

# XXXIII Course on MUSCULOSKELETAL PATHOLOGY

*"Hot topics in musculoskeletal tumor treatment"*

**May 23-26, 2022**  
**Rizzoli Orthopaedic Institute - Bologna, Italy**

*Director of the Course*

**MARCO MANFRINI, M.D.**

Orthopaedic Oncology

*Department of Musculoskeletal Oncology, Rizzoli Orthopaedic Institute, Bologna, Italy*

*Invited Speakers*

**ANGELO P. DEI TOS, M.D.**

Pathology

*University of Padua School of Medicine, Padua, Italy*

**LEE JEYS, M.D.**

Orthopaedic Oncology

*Royal Orthopaedic Hospital NHS, Birmingham, UK*

**SILVIA CAMMELLI, M.D.**

Radiotherapy

*Imaging and Radiotherapy, S.Orsola University Hospital, Bologna, Italy*

**MARCO CIANCHETTI, M.D.**

Proton Therapy

*Department of Proton Therapy, Trento, Italy*



SERVIZIO SANITARIO REGIONALE  
EMILIA - ROMAGNA  
Istituto Ortopedico Rizzoli di Bologna  
Istituto di Ricovero e Cura a Carattere Scientifico



European  
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for rare or low prevalence  
complex diseases

Network  
Adult Cancers  
(EUSACAN)

Member  
Rizzoli Orthopaedic  
Institute of Bologna  
Italy

## FACULTY

### **Orthopedic Oncologic Clinic** - *Course Staff & Presenters*

Davide Maria DONATI  
Giuseppe BIANCHI  
Laura CAMPANACCI  
Tommaso FRISONI  
Eric STAALS

### **Diagnostic & Interventional Radiology** - *Course Staff*

Marco MICELI  
Anna Maria CHIESA  
Giancarlo FACCHINI  
Giuliano PETA  
Federico PONTI  
Paolo SPINNATO  
Cecilia TETTA

### **Anatomy and Pathological Histology** - *Course Staff*

Marco GAMBAROTTI  
Alberto RIGHI

### **Osteoncology** - *Course Staff*

Ibrahim TONI  
Marilena CESARI  
Anna PAIOLI  
Emanuela PALMERINI

### **Laboratory of Experimental Oncology**

Katia SCOTLANDI, Maria Cristina MANARA, Caterina MANCARELLA

### **Pharmacogenomics and Pharmacogenetics**

Massimo SERRA

### **Regenerative Therapies in Oncology**

Enrico LUCARELLI

### **Spine Surgery**

Alessandro GASBARRINI, Riccardo GHERMANDI

### **Plastic Surgery**

Marco INNOCENTI

### **General Surgery**

Fabio DAVOLI

## GENERAL INFORMATION

### AIM OF THE COURSE

The Course consists in a 4-day update on management of bone and soft tissue tumors with particular emphasis on clinico-pathologic and radiographic correlations including practical studies under microscope. It is addressed to orthopaedic surgeons, oncologists, pathologists, radiologists and basic researchers to improve their knowledge and competence in these pathologies by working in multidisciplinary teams.

The format includes interactive sessions for questions, case presentations and an early morning interactive session of multiple choice questions reviews the topics previously discussed. The last day participants are grouped in multidisciplinary teams to discuss a clinical case. The best teams are awarded a prize.

### SITE

Istituto di Ricerca Codivilla-Putti - Via di Barbiano 1/10, Bologna, Italy  
(can be easily reached by bus A from railstation and town center)

Start: Monday May 23 at 11.00

End: Thursday May 26 at 13.00

### REGISTRATION FEE AND DEADLINES

Regular.....	€ 450,00 VAT included
SIAPEC Member – Regular Fee discount 20%.....	€ 360,00 VAT included
Resident with letter from Chief Dept .....	€ 200,00 VAT included
AIOT Member.....	€ 200,00 VAT included
SIAPEC Member – Resident Fee discount 20%.....	€ 160,00 VAT included

