

**BOOK EARLY AND
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May 7-9 2019 | Boston, MA

3d-oncology.com

2nd Annual PREDiCT: 3D MODELS ONCOLOGY

**Connecting Model Experts, Early Adopters
& Cancer Scientists to:**

- **Define 3D Model Utility**
- **Address Validation & Translatability Issues**
- **Explore Scaling & Additive Technologies**

Expert Speakers Include:



Timothy Spicer
Sr. Scientific
Director
**Scripps
Research**



Szczepan Baran
Head of Emerging
Technologies
Novartis



Shane Horman
Research
Investigator III
Novartis GNF



Anita Seshire
Head of Laboratory
Cellular Pharmacology &
Translational Innovation
Platform Oncology
EMD Serono



Monica Gostissa
Head of
Pharmacology
**Jounce
Therapeutics**

Expertise Partners:

D R A P E R **MITRABIOTECH** 

“The depth of the discussion, and opportunities to hear perspectives from those leading the industry on developing 3D tissue models made this an exceptionally valuable meeting”

Pfizer, Senior Director, Strategy and Innovation, PREDiCT 3D Series Attendee

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Mail: info@hansonwade.com

 [@Predict_models](https://twitter.com/Predict_models)



Taking Cancer Research into the Next Dimension

3D models continue to show significant promise for IO and oncology. Despite this, their place within the drug development paradigm remains ill-defined.

To bridge the remaining scientific and organizational barriers to use, “3D Models Oncology” is committed to uniting end users and model champions from pharma alongside expert developers and academic leaders.

3D Models Oncology steers clear of the bioengineering challenges of model-design. It is instead driven by real-world case-studies from biopharma on how these systems can and are being successfully deployed to expedite discovery and translation to clinical research.

- Identify which 3D system is right for your programs.
- Learn from pharma leaders who’ve championed model use.
- Hear directly from model experts on how these systems are impacting IO & Oncology programs.

So whether you’ve already established 3D models into your efforts or are just about to, tap into a ready-made network of peers who continue to redefine this area.

WHAT TO EXPECT

 **100+**
Attendees

 **18**
Expert Speakers

 **16**
Presentations

 **7**
Hours Discussion & Debate

 **6**
Topic Deep Dives

“I appreciated the very focused topic and the format of the meeting. It enabled significant one-one discussions with other delegates and speakers”

Resonant Therapeutics, CEO,
PREDICT 3D Oncology Attendee

Key Case Studies Not to Miss

1.

GSK & Novartis

exploring how they’ve been assessing the translational value of 3D and MPS models across their IO and Oncology pipelines.



2.

GNF & Scripps Institute

revealing the impact of an industrialized a fully automated 1536 well compatible HTS platform.



3.

Eli Lilly

demonstrating how patient derived organoids are providing a new dimension for assessing response, target validation and patient stratification.



4.

EMD Serono & NIBR

revealing insights on their 3D platforms to investigate immune-suppressive features of the TME and assess IO therapies.



5.

NIH

discussing how 3D HCS platforms incorporating omic & 3D imaging are enabling the study of tumor-immune interactions.



YOUR EXPERT SPEAKERS



William Hastings
Exploratory Immuno-
Oncology Investigator
**Novartis Institute of
Biomedical Research**



Tim Spicer
Senior Associate
Director - Scientific &
Molecular Medicine
Scripps Institute



Szczepan Baran
Head of Emerging
Technologies
Novartis



Sylvia Boj
Director - Scientific &
Group Leader
**Hubrecht Organoid
Technology**



Shane Horman
Research Investigator
III
Novartis GNF



Roger Kamm
Professor
MIT



Monica Gostissa
Head of
Pharmacology
Jounce Therapeutics



Mark Paris
Director Translational
Biology
Mitra Biotech



Karsten Boehnke
Oncology TME
& Translational
Research
Eli Lilly and Company



Joseph Charest
Biomedical Solutions
Program Manager
Draper



Joe Grosso
Senior Lead, Early
Clinical
BMS



Jason Ekert
Head of Complex In
Vitro Models
GlaxoSmithKline



Elad Katz
Lead Biologist
University of Dundee



Dik Van Gent
Professor
Erasmus MC



Daniel Harrington
Assistant Professor
**The University of
Texas Health Science
Center**



Chen Zhao
Senior Research
Fellow
NIH



Anita Seshire
Head of Laboratory
Cellular Pharmacology
& Translational
Innovation Platform
Oncology
EMD Serono



Alejandro Amador
Head, Scientific
Leader Discovery
Biology Automation
GSK

“The meeting was excellent. I was impressed with the array of highly relevant experts that were brought together to speak”

Merck, Associate Principal Scientist, PREDICT 3D Oncology Attendee

WORKSHOP DAY TUESDAY 7TH, MAY

Workshop A

8.00 - 11.00am

A Simple Introduction To The Confusing World Of 3D Oncology Models

Advances in 3D cell culture, bioengineering and microtechnologies have contributed to the rapid development of novel in vitro models that have the potential to enhance the relevance of human disease.

