

# 2023 International Chordoma Research Workshop

Boston Marriott Cambridge Hotel | 50 Broadway, Cambridge, MA

## Wednesday, July 12

5:00 - 7:00 PM    Welcome reception and registration  
Location: Foyer

## Thursday, July 13

7:00 AM            Continental breakfast and registration  
Location: Salon 4

8:00 AM -  
12:30 PM          Morning Plenary Sessions  
Location: Salon 3

8:00 AM            **Welcome**  
Patient perspective: Dani Pike

8:15 AM            **Session I: State of the Art care**  
Moderator: Chandra Sen, New York University Langone Health, US

Setting the stage for the workshop, presentations in this session will provide a high level overview of the current state of chordoma clinical management, highlighting key knowledge gaps, needs and opportunities to improve care.

Ziya Gokaslan, Brown University, US  
*State of the Art for Spinal and Sacral Chordomas - Full spectrum*

Paul Gardner, University of Pittsburgh Medical Center, US  
*State of the Art for Skull Base Chordoma: From Endoscopic to Genetics*

Shannon MacDonald, Massachusetts General Hospital, US  
*State of the Art Radiation Therapy for Skull Base, Spine and Sacral Chordomas*

Silvia Stacchiotti, Fondazione IRCCS Istituto Nazionale dei Tumori, IT  
*State of the Art of systemic treatment in sarcomas and future directions*

9:40 AM	Break
10:00 AM	<p><b>Session II: Molecular classification and target discovery</b>  Moderator: Matija Snuderl, New York University Langone Health, US</p> <p>Presentations in this session will share unpublished results revealing novel tumor subtypes and potential therapeutic targets. Discussion will focus on ideas and possibilities for further target discovery and validation.</p> <p>Stefan Fröhling, National Center for Tumor Diseases Heidelberg, DE  <i>The 101 Chordoma Multi-Omes Project</i></p> <p>Katrina O'Halloran, Children's Hospital Los Angeles, US  <i>Pediatric Chordoma: A Tale of Two Genomes</i></p> <p>Shahbaz Khan, University of Toronto, CA  <i>Organelle resolved proteomics reveals new chordoma cell surface markers required for proliferation and association with outcome</i></p> <p>Matija Snuderl, New York University Langone Health, US  <i>Detecting structural and epigenetic variations in chordomas using 3D genomics and DNA methylation</i></p>
11:40 AM	<p><b>Research Spotlight: Chordoma Foundation Labs — a resource for accelerating the development of new systemic therapies</b>  Dan Freed, Chordoma Foundation, US</p>
12:30 - 1:30 PM	Lunch

1:30 - 5:00 PM	<p><b>Afternoon breakout sessions</b>  Concurrent sessions including presentations as well as moderated whole group discussion and action planning around key topics and questions.</p>
1:30 PM	<p><b>Session III A: Novel approaches to targeting brachyury</b>  Location: Salon 1</p> <p>Moderator: Charles Lin, Kronos Bio, US</p> <p>Presentations in this session will cover the latest advances in brachyury drug discovery, as well as emerging therapeutic modalities that could be applied to brachyury. Discussion will aim to identify opportunities to apply new approaches to advance brachyury drug discovery and the additional resources, tools, or knowledge that will be required.</p>

Lee Dolat, Chordoma Foundation, US  
*Developing a preclinical assay pipeline to facilitate brachyury drug discovery*

David Drewry, University of North Carolina at Chapel Hill, US  
*Structure Guided discovery of Brachyury Ligands*

Alex Federation, Talus Bioscience, Inc., US  
*Profiling the DNA Regulome to Discover Direct Inhibitors of Brachyury*

Davis Chase, Yale University, US  
*Development of a Covalent Small-Molecule Brachyury Downmodulator*

#### **Break**

Samuel Umbaugh, German Cancer Research Center, DE  
*Designed Ankyrin Repeat Proteins (DARPs) inhibit brachyury function and downstream pathways in chordoma cells*

