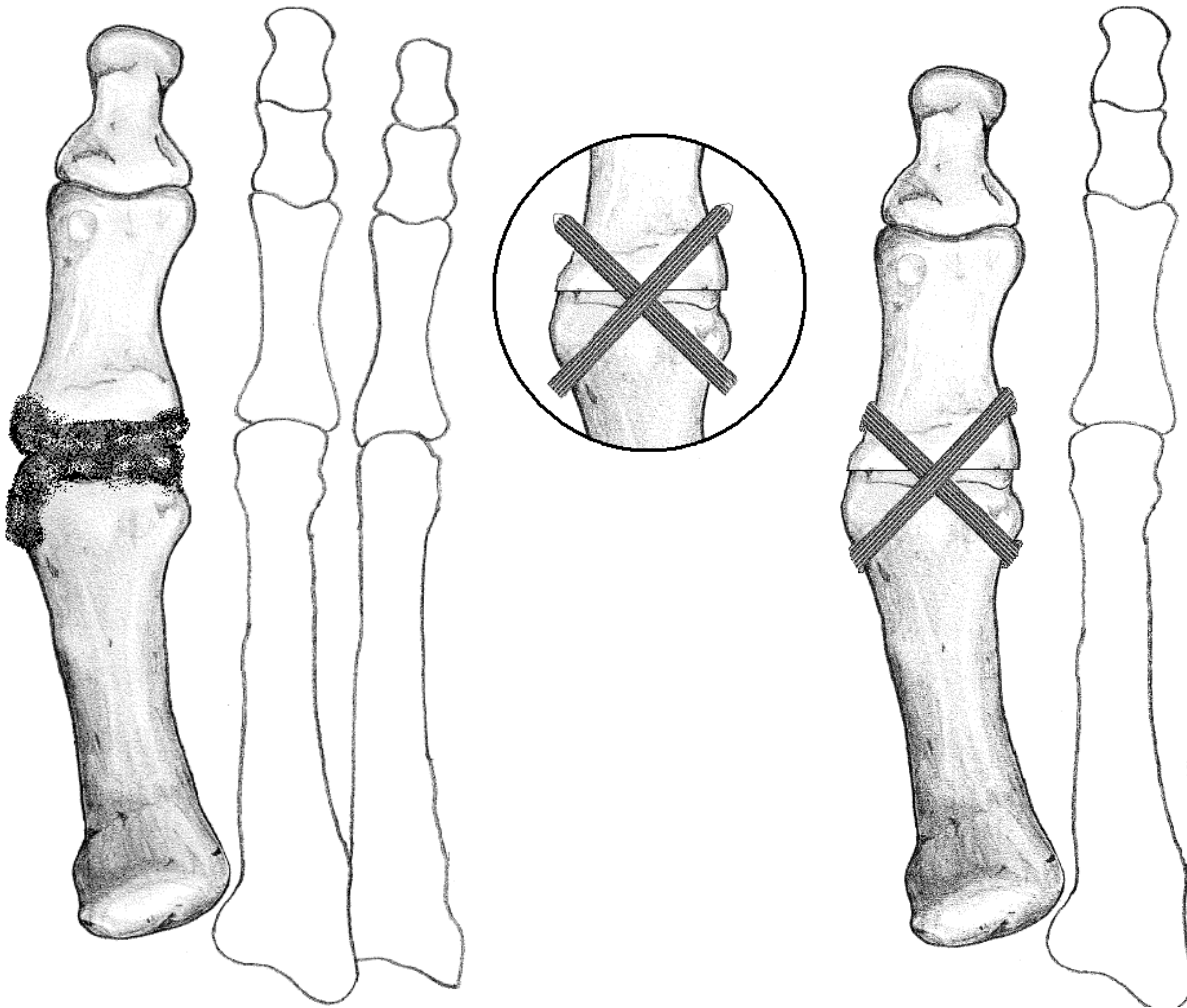
3. AKIN OSTEOTOMY



2.0 mm ActivaPin™ or 2.7 mm ActivaScrew™ can be used.