This session will act a robust primer for the conference, exploring current state of the art, remaining challenges and future directions for these systems.

Core topics to be discussed:

- What are we modelling and what are we modelling for? [overview of motivations to modelling of tumours and how they are typically addressed]

- Matrix: know your tissue of origin and model it [basics of extra-cellular matrix composition in tumours, current solutions and examples of physiologically relevant models and their fit in the required level of throughput]
- How to complete the microenvironment [considerations in co-cultures modelling, with emphasis on contrasting immuno-oncology models in vitro and in vivo solutions]



Elad Katz
Lead Biologist
University of Dundee

Workshop B

8.00 - 11.00am

The Translational Advancement Of 3D Technologies Towards Precision Oncology Therapies Directed At Pancreas And Brain Tumors

3D systems present novel methods for modelling GBM and pancreatic cancers. However, adapting these models to support large-scale drug screening is a considerable challenge.

Using clinically relevant, ex vivo 3D tumor models directly harvested from patients this session will explore the development of HTS-compatible methods that enable consistent production of PDO's for GBM and pancreatic cancer. Using these case-studies the session will reveal potential methods for adapting, scaling and automating 3D methods to standard flat-bottom 384- and 1536-well plates.

Topics for discussion will include:

- Design Challenges for GBM and Pancreatic cancers
- Engineering solutions from the benchtop to fully automated industrial scaled platforms
- Adaptation of critical 3D culture hardware
- Confirmation of the utility and possibility of 3D modelling using high content imaging for therapies directed at pancreas and brain tumors



Timothy Spicer
Sr. Scientific Director
Scripps Research

Workshop C

11.30am - 2.30pm

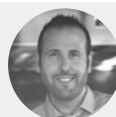
Introduction & Overview To 3D High Content Screening Approaches

3D high content approaches offer significant opportunity for improving cancer drug discovery. However, there exists formidable technical hurdles for HCS methods and analytical approaches.

The session will look to explore the current state-of-the-art alongside the emergence of new technologies and techniques enabling 3D HCS applications. Discussions will centre on the marriage of 3D and high-content screening (HCS) to discover targeted cancer drug therapies.

Leave having explored

- The value, impact and approaches for use of 3D-HCS within cancer discovery
- 3D High-content analysis algorithm approaches for HCS
- How multiparametric analyses can be incorporated to evaluate phenotypic compound effects



Alejandro Amador
Head, Scientific Leader Discovery
Biology Automation
GSK

Workshop D

11.30am - 2.30pm

Designing Cancer-Microfluidic Models: Challenges & Considerations

Organs-on-chips have been heralded as the beginning of the end of animal studies. However, the reality is that whilst these systems hold promise in minimizing animal usage, several challenges remain both in the design and application. Microfluidic models are beginning to play a critical role to improving the prediction of organ toxicity liabilities, supporting mechanistic understandings and provide a basis for comparative toxicology between non-clinical test species and patients. But what degree of complexity is sufficient? What components should be included or excluded when designing these models? Is there a way to ever miniaturize these models for industrial use?

Topics for discussion will include:

- How tumour organoids and emerging stem cell models can be combined and applied to chips?
- The key challenges facing the development of microfluidic systems and how to overcome them



Dik Van Gent
Professor
Erasmus MC

Workshop E

3.00 - 6.00pm

Model Development For Primary & Metastatic Tumors

Considerable progress has been made engineering in vitro models for studying mechanical and biological factors of primary and metastatic tumors.

From organoids to microfluidics, this session will look to provide an outlook for novel in vitro assays and their combination with advanced measurement technologies. It will explore common challenges in their design amongst how these models are enabling the recapitulation of both biology and disease mechanics more relevant to both primary and metastatic disease.

