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Fissazione esterna nel trattamento delle emergenze e traumi militari, tecniche di ricostruzione degli arti e trattamento degli esiti postraumatici

ROMA

2025

16-17 MAGGIO 2025

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16-17 MAGGIO 2025

Use of vascularised fibula associated with External Fixation for Osseous Losses

Aloj D.
S.C. Ortopedia Traumatologia, Ospedale Sant'Andrea di Vercelli

ASL Vercelli

Population:
Four cases of OBF using VFBG in three patients

2020

Contents lists available at ScienceDirect

Injury

journal homepage: www.elsevier.com/locate/injury

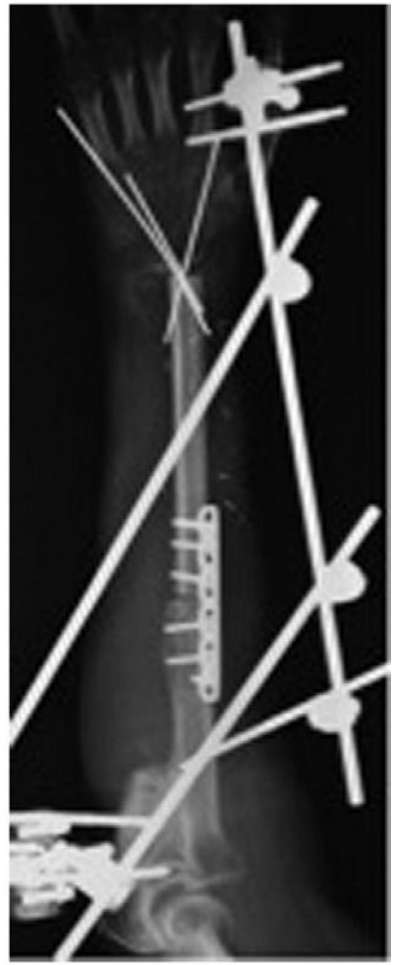
One bone forearm with vascularized fibular graft. Clinical experience and literature review

S. Artiaco*, D Ciclamini, J. Teodori, E. Dutto, T. Benigno, B. Battiston

Department of Orthopaedic and Traumatology, Hand and Microsurgery Unit, Orthopaedic and Trauma Center,AOU Città della Salute e della Scienza di Torino, via Zuretti 29, 10126, Turin, Italy

One-Bone Forearm (OBF) procedure is a surgical technique where the proximal stump of the ulna is fixed to the distal stump of the radius.

Indicated for forearm instability resulting from trauma, infection, tumor resection, and congenital deformities involving severe bone loss in the radius and ulna.



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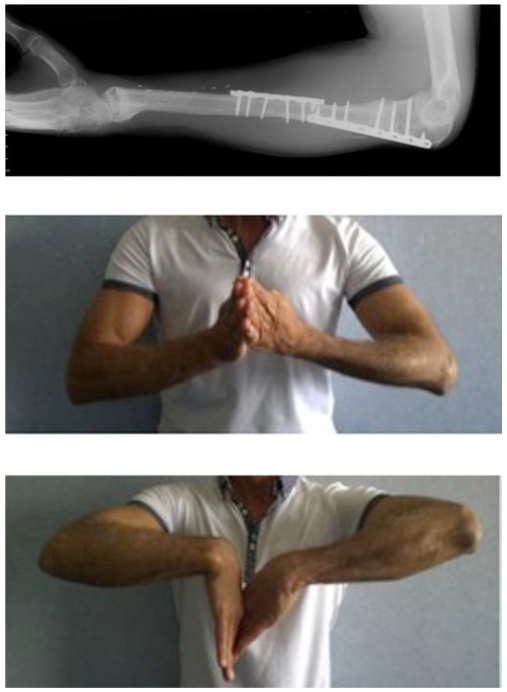
2020



OBF fixation in either a neutral or slightly pronated position limits forearm rotation but preserves elbow and wrist flexion-extension, providing stability and acceptable residual forearm function

While direct osteodesis is possible when bone loss is limited, Vascularized Fibular Bone Grafts (VFBG) are particularly useful for extensive radius and ulna bone loss that prevents direct fixation

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2020

OBF with VFBG showed similar clinical results and a high rate of healing compared to the standard OBF technique with direct osteodesis, even in cases involving bone infection.

Composite osteocutaneous VFBGs can also be used to treat local soft tissue defects at the same time.

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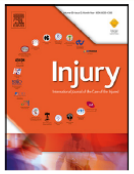

Treatment of acute bone defects in severe lower limb Trauma☆

B. Battiston*, D. Santoro, R. Lo Baido, F. Pasquero
Orthopaedic Dpt., Città della Salute e della Scienza, Torino, Italy

2019

POPULATION: eight patients with acute large bone defects treated with this method between 2007 and 2013.

Lower limb diaphyseal fractures with segmental bone defect pose a challenge for trauma surgeons, occurring with varying soft tissue conditions. These high-energy traumas are often treated with a damage control orthopedics approach

Purpose: Treating acute bone defects using vascularized fibular grafts supported by Ilizarov circular external frames

Winquist classification.

Fracture grade	Comminution
Grade I	No or minimal comminution
Grade II	More than 50% contact between the two fragments, moderate comminution
Grade III	Less than 50% contact between the two fragments, moderate - severe comminution
Grade IV	Severe comminution with no contact between the fragments, segmental loss
A	Less than 5 cm
B	More than 5 cm

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Treatment time (mean 61 weeks)
Number of operations (mean 7.6).

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Orthopaedic Dpt., Città della Salute e della Scienza, Torino, Italy

2019

The treatment approach involves early bone reconstruction with microvascular fibular grafts, combined with the mechanical support and bone transport capabilities of Ilizarov circular external fixators.

Table 4
Plastic treatment, type of infection and time between trauma and definitive treatment.

Patient	F.U. (months)	Infection	Soft tissue treatment	Time between trauma and definitive treatment
1a	10	yes: Staphylo aureus+empidermidis	yes	18 days
2a	7	yes: Pseudomonas aeruginosa	yes	21 days
3a	60	yes: Staphylo aureus	yes	28 days
4a	12	yes: Staphylo aureus	yes	38 days
5a	54	yes: Staphylo aureus	no	18 days
6a	35	yes: Staphylo Haemoliticus+pseud aeruginosa	yes	41 days
7a	17	no	yes	19 days
8a	11	no	yes	21 days

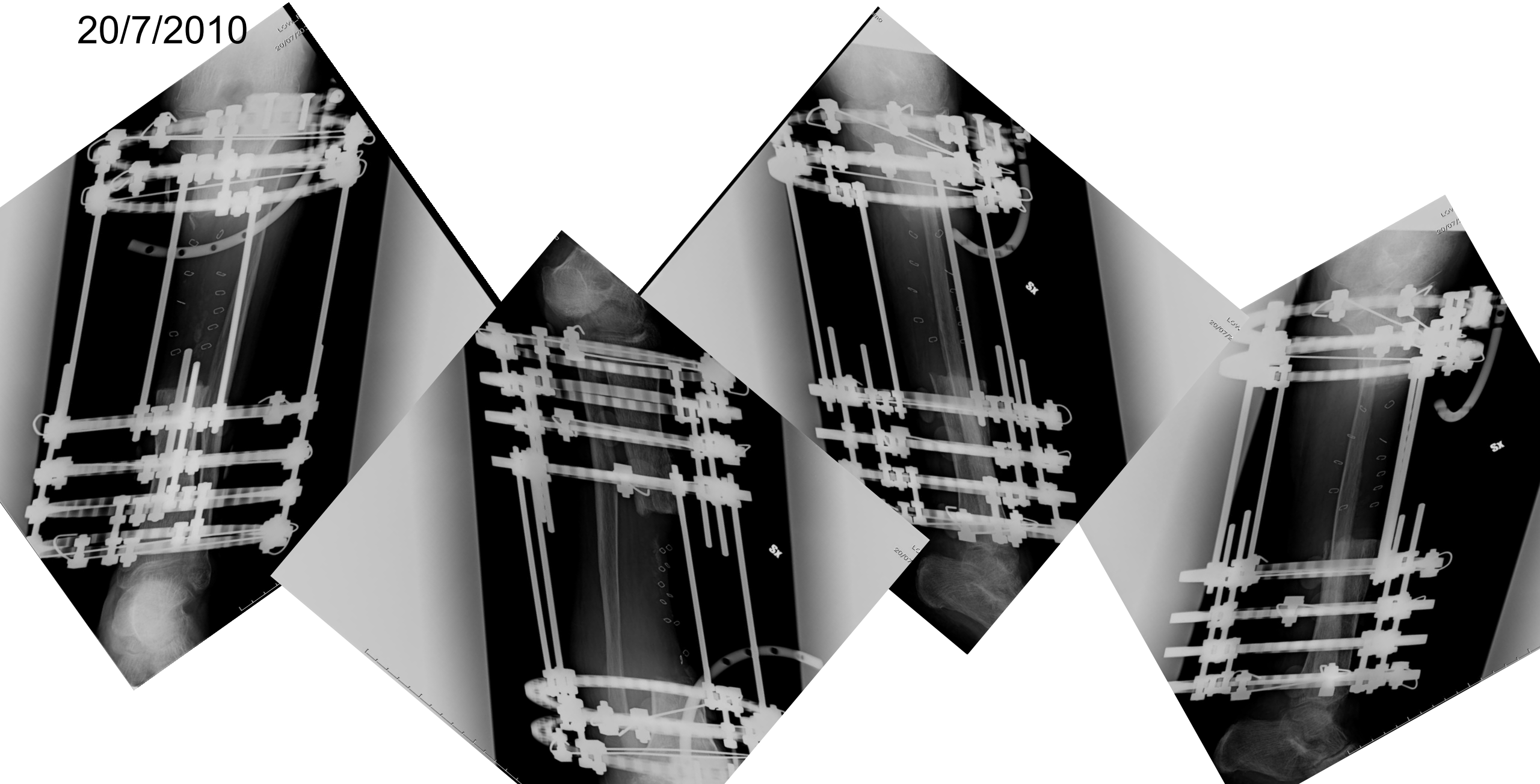
Table 4a
Results of the treatment at the final follow-up.

Patient	Crutches dismission time	SF-36 QoL	VAS	Leg length discrepancy	Coronal Axis	Knee ROM ext	Knee ROM flex
1a	1,5 years	30	4	2 cm	valgus 2°	0°	130°
2a	10 months	60	4	2 cm	valgus 5°	0°	10°
3a	2 years	80	2	2 cm	varus 7°	0°	110°
4a	no	20	7	–	–	–	–
5a	8 months	50	3	1,5 cm	normal	0°	100°
6a	1 year	50	4	2 cm	normal	0°	100°
7a	1 year	50	5	3 cm	normal	0°	130°
8a	4 months	70	5	1,8 cm	normal	0°	100°