Wedge resection is done into the medial phalanx. Lateral cortical hinge of bone is kept intact at the apex and the implant is inserted from the distal lateral to proximal medial through both cortex's. Use of hot loop is recommended when possible to improve fixation stability.

4. ARTHRODESIS OF THE 1ST MTP JOINT



Two 2.0 mm ActivaPin™ implants or combination of one 2.0 mm ActivaPin™ and one 2.7mm ActivaScrew™ can be used.

Articular cartilage and other unevenness are removed. An exact contact between the freshened surfaces is essential with good compression. Reduction should be as anatomical as possible. From the medial sides of the metatarsal and phalangeal bone two channels are drilled. Both implants are inserted through both cortex's. Use of hot loop is recommended when possible to improve fixation stability.

5. RADIAL HEAD AND NECK

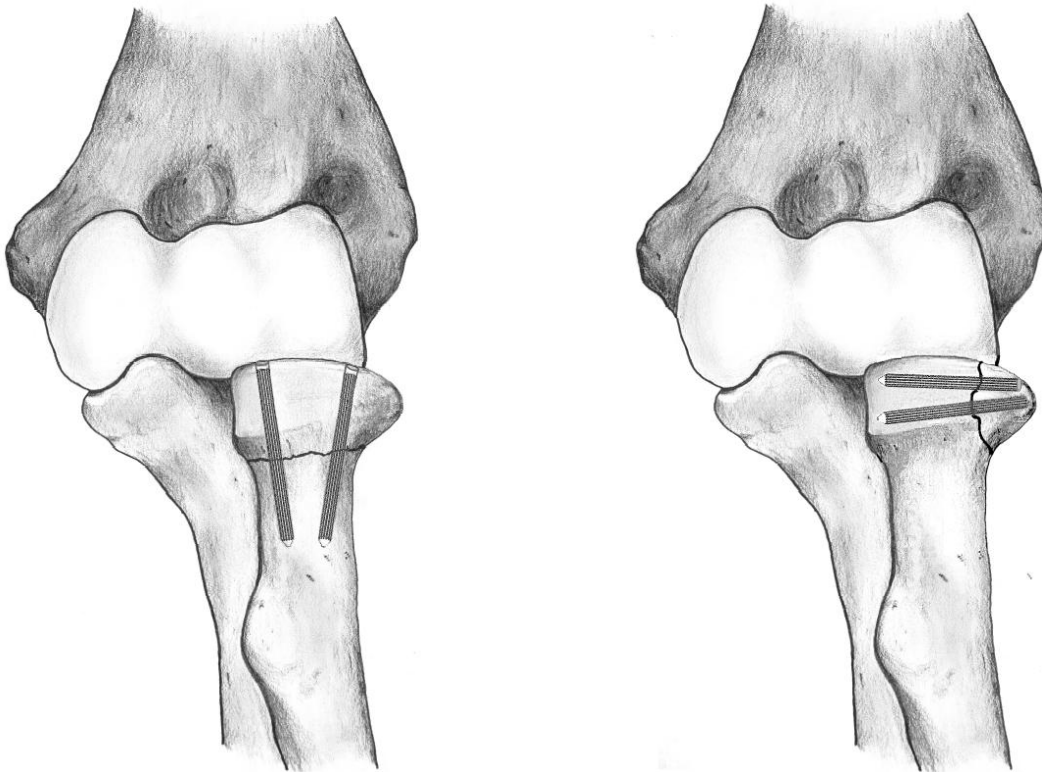
Radial head and neck fixation with ActivaPin™ 1.5 - 2.0 mm (lengths 20 – 50 mm)

The fragments are repositioned and held in place, while aiming two diagonal drill holes through the proximal cortical bone to ensure stable fixation. Radiography with K-wires can be taken to ensure the proper implant channel positioning. K-wires (or drill bits) are replaced with bioabsorbable pins one by one maintaining the reduction throughout the operation. All pins must be fully inserted to the bone (ActivaPin™ instrumentation is designed to sink proximal head of the implant automatically 1-2 mm under the cartilage level when fully inserted) to secure drill hole closure by enabling the tissue overgrowth over the pin head.

