



iPFRR23



# 7th International Patellofemoral Research Retreat

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*Research Retreat  
&  
Clinical Symposium*

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6-9<sup>th</sup> June 2023

Istituto Ortopedico Rizzoli, Bologna, Italy

# 6<sup>th</sup> June 2023 – Research Retreat

08:00 Registration, tea & coffee

08:40 Local welcome

Ing. Claudio Belvedere, Prof. Lisa Berti

Dr. Milena Fini Director of the Rizzoli Scientific Department

08:55 IPFRN welcome

iPFRN Executive Board

09:00 **Keynote Address**

*Moderator: David Bazett-Jones*

Prof. Stefano Zaffagnini & Prof. Maria Grazia Benedetti

10:00 *Discussion & questions*

10:20 Networking break

10:50 **Session 1: 8-minute Orals PF Cartilage and Post-Surgical Impacts**

*Moderator: Volga Bayrakci Tunay*

- Claudio Belvedere: Fiber Elongation in Surgically-Treated Patellar Instability. Comparison between Assessments based on Conventional and Weight-Bearing Computed Tomography
- Rudi Hansen: Do patients with patellofemoral pain have increased subchondral metabolic activity?
- Joshua Stefanik: Anterior Knee Pain is Associated with 2-year Compartment Specific Patellofemoral Cartilage Worsening: The MOST Study
- Thomas Demirjian: Patellofemoral Joint Stress in Persons Who Have Undergone ACL Reconstruction
- Michelle Boling: Is Patellofemoral Joint Loading during Gait Associated with Articular Cartilage Compositional Changes at the Patellofemoral Joint following ACL Reconstruction?
- Harvi Hart: Does Knee Flexion Moment Differ Between Females and Males with Patellofemoral Osteoarthritis, And Is It Associated with Patellofemoral Joint Related Symptoms?
- Kay Crossley: Associations of Surrogate Measures of Knee Load With Symptoms and Function, and the Effect of Patellofemoral Osteoarthritis Disease Severity

12:00 Lunch

13:00 Welcome from Alberto Leardini (ISB)

13:15 **Session 2: 8-minute Orals Biomechanics**

*Moderator: Alberto Leardini*

- Lori Bolgia: Is Patella Position or Knee Kinematics Associated with Inflammatory Biomarkers in Females with Patellofemoral Pain
- Lisa Hoglund: Males with Patellofemoral Pain Have Decreased Knee Adduction Angles During Weight-Bearing Tasks
- Brian Noehren: Where do people with Patellofemoral Pain experience pain during squatting?
- Neal Glaviano: Vertical Ground Reaction Forces are Not Associated with Physical Activity Level in Individuals with and without Patellofemoral Pain
- Natanael Batista: Clinical - and Laboratory - Based Measures of Postural Control in Individuals with and without Patellofemoral Pain

14:10 Networking break

14:40 **Session 3: 8-minute Orals Systematic Reviews**

*Moderator: Sinead Holden*

- Gamze Arin Bal: Novel Assessment Technologies in Patellofemoral Pain Patients: A Scoping Review
- Sungwan Kim: Physical Activity Levels in Individuals with Patellofemoral Pain: A Systematic Review and Meta-Analysis
- Natanael Batista: Postural Control in People with Patellofemoral Pain: A Systematic Review with Meta-analysis
- David Bazett-Jones: Biomechanics during Weight-Bearing Knee Flexion Tasks in People with Patellofemoral Pain: A Systematic Review with Meta-Analysis
- Marina Cabral Waiteman: Is Posterolateral Hip Strength Testing with Portable Dynamometers Reliable and Valid? A Systematic Review with Meta-analysis
- Saleh Alsaleh: The effects of interventions on local neuromuscular characteristics in patellofemoral pain: a systematic review with meta-analysis

15:40 Stretch Break

- 16:00 **Group session 1 Evidence & Gap Map**  
 Marchetti conference hall, Sala de Federalismo, LABMOV Meeting Room
- 16:00 Consensus exercises in patellofemoral pain Karim Khan (on behalf of Paul Blazey)
- 16:10 Explanation of transition from consensus to E&G map Marienke van Middelkoop
- 16:20 *Discussion & questions*
- 17:30 Welcome Drinks