Fee reserved for UNIBO residents,  
PhD students and International Fellows of the  
IOR Orthopaedic and Traumatology Clinic III (oncology).....€ 100,00 VAT included

The registration fee covers:

- admittance to the scientific session and final program
- refreshments during break and lunches

Course dinner: tuesday, 24 may 2022 .....€ 50,00 VAT included

The registration and payment forms will be available online at  
<https://form.jotform.com/220533098590356>

Deadline for registration is **MAY 15<sup>th</sup>, 2022**

### ORGANIZING SECRETARIAT



Ad Arte Eventi srl

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www.adarteventi.com - Phone: + 39 370 3090831 + 39 393 7049383

### OFFICIAL LANGUAGE

English

**MONDAY, 23 May 2022**

**11.00** *Registration and Welcome reception*

**12.00** **Introduction to the course**

*M. Manfrini*

### **PSEUDO TUMORAL BONE LESIONS**

*Presenter: L. Campanacci*

*Panel: Pathologist, Radiologist and Guests*

**12.30** **IS BIOPSY NECESSARY IN A RADIOLOGICALLY SUSPECTED BONE CYST?**

**Introduction: presentation of a case (UBC vs ABC vs Fibrous dysplasia)**

*L. Campanacci*

**Discussion on differential radiological diagnosis**

*G. Facchini*

**Discussion on differential pathological diagnosis**

*M. Gambarotti*

**Discussion with the audience through interactive unknown cases: when perform a needle biopsy? When perform open surgery with curettage in a cystic lesion**

*Panel*

**13.30** **WHEN SHOULD A NON-OSSIFYING FIBROMA (NOF) BE CURETTED OUT?**

**Introduction: presentation of a fractured case**

*L. Campanacci*

**Radiographical sign of NOF (differential diagnosis)**

*G. Facchini*

**13.45** **HOW TO TREAT ANEURYSMAL BONE CYST IN SKELETALLY IMMATURE PATIENTS**

**Introduction: presentation of a case treated with bone marrow concentration**

*L. Campanacci*

**The need for biopsy and the differential diagnosis in ABC**

*M. Gambarotti*

**Interventional radiology in ABC**

*G. Facchini*

**Discussion with the audience through interactive unknown cases: when to perform a needle biopsy? When to perform open surgery with curettage in a ABC: the good and the bad (from curepsy to growth plate damage)**

*Panel*

**14.30** *Coffee break*

## **BENIGN BONE LESIONS**

Presenter: *E. Staals*

Panel: *Radiologist, Pathologist, Oncologist, and Guest*

### **15.00 HOW AGGRESSIVE SHOULD BE A CURETTAGE?**

**Presentation of clinical cases**

*E. Staals*

**Key radiological issues in the diagnosis of benign bone lesions**

*G. Facchini*

**Key pathological issues in the diagnosis of benign bone lesions**

*A. Righi*

**The use of Denosumab in benign bone lesions**

*E. Palmerini*

**Benign bone lesions in the spine**

*R. Ghermandi*

**The use of osteosynthesis in bone curettage**

*L. Jeys*

### **16.30 THE HISTOLOGICAL TRANSITION FROM BENIGN TO MALIGNANT CARTILAGE: IS BIOPSY ALWAYS NECESSARY?**

**Clinical presentation of cartilage lesions**

*E. Staals*

**The radiological keys in cartilage tumors progression**

*G. Facchini*

**The histological progression**

*A. Righi*

**Current ROH strategy on Chondrosarcoma of limb and pelvis**

*L. Jeys*

**Discussion with the audience through interactive unknown cases:  
when to perform a needle biopsy? Curettage vs resection in low grade  
cartilage tumors**

*Panel*

### **18.00 *End of the day***

*Histo-slides of the presented entities will be displayed on the microscopes all day*