B.G.
19/04/2010

B.G

20/7/2010



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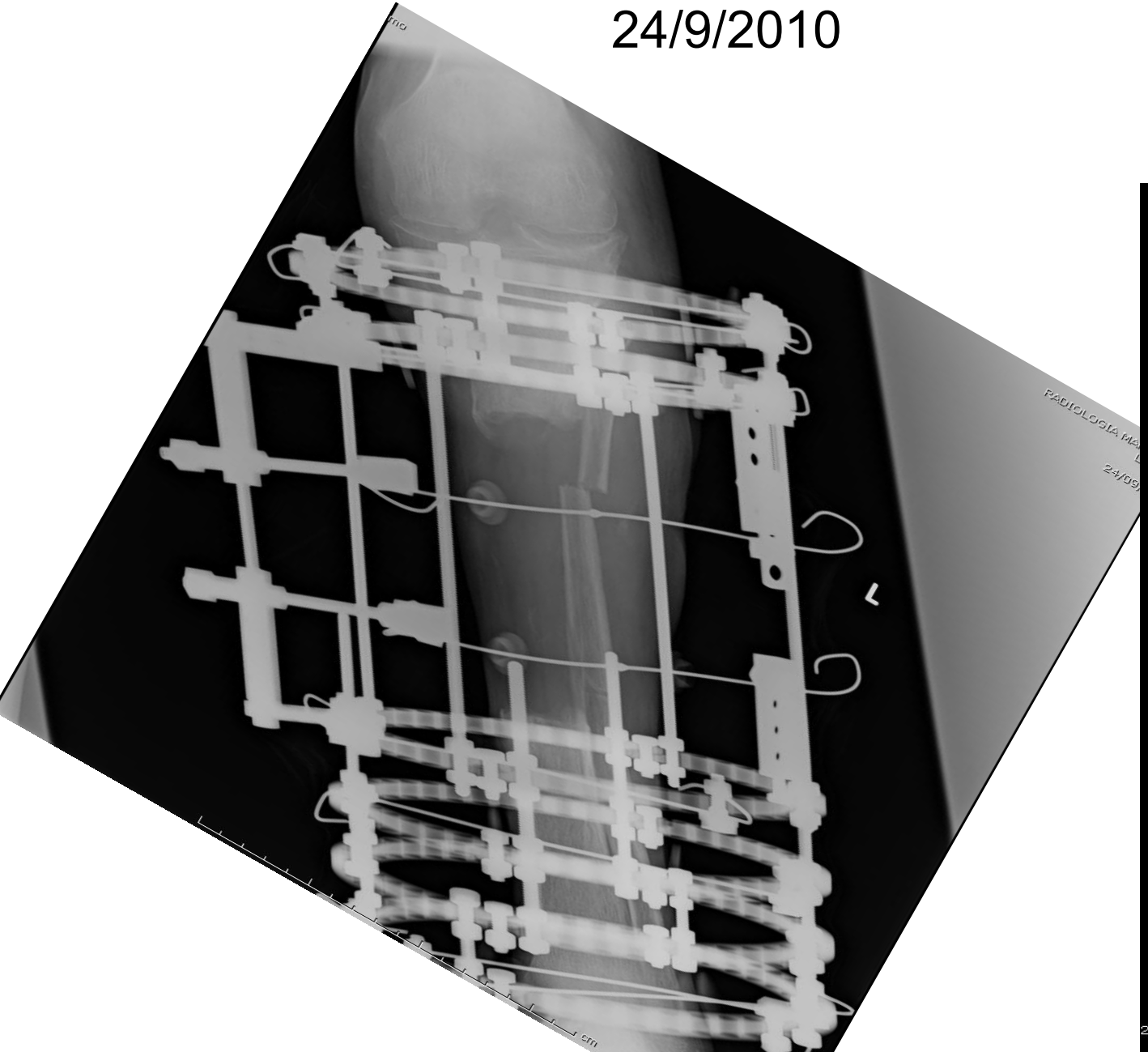
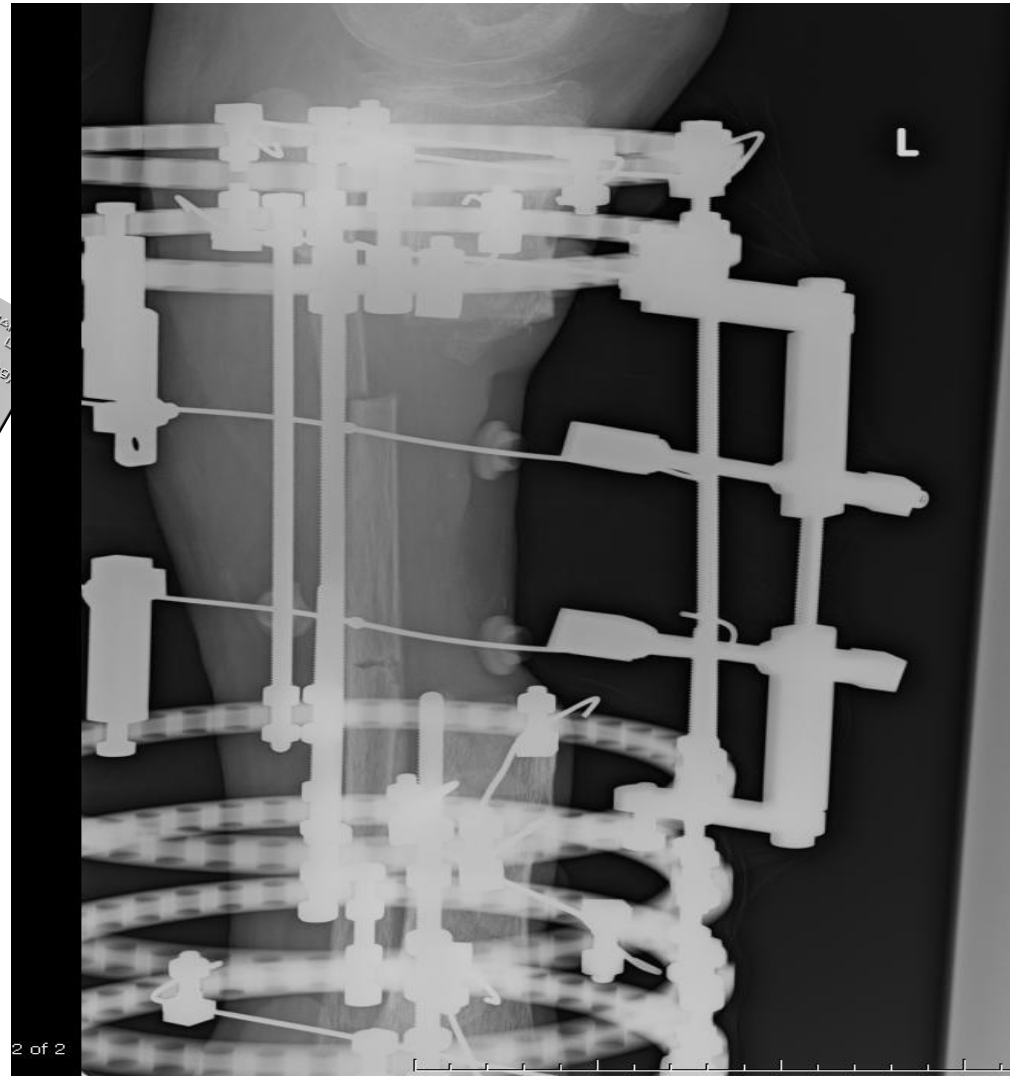
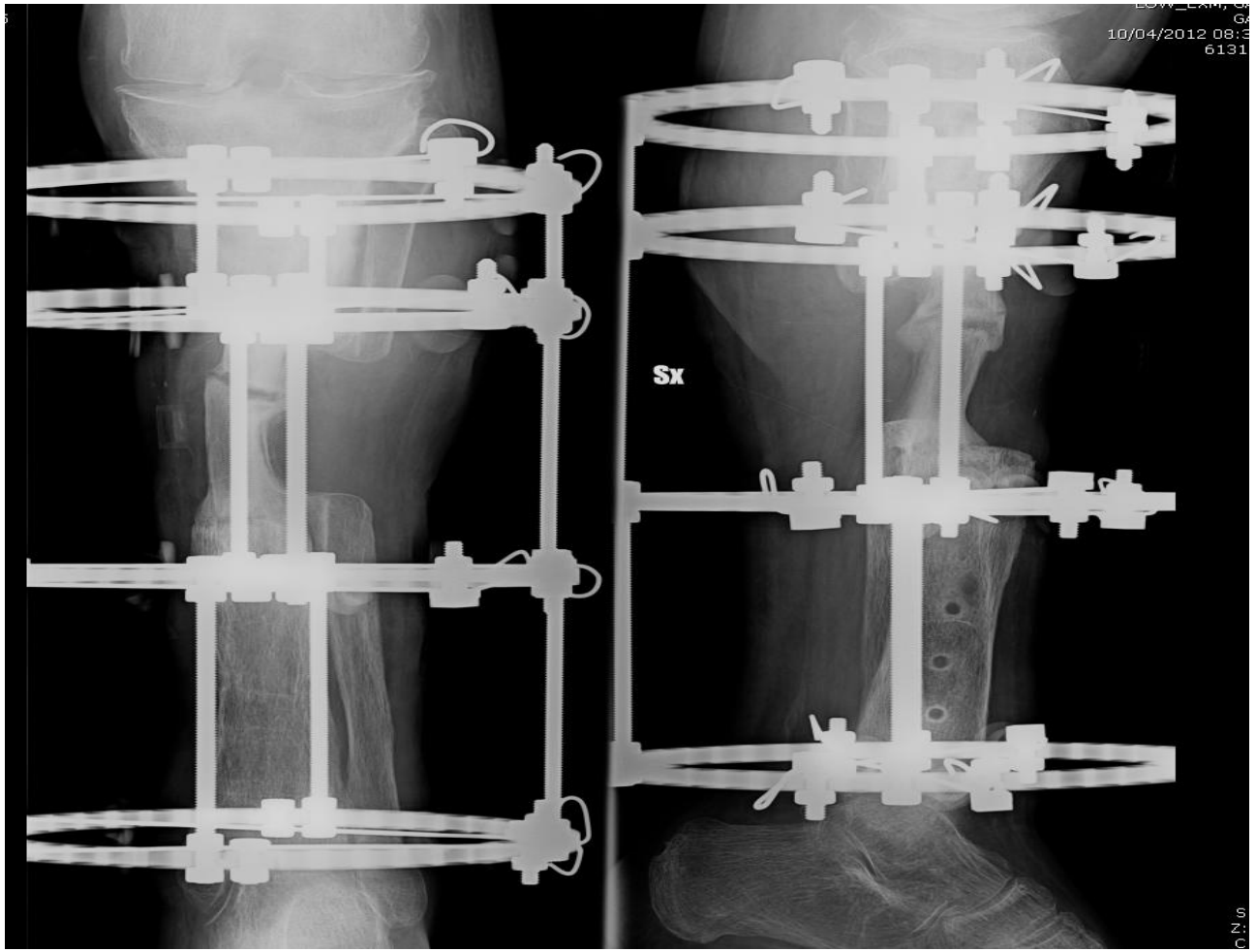
24/9/2010





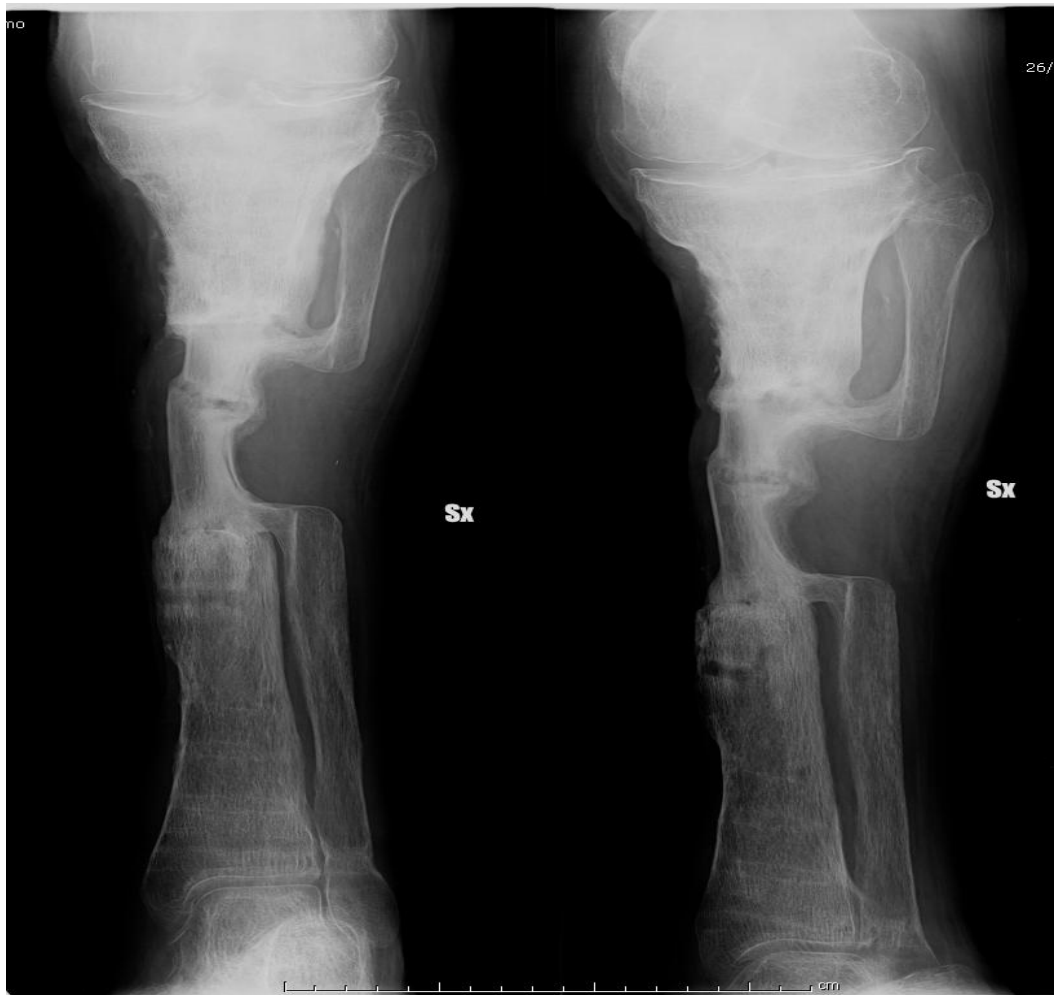
B.G.

