

**34th EDRN Steering Committee Meeting and
6th Annual US Japan Workshop on Cancer Biomarkers in
Collaboration with NCI Early Detection Research Network
March 18-20, 2019
Hilton Garden Inn, Downtown
Nashville, Tennessee**

This meeting marks the sixth Annual US Japan Workshop on Cancer Biomarkers. Presentations by Japanese colleagues will be organized throughout the 3 days for better integration. We want to foster an environment of collaboration between EDRN-NCI and Japan Agency for Medical Research and Development (AMED) funded investigators. Presentations by EDRN investigators will provide NCI Program Staff with updates on progress made by individual researchers and by the EDRN as a collaborative network.

Monday, March 18, 2019

7:00 a.m. – 8:00 a.m.

Pre Function Area

Sign-in and Continental Breakfast

8:00 a.m. – 8:05 a.m.

Grand Ballroom

**Opening of Steering Committee Meeting and
Approval of September 2018 EDRN Steering
Committee Meeting Minutes**

Joshua LaBaer, M.D., Ph.D., Arizona State
University/The Biodesign Institute

8:05 a.m. – 8:10 a.m.

Welcome

Scott Hiebert, Ph.D., Vanderbilt-Ingram Cancer
Center

8:10 a.m. – 8:25 a.m.

Charge to Participants: Strategic Priorities

- EDRN – Sudhir Srivastava, Ph.D., M.P.H.,
National Cancer Institute
- AMED – Tetsuo Noda, M.D., Ph.D., Cancer
Institute, Japanese Foundation for Cancer
Research, Director

8:25 a.m. – 9:15 a.m.

Grand Ballroom

**Session 1: Personalized Medicine in Companion
Diagnostics**

Chair: Sudhir Srivastava, Ph.D., M.P.H., National
Cancer Institute

8:35 a.m. – 8:45 a.m.

Development of Circular RNAs as Cancer
Biomarkers

Arul Chinnaiyan, M.D., Ph.D., University of
Michigan

8:45 a.m. – 8:50 a.m.

Q&A

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Monday, March 18, 2019 (Continued)

Session 1: Personalized Medicine in Companion Diagnostics (Continued)

*8:50 a.m. – 9:10 a.m.
Grand Ballroom*

Analysis of Immunological Resistance to Anti-tumor Immunity

Yoshihiro Ohue, M.D., Ph.D., Division of Cancer Immunology, Exploratory Oncology Research & Clinical Trial Center, National Cancer Center, Laboratory Head

9:10 a.m. – 9:15 a.m.

Q&A

9:15 a.m. – 10:05 a.m.
Grand Ballroom

Session 2: Genotype, Next Gen Sequencing, and Genomics

Chair: Sudhir Srivastava, Ph.D., M.P.H., National Cancer Institute

9:15 a.m. – 9:35 a.m.

The Integrative Genomics of Early Prostate Cancer
Paul Boutros, Ph.D., M.B.A., University of California Los Angeles

9:35 a.m. – 9:40 a.m.

Q&A

9:40 a.m. – 10:00 a.m.

Progression of Hepatocellular Carcinoma: from Early to Advanced Cancer

Hiroyuki Aburatani, M.D., Ph.D., The University of Tokyo, Research Center for Advanced Science and Technology, Professor

10:00 a.m. – 10:05 a.m.

Q&A

10:05 a.m. – 10:25 a.m.