Topics for discussion will include:

- An overview of 3D models in drug development & diagnostics
- Platform design and utility
- Media and cell sourcing issues
- Recent advances in the 3D technologies that are providing deeper insight into the process of cancer dissemination.
- Technologies to study the role of immune cells in disease control and progression



Roger Kamm
Professor
MIT

Workshop F

3.00 - 6.00pm

3D Tumour Engineering to Recapitulate Microenvironment

The TME shapes disease progression and influences therapeutic response.

Recapitulation of the interaction between the different cellular players, along with the extracellular matrix, is critical for understanding the mechanisms underlying disease progression and prediction of therapeutic response.

3D Models mimicking this crosstalk constitute a novel tool to study immune plasticity in the microenvironment and its role on chemotherapeutic and IO drugs.

This workshop will explore:

- Considerations for the design of models to study the ECM, stromal and immune cell interactions
- Current state of the art for 3D TME models
- How 3D systems can be leveraged for the drug discovery and evaluation process



Daniel Harrington
Assistant Professor
The University of Texas Health
Science Center

“I really enjoyed the conference, and I learned a lot, both from presentations and informal interactions. Presentations were well balanced between science and technical innovation, and speakers focused on highlighting pros and cons of each application, which is helpful for someone just starting to explore the field of 3D models”

Jounce Therapeutics, PREDICT 3D Models Attendee

CONFERENCE DAY ONE

MAY 8TH, 2019

	7.00 Coffee & Registration
Shane Horman Research Investigator III Novartis GNF	8.00 Chair's Welcoming Remarks
Assesing The Strategic Value Of 3D Models	
Jason Ekert Head of Complex In Vitro Models GlaxoSmithKline	8.10 From Validation to Application How 3D Models Have Been Supporting GSK IO & Oncology Programs • Highlighting opportunities and challenges in adoption of 3D solid tumor models in preclinical drug discovery • How do we validate, scale and automate 3D solid tumor models in preclinical drug discovery? • Methods to evaluate and validate new technologies for advanced 3D in vitro immuno-oncology models
Szczepan Baran Head of Emerging Technologies Novartis	8.40 Beyond 3D-Models - Building Confidence in Microphysiological Models at Novartis • Divulging Novartis' approach to 3D microphysiological systems • Exploring common drug development issues to frame specific questions and highlighting how 3D tumour models can address these • Illustrating case studies of how Novartis are using microphysiological systems in current projects and future plans
Mark Paris Director Translational Biology Mitra Biotech	9.10 Transforming Translational Research: CANscript™ - A Better Predictive Model for Oncology • Recreating the human TME by using fresh human tumour tissue, autologous serum and immune cells, and immune-targeted agents in a platform with 1:1 clinical outcome validated in over 2,000 patients • Interrogate the phenotypic changes in living tissue in response to standard-of-care agents, PD-1 and PD-L1 inhibitors to explore compound activity, mechanism of action and discover & validate biomarkers • Predict clinical efficacy and enrich clinical trials with responders
	9.40 Speed Networking & Morning Refreshments

10.55 MASTERMIND BREAKOUT: How, When, Where?! Selecting and Choosing the Right 3D System

Picking up on the morning's presentation, this session acts as an opportunity to drive your own learning, crowd-source ideas and discover multiple perspectives for driving the internal confidence in 3D. Over the hour, each breakout will discuss the below questions. Feedback from each group will collated and presented morning of conference day 2.

Where should 3D models be qualified and successfully integrated into the R&D paradigm?

What are the remaining challenges that are yet to be addressed for integration of these models?

Where have 3D Models failed to exact their promise?

What are the pitfalls of classical animal models that 3D models are fulfilling?

Strategies For Understanding & Targeting The Microenvironment



Anita Seshire

Head of
Laboratory Cellular
Pharmacology
& Translational
Innovation Platform
Oncology
EMD Serono

11.40 Utilizing Multicellular 3D Models for Preclinical Drug Discovery

- Developing primary 3D cell cultures from patient material
- Addition of monocytes or fibroblasts to identify a potential trophic role
- Transplantation of multicellular spheres to create tumours with microenvironments and enable the exploration of the influence of the TME on stemness



Joseph Charest

Biomedical Solutions
Program Manager
Draper

12.10 Using Microfluidics to Evaluate Interactions Between Patient-Derived Tissues & Immune Components

12.40 Lunch & Networking



William Hastings

Exploratory
Immuno-Oncology
Investigator
**Novartis Institute
of Biomedical
Research**