10/04/2012



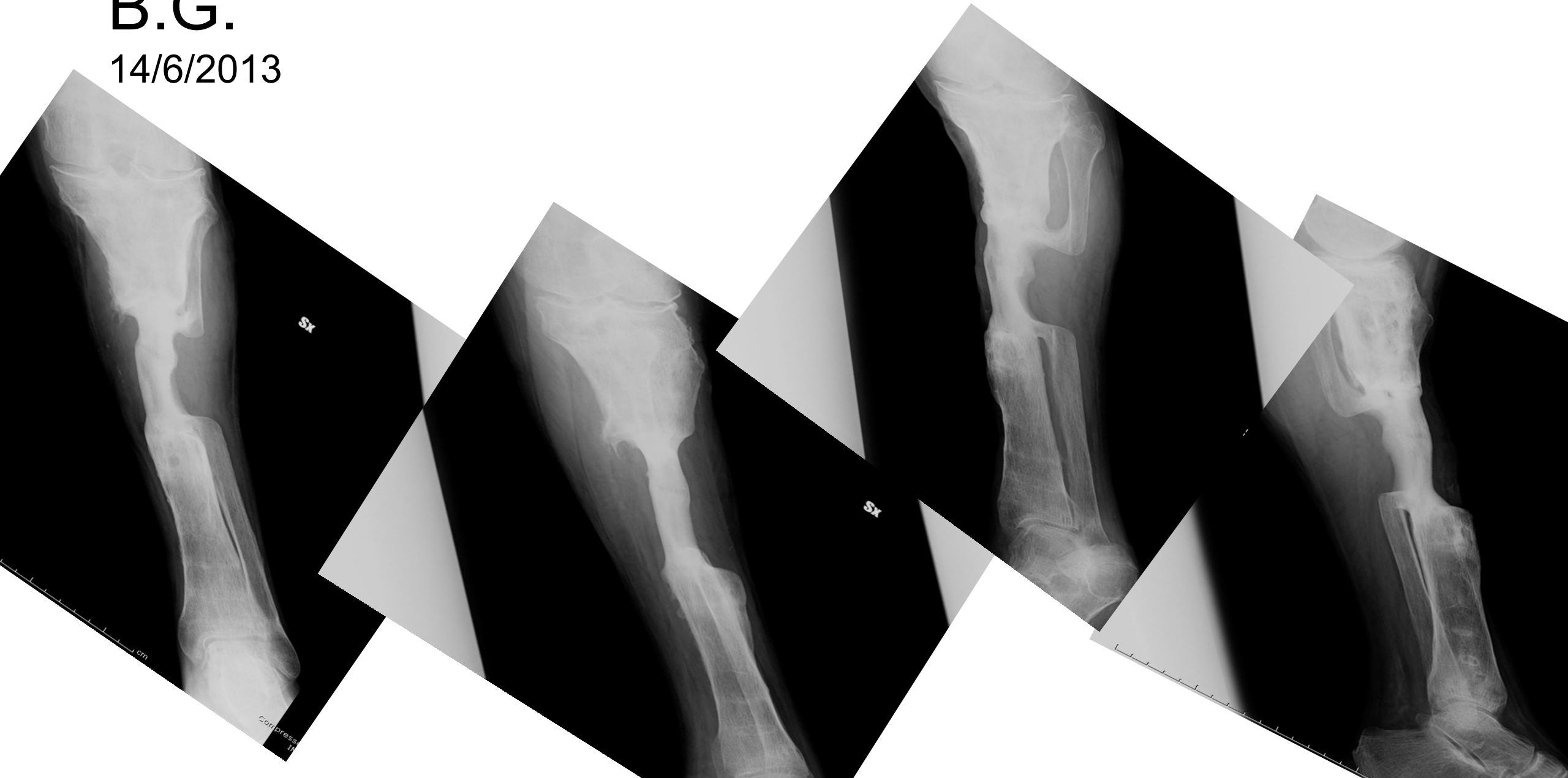
B.G.

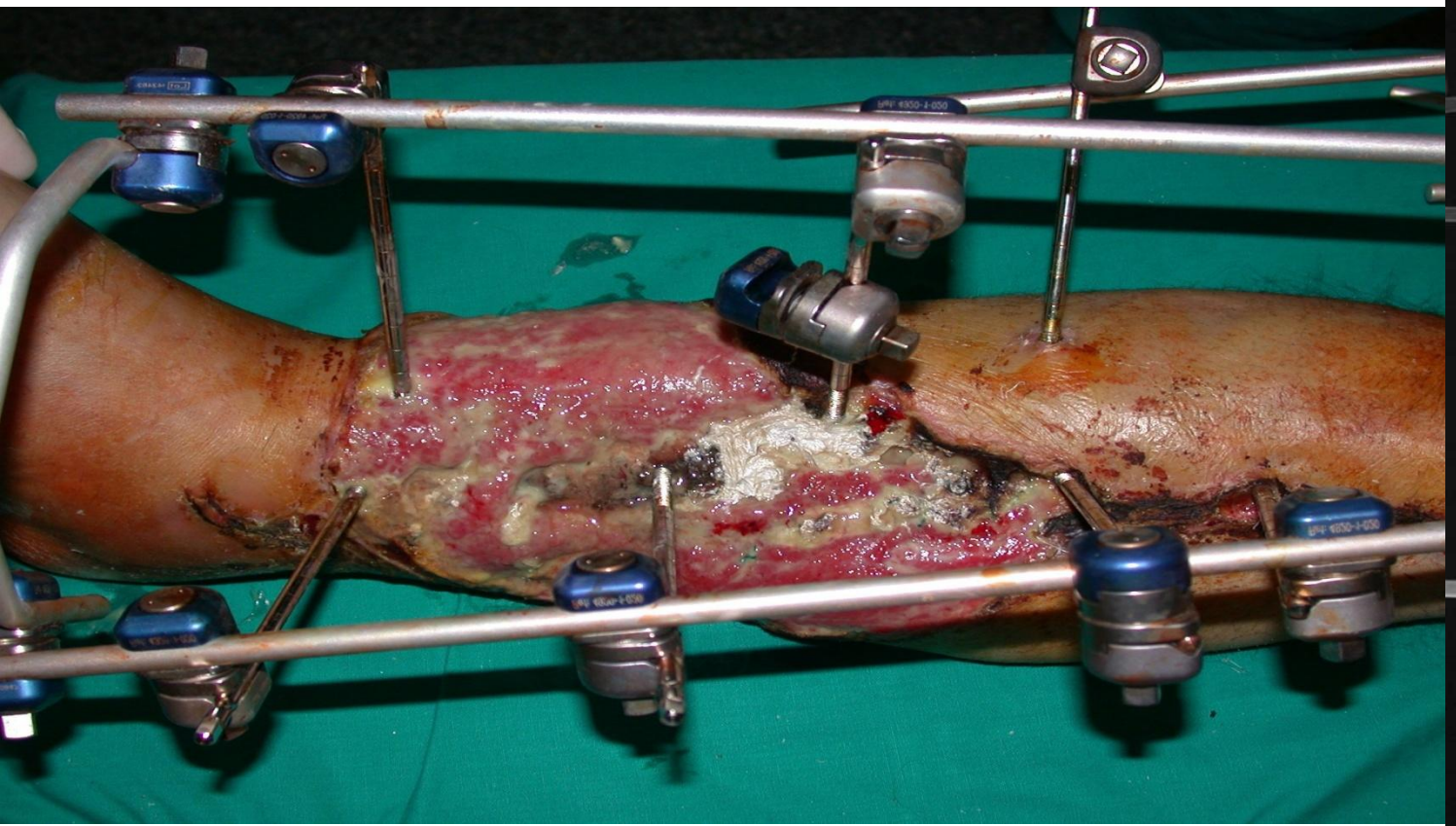
26/6/2012

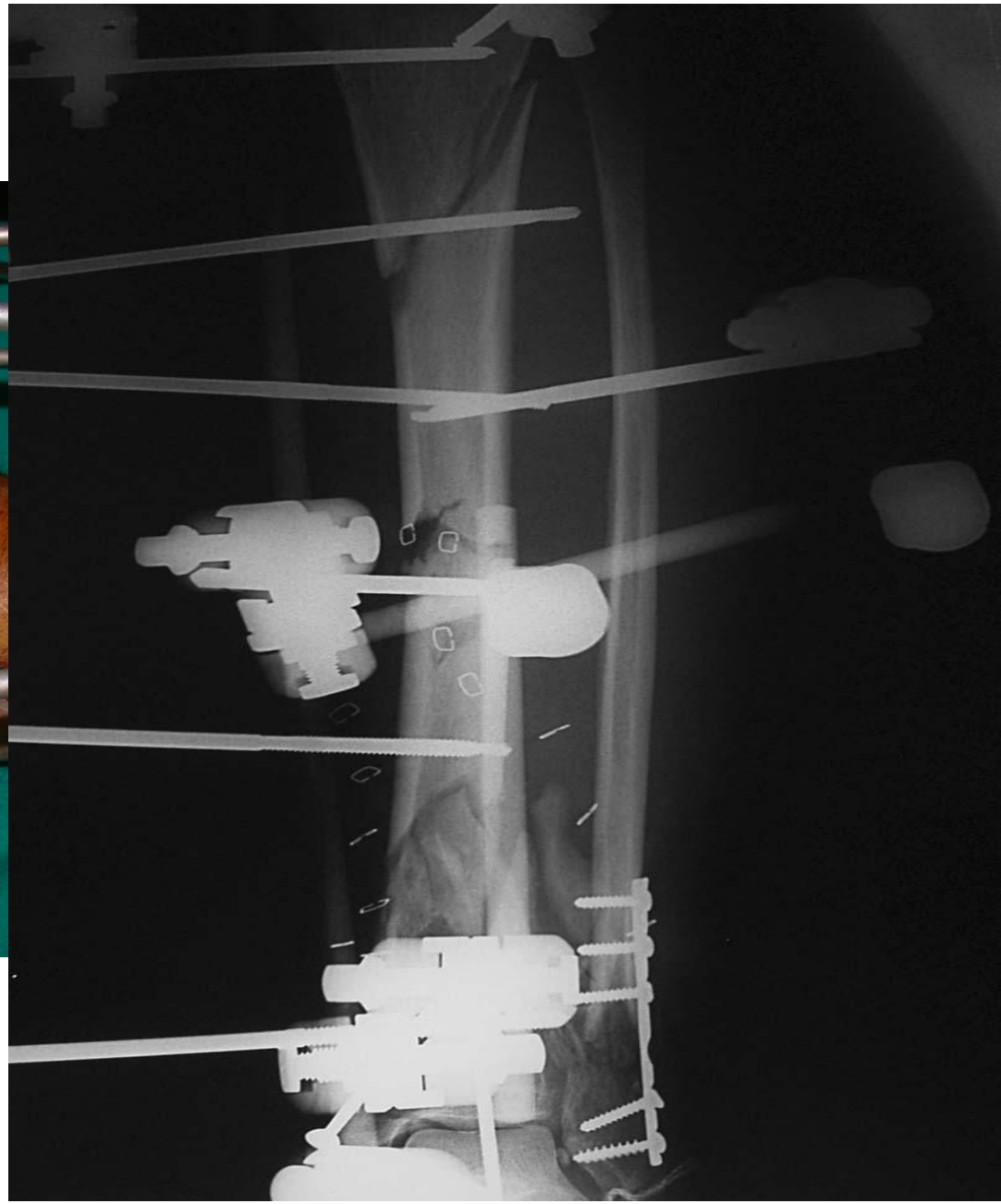


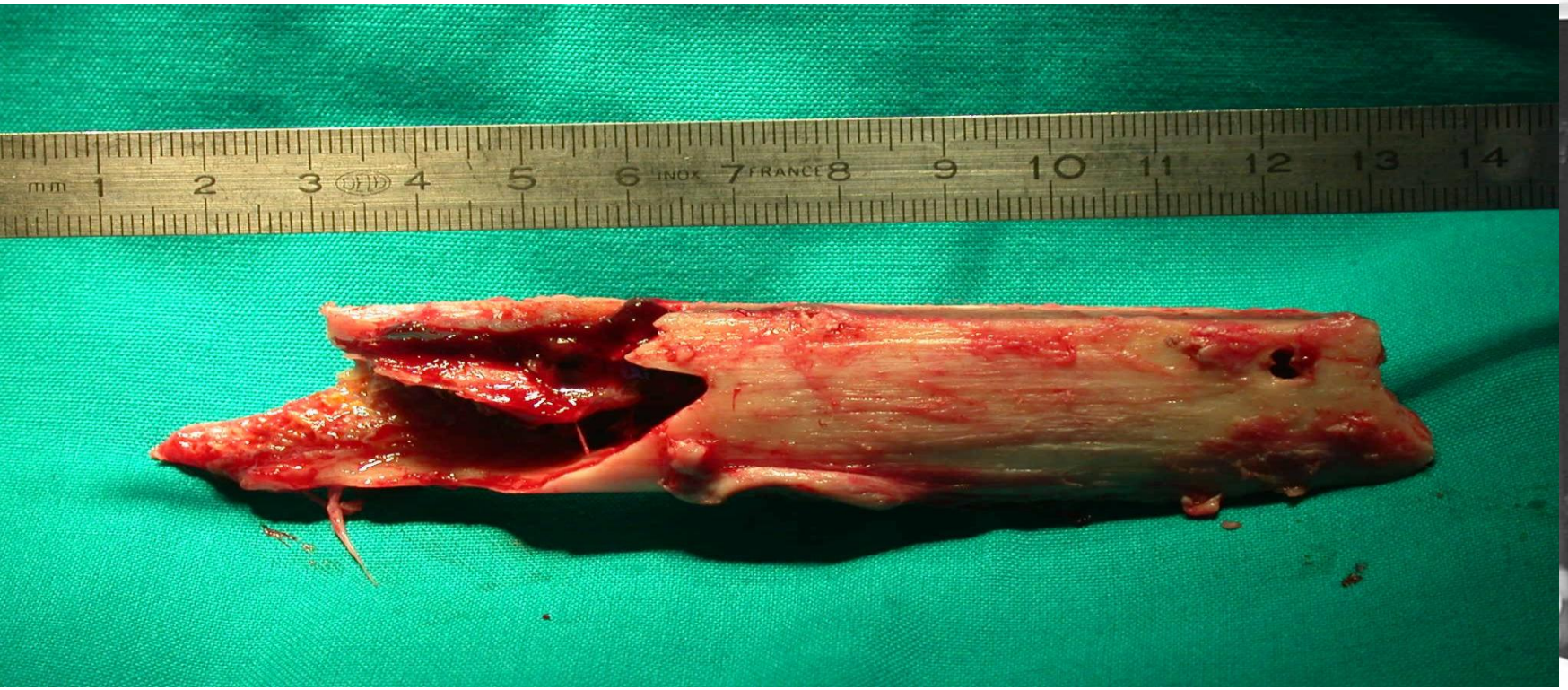
B.G.