## 7th June 2023 – Research Retreat

- 07:30 Tea & coffee
- 08:00 **Session 4: 8-minute Orals Clinical Outcomes** *Moderator: Saleh Alsaleh*
- Sinead Holden: Outcome Measures as Indicators of Health-related Domains measured in People with Patellofemoral Pain: A Preliminary Report of a Scoping Review
  - Kay Crossley: Are There Clinical Differences Between People with Unilateral and Bilateral Patellofemoral Pain?
  - Timothy Gilgallon: Physical Activity Levels are Moderately Associated with Pain Self-Efficacy in Individuals with Patellofemoral Pain
  - Ronaldo Briani: Is Self-Reported Symptom Duration in Individuals with Patellofemoral Pain an Accurate Measure?
  - Henrik Riel: Development of a clinical support tool for better Management of Adolescent knee Pain (The MAP-Knee Tool)
- 08:50 Stretch break
- 09:10 **Session 5: 8-minute Orals Patient Experience and Psychological Outcomes** *Moderator: Henrik Riel*
- Liliam Del Priore: Perspectives about the first knee pain experience. A qualitative longitudinal study
  - David Bazett-Jones: Relationships of Pressure Pain Thresholds, Kinesiophobia, and Quadriceps Strength with Sagittal Plane Knee Biomechanics During Squatting in People with Patellofemoral Pain
  - Brian Eckenrode: Change in Behavioral and Psychological Traits and Their Relationship to Pain Sensitivity in Females with Chronic Patellofemoral Pain
  - Ronaldo Briani: Do Physical and Psychological Outcomes of Patellofemoral Pain Change Over 15+ Months in Those Whose Pain Does Not? A Prospective, Natural History Investigation
  - Harvi Hart: Sex-Related Differences in Fear of Movement and Knee Confidence and Their Associations with Pain, Function and Quality of Life in Patellofemoral Osteoarthritis
- 10:00 Stretch break

- 10:20 **Group session 2 Break-out sessions, E&G exercise**  
 Marchetti conference hall, Sala de Federalismo, LABMOV Meeting Room
- 12:20 Lunch
- 13:30 **Keynote Address** *Moderator: Erin Macri*  
 Dr. Mel Holden & Dr. Adele Higginbottom
- 14:30 *Discussion & questions*
- 14:50 Halfway point - review plans for afternoon/evening Claudio Belvedere
- 15:00 Free Time - Bologna tour/walk
- 19:00 Dinner Banquet

## 8th June 2023 – Research Retreat

- 07:30 Tea & coffee
- 08:00 **Session 6: 8-minute Orals Adolescents** *Moderator: Jenevieve Roper*
- Rosemarijn van Paassen: Semi-automatic segmentation of the knee on MR images of 13-year old children
  - Guido van Leeuwen: The Incidence and Management of Patellofemoral Pain in Children and Adolescents in Dutch General Practice

- Chris Djurtoft: How do we explain Patellofemoral Pain and other non-traumatic knee conditions to adolescents? A multiple-method study to develop credible explanations.
- Sinead Holden: Exploring the pain and disability continuum in adolescents with patellofemoral pain: A mediation analysis using individual participant data of prospective studies.
- Michael Skovdal Rathleff: From adolescence to adulthood: 10-year follow-up of patellofemoral and other types of knee pain – a prospective cohort study
- Natalie Mazzella: The immediate effects of a flat, flexible school shoe on patellofemoral joint loads and pain during walking and running in adolescents with patellofemoral pain
- Michael Skovdal Rathleff: Good short-term effect of self-management rehabilitation is associated with a long-term successful outcome in adolescents with Patellofemoral Pain and Osgood-Schlatter

09:10 Stretch break

09:20 **Session 7: 8-minute Orals Neuromuscular Outcomes**

*Moderator: Ronaldo Briani*

- Saleh Alsaleh: Building, and reliability testing, a local neuromuscular deficits-detection protocol from meta-analysis: a proposed method
- Natanael Batista: Altered neuromuscular function of the quadriceps and gluteal musculature in individuals with patellofemoral pain
- David Selkowitz: Comparison of Electromyographic Activity between the Gluteal Muscles and Tensor Fascia Lata in Persons with Patellofemoral Pain: Evaluation of Selected, Hip-Focused Exercises Using Indwelling Fine-Wire Electrodes
- Miguel Farraj: Hip Abductors Strength and Endurance in Individuals with Recent and Long-standing Patellofemoral Pain
- Sungwan Kim: MRI Analysis of Superficial and Deep Lower Extremity Muscle Volume in Women with Unilateral or Bilateral Patellofemoral Pain

10:10 Networking break

10:30 **Group session 3 Reconvene, share and develop group E&G map protocols**

Marchetti conference hall, Sala de Federalismo, LABMOV Meeting Room

12:30 Lunch

13:30 **Session 8: 8-minute Orals Best Pandemic Paper Prize**

*Moderator: Karim Khan*

- Ronaldo Briani: Exacerbating patellofemoral pain alters trunk and lower limb coordination patterns and hip-knee mechanics patterns and hip-knee mechanics
- Bradley Neal: Six treatments have positive effects at 3 months for people with patellofemoral pain: a systematic review with meta-analysis

**Award announced**

15:30 **Session 9: 8-minute Orals Management/Interventions**

*Moderator: Marina Cabral Waiteman*

- Bradley Neal: A best practice guide for patellofemoral pain: synthesising systematic review with meta-analysis, the patient voice, and expert clinical reasoning
- Chan Yoon: Multidisciplinary Digital Therapeutics for Patellofemoral Pain Syndrome Versus Usual Care: a randomized controlled study
- Natalie Mazzella: A randomised, assessor-blinded, parallel group feasibility trial of flat, flexible school shoes for adolescents with patellofemoral pain.
- Jenevieve Roper: An Examination of Predicted Running Performance After Gait Retraining in Runners With Patellofemoral Pain
- Brian Eckenrode: Effects of High Frequency Strengthening on Pain Sensitivity and Function in Female Runners with Chronic Patellofemoral Pain
- Rudi Hansen: Quadriceps or Hip Exercises for Patellofemoral Pain? A Randomized Controlled Equivalence Trial