1.40 Using 3D Models to Investigate Mechanisms of Relieving Suppression of TME

- Performing compound profiling of targeted IO combination therapies in 3D models to aid in-vitro in-vivo translation
- Analyzing immune suppressive features of co-culture
- Highlighting the applications of co-culture to profiling targeted therapies using multiple readouts



Joe Grosso

Senior Lead
Early Clinical BMS

2.10 Panel Discussion: Incorporating the Immune Component - Requirements for IO Models When Mimicking the Microenvironment in a Dish



Monica Gostissa

Head of
Pharmacology
**Jounce
Therapeutics**

- What are the limitations to IO & where do you draw the line for their utility?
- How do we avoid biasing model design and ensure that these systems are representative of patient responses?
- To what degree of complexity should we align models to human-TME complexity?
- Can we ever accurately model ME effects in a dish?
- How can we overcome the current challenges of incorporating the immune and stromal components?



Roger Kamm

Professor
MIT

2.55 Afternoon Refreshments

3.55 Roundtable Discussions:

Engineering Solutions for Cell Sourcing and Maturity Issues

- What are the benefits/risks of isolating key cell types within your organization versus commercial sourcing?
- New opportunities to acquire “hard to isolate” or unavailable cell types.
- How do “mature” cells need to be before incorporation into a model, and what are the opportunities for cell maturation within a system?
- Setting clear and manageable cell acceptance criteria to drive reproducibility.

Regulatory Considerations for 3D Models

- What are core regulatory hurdles and approval standards for the preclinical applications of 3D oncology models
- Is there a need to translate findings back to animal systems before making the leap to humans?
- What regulatory conversations need to take place to further advance 3D models development for IO applications

Building the Internal Confidence in 3D & Collaborating with Developers

- How should we be working with external collaborators for PoC studies?
- How do we address issues of robustness and reproducibility across lab environments?
- How should we most effectively be demonstrating the internal business case?
- Does 3D always mean more predictive?
- How should we define the context of use to address this?

Overcoming the Analytical Hurdles for Testing Endpoints in Organotypic Cultures

- How can we best adapt the low volumes to analytical techniques such as transcriptomics and proteomics
- How can we best optimize readout methods for sensitivity?
- What technologies can we apply?

4.45 Round Table – Moderator Feedback

5.00 Close of Conference Day One



Drinks & Poster Reception

After the formal presentations have finished, the learning and networking carries on. The Poster Session is an informal part of the conference agenda, allowing you to connect with your peers in a relaxed atmosphere and continue to forge new and existing relationships. During this session scientific posters will be presented on 3D models validating innovative targets, disease models highlighting novel mechanisms, systems that are informing investigative toxicology and safety assessments.

■ The previous 3D Model meetings have been highly successful and key contributions to the growth of this field and community of interest. The result has been a growing alignment on opportunities, challenges and strategies to building internal confidence in the applicability of these new capabilities ■

NIEHS, Associate Director National Toxicology Program, PREDICT: 3D Series Attendee

CONFERENCE DAY TWO

MAY 9TH, 2019

Shane Horman Research Investigator III Novartis GNF	8.30 Chair's Opening Remarks
Adam Cohen Brand Director Hanson Wade	8.35 Mastermind Discussion Feedback How, When, Where?! Selecting and Choosing the Right 3D System

Modelling Patient Level Responses To Cancer Therapeutics

Karsten Boehnke Oncology TME & Translational Research Eli Lilly and Company	8.40 Application of Patient-Derived Organoid Cultures as Preclinical Model Systems for Target Validation & Translational Research - Application of patient-derived organoid cultures as preclinical model systems for target validation and translational research - Establishment of organoid cultures as drug testing systems; target validation studies in organoid cultures; pharmacogenomic analysis for patient population strategies
Sylvia Boj Director - Scientific & Group Leader Hubrecht Organoid Technology	9.10 Patient-Derived Organoids for development and discovery of Oncology and Immuno-Oncology Drugs - Exploring how in-vitro response of organoids directly correlates with the clinical outcome of the patient - Showcasing the establishment of patient-derived organoids suitable for performing large scale screens - Highlighting the development of a novel system that allows the co-culture of organoids with immune cells to study the effect of immune modulating drugs
Karsten Boehnke Oncology TME & Translational Research Eli Lilly and Company Alejandro Amador Head, Scientific Leader Discovery Biology Automation GSK	9.40 Fireside Chat: Are PDO's The New PDX? - What lessons from PDX can be applied to PDO's? - How can the immune and stromal components be best incorporated into these models? - In what context do PDO's hold the most value?
	10.10 Morning Refreshment Break