Jacques Dumas, Arrakis, US  
*Could the Arrakis Discovery Platform be leveraged to target brachyury?*

Caslin Gilroy, University of California, Berkeley, US  
*Developing a brachyury inhibitor for chordoma targeted therapy*

1:30 PM

#### **Session III B: Discovery and application of novel clinical biomarkers**

Location: Concept room

Moderators: Georgios Zenonos, University of Pittsburgh Medical Center, US and Gelareh Zadeh, University of Toronto, CA

The aim of this session is to lay the conceptual groundwork for consensus guidelines regarding the application of biomarkers in chordoma clinical management. It will include a group discussion of clinical cases, as well as presentations sharing recently identified biomarkers and ongoing biomarker discovery efforts. Discussion will seek to identify strategies for incorporating the use of biomarkers in clinical care and for discovering new clinically relevant biomarkers. Following the workshop, participants will have the opportunity to contribute to the development of consensus guidelines based on discussion in this session.

Georgios Zenonos, University of Pittsburgh Medical Center, US  
*Promising Chordoma Biomarkers: The Current State and a Glimpse of The Future*

Gelareh Zadeh, University of Toronto, CA  
*Correlation Of Clinical Features To DNA Methylation Based  
Prognostic Subtypes In Chordoma Patients*

Zachary C Gersey, University of Pittsburgh Medical Center, US  
*Biomarkers in skull base chordomas: Using radiomics and  
inflammatory indices for prognostication and classification*

**Break**

Jiwei Bai, Beijing Tiantan Hospital, Capital Medical University, CN  
*Immune subtypes of chordoma*

Siddh van Oost, Leiden University Medical Center, NL  
*Immuno-transcriptomic profiling of chordomas reveals an  
immunogenic subtype with exceptional clinical prognosis*

Matija Snuderl, New York University Langone Health, US  
*Minimal residual disease monitoring for brain tumors using  
ctDNA whole genome sequencing: opportunities and challenges*

Chetan Bettegowda, Johns Hopkins University School of  
Medicine, US  
*Detection of Spinal Chordomas Using Circulating Tumor DNA*

**5:00 - 7:00 PM**    **Reception and poster session**  
Hors d'oeuvres and cash bar  
Location: Salons 5-7

## Friday, July 14

7:00 AM      Continental breakfast  
Location: Salon 4

8:00 AM -  
12:00 PM      Morning Plenary Sessions  
Location: Salon 3

8:00 AM      Welcome  
Patient perspective: Todd Balf

8:10 AM      **Session IV: Clinical Trials**  
Moderator: Chris Heery, Arcellx, US

This session will provide results from ongoing or recently completed clinical trials, highlighting lessons learned and opportunities for improving trial efficiency in the future.

Santosh Kesari, Saint John's Cancer Institute at Providence Saint John's Health Center, US  
*A Pilot Study of High-Dose Pemetrexed for Patients with Progressive Chordoma*

Stefan Fröhling, National Center for Tumor Diseases Heidelberg, DE  
*CDK4/6 Inhibition in Advanced Chordoma: Interim Results of the NCT PMO-1601 Trial*

Michael Lim, Stanford University, US  
*Prospective Phase I Trial Comparing Anti-PD-1 Along with Anti-PD-1 + SRS for Advanced Chordoma*

Anthony Conley, University of Texas M.D. Anderson Cancer Center, US  
*Cetuximab for the Treatment of Advanced Unresectable or Metastatic Chordoma*

9:30 AM      **Research spotlight: My Pediatric and Adult Rare Tumor network — A comprehensive clinical, patient reported outcomes, and biospecimen analysis**  
Mary Frances Wedekind Malone, National Cancer Institute, US

9:50 AM      Break

10:15 AM

**Session V: Emerging therapeutic opportunities**

Moderator: Dan Freed, Chordoma Foundation, US

This session will highlight new validated targets and rationale for repurposing or repositioning existing drugs for chordoma.