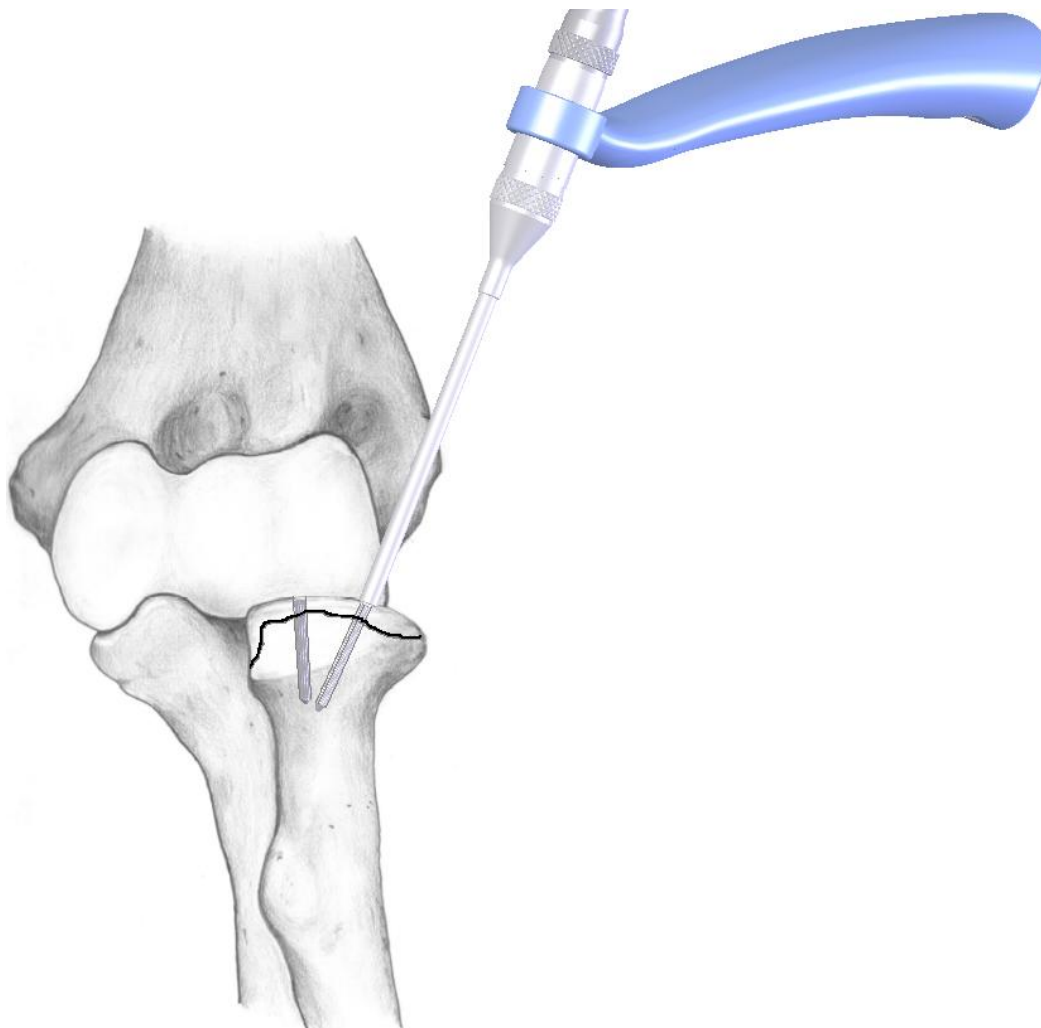
With comminuted fractures 3 weeks immobilization is recommended.