Strategies For Combining High-Content Screening & Analysis Of 3D Tumour Models

Chen Zhao Senior Research Clinical Fellow NIH	11.10 Using Clearing-Enhanced 3D (Ce3D) to Dissect Tumor Immune Microenvironment - Investigating immune cell populations in 3D - Combining transcriptomic analysis and Ce3D to study the functions of immune cells in tumor microenvironment - Visualizing lung microbiota in lung adenocarcinoma
Alejandro Amador Head, Scientific Leader Discovery Biology Automation GSK	11.30 Active-Learning Strategies for High Content Screening to Improve Clinical Relevance of Oncology Therapeutics - Introducing novel 3D tumor in vitro models, high content imaging and cell-based screening technologies improving clinical relevance in the testing of oncology drugs - Showcasing the design and build of an intelligent, automated platform to accelerate the identification of high value small molecule leads, and the delivery of quality candidates into clinical development - Discussing computational active-learning approaches used in high content screenings of a large number of 3D tumor spheroid images

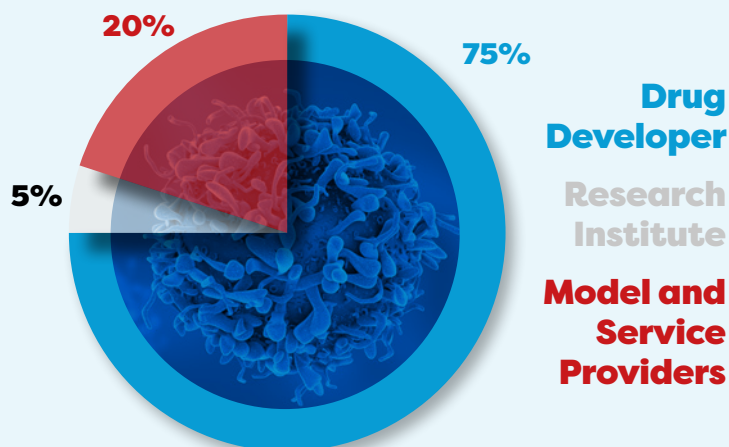
12.00 Lunch Break	
Exploiting 3D Cell Cultures For Cancer Drug Discovery	
 Tim Spicer Senior Associate Director - Scientific & Molecular Medicine Scripps Institute	1.00 Combined Genetic Analysis and 3D Screening of Approved Drugs Directly on GBM Patient Tumors • Showcasing a fully automated 1536 well compatible platform able to perform HTS on large compound libraries • Highlighting the applicability of 3D spheroid based uHTS assays for the purpose of testing molecules in a more phenotypically relevant format to cancer biology
 Shane Horman Research Investigator III Novartis GNF	1.30 Industrialized 3D Drug Discovery: Spheroids in 1536-well Format • Understanding how to overcome late stage failures by adopting novel screening strategies using complex 3D platforms in HTS environments • Utilizing organotypic systems to better enable targeting and modulation of intended mechanisms • Employing novel technologies to translate better performing drug candidate selection early on
 Shane Horman Research Investigator III Novartis GNF  Alejandro Amador Head, Scientific Leader Discovery Biology Automation GSK	2.00 Summary Panel Discussion - Assessing Where 3D Systems Shine in Discovery • Does the value of 3D lie with HTS or HCS? Phenotypic or Target Based Screening? • Justifying risk: Where do we envisage the technology heading and what can these systems never do? • How should we weigh up the cost per data point against the importance of throughput? • Should we compromise the predictive value of models because of assay cost, throughput, convenience and use?
2.45 Chair's Closing Remarks	
3.00 Close of Conference	

■ The 2018 Predict: 3D Models conference was excellent. I came away feeling that I had been brought up to date on the latest technologies, by an impressive group of leaders in the pharmaceutical, academic and technology development industries ■

Sanofi, Research Investigator, PREDiCT: 3D Series Attendee

WHO ATTENDED IN 2018

COMPANIES BY TYPE:



BREAKDOWN BY SENIORITY:



Director & Above: 35%

Scientist & Team Leader: 55%

Other: 10%

*Based on market research and previous events' statistics

WHO ATTENDED IN 2018?



SPONSOR

WHO SHOULD PARTNER



MODEL DEVELOPERS

Engage directly with decision makers at biopharma and CROs to showcase your 3D models, imaging and assay systems to demonstrate their value within non-clinical research. We continue to work with pioneering developers including Mitra, Draper, Nortis and Synvivo to enable them to establish valuable relationships and collaborations in this space.