14/6/2013





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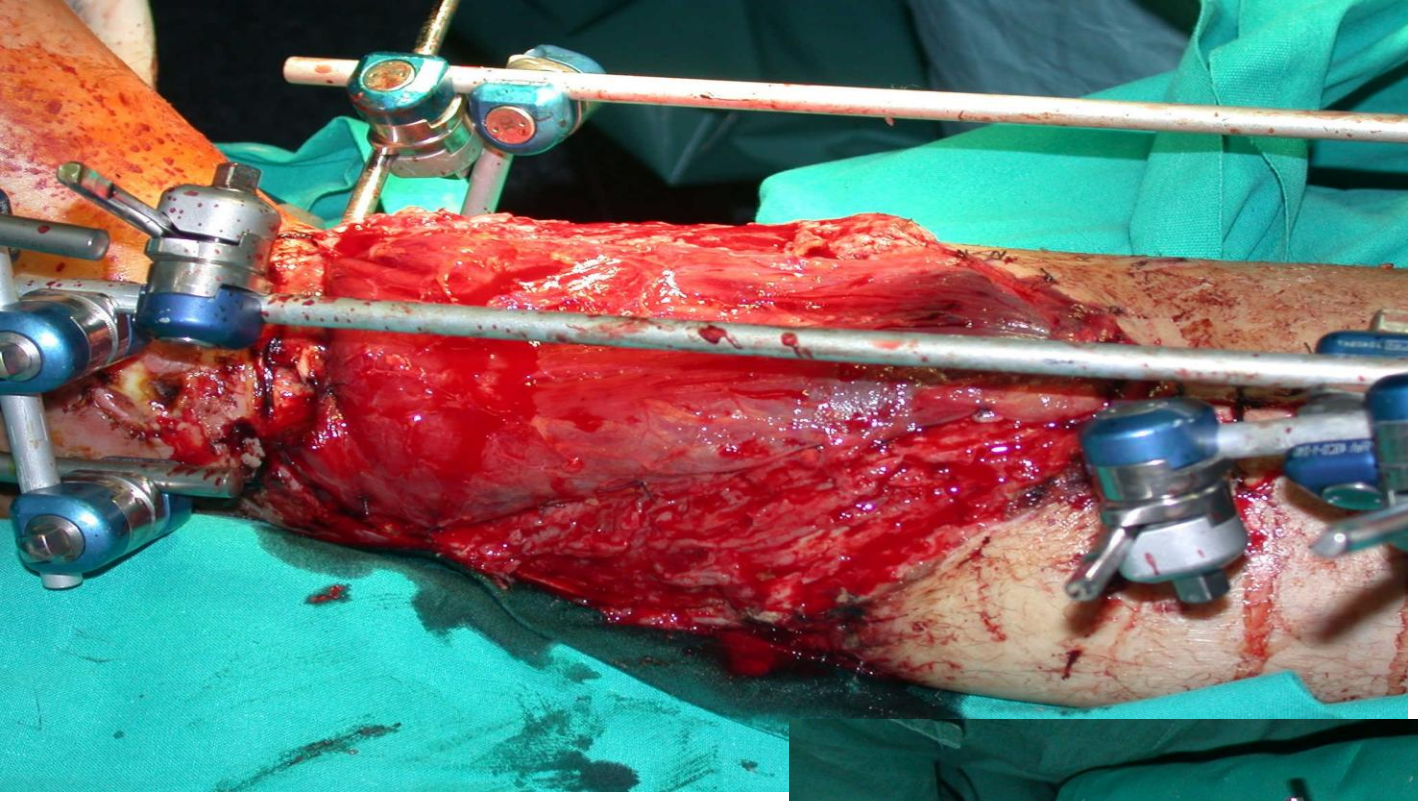

