

# The value of a personalized approach

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Complex lower extremity trauma management requires careful evaluation, prompt decision-making, and robust surgical experience.

There are **30 open fractures for every 100,000 people per year** (Jorge-Mora A et al. 2017), mainly caused by traffic accidents (car, cyclist, motorcycle, and pedestrian) and falls.

The medical education course held in Verona at Orthofix headquarters last July had the following goals:

- To assess and manage complex diaphyseal, articular and peri-articular fractures of the lower limb,
- To become familiar with advanced techniques for temporary and definitive external fixation in polytrauma and complex trauma settings,
- To discuss and learn about the relevant decision-making process in complex trauma situations,
- To manage trauma sequelae and problems with fracture healing.

An outstanding international faculty shared their experiences, deriving from the best available clinical evidence, expert consensus, and existing guidelines for high-energy fracture management.

**Standards of care** and **validated protocols** optimize the **outcome**.

The orthopaedic surgeon should identify fracture characteristics and soft tissue injuries. Time is critical: **early antibiotic prophylaxis** is mandatory, together with **accurate debridement**.

**Sean Pretorius** is an orthopaedic surgeon, head of the Upper Limb Unit at the Tygerberg Academic Hospital, Stellenbosch University, Cape Town, South Africa. He insisted on this point: *"Initial irrigation and debridement surgery is mandatory. **We should not be afraid to extend wounds** along fasciotomy lines, judiciously resecting all contaminated soft tissue and devitalized bone, always respecting perforators."*

**Soft tissue coverage** is an important issue when managing high-energy trauma fractures. **Jonathan Lohn** is a consultant plastic surgeon, specialized in complex reconstruction, at St.



George's University Hospitals, NHS Foundation Trust, London, UK: *"The creation of **ortho-plastic units** is a best practice of lower limb open fracture treatment."*

**Alex Trompeter** was the chair of the faculty. He is a consultant orthopaedic surgeon, specialized in trauma and limb reconstruction, and honorary senior lecturer at St. George's University Hospitals, London, UK: *"High-energy fractures should be managed in **adequate trauma centers**. To treat a polytrauma patient **we should apply a multidisciplinary approach**: a team of orthopaedic, plastic and vascular surgeons, anaesthesiologists, microbiologists and specialized nurses with the right skillset to strive to minimize complications."*

**Federico Bove** is the head of the Trauma ward at the Grande Ospedale Niguarda in Milan: *"An **optimal temporary management option is to apply an external fixator**. When using an external fixator for temporary or definitive management, we should keep in mind that **any intervention should avoid damaging essential structures or compromising future reconstructive procedures**. Computer-assisted hexapod circular frames can help to correct and treat trauma sequelae and problems with fracture alignment."*

During the dry and wet laboratory sessions, attendees could transfer into practice the newly acquired treatment techniques, embracing a range of tips and tricks shared by the faculty.