Break

10:25 a.m. – 12:30 p.m.
Grand Ballroom

Session 3: Novel Technologies toward Developing Cancer Biomarkers

Chair: Paul Wagner, Ph.D., National Cancer Institute

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Monday, March 18, 2019 (Continued)

**Session 3: Novel Technologies toward Developing Cancer Biomarkers
(Continued)**

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| <i>10:25 a.m. – 10:45 a.m.</i>
<i>Grand Ballroom</i> | <u>N-NOSE:1st Screening Technology for Cancer Using Nematode Olfaction</u>
Yohei Matsunaga, Ph.D., Hirotsu Bio Science, Inc.,
Head Research Fellow |
| <i>10:45 a.m. – 10:50 a.m.</i> | Q&A |
| <i>10:50 a.m. – 11:10 a.m.</i> | <u>AI (Deep Learning) Cancer Diagnosis with Small Amount of Blood</u>
Nobuyuki Ota, Ph.D., Preferred Medicine, Inc.,
Chief Executive Officer |
| <i>11:10 a.m. – 11:15 a.m.</i> | Q&A |
| <i>11:15 a.m. – 11:35 a.m.</i> | <u>Using Machine-learning Assisted Histopathology (HistoMAP) to Enable Early Detection of Aggressive Prostate Cancer</u>
Andries Zijlstra, Ph.D., Vanderbilt University
Medical Center |
| <i>11:35 a.m. – 11:40 a.m.</i> | Q&A |
| <i>11:40 a.m. – 12:00 p.m.</i> | <u>Measurement and Inference of Contextual Biomarkers</u>
Ruedi Aebersold, Ph.D., Institute of Molecular
Systems Biology, ETH Zurich |
| <i>12:00 p.m. – 12:05 [p.m.</i> | Q&A |
| <i>12:05 p.m. – 12:25 p.m.</i> | <u>Improving Early Detection of Breast Cancer with Auto-anti-glycoprotein Antibodies</u>
Joshua LaBaer, M.D., Ph.D., Arizona State
University/The Biodesign Institute |
| <i>12:25 p.m. – 12:30 p.m.</i> | Q&A |

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| 12:30 p.m. – 2:00 p.m. | Lunch (On Your Own) |
| 12:30 p.m. – 2:00 p.m.
<i>Skyline Junior Ballroom</i> | EDRN Executive Committee Meeting with Larry Norton, M.D., Chair of Network Consulting Team (Closed Session) |
| 2:00 p.m. – 5:15 p.m.
<i>Grand Ballroom</i> | Session 4: Progress on Biomarkers for Selected Cancers
<u>Chair:</u> Paul Wagner, Ph.D., National Cancer Institute |
| <i>2:00 p.m. – 2:20 p.m.</i> | <u>Potential Usefulness of ApoA2 Isoforms for the Screening and Risk Stratification of Pancreatic Cancer</u>
Kazufumi Honda, D.D.S., Ph.D., Department of Biomarkers for Cancer Early Detection, National Cancer Center Research Institute, Laboratory Head |
| <i>2:20 p.m. – 2:25 p.m.</i> | Q&A |
| <i>2:25 p.m. – 2:45 p.m.</i> | <u>TBD</u>
Wade Iams, M.D., Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center |
| <i>2:45 p.m. – 2:50 p.m.</i> | Q&A |
| <i>2:50 p.m. – 3:10 p.m.</i> | <u>The High Specificity Secondary Screening Biomarker for Prostate Cancer “PSA G-Index”</u>
Koji Ueda, Ph.D., Japanese Foundation for Cancer Research, Cancer Precision Medicine Center, Project Leader |
| <i>3:10 p.m. – 3:15 p.m.</i> | Q&A |

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Session 4: Progress on Biomarkers for Selected Cancers (Continued)