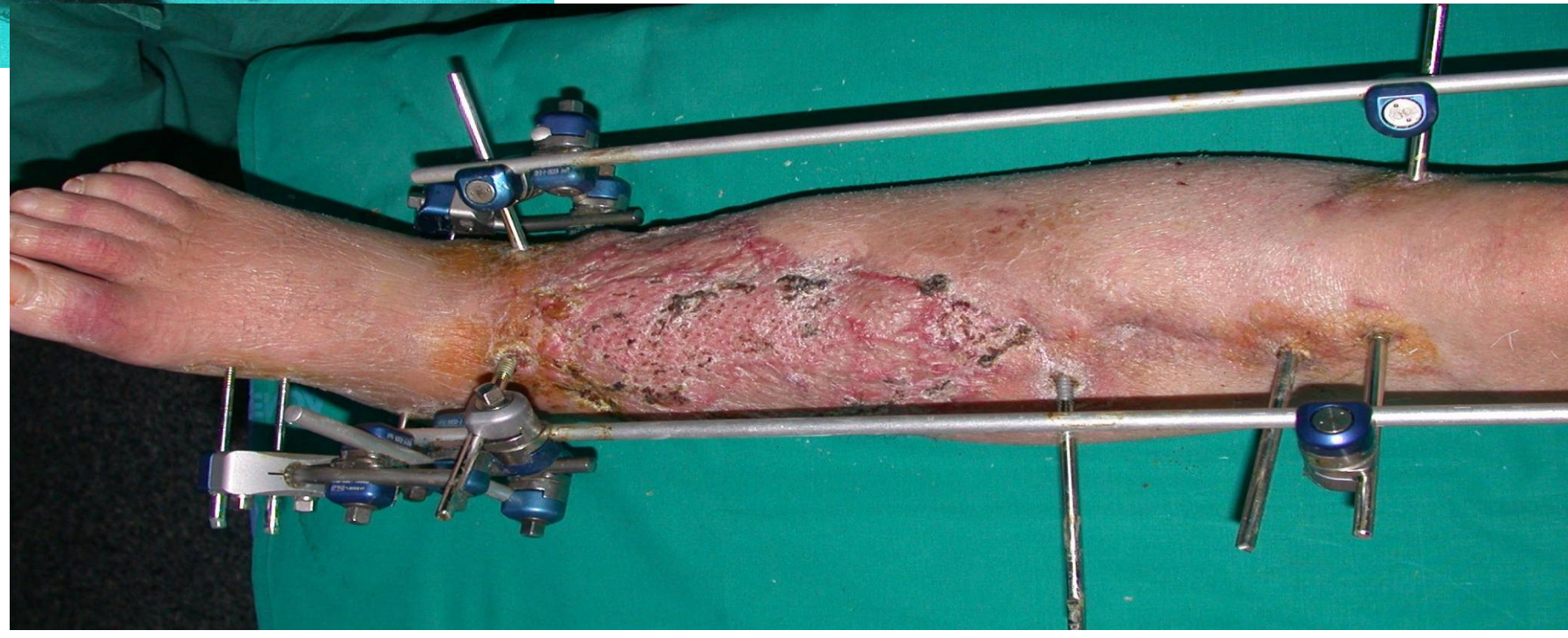

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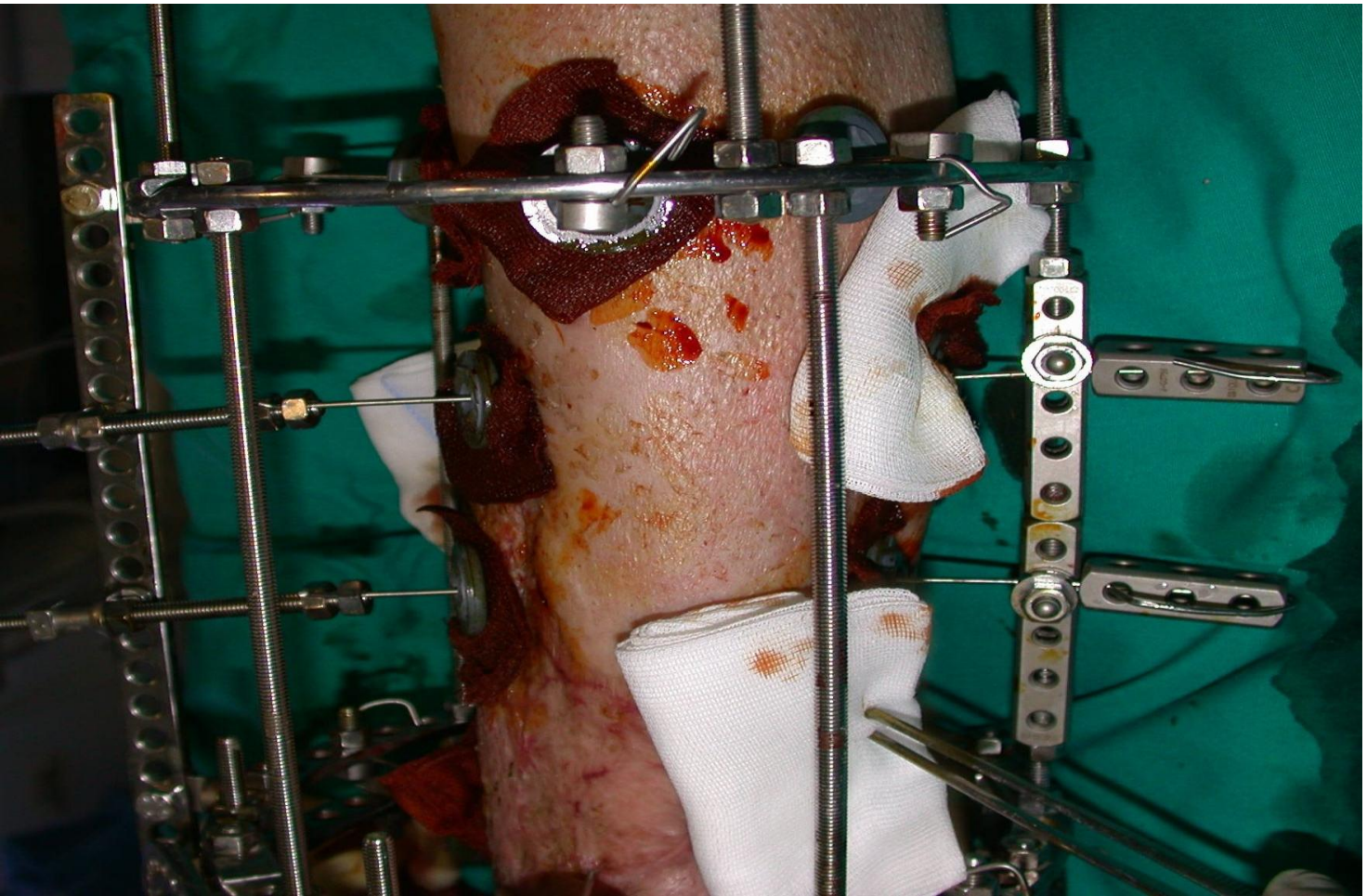
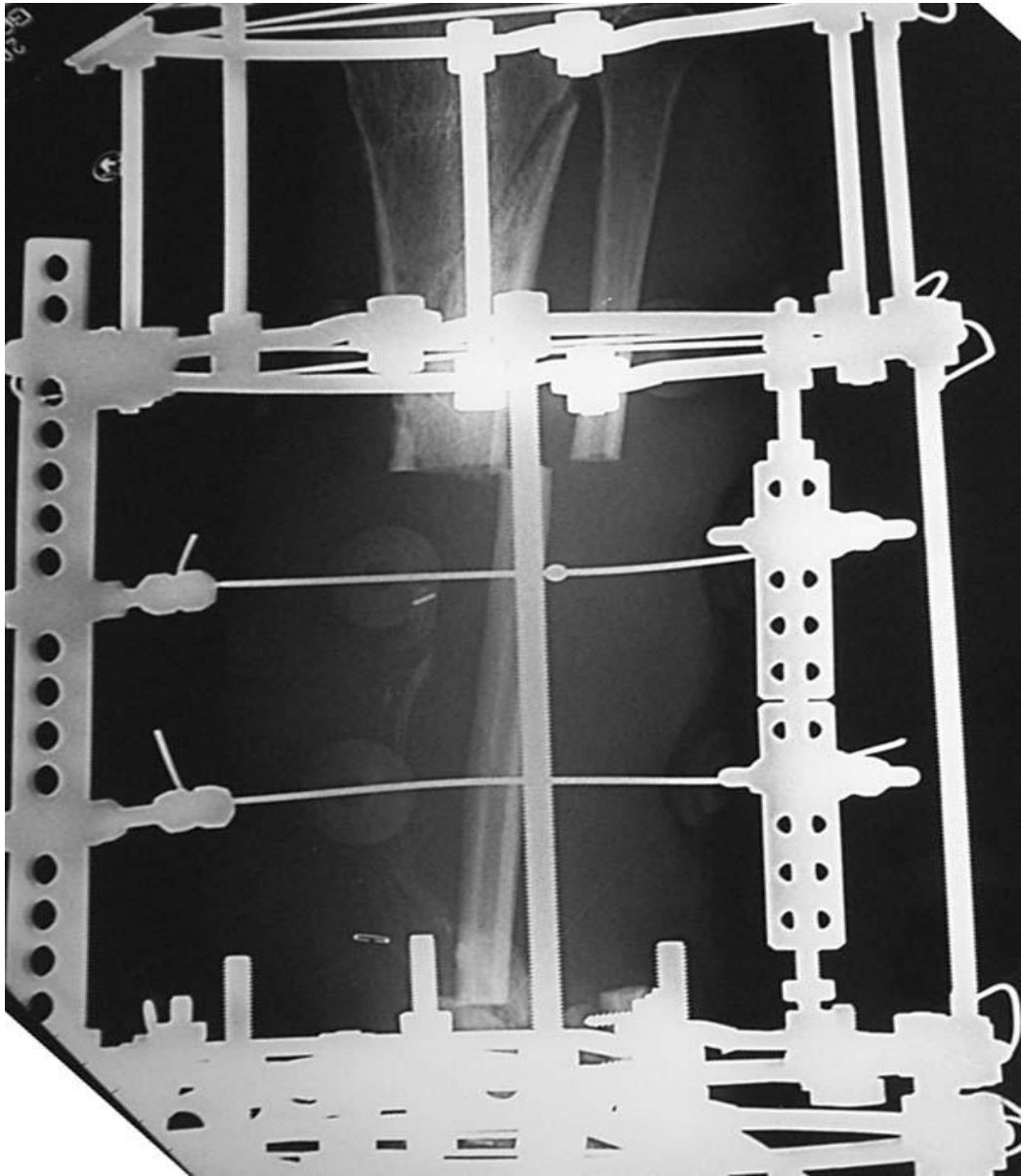
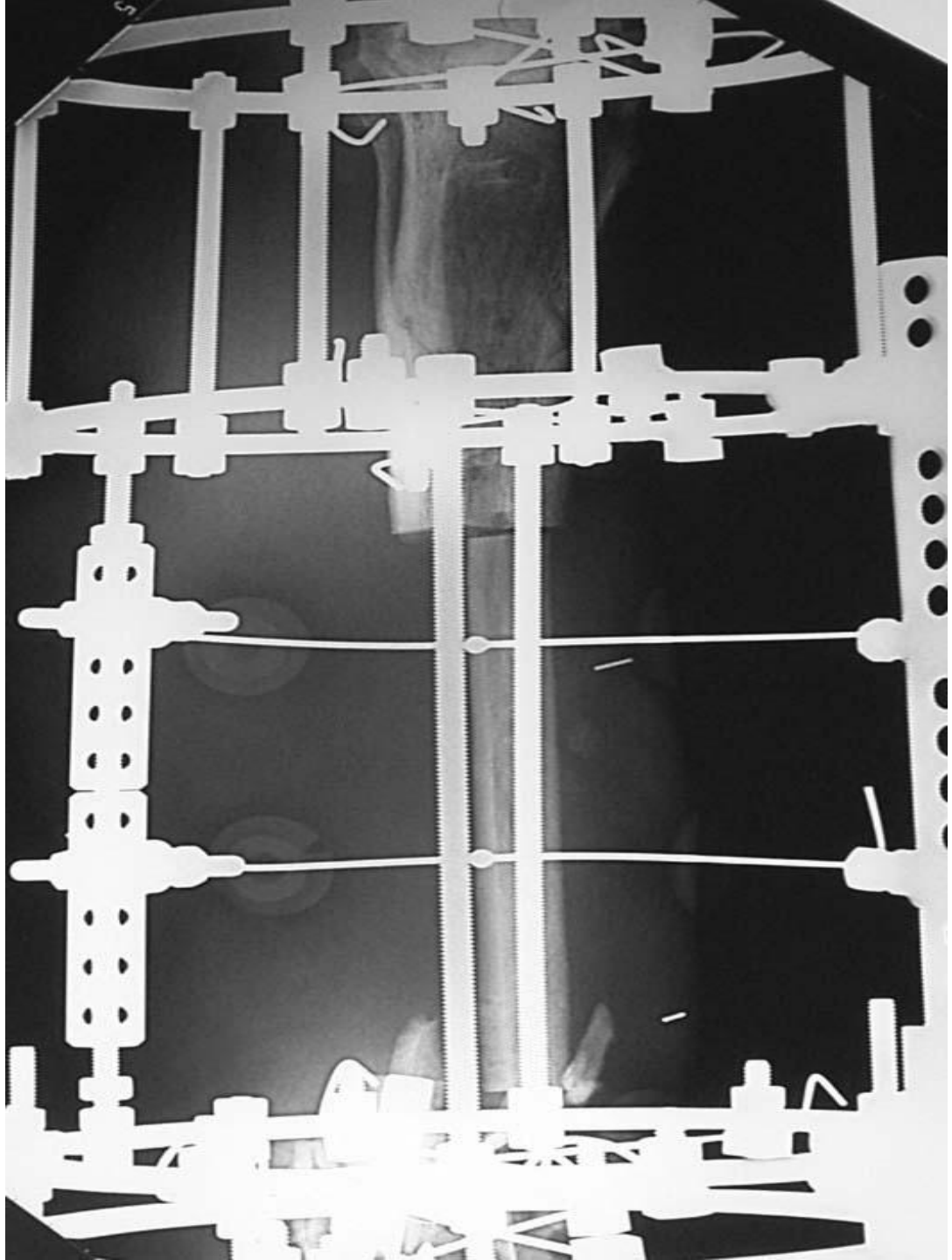
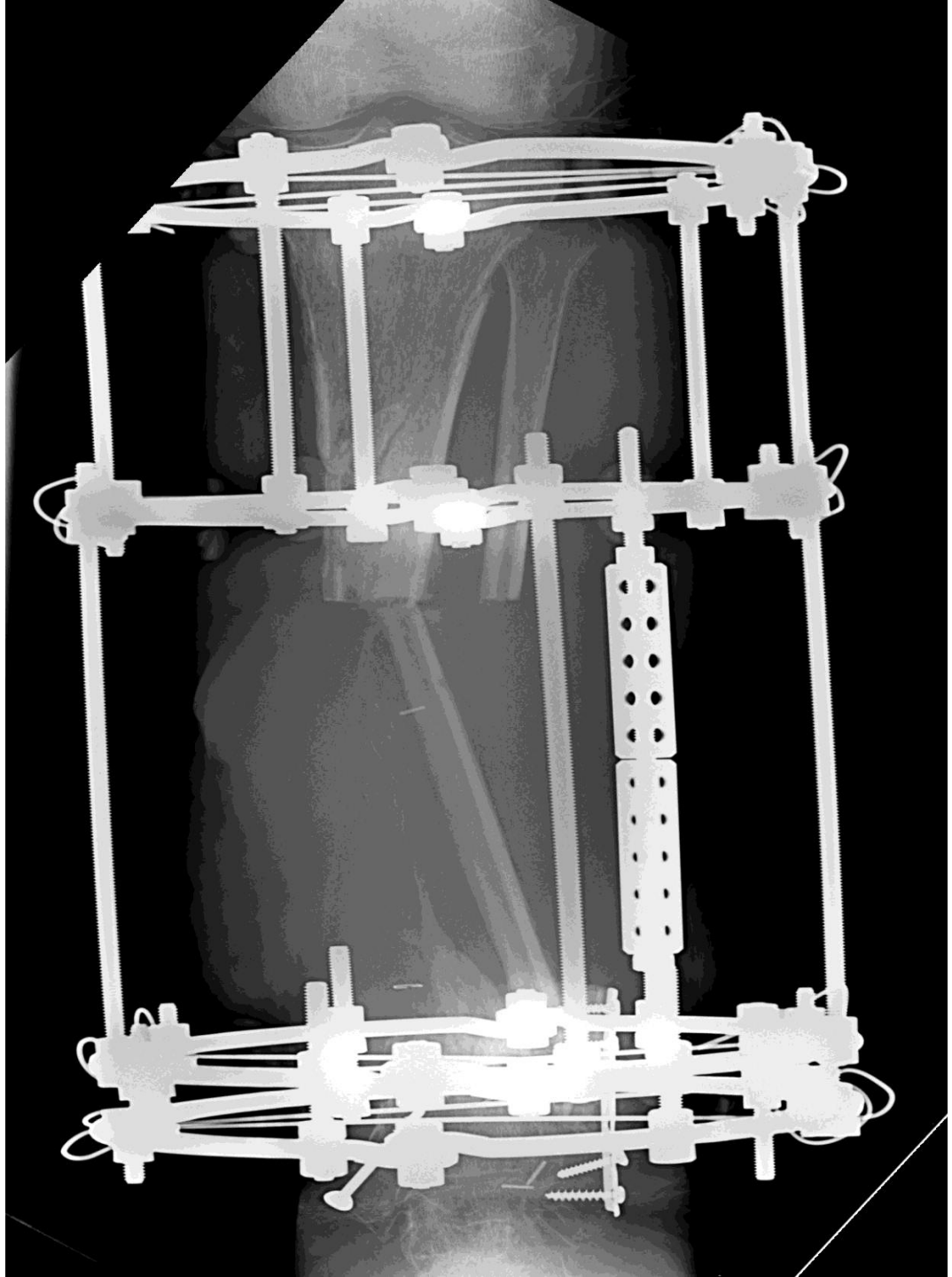
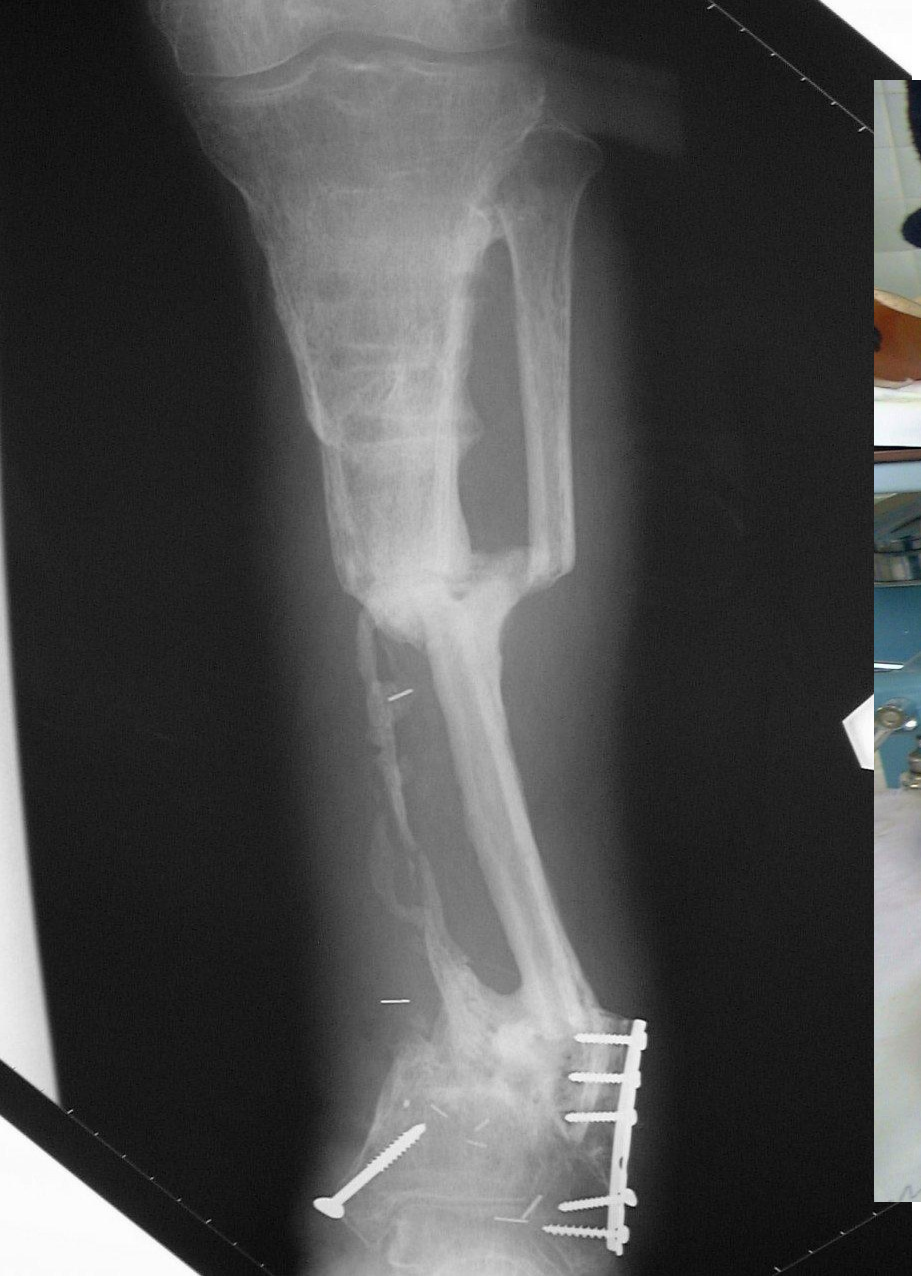