**TUESDAY, 24 May 2022**

## **MALIGNANT BONE TUMORS**

*Presenter: M. Manfrini*

*Panel: Pathologist, Radiologist, Oncologist, Researchers, Radiotherapists, Guests*

### **08.15 MALIGNANT PROGRESSION IN OSTEOID BASED BONE TUMORS?**

**Presentation of a case of osteoid osteoma eventually resulted in high grade osteosarcoma**

*M. Manfrini*

**Key radiological issues in malignant osteo-differentiation**

*M. Miceli, G. Peta*

**The pathology perspective in the diagnosis of osteoid based bone tumors**

*M. Gambarotti*

**Chemotherapy in high grade variants**

*M. Cesari*

**The role of research: preclinical models for functional genomics**

*M.C. Manara*

**The role of research: news about chemo-resistance in osteosarcoma**

*M. Serra*

**Discussion with the audience through interactive unknown cases:  
How to treat recurrent high grade osteosarcoma?**

*Panel*

**10.00** *Coffee break*

### **10.30 TREATMENT OF NOT RESPONSIVE EWING'S SARCOMA**

**Presentation of a case of Ewing with soft tissue persistence after inductive chemotherapy**

*M. Manfrini*

**Radiological key issues in the evaluation of response to chemotherapy**

*M. Miceli, G. Peta*

**Pathological key issues in the evaluation of response to chemotherapy**

*A. Righi*

**The role of High-Dose ChemoTx in Ewing's sarcoma**

*A. Paioli*

**The role of Radiotherapy in not responsive Ewing's sarcoma**

*S. Cammelli, M. Cianchetti*

**Pelvic Ewing's sarcoma: when the surgical treatment**

*L. Jeys*

**12.00 IS PROGNOSIS OF METASTATIC EWING'S SARCOMA BETTER THAN METASTATIC OSTEOSARCOMA?**

**What about the outcome of Ewing and Osteosarcoma metastatic cases?**

*M. Manfrini*

**New variants in small round cell tumors**

*P. Dei Tos*

**New drugs in the treatment of Ewing sarcoma family**

*E. Palmerini*

**What's new about circulating markers in Ewing's sarcoma**

*C. Mancaella*

**Surgical treatment of lung metastases**

*F. Davoli*

**Stereotactic radiotherapy application in lung metastasis**

*S. Cammelli*

**13.00 Lunch break**

**SOFT TISSUE TUMORS**

*Presenter: G. Bianchi*

*Panel: Pathologist, Radiologist, Oncologist, Researchers, Radiotherapists, Plastic Surgeon*

**14.00 WHAT PERCENTAGE OF LUNG METASTASIS IN SUPERFICIAL AND SMALL (less than 5 cm) SOFT TISSUE TUMOR?**

**Introduction**

*G. Bianchi*

**Imaging studies options in STS**

*P. Spinnato*

**Is there any histology difference among small superficial and large deep-seated tumor of same diagnosis?**

*P. Dei Tos*

**Why soft tissue sarcoma metastasizing to nodes seem to have a less favorable prognosis**

*P. Dei Tos*

**14.30 IS IT STILL NECESSARY TO RE-EXCISE ALL SUPERFICIAL INADEQUATE LESION?**

**Presentation of a case and Rizzoli Institute data on re-excision**

*G. Bianchi*

**Radiotherapy in superficial tumor and whoops lesions**

*S. Cammelli*

**Birmingham experience in re excision in whoops lesions**

*L. Jeys*

**15.00 IS THE COMBINATION RADIOTHERAPY, CHEMOTHERAPY AND SURGICAL EXCISION TO BE CONSIDERED THE GOLD STANDARD FOR HIGH GRADE STS?**