David Zagzag, New York University Langone Health, US  
*Deciphering a novel mechanism of immune evasion by human chordoma*

Kwang Seok Lee, National Center for Tumor Diseases Heidelberg, DE  
*Loss of *LIG1* induces synthetic lethality in combination with *PARP* inhibition in chordoma*

Slim Sassi, Massachusetts General Hospital, US  
*An overactive interferon response in chordoma: A therapeutic opportunity*

Matt Pun, University of Michigan, US  
*Investigating isocitrate dehydrogenase 1 as a therapeutic target in chordoma*

12:00 - 1:15 PM **Lunch and group photo**

Location: Salon 4

1:15 - 4:30 PM **Afternoon breakout sessions**

Concurrent sessions including presentations as well as moderated whole group discussion and action planning around key topics and questions.

1:15 PM

**Session VI A: Advances in surgery and radiotherapy**

Location: Salon 1

Moderators: Shannon MacDonald, Massachusetts General Hospital, US  
and Shaan Raza, University of Texas M.D. Anderson Cancer Center, US

Presentations will describe recent advances in surgical and radiotherapy paradigms. Discussion will aim to identify new opportunities to improve long-term disease control and patient quality of life.

Kristin Redmond, Johns Hopkins University, US  
*Neoadjuvant stereotactic radiotherapy*

Anthony Conley, MD University of Texas M.D. Anderson Cancer Center, US

*Phase 1 clinical trial of AdAPT-001 in advanced sarcomas including chordoma (BETA PRIME) and opportunities for neoadjuvant trials in chordoma*

Alessandro Gronchi, Fondazione IRCCS, Istituto Nazionale dei Tumori, IT

*Update on S.A.C.R.O, an international, multicenter, randomized and observational prospective clinical trial sponsored by the Italian Sarcoma Group (ISG) on surgery versus definitive radiation therapy (RT) in primary and localized sacral chordoma*

#### **Break**

Morena Sallabanda, Protontherapy Center Quironsalud Madrid, ES  
*Five-fraction Proton Therapy for Chordomas of the Skull Base: Preliminary Results of a Prospective Series*

Zachary Gersey, University of Pittsburgh Medical Center, US  
*An institutional review of clinical outcomes for skull base chordoma: an analysis of 269 cases over 19 years*

1:15 PM

#### **Session VI B: Immunobiology and immunotherapy**

Location: Concept room

Moderator: Catalina Lee-Chang, Northwestern University, US

Presentations will describe newly-identified features of the chordoma immune microenvironment that shape antitumor immunity, and suggest opportunities for immunotherapeutic intervention. Discussion will focus on identifying the most important questions about chordoma immunobiology and new approaches that could answer them.

Aurelie Dutour, Centre Leon BERARD/Centre de Recherche en Cancerologie de Lyon, FR

*Multi-omics profile of Chordoma's Immunome: focus on its interactions with Chordoma's signaling pathways*

Catalina Lee-Chang, Northwestern University, US

*Comprehensive Evaluation of the Immune Landscape of Chordomas to Establish a Rational for the Immunotherapeutic Intervention*

Rami Vanguri, Children's Hospital of Philadelphia, US

*Understanding the tumor immune microenvironment in chordoma*

#### **Break**

Cassian Yee, University of Texas M.D. Anderson Cancer Center, US  
*TCR-based Therapies and Antigen Discovery in Chordoma*

David Osei-Hwedieh, Massachusetts General Hospital, US  
*CAR T cell therapy combined with irradiation is effective in targeting bulk and radiation-resistant chordoma cancer cells*

Thorsten Mempel, Massachusetts General Hospital, US  
*Reprogramming T regulatory cells into proinflammatory anti-cancer effector cells*

4:30 - 5:30 PM Closing Happy Hour  
Location: Salon 5 -7

6:00 - 9:00 PM Reception and dinner with the chordoma community  
Location: Salon 4

Join chordoma patients and family members for a special evening honoring those in our community who have made a truly uncommon impact.

The ICRW is sponsored by



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