Benefits of using ActivaPin™ in fixation of radial head and neck fractures:

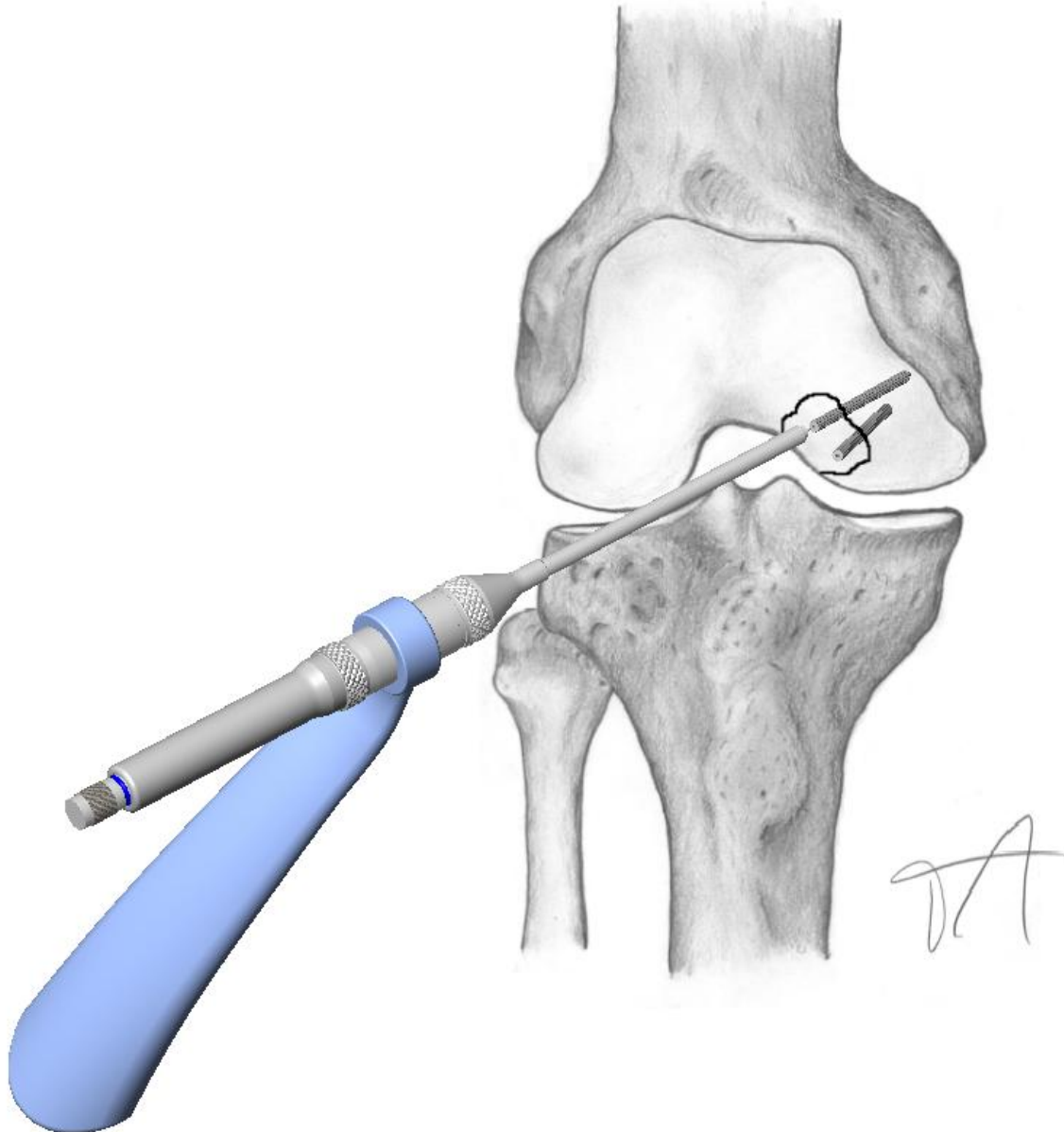
- Bioabsorbable rod, like ActivaPin™ offers the great benefit of direct transarticular fixation of radial neck or head.
- No protruding implants or implant heads inside a joint
- Grooved surface and Self-Locking™ capability of ActivaPin™ provides good fixation stability also with small fragments



