**Soft-Tissue Management Initiative – Event framework**

**Course description**

This 2-day educational event comprises lectures, case-based presentations, and small group discussions. In addition, a half-day anatomical lab session (with animal models) will give participants the opportunity to advance their hands-on surgical skills. The course is built using a modular structure and designed to make it highly interactive. The soft-tissue management topics addressed are acute wounds, wounds undergoing delayed healing, non-healing (chronic) wounds, soft-tissue deformities, and scars.

**Goal of the course**

The AO Foundation Course—Fundamentals of Soft-Tissue Management teaches the principles and current standards in the treatment of soft-tissue injuries, deformities, and scars both in isolation and as they relate to the management of skeletal trauma. It addresses patient problems such as methods to control bleeding, adequate debridement, prevention of surgical-site infection, as well as management of soft-tissue defects and scars. This multidisciplinary event offers a unique opportunity to learn from leading experts across clinical divisions, and to share best practices in the field of soft-tissue management.

**Target participants**

This course is targeted at practicing surgeons, in all stages of their career, who are interested in furthering their knowledge and skills in soft-tissue management.

**Learning objectives**

* After the course participants will be able to:
* Apply principles of instrument and soft-tissue handling in the surgical treatment of acute and chronic wounds
* Manage the healing process, restore form and function, and minimize pain
* Apply evidence-based strategies and techniques to minimize surgical-site infection
* Manage tissue changes due to environmental and patient factors in acute or chronic wounds
* Recognize and treat soft-tissue defects, deformities, and scars

**Course template**

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| Topic | Time (mins) |
| Welcome & introduction | 5 |
| Plenary sessionTeaching points* Interactive, provocative
* Participants should recognize their 'gaps' in soft-tissue handling and management
* Ice-breaking session
 | 15 |
| Module 1: Principles of soft-tissue management |
| Wound description & & clinical aspects of wound healingLearning objectives* Describe and classify the various wound types
* Recall local, systemic, and environmental factors that may affect wound healing
* Describe appropriate non-clinical technology for wound diagnosis
* Describe wound healing phases and tensile strength
* Describe the vascular anatomy of fascia, subcu’ tissue & skin
* Recognize the value of tissue coaptation & reducing dead-space
* Apply this knowledge to design and execute wound closure
 | 10 |
| Skin preparation and patient positioningLearning objectives* Describe procedures for skin preparation
* Draping in a better way
* Recognize risks related to incorrect patient positioning
 | 10 |
| Suture materialsLearning objectives* Describe the different wound/skin closure devices
* Describe the characteristics of the different suture materials
* Choose the appropriate suture size and needle according to the targeted tissue
* Describe properties and indications of barbed and coated sutures
 | 10 |
| Methods of hemostasisLearning objectives* Describe the methods of hemostasis control and maintenance
* Describe factors that affect hemostasis
* List the types of cauterization devises and hemostatic agents and their indications for use
 | 10 |
| Summary of Module 1 and Q&A session | 15 |
| Small-group discussionCases on:* Wound types
* Wound closure under tension
* Post-op dehiscence
* Hematoma and skin necrosis
 | 60 |
| Module 2: Surgical and traumatic wounds |
| Surgical incision and exposureLearning objectives* Describe the management of the surgical soft tissue wound from incision to closure
* Differentiate between surgical & traumatic wounds
* Identify advantages and disadvantages of differing techniques to open, retract, and close the surgical soft tissue wound
* Describe vascular anatomy of the different soft-tissues incl. nerves
* Describe methods to prevent strangulation of tissue
 | 10 |
| Infection in surgical and traumatic woundsLearning objectives* List risk factors for infection
* Acknowledge the myths of infection prevention
* Recognize early onset wound infections
* Optimize intraoperative workflow to minimize infections
 | 10 |
| Mobilization strategy & edema managementLearning objectives* Employ appropriate mobilization strategy for surgical wounds
* Describe and apply methods for edema management for surgical wounds
 | 10 |
| Penetrating and high-energy woundsLearning objectives* Describe three types of penetrating injuries
* Compare and contrast the wound patterns seen with each
* Compare and contrast the implications for treatment of each
 | 10 |
| Summary of Module 2 and Q&A session | 15 |
| Small group discussion Cases on:* Low velocity, open wound
* Infection
* Edema and mobilization
 | 60 |
| Round-table case-presentation and discussionPlenary case discussion | 60 |
| Module 3: Traumatic sub-acute and chronic wounds  |
| Modifiable factors to optimize wound healingLearning objectives* List risk factors that may affect healing in sub-acute and chronic wounds
* Describe implications for wound healing in specific patient populations
* Identify risk factors present in wounds that may contribute to delayed healing
 | 10 |
| Management of subacute and chronic woundsLearning objectives* Describe the principles of wound dressings and secondary closure
* Recognize the impact of adequate debridement
* Apply appropriate post-operative closure techniques
 | 10 |
| Summary of Module 3 and Q&A session | 15 |
| Small group discussionCases on:* Necrotic skin
* Full thickness clean and granulating wound
* Full thickness necrotic wound
 | 60 |
| Summary of Module 3 and Q&A session | 15 |
| Module 4: Anatomical specimen lab |
| * Sutures, instruments, and Surgical exposure
* Dead space management & closure under tension
* Closure under laxity
* Skin grafting
 | 260 |
| Module 5: Soft-tissue deformities & scars |
| Post-operative scar managementLearning objectives* List the types of scars
* Describe the risk factors for scarring and how to minimize scarring both before healing and during the healing process
* Describe the normal healing of skin and the various phases
 | 10 |
| Treatment of soft-tissue deformities and symptomatic scarsLearning objectives* Identify type of scar and potential management options
* Identify missing or malpositioned soft tissue
* Describe and apply methods for redundant/excess tissue correction
* Apply techniques to manipulate the scar formation process
* Select appropriate closure/coverage using the reconstructive principles
 | 10 |
| Introduction to skin graftingLearning objectives* Identify proper wound beds for grafting
* Differentiate between thin, intermediate and thick split thickness skin grafts and full thickness skin grafts
* Identify causes for failure of grafts
* Know strategies for graft dressings and graft harvest dressings
* Identify need for flaps versus skin graft
 | 10 |
| Summary of Module 5 and Q&A session | 15 |
| Closing session |
| Round-table discussion: spot the errorsInteractive plenary session | 60 |
| Feedback session | 10 |
| Evaluation and reflection  | 10 |
| Closing remarks | 5 |