<i>3:15 p.m. – 3:35 p.m.</i> <i>Grand Ballroom</i>	<u>Blood Protein Biomarkers for Early Detection of Pancreatic Cancers</u> Sumio Ohtsuki, Ph.D., Kumamoto University, Faculty of Life Sciences, Department of Pharmaceutical Microbiology, Professor
<i>3:35 p.m. – 3:40 p.m.</i>	Q&A
3:40 p.m. – 4:00 p.m.	Break
<i>4:00 p.m. – 4:20 p.m.</i>	<u>Colorectal/Esophageal Cancer</u> Robert Schoen, M.D., M.P.H., University of Pittsburgh
<i>4:20 p.m. – 4:25 p.m.</i>	Q&A
<i>4:25 p.m. – 4:45 p.m.</i>	<u>Pancreatic Cancer</u> Samir Hanash, M.D., Ph.D., The University of Texas MD Anderson Cancer Center
<i>4:45 p.m. – 4:50 p.m.</i>	Q&A
<i>4:50 p.m. – 5:10 p.m.</i>	<u>Breast Cancer</u> Karen Anderson, M.D., Ph.D., Arizona State University/The Biodesign Institute
<i>5:10 p.m. – 5:15 p.m.</i>	Q&A
5:15 p.m. – 5:45 p.m. <i>Grand Ballroom</i>	Panel Discussion of Issues Raised During Previous Sessions <u>Moderators</u> <ul style="list-style-type: none">○ Tetsuo Noda, M.D., Ph.D., Cancer Institute, Japanese Foundation for Cancer Research, Director○ Sudhir Srivastava, Ph.D., M.P.H., National Cancer Institute

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Monday, March 18, 2019 (Continued)

5:45 p.m.	Adjourn for the Day
5:45 p.m. – 6:30 p.m. <i>Skyline Junior Ballroom</i>	Executive Session (Closed) AMED, EDRN Program Staff and EDRN Leadership

Tuesday, March 19, 2019

7:00 a.m. – 8:00 a.m. <i>Pre Function Area</i>	Sign-in and Continental Breakfast
8:00 a.m. – 8:30 a.m. <i>Grand Ballroom</i>	<u>State of the EDRN</u> Sudhir Srivastava, Ph.D., M.P.H., National Cancer Institute
8:30 a.m. – 9:20 a.m. <i>Grand Ballroom</i>	Session 5: Guest Lectures <u>Chair:</u> Paul Wagner, Ph.D., National Cancer Institute
<i>8:30 a.m. – 8:50 a.m.</i>	<u>Integration of Multi-omics Data to Identify Biomarkers for Cancer Risk</u> Wei Zheng, M.D., Ph.D., Vanderbilt-Ingram Cancer Center
<i>8:50 a.m. – 8:55 a.m.</i>	Q&A
<i>8:55 a.m. – 9:15 a.m.</i>	<u>Drug Target Discovery by Proteomics</u> Tesshi Yamada, M.D., Ph.D., National Cancer Center Research Institute, AMED Japan Cancer Research Project, Program Officer
<i>9:15 a.m. – 9:20 a.m.</i>	Q&A
9:20 a.m. – 10:35 a.m. <i>Grand Ballroom</i>	Session 6: Biospecimen Science: Collection, Availability and Accessibility <u>Chair:</u> Paul Wagner, Ph.D., National Cancer Institute

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Tuesday, March 19, 2019 (Continued)

**Session 6: Biospecimen Science: Collection, Availability and Accessibility
(Continued)**

<i>9:20 a.m. – 9:40 a.m.</i> <i>Grand Ballroom</i>	<u>Integration of Clinical Data and Repeated Imaging Measures for the Early Detection of Lung Cancer</u> Yuankai Huo, Ph.D., Vanderbilt University Medical Center
<i>9:40 a.m. – 9:45 a.m.</i>	Q&A
<i>9:45 a.m. – 10:05 a.m.</i>	<u>Development of the Collaborative Research and Biobanks and Biobanking Network in Japan</u> Tohru Masui, M.D., Ph.D., Keio University School of Medicine, AMED Genomic Medicine R&D Platform Utilization System, Program Officer
<i>10:05 a.m. – 10:10 a.m.</i>	Q&A
<i>10:10 a.m. – 10:30 a.m.</i>	<u>Use Right Samples to Answer Right Questions- Lessons and Strategies</u> Ziding Feng, Ph.D., Fred Hutchinson Research Cancer Center
<i>10:30 a.m. – 10:35 a.m.</i>	Q&A
10:35 a.m. – 10:55 a.m.	Break
10:55 a.m. – 12:35 p.m. <i>Grand Ballroom</i>	Session 7: Update on Current Projects <u>Chair: Paul Wagner, Ph.D., National Cancer Institute</u>
<i>10:55 a.m. – 11:10 a.m.</i>	<u>Development of Combinatorial Biomarker(s) for Pancreatic Cancer Diagnosis and Prognosis</u> Sukhwinder Kaur, Ph.D., University of Nebraska Medical Center
<i>11:10 a.m. – 11:15 a.m.</i>	Q&A