docking point nonunion



3.5 mesi

20 mesi

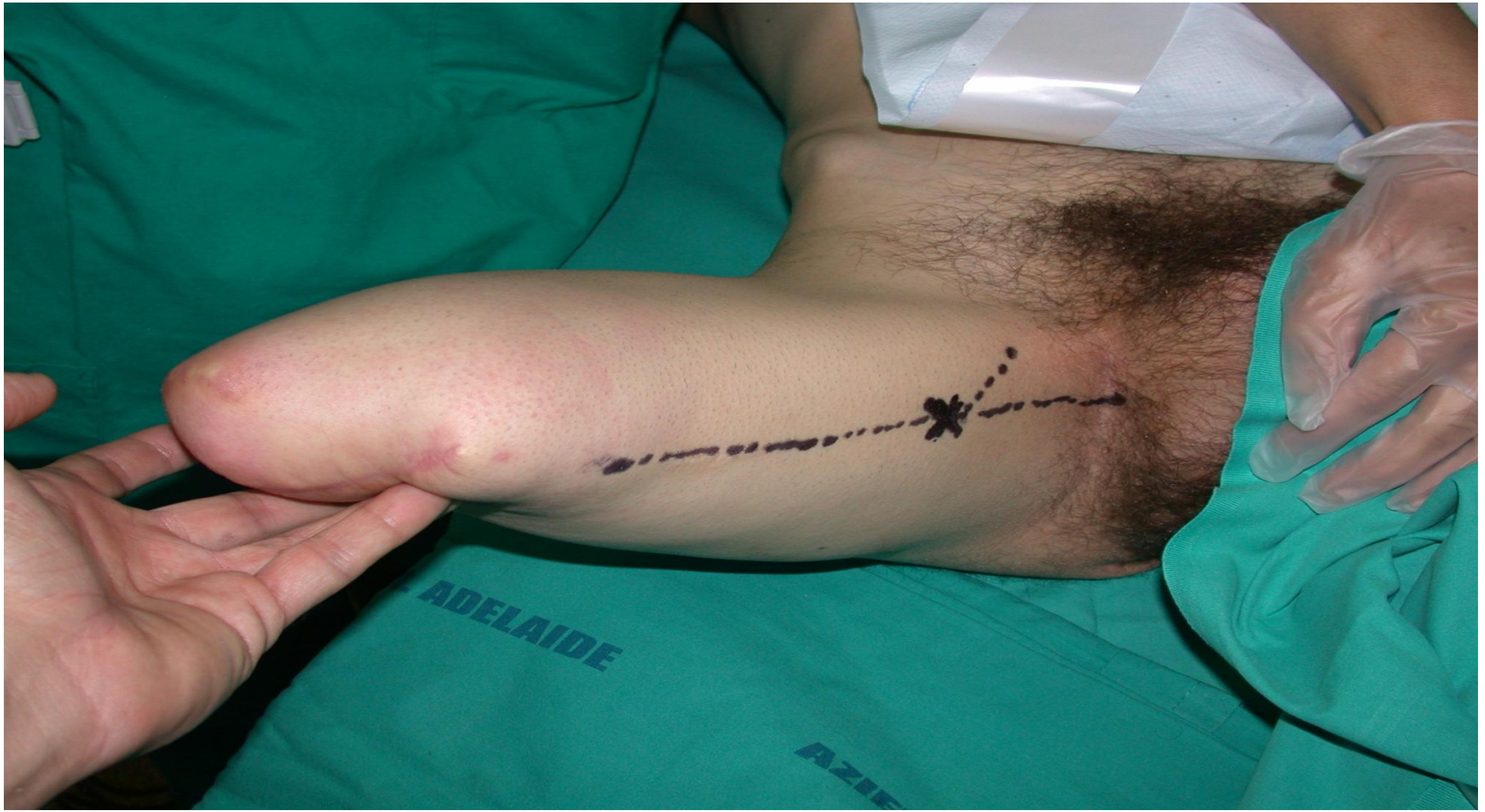

Pre op


3.5 mesi

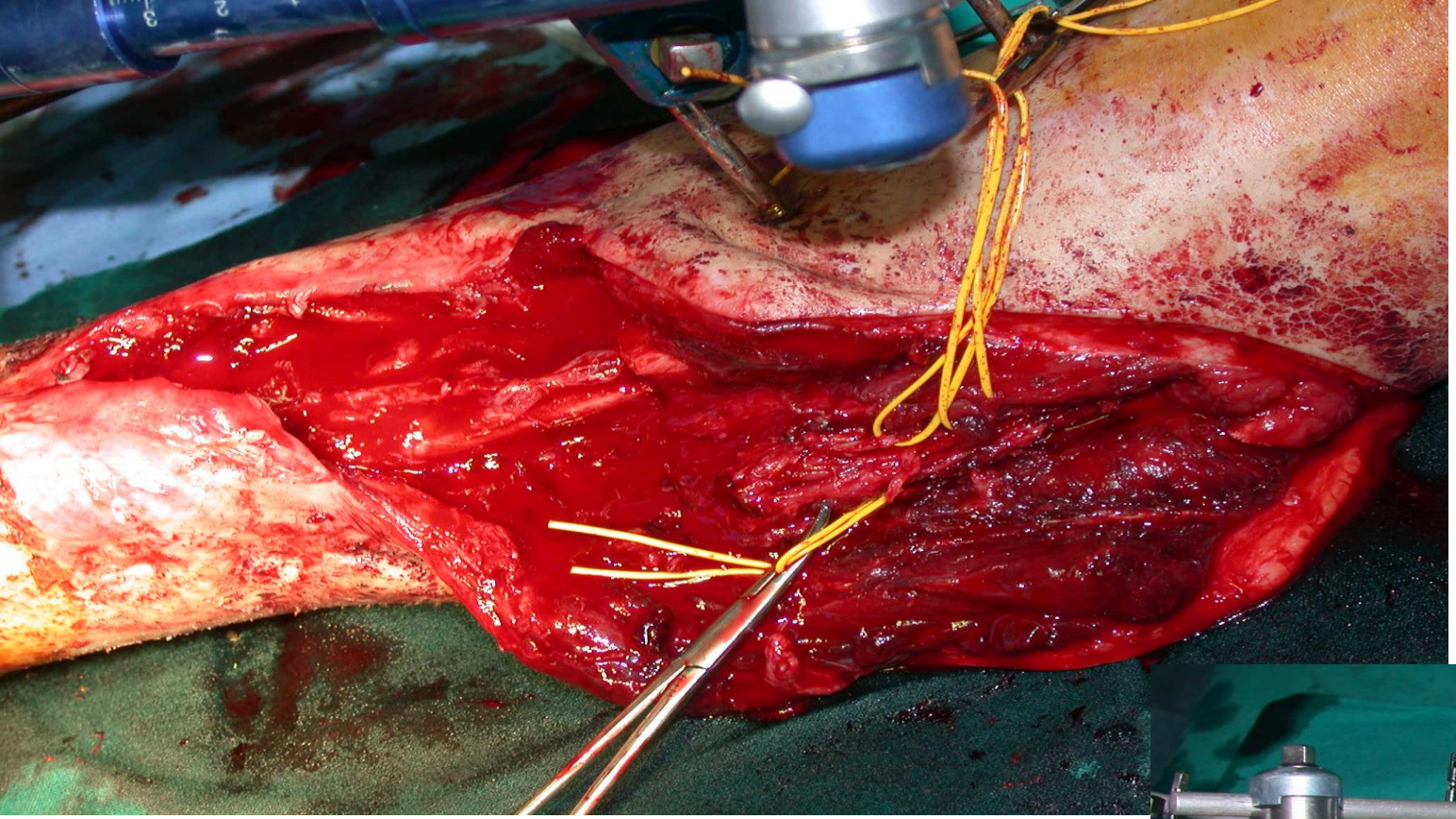

20 mesi

20 mesi


Male 28 y



GRACILIS MUSCLE

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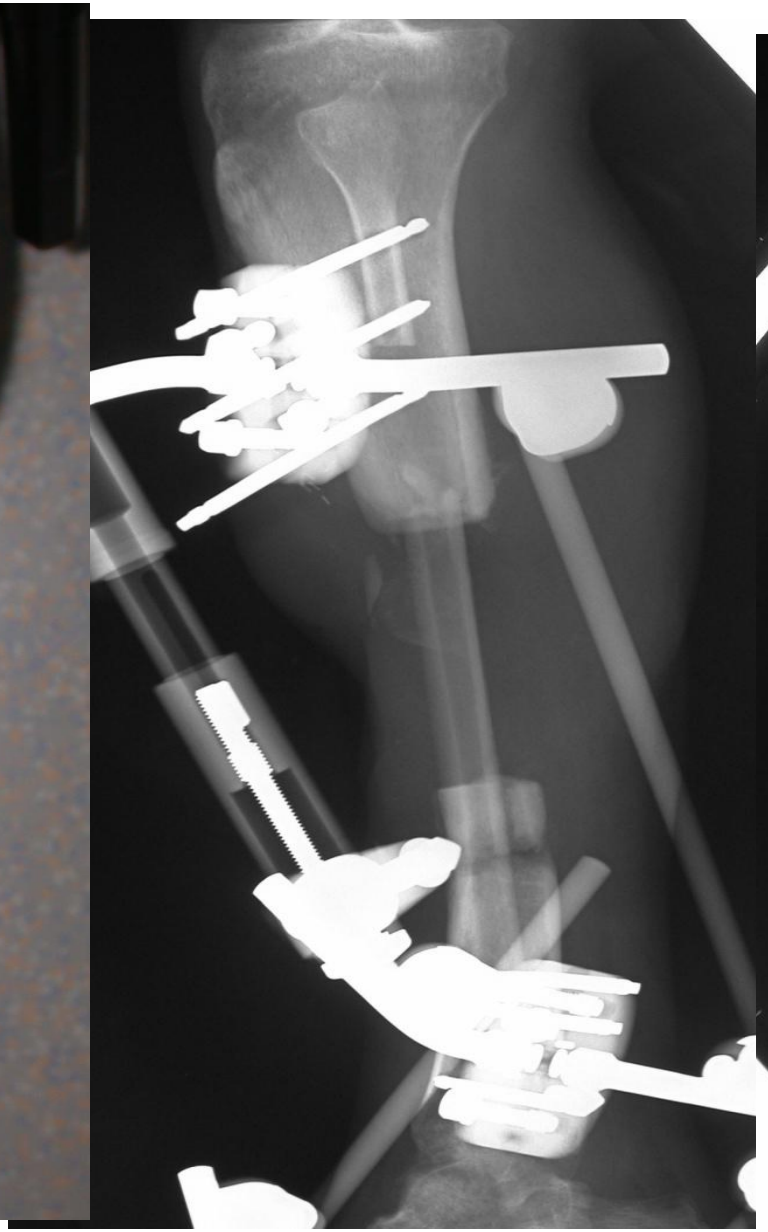