Optional: RADIAL HEAD AND NECK WITH ARTHROSCOPIC TECHNIQUE



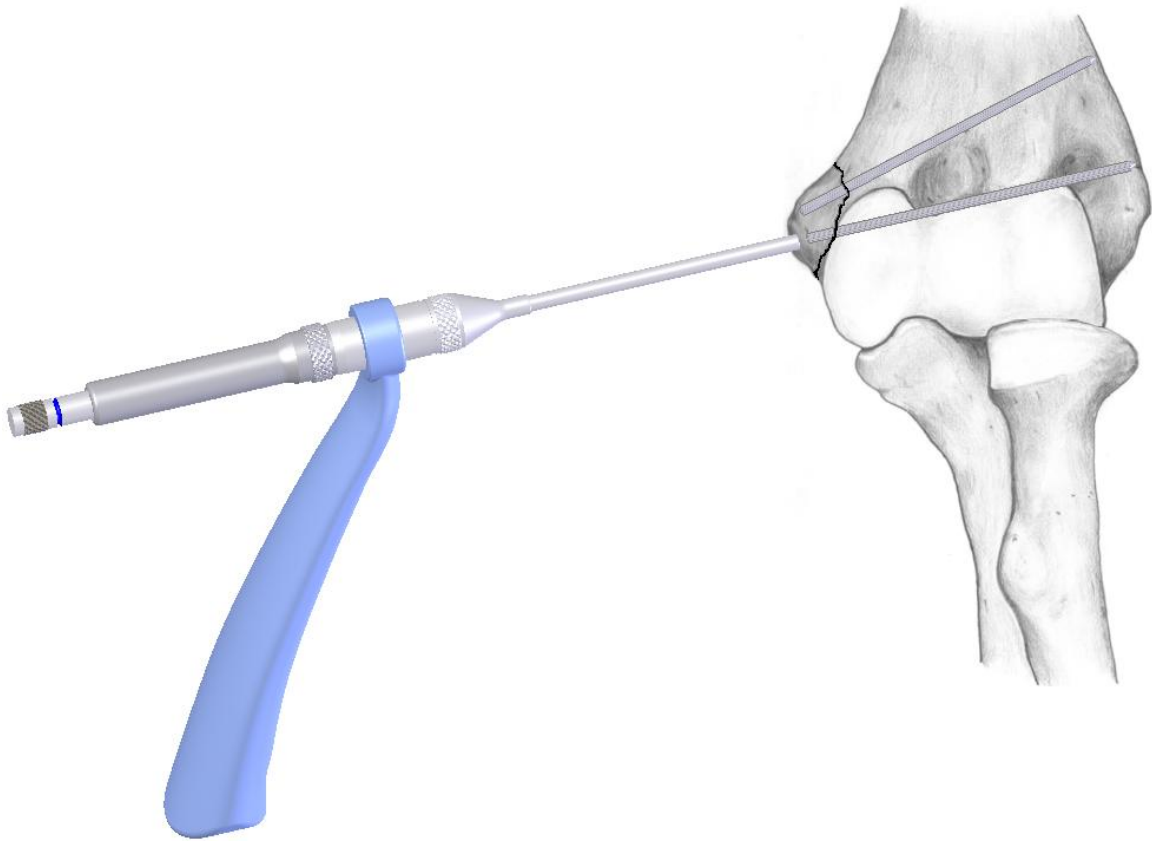
6. OSTEOCHONDRITIS DISSECANS (OCD)



1.5 and 2.0 mm ActivaPins™ (lengths 20 – 40 mm) can be used.

The used implants, implant combinations and the exact positioning depend on the location of the fracture lines. Pins are fully inserted under the bone surface with the instrument.