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Session 7: Update on Current Projects (Continued)

<i>11:15 a.m. – 11:30 a.m.</i> <i>Grand Ballroom</i>	<u>Quantitative Image Analyses for Breast Cancer Diagnosis and Risk Prediction</u> John Heine, Ph.D., H. Lee Moffitt Cancer Center and Research Institute, Inc.
<i>11:30 a.m. – 11:35 a.m.</i>	Q&A
<i>11:35 a.m. – 11:50 a.m.</i>	<u>Combining Biomarkers to Improve Early Lung Cancer Diagnosis</u> Eric Grogan, M.D., M.P.H., Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center
<i>11:50 a.m. – 11:55 a.m.</i>	Q&A
<i>11:55 a.m. – 12:10 p.m.</i>	<u>Urine-derived Biomarkers from a Racially Diverse Cohort of Men Biopsied for Prostate Cancer</u> Indu Kohaar, Ph.D., Center for Prostate Disease Research, Uniformed Services University of the Health Sciences and the Walter Reed National Military Medical Center
<i>12:10 p.m. – 12:15 p.m.</i>	Q&A
<i>12:15 a.m. – 12:30 p.m.</i>	<u>Biomarkers for Ovarian Cancer Detection</u> Steven Skates, Ph.D., Massachusetts General Hospital
<i>12:30 a.m. – 12:35 p.m.</i>	Q&A
12:35 p.m. – 2:00 p.m.	Lunch (On Your Own)

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12:35 p.m. – 2:00 p.m.
Skyline Junior Ballroom

**2019 EDRN Scientific Workshop Organizing
Committee Meeting**

Chair: Arul Chinnaiyan, M.D., Ph.D., University of Michigan

- Anirban Maitra, M.B.B.S., The University of Texas MD Anderson Cancer Center (by Phone)
- Matthew Schabath, Ph.D., H. Lee Moffitt Cancer Center and Research Institute, Inc.
- Marc Lenburg, Ph.D., Boston University
- Robert Schoen, M.D., M.P.H., University of Pittsburgh
- Amanda Paulovich, M.D., Ph.D., Fred Hutchinson Research Cancer Center
- NCI Program Staff

2:00 p.m. – 5:40 p.m.
Grand Ballroom

**Session 8: Developing Deliverables and
Regulatory Requirements (4 Concurrent
Breakout Sessions)**

Session Questions:

1. What differentiates EDRN in this area from other programs nationally or internationally?
2. What are the most exciting things that will happen in biomarker cancer research over the next five years? Why so few biomarkers to validate?
3. Is EDRN well positioned to lead in these areas?
4. What is/are the biggest challenges EDRN faces to maintain or take on leadership in those areas?
5. If given unlimited resources, how would you/your group go about making the single biggest impact in early detection?
6. What models of collaboration will EDRN need to undertake to early detection cancer research and its delivery to the population?

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**Session 8: Developing Deliverables and Regulatory Requirements
(Continued)**

2:00 p.m. – 3:30 p.m.

Gulch

Table 1: Investing in Fundamental Discovery

Discussion Facilitators/Reporters:

- Karen Anderson, M.D., Ph.D., Arizona State University/The Biodesign Institute
- James Herman, M.D., University of Pittsburgh Cancer Institute

2:00 p.m. – 3:30 p.m.