CONTRACT RESEARCH ORGANIZATIONS

This is your opportunity to ensure that you're front of mind when biopharma organizations outsource translational and preclinical services to aid in go/no-go decisions. The PREDICT event series has helped organisations like Lonza and Organovo to help them develop strategic relationships across the field through effective positioning alongside the leading pharmaceutical organizations.

DRAPER

Expertise Partner

Draper is an independent, not-for-profit corporation, which means its primary commitment is to the success of clients' missions rather than to shareholders. For either government or private sector customers, Draper leverages its deep experience and innovative thinking to be an effective engineering research and development partner, designing solutions or objectively evaluating the ideas or products of others.

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MITRABIOTECH



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Mitra Biotech is a global leader in advancing personalized cancer treatment and empowering drug development & discovery. Our phenotypic CANscript platform delivers powerful insight for our biopharma partners. Because CANscript conserves the native tumour microenvironment and delivers 1:1 clinical correlation, it can be used to predict response of an indication to a specific drug (or drug combination), or to better understand MOA of a given compound.

www.mitrabiotech.com

GET INVOLVED



Diane McKenna

Commercial Director,
PREDICT Event Series

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READY TO REGISTER?

3 EASY WAYS TO BOOK



3D-Oncology.com/take-part/register/



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Email: register@hansonwade.com

- ① Identify the applicability of 3D models
- ② Learn from & network with model experts and champions
- ③ Streamline PoC, validation and scaling challenges

SECURE YOUR PLACE

Pharma & Academic Pricing	Register & Pay Before Friday February 1st, 2019	Standard Pricing
Conference Only	\$1,699 (save \$800)	\$2,499
Conference + 1 Workshop	\$2,198 (save \$900)	\$2,998 (save \$100)
Conference + 2 Workshops	\$2,697 (save \$1000)	\$3,497 (save \$200)
Conference + 3 Workshops	\$3,196 (save \$1100)	\$3,996 (save \$300)
Workshops (Each)	\$599	

Model & Service Providers Pricing	Register & Pay Before Friday February 1st, 2019	Standard Pricing
Conference Only	\$2,399 (save \$800)	\$3199
Conference + 1 Workshop	\$2,898 (save \$900)	\$3,698 (Save \$100)
Conference + 2 Workshops	\$3,387 (save \$1000)	\$4,197 (Save \$200)
Conference + 3 Workshops	\$3,896 (save \$1100)	\$4,696 (Save \$300)
Workshops (Each)	\$599	

Team Discounts*

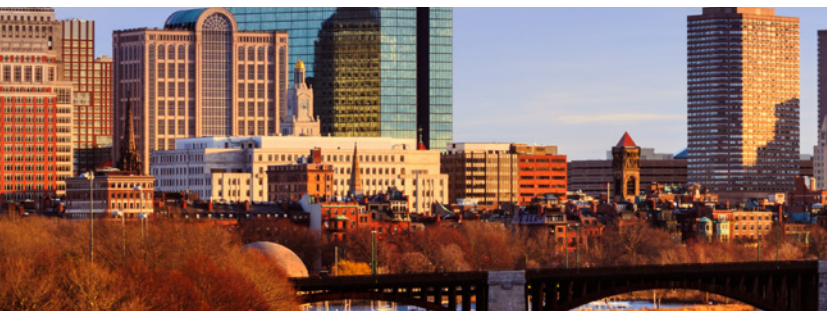
- **10% discount – 2 delegates**
- **20% discount – 3 or more delegates**

Please note that discounts are only valid when two or more delegates from one company book and pay at the same time.

Contact: register@hansonwade.com

There was a diverse set of presentations, covering multiple aspects of challenges and opportunities setting up and using 3D models. A lot of attention was given to time for networking and exchanging experiences. All in all, a very efficient and useful conference

Director Non Clinical Development, Gadeta, PREDICT: 3D Oncology Attendee



VENUE

Hyatt Regency Boston
One Avenue de Lafayette
Boston, Massachusetts, United States, 02111

For further information or assistance, please visit
www.hyatt.com

TERMS & CONDITIONS

Full payment is due on registration. Cancellation and Substitution Policy: Cancellations must be received in writing. If the cancellation is received more than 14 days before the conference attendees will receive a full credit to a future conference. Cancellations received 14 days or less (including the fourteenth day) prior to the conference will be liable for the full fee. A substitution from the same organization can be made at any time.

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