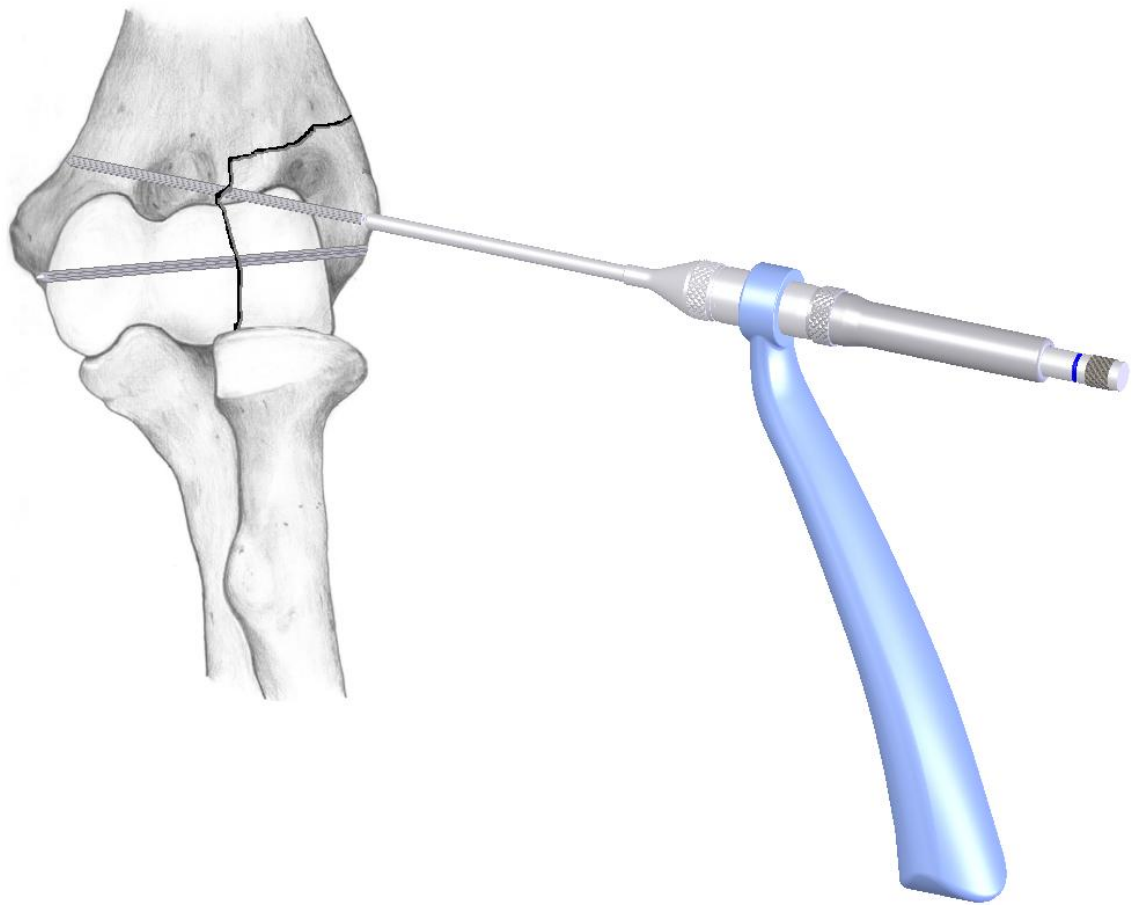
7. CHONDYLAR AND EPICONDYLAR FRACTURES



1.5 and 2.0 mm ActivaPins™ can be used.

The used implants, implant combinations and the exact positioning depend on the location of the fracture lines. Pins are fully inserted under the bone surface with the instrument.