**Presentation of the Rizzoli Institute data on high grade STS in pediatric patients**

*G. Bianchi*

**The use of tailored chemotherapy protocols in STS**

*T. Ibrahim*

15.30 *Coffee break*

**16.00 WHEN IS THE CORRECT TIME FOR RADIOTHERAPY IN STS?**

**Introduction**

*G. Bianchi*

**Preoperative or postopradiotherapy (in conjunction with chemotherapy)**

*S. Cammelli*

**Proton radiotherapy pro's and con's**

*M. Cianchetti*

**Are wound related problem interfering with chemotherapy?**

*M. Cesari*

**Does preoperative radiotherapy change surgical perspective in STS? (wound problems vs preservation of vital structures)**

*L. Jeys*

**What is the role of the plastic surgery?**

*M. Innocenti*

18.00 *End of the day*

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20.00 **COURSE DINNER**



**WEDNESDAY, 25 May 2022**

## **SECONDARY BONE LESIONS**

*Presenter: D.M. Donati*

*Panel: Pathologist, Radiologist, Oncologist, Researchers, Radiotherapists, Spine Surgeon, Guest*

### **08.30 PERSPECTIVE OF CURE OF METASTATIC CARCINOMA IN 2022**

**Epidemiology update regarding metastatic carcinoma**

*D.M. Donati*

**Difficult diagnosis of metastatic carcinoma. Is needle biopsy always diagnostic?**

*P. Dei Tos*

**The bone niche in metastatic carcinoma**

*E. Lucarelli*

**Targeting cancer and microenvironment in solid tumor**

*T. Ibrahim*

**10.00** *Coffee break*

### **10.30 TREATMENT OF BONE METASTATIC CANCERS**

**The Rizzoli surgical experience**

*D.M. Donati*

**Radiotherapy strategy in metastatic carcinomas**

*S. Cammelli*

**Overview of interventional radiology in the treatment of bone metastatic lesions**

*G. Facchini*

**The use of electrochemo therapy**

*L. Campanacci*

**The role of surgery for spine metastases**

*R. Ghermandi*

**Pelvic and proximal femur surgery: when partial (curettage) or complete excision (resection)?**

*L. Jeys*

### **12.00 DISCUSSION ON SELECTED CASES PRESENTED BY PARTICIPANTS**

*Staff and Guests*

**13.00** *Lunch break*

## HOT TOPICS ON MUSCULOSKELETAL RECONSTRUCTIONS

Presenter: Tommaso Frisoni

- 14.00 **Current role of bone grafts in oncological patients (adults and children)**  
*M. Manfrini*
- 14.20 **How to face limb discrepancy in pediatric surgery**  
*L. Campanacci*
- 14.40 **Is 3D printing custom device replacing allograft application in limb reconstruction?**  
*D.M. Donati*
- 15.00 **Computer assisted surgery: navigation vs 3D printing in pelvic resection**  
*L. Jeys*
- 15.20 **Discussion**
- 16.00 *Coffee break*
- 16.30 **DISCUSSION ON SELECTED CASES PRESENTED BY PARTICIPANTS**  
*Staff and Guests*
- 18.30 *End of the day*

*Histo-slides of the presented entities will be displayed on the microscopes all day*

Slide of different presentations of the same session should be filled in the same PPT to not lose time with change of PPT files

All the slides should be inserted in the course logo PPT

## THURSDAY, 26 May 2022

- 08.30 **Display of 8-10 final unknown cases and teams line-up**
- 10.00 *Coffee break*
- 10.15 **Test continuing education (ECM)**
- 10.30 **Discussion of the final unknowns and Musculoskeletal Pathology Contest**  
*Staff and Guest*

*Attendees will form multispecialistic teams, will be called to discuss one of the final unknown cases and will be scored by the guest professors and staff. Each team will have a maximum of 15 minutes for their case discussion*

- 13.00 *End of the course and award ceremony*



PROMOTED BY



AUSPICIE OBTAINED



Società Italiana di Ortopedia e Traumatologia



Italian Sarcoma Group



Associazione Italiana Specializzandi in Ortopedia e Traumatologia



European Musculo-Skeletal Oncology Society



International Society of Limb Salvage



Società Italiana di Anatomia Patologica