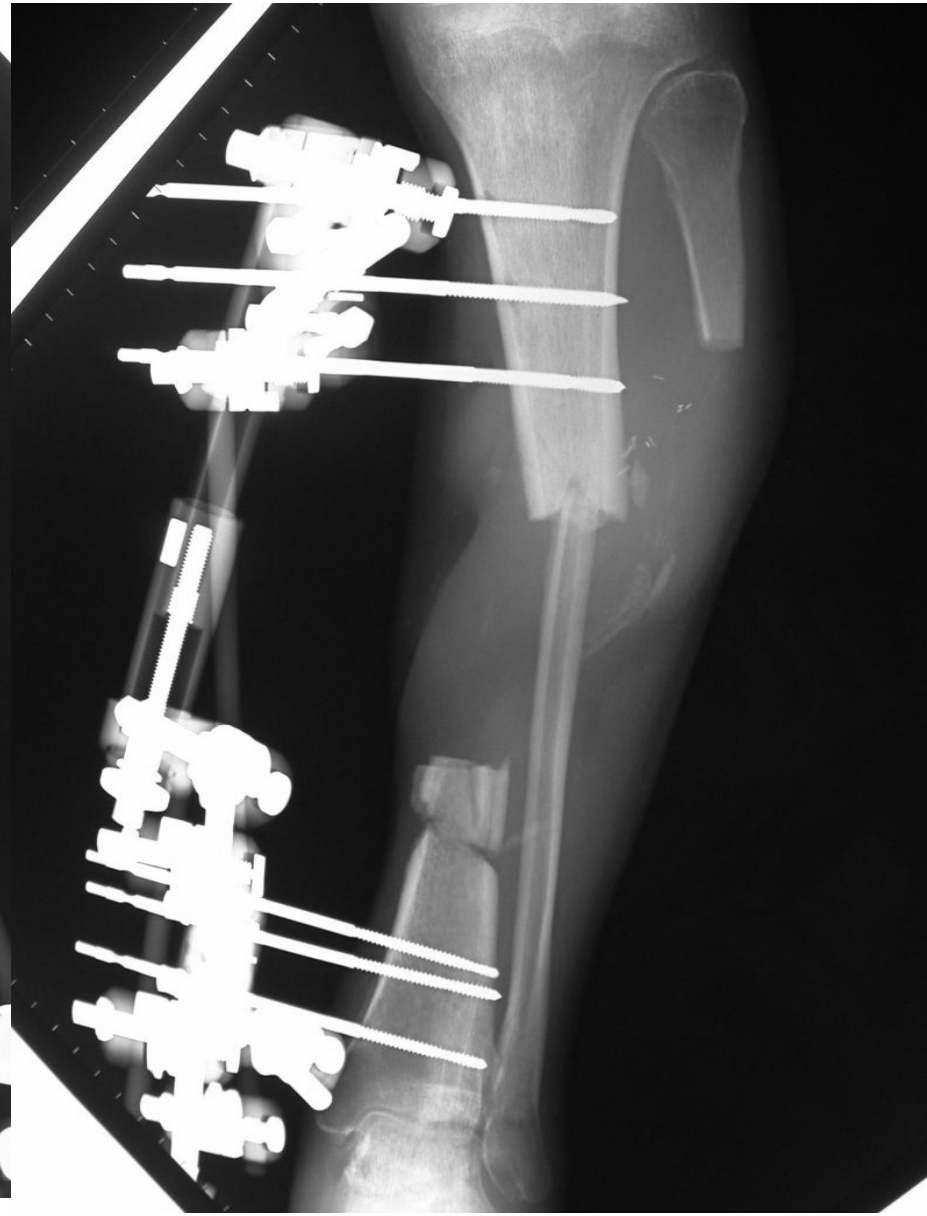

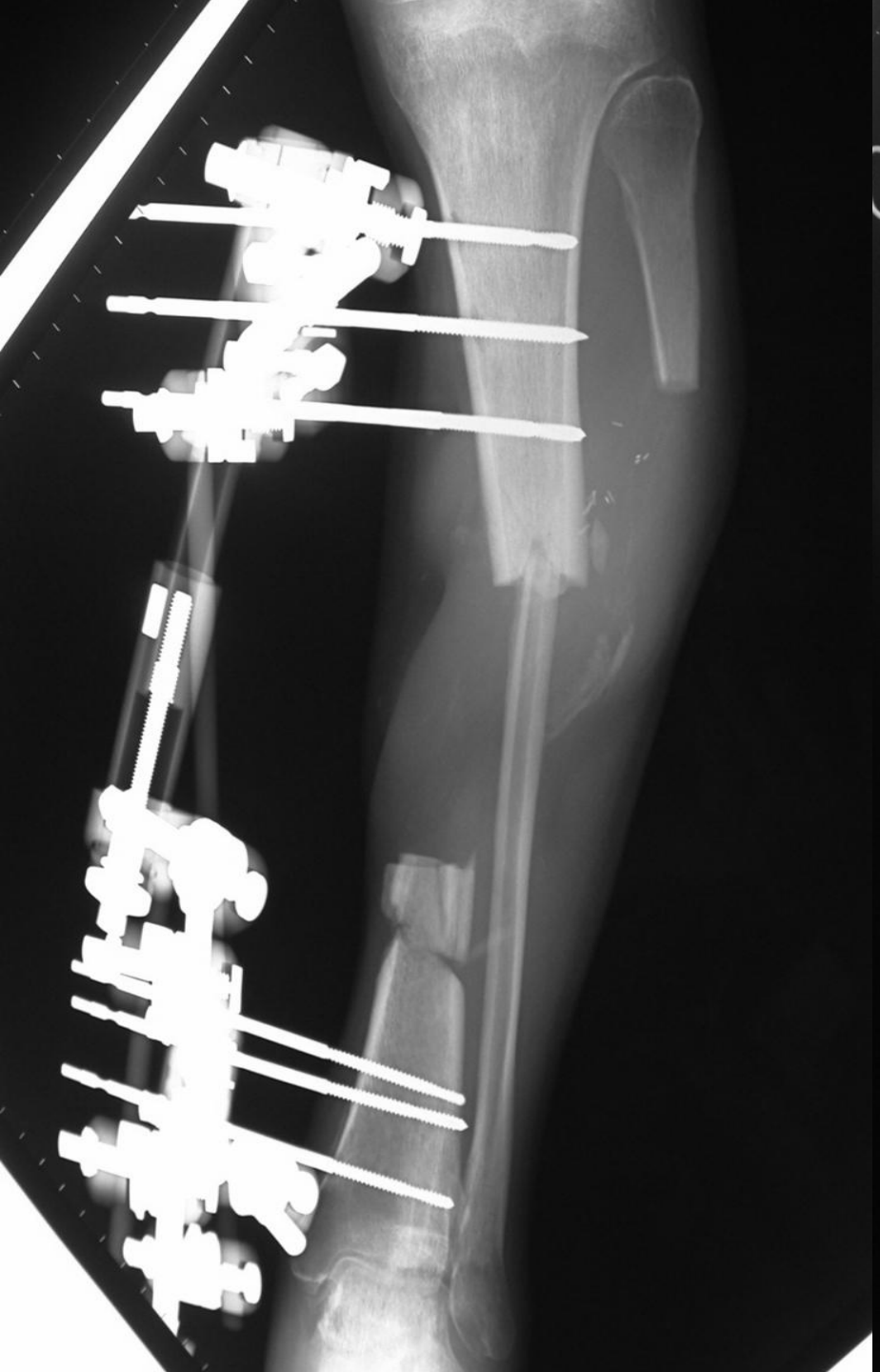

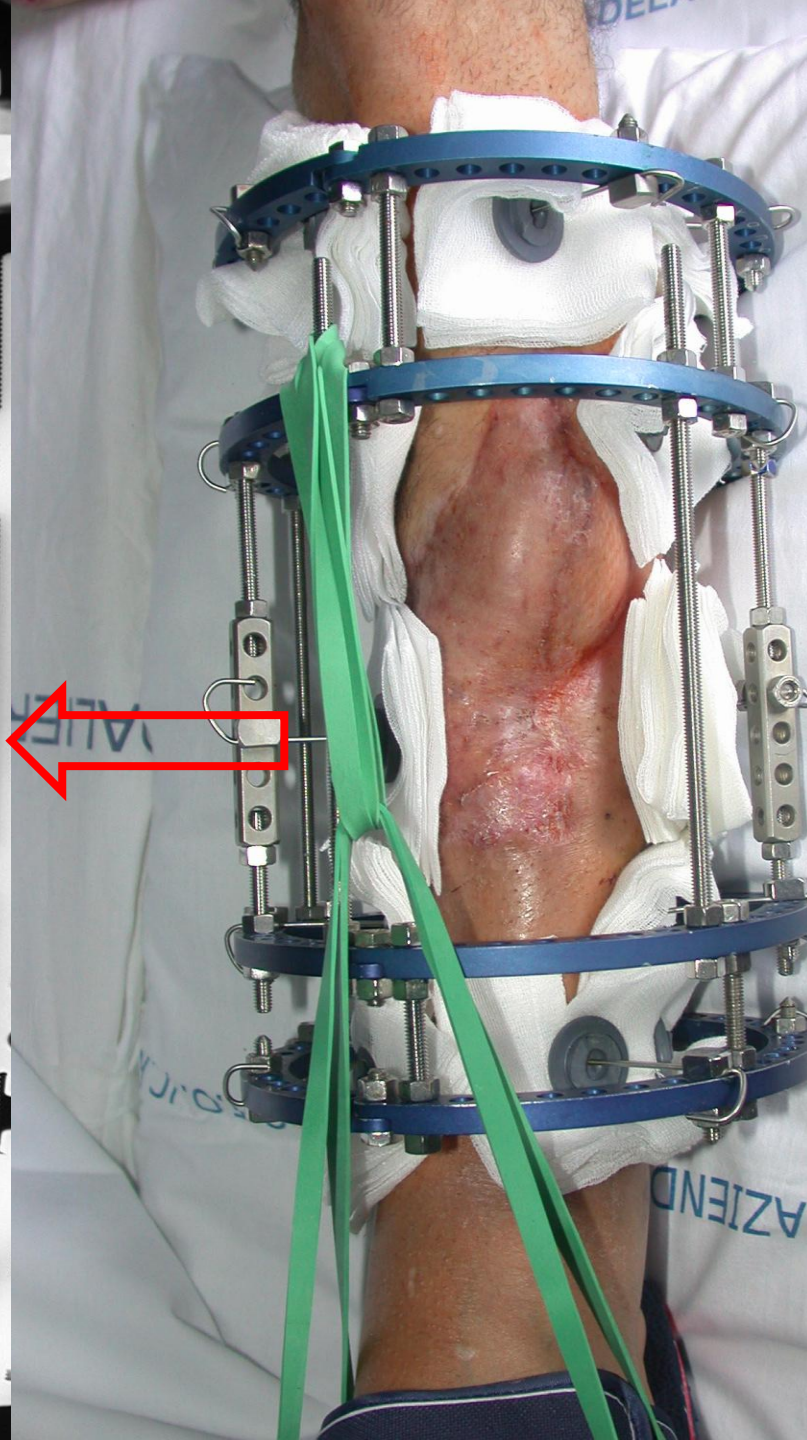


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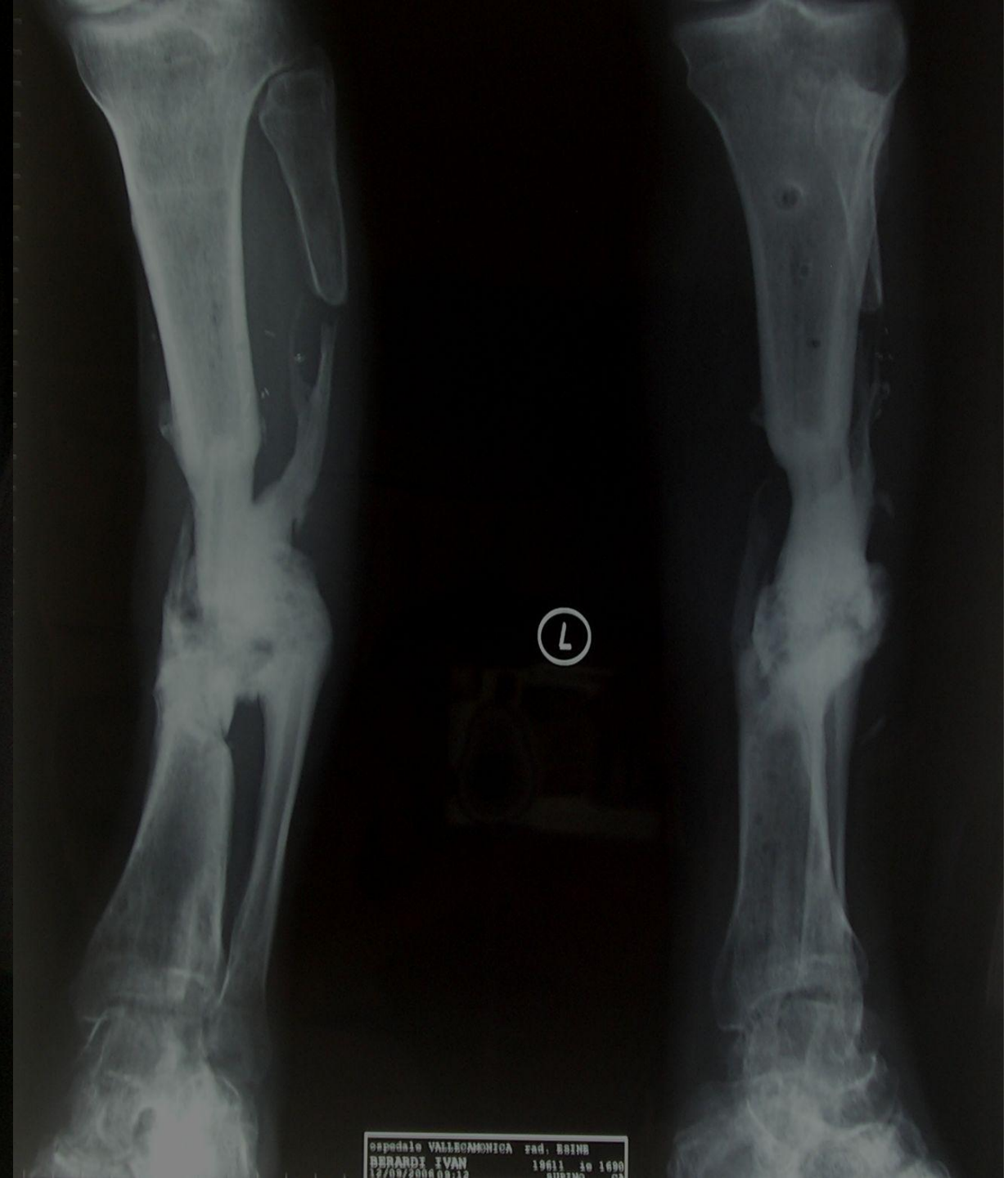
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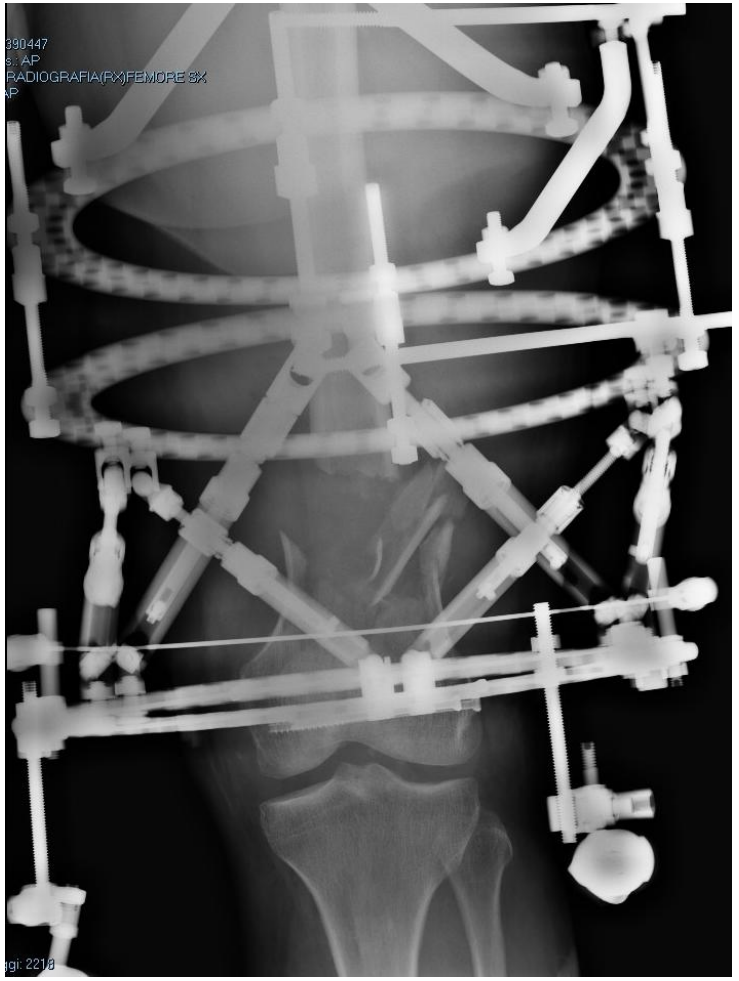