16:30 Conference Closing Comments

iPFNR Executive Board & Local Planning Committee

# 9<sup>th</sup> June 2023 – Clinical Symposium

08:00 Registration

08:30 Welcome

**Session 1** **Status report on PFP** *Moderators: Volga Bayrakci Tunay – Lisa Berti*

08:40 Epidemiology: Causes, Risk factors, Prevention *Maria Grazia Benedetti*

Rizzoli Orthop. Inst., Bologna, IT

08:55 Historical overview, Passive and Active approaches *Christopher Powers*

USC, Los Angeles, CA-USA

09:15 Biomechanical influences on the PF joint *David M Bazett-Jones*

University of Toledo, OH-USA

09:35 Gait retraining in PFP patients *Irene Davis*

Univ. of S. Florida, Tampa, FL-USA

09:55 Pain, psychosocial aspects and quality of life in PFP *Volga Bayrakci Tunay*

Hacettepe University, Ankara, TR

10:15 Evidence and Gap Map in PFP *Marienke van Middelkoop*

Erasmus MC University Medical Center, Rotterdam, NL

10:35 *Panel Discussion & questions*

11:00 Morning Break

**Session 2** **Evaluation** *Moderators: Irene Davis – Maria Grazia Benedetti*

11:20 PFP incidence in sport *Francesco Della Villa*

Isokinetic Med. Center, Bologna, IT

11:35 Clinical and functional evaluation in PFP: Subjective Examination, Objective Examination, Outcome Measures *Lisa Berti*

Rizzoli Orthop. Inst., Bologna, IT

11:50 New technologies for Instrumental-based clinical and functional evaluation in PFP *Gamze Arin Bal*

Hacettepe University, Ankara, TR

12:05 *Panel Discussion & questions*

12:20 Lunch

**Session 3** **Treatment** *Moderators: David Bazett Jones – Francesco Della Villa*

13:30 Muscular strengthening for PFP *Luciana Labanca*

Rizzoli Ortho. Inst., Bologna, IT

13:45 Physical therapy *Clizia Guerrini*

Rizzoli Ortho. Inst., Bologna, IT

14:00 Orthoses and external devices for PFP Orthopaedic Technicians *Lucia Calbucci*

Rizzoli Ortho. Inst., Bologna, IT

14:15 Regenerative Medicine *Luca Andriolo-Stefano Zaffagnini*

Rizzoli Ortho. Inst., Bologna, IT

14:30 Surgery: traditional surgery and innovative procedures *Luca Andriolo-Stefano Zaffagnini*

Rizzoli Ortho. Inst., Bologna, IT

14:45 *Panel Discussion & questions*

15:00 Afternoon Break

**Session 4** **Clinical Cases** *Moderators: Christopher Powers – Luca Andriolo*

15:15 Interactive session on the presentation of clinical cases based on real patients with primary, sports and postoperative interventions, as well as presentation of data from clinical archive *Local and international clinicians & PTs, iPFRN Board*

**Session 5** **Panel Discussion & Concluding remarks**

17:00 What is most important in managing PFP patients & from the patient perspective? Viewpoints from clinical experts *Local clinicians & PT; iPFRN Board*

17:20 Closing

17:30 Italian ECM

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## Registration

<https://www.korilu.it/wp/en/ipfrr-2023-en/>

## Location:

Marchetti conference hall  
Centro di ricerca Codivilla-Putti  
Via di Barbiano 1/10, 40136 Bologna, IT

## ECM

7,6 Credit CME only for italian people

## How to arrive:



## Local Planning Team:

Claudio Belvedere, IRCCS Istituto Ortopedico Rizzoli, Bologna, IT  
Lisa Berti, University of Bologna & IRCCS Istituto Ortopedico Rizzoli, Bologna, IT  
Alberto Leardini, IRCCS Istituto Ortopedico Rizzoli, Bologna, IT  
Volga Bayrakçı Tunay, Hacettepe University, Ankara, Turkey  
Maria Grazia Benedetti, University of Bologna & IRCCS Istituto Ortopedico Rizzoli, Bologna, IT

## iPFRN Executive Board:

David Bazett-Jones, University of Toledo, Toledo, OH, USA  
Natalie Collins, University of Queensland, Brisbane, Australia  
Erin Macri, Erasmus MC University Medical Center Rotterdam-NL  
Marienke van Middelkoop, Erasmus MC University Med. Center Rotterdam-NL  
Michael Skovdal Rathleff, Aalborg University, Aalborg, DK

The 7th International Patellofemoral Research Retreat (event n. EMT33064) is compliant with **Ethical MedTech's standards**

## Organizing secretariat and ECM provider:

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