8. CAPITELLUM HUMERI



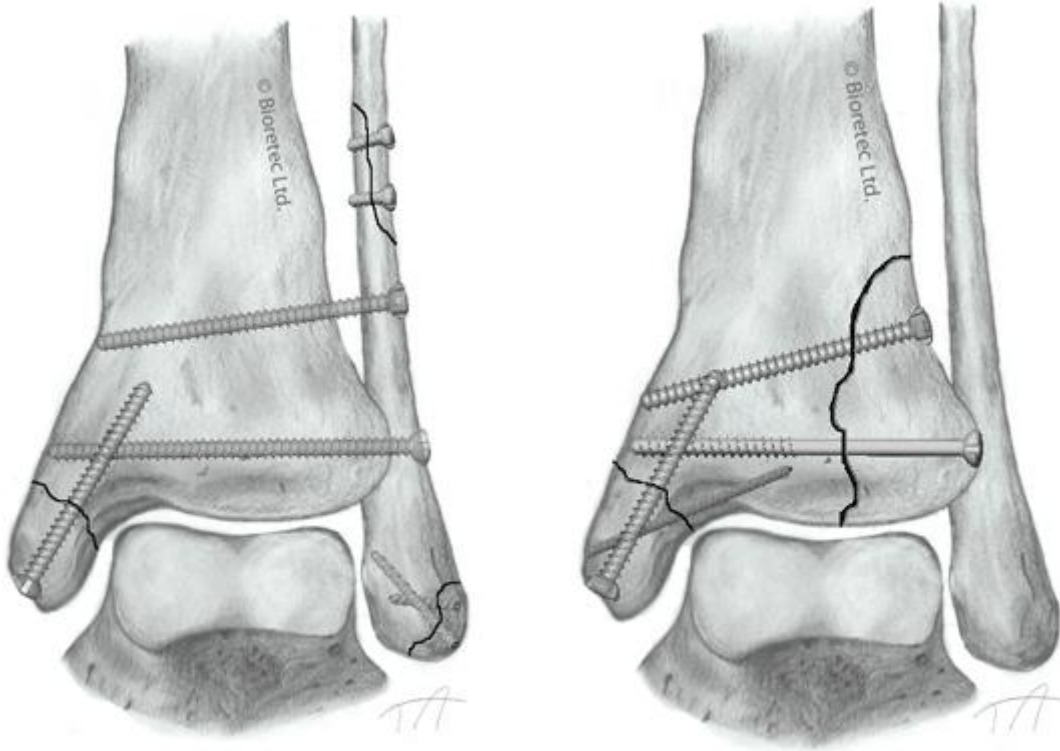
Used implants: 1.5 and 2.0 mm ActivaPins™

The used implants, implant combinations and the exact positioning depend on the location of the fracture lines. Pins are fully inserted under the bone surface with the instrument.

9. ANKLE FRACTURES

Fixation of

- Unimalleolar fractures,
- Bimalleolar fractures,
- Trimalleolar fractures,
- Pilon fractures
using ActivaScrew™ and ActivaPin™ implants.



Used implants: 3.5 and 4.5 mm ActivaScrews™ (also cannulated and LAG), 2.0, 2.7 and 3.2 mm ActivaPins™. Activa implants can also be used in combination with metallic implants e.g. ActivaScrew with metallic plate in fixation of the tibia-fibular syndesmosis (see indication 9).

The used implants, implant combinations and the exact positioning depend on the location of the fracture lines. The fractures are exposed by lateral and medial incisions. The fracture is reduced with bone clamps in anatomically correct position. The hole is drilled across the fracture site with a proper drill bit and the depth of the channel is measured with the depth gauge. The ActivaPins™ are inserted with the applicator and cut along the bone surface. When ActivaScrews™ are used the drill channel need to be tapped and countersunk before inserting the screw. Radiograph is taken to ensure the result.

10. FIXATION OF TIBIO-FIBULAR SYNDESMOSIS

ActivaScrew™ 4.5 mm or ActivaScrew™ 4.0 mm Cannulated (Length 70 mm) can be used.