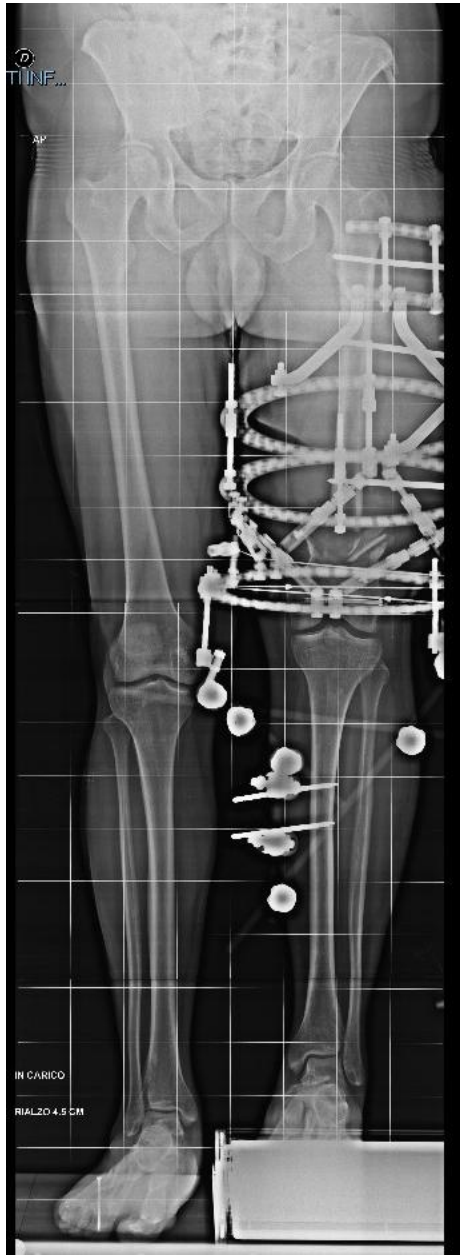
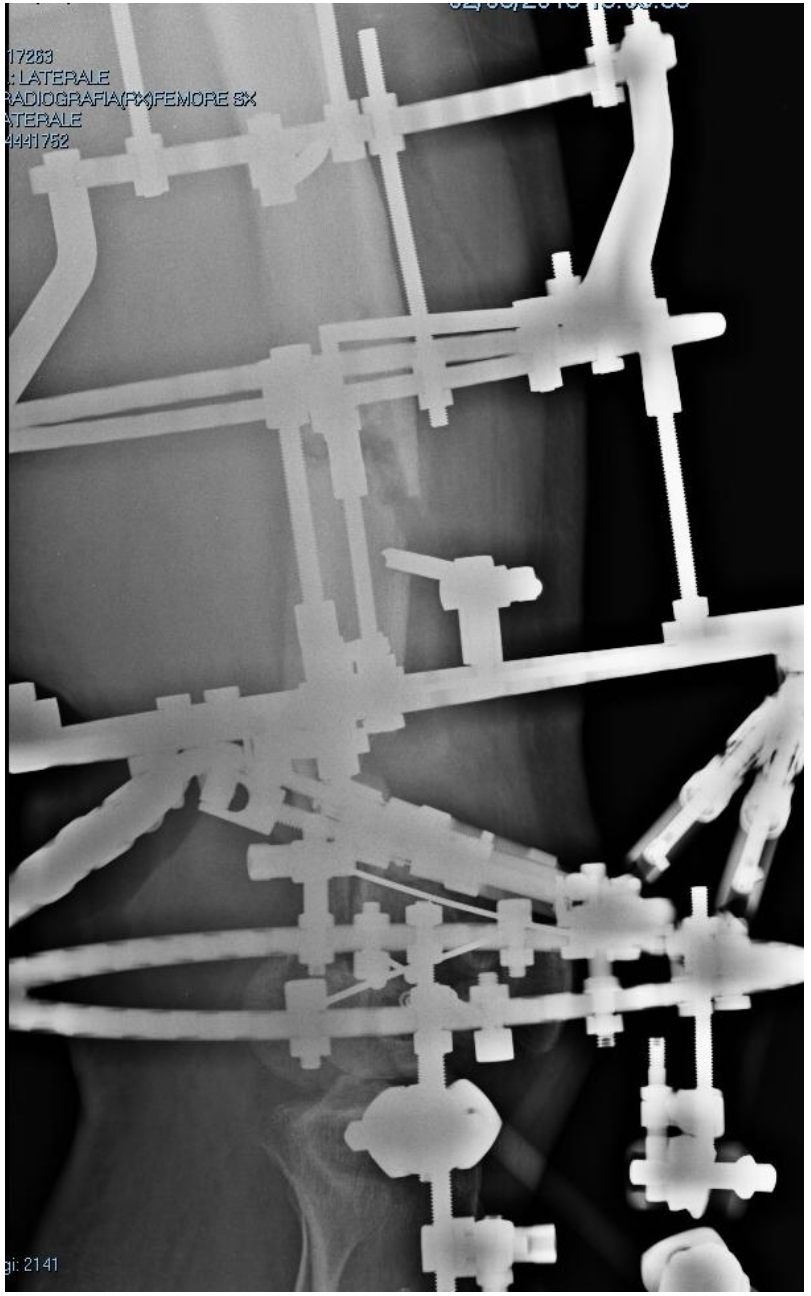
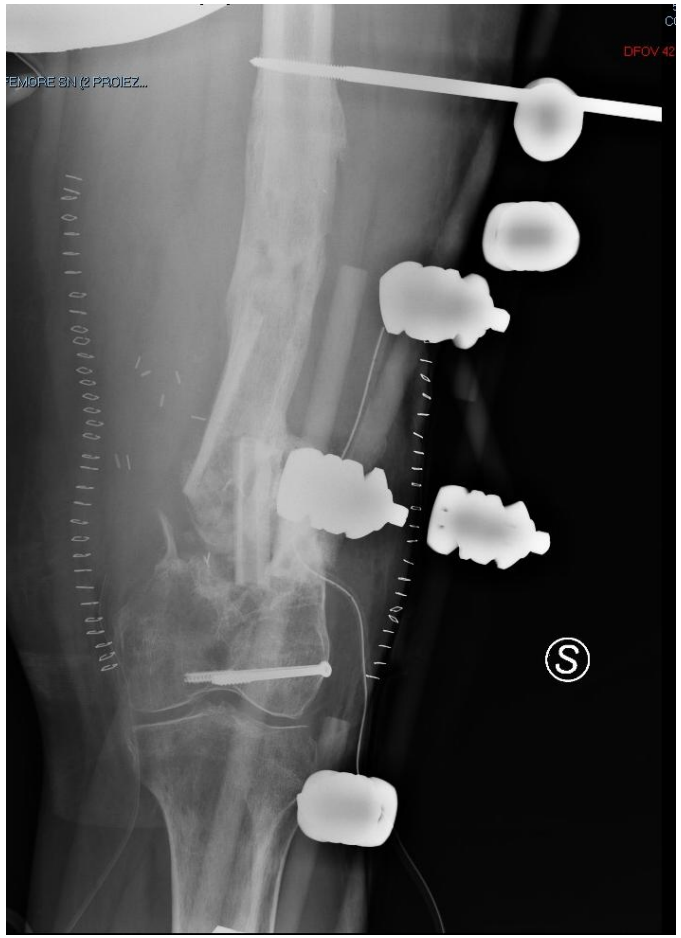
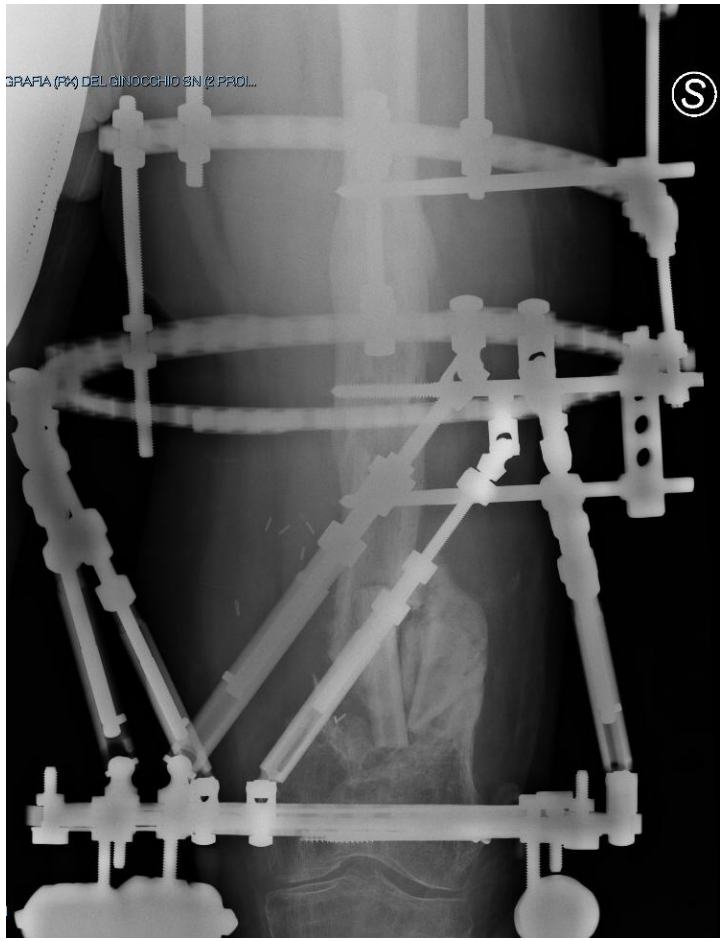


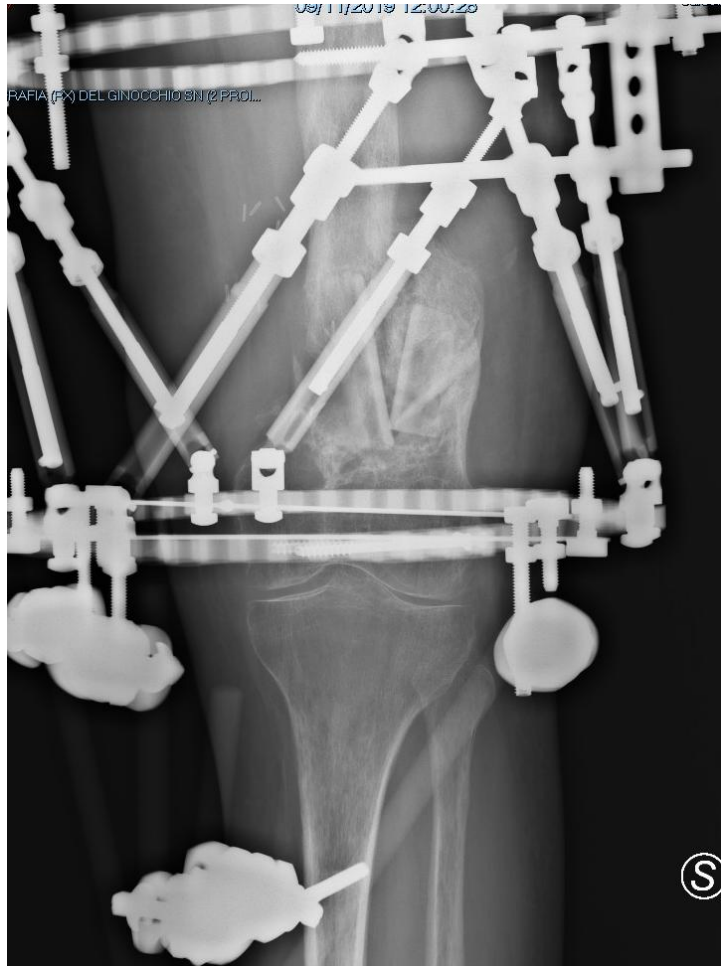




VASCULARIZED FIBULA GRAFT







After 2 months: vascularized fibula graft

CONTROLLO A 24 MESI

Grazie per l'attenzione

ASL Vercelli