Skyline Junior Ballroom

Table 2: Leading the Science of Validation

Discussion Facilitators/Reporters:

- Pierre Massion, M.D., Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center
- Steven Skates, Ph.D., Massachusetts General Hospital

2:00 p.m. – 3:30 p.m.

SOBRO

Table 3: Enabling Screening Strategies

Discussion Facilitators/Reporters:

- Martin Sanda, M.D., Emory University
- Ziding Feng, Ph.D., Fred Hutchinson Cancer Research Center

2:00 p.m. – 3:30 p.m.

12-South

Table 4: Moving Discoveries to Diagnostic Tests

Discussion Facilitators/Reporters:

- Arul Chinnaiyan, M.D., Ph.D., University of Michigan
- Daniel Chan, Ph.D., Johns Hopkins University

3:30 p.m. – 3:50 p.m.

Break

3:50 p.m. – 5:40 p.m.

Grand Ballroom

Reports from Session 8 Discussions

(5-minute report plus 10-minute discussion for each group)

5:40 p.m.

Adjourn for the Day

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Wednesday March 20, 2019

7:00 a.m. – 8:00 a.m. Sign-in and Continental Breakfast
Pre Function Area

8:00 a.m. – 12:00 p.m. Collaborative Group Meetings (By Invitation Only)

12-South

Breast and Gynecological Cancers

- Steven Skates, Ph.D., Massachusetts General Hospital
- Christopher Li, M.D., Ph.D., Fred Hutchinson Cancer Research Center
- Christos Patriotis, Ph.D., National Cancer Institute
- Sharmistha Ghosh-Janjigian, Ph.D., National Cancer Institute

Gulch

Gastrointestinal Cancers

- Brian Haab, Ph.D., Van Andel Research Institute
- Robert Schoen, M.D., M.P.H., University of Pittsburgh
- Matthew Young, Ph.D., National Cancer Institute

Skyline Junior Ballroom

Lung and Upper Aerodigestive Cancers

- Pierre Massion, M.D., Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center
- James Herman, M.D., University of Pittsburgh Cancer Institute
- Lynn Sorbara, Ph.D., National Cancer Institute
- Karl Krueger, Ph.D., National Cancer Institute

SOBRO

Prostate and Urological Cancers

- O. John Semmes, Ph.D., Eastern Virginia Medical School
- Martin Sanda, M.D., Emory University
- Jacob Kagan, Ph.D., M.Sc., National Cancer Institute

12:00 p.m. – 1:00 p.m. Lunch (On Your Own)

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Wednesday, March 20, 2019 (Continued)

1:00 p.m. – 2:00 p.m.
Grand Ballroom

Reports from Collaborative Groups

1:00 p.m. – 1:15 p.m.

Breast and Gynecological Cancers

- Steven Skates, Ph.D., Massachusetts General Hospital
- Christopher Li, M.D., Ph.D., Fred Hutchinson Cancer Research Center

1:15 p.m. – 1:30 p.m.

Gastrointestinal Cancers

- Brian Haab, Ph.D., Van Andel Research Institute
- Robert Schoen, M.D., M.P.H., University of Pittsburgh

1:30 p.m. – 1:45 p.m.

Lung and Upper Aerodigestive Cancers

- Pierre Massion, M.D., Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center
- James Herman, M.D., University of Pittsburgh Cancer Institute

1:45 p.m. – 2:00 p.m.

Prostate and Urological Cancers

- O. John Semmes, Ph.D., Eastern Virginia Medical School
- Martin Sanda, M.D., Emory University

2:00 p.m. – 2:10 p.m.

Final Remarks

- Joshua LaBaer, M.D., Ph.D., Arizona State University/The Biodesign Institute
- Sudhir Srivastava, Ph.D., M.P.H., National Cancer Institute

2:10 p.m.

Adjourn