



International Course on
Custom Solutions for
SEVERE BONE and
JOINT DEFECTS

OCTOBER 26 | 28

BOLOGNA - ITALY

www.orthopaediccoursesbjd.it

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2022

Day 1

Day 1 – October 26th (Wednesday afternoon)		
Session 1: Overview on standard implants used in large skeletal defects		
13.30-14.30	Course admission	
14.30-15.30	Presentation of the course: why to improve the actual implants used in large skeletal defect. Focus on fixation, integration, infection	
Lecture 1 (30 min.)	Limits of the standard mega-implants: what it can be done, and what should not. Complications	
Lecture 2 (30 min.)	Limits of biological reconstructions: what can be done, and what should not. Complications	
15.30-16.00	Implant infection	
Lecture 3 (30 min.)	Infection in orthopaedic implants. How to limit the reinfection after two stage surgery	
16.00-16,30	Discussion & Coffee break	
16.30-17.00	Implant loosening	
Lecture 4 (30 min.)	Design implant fixation. What's new in implant design and material	
17.00-17.30	Implant integration	
Lecture 5 (30 min.)	The definition of scaffold. Porous resorbable structures vs porous metals (tantalum, titanium).	
17.30-18.00	Principles of custom reconstructions	
Lecture 6 (30 min.)	Custom as a standard solution (Stanmore). Custom in disaster cases (Link). Forged device. Custom as reliable prosthetic solution in young individuals (Custom – better anatomy respect – better function – better durability)	
18.00-18.30	Discussion	
18.30	End of the day	

Day 2

Day 2 – October 27th (Thursday morning)		
Session 3: Generalities on custom solutions		
08.00-08.30	The use of new virtual technology applied to orthopaedic surgery	
Lecture 7 (30 min.)	Navigation, robotic, use of patient specific instrumentation. PSI vs navigation vs robotics.	
08.30-09.00	3D printing technology	
Lecture 8 (30 min.)	Different materials and machines. What is standard and future directions.	
09.00-09.30	Projecting custom made solutions (biomechanical approach)	
Lecture 9 (30 min.)	Designing the trabecular custom structure. How to improve integration, how to decrease infection risk	

09.30-10.00	An overview of the use of 3D printing custom implant	
Lecture 10 (30 min.)	A skeletal journey in bone and joint replacement	
10.00-10.30	Discussion & Coffee break	

Session 4: Custom solutions in the pelvis

10.30-11.00	Standard solution in tumour pelvic surgery	
Lecture 11 (30 min.)	Pelvic resections: surgical approach, resection classification, different type of reconstruction in different pelvic sites	
11.00-11.30	Standard solution in hip revision surgery	
Lecture 12 (30 min.)	Principle of cup revision in 3b Paproski cases and more. Pseudotumor cases. How to regain the bone stock	
11.30-12.00	Custom made prosthesis in pelvic area: relive surgery	
Lecture 13 (30 min.)	How to match resection and reconstruction. The use of 3D printed guides. Fixation. Reduce the reconstruction time. Quality of bone stock in revision cases	
12.00-12.30	Discussion	
12.30	Lunch break	

Day 2 – (Thursday Afternoon)

Session 5: Skeletal Custom applications (1)

14.00-15.00	What is the best fixation method in different pelvic sites	
	Presentation of cases from invited speaker: Cases in oncology surgery Cases in revision surgery	
15.00-16.00	How to fight infection in 3D printing custom reconstructions	
	Presentation of cases from invited speaker: Cases in oncology surgery Cases in revision surgery	
16.00-16.30	Discussion & Coffee break	
16.30-17.30	Custom made application around the knee	
Lecture 14 (60 min.)	From allograft replacement experience, trough partial prosthetic applications, to articular replacement (small and large osteochondral)	
17.30-18.00	Osteochondral knee partial replacement	
Lecture 15 (30 min.)	Fixation and integration	
18.00-18.30	Relive surgery (knee)	
18.30	End of the day	
20.30-22.30	Course Dinner	

Day 3

Day 3 – October 28th (Friday morning)

Session 6: Skeletal Custom applications (2)

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08.30-09.00	Custom made applications around the shoulder	
Lecture 16 (30 min.)	How to improve functional activity. Attachment of the scapula. Shoulder joint reconstruction	
09.00-09.30	Custom made application around the ankle	
Lecture 17 (30 min.)	Ankle arthrodesis in distal tibia fracture. Mobile ankle in tumor or fracture surgery	
09.30-10.00	Custom made application in the tibia	
Lecture 17 (30 min.)	Personal experience and literature review	
10.00-10.30	Coffee break	
11.00-11.30	Biomechanics of the tibia	
Lecture 18 (30 min.)	Fixation and integration of tibia devices	
11.30-12.30	Presentation and discussion on cases provided by participants and invited speakers	
12.30	End of the course	