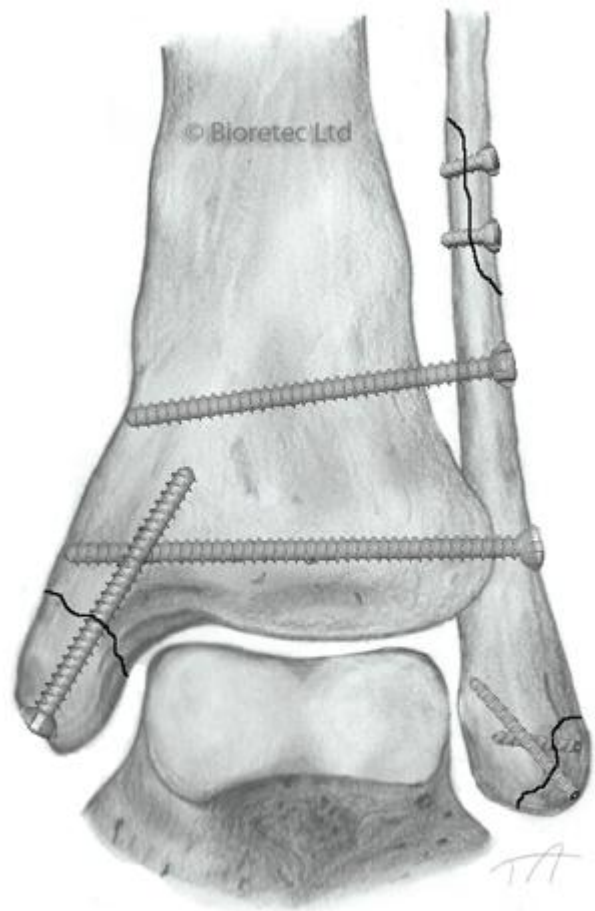
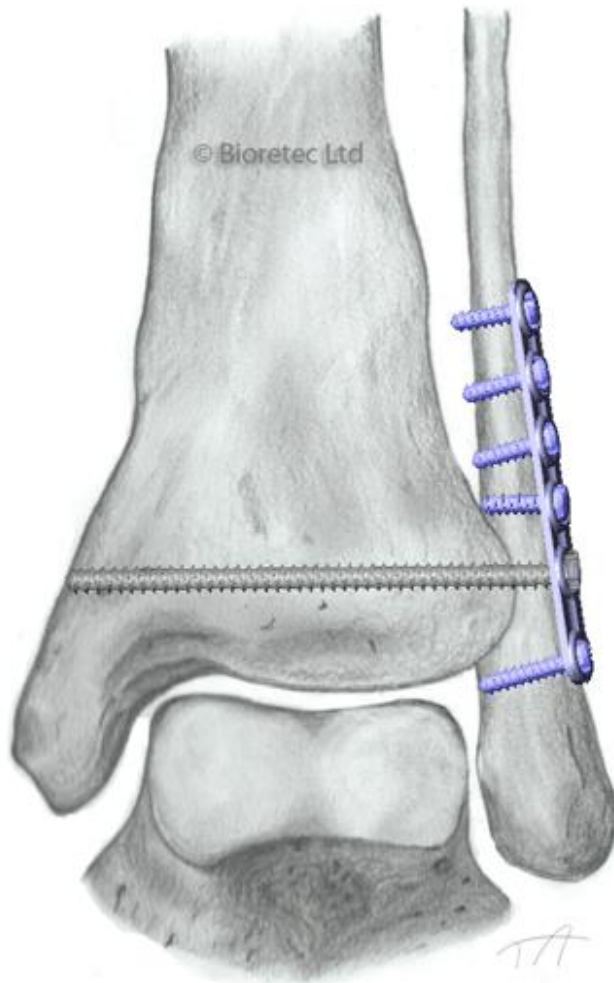
After fixation of concomitant fractures of fibula and tibia, fibula is firmly placed into the fibular notch of the tibia to regain the normal anatomy of the ankle mortise. While holding the fibula in place, a hole is drilled through the four cortices in slightly anteriorly inclined direction. The screw hole is tapped and a full threaded screw is inserted until the distal tip of the screw can be palpated through the tissues of the medial aspect of the tibia. Screw head and excess screw can be cut off flush along the bone surface. Cutting with hot loop increases the holding power due to the small head formation.

With Plate Fixation:

The syndesmosis screw can be placed through a hole of a fixation plate (ActivaScrew™ 4.0 mm cannulated is also compatible with most of the modern locking plates due to its smaller outer diameter).

Optional Technique with two ActivaScrew™ implants:

If the technique of two screws is applied, sufficient holding power is gained by fixation through three cortices. Also in this case the head and the excess screw can be cut off after insertion of the screw.



Benefits using ActivaScrew™ in fixation of tibio-fibular syndesmosis

- Avoidance of routine metal screw removal
- No need to worry about the screw breakage like with metal screws
- In case of non-cannulated ActivaScrew™ no extra instrumentation is needed due to AO-compatibility
- ActivaScrew 4.0 mm cannulated compatibility with most of the modern locking plates