The Academy for Radiology & Biomedical Imaging Research (Academy) held its Eighth Annual Medical Imaging Technology Showcase on March 28th, 2017 in the Hart Senate Office Building on Capitol Hill in Washington, DC. The Showcase, hosted by the Academy’s Coalition for Imaging & Bioengineering Research (CIBR) brings together academic researchers, industry partners, imaging societies and patients/patient advocates to illustrate the impact and value that medical imaging technology has on patient care and showcase developments in imaging research and technological development.

The Academy's mission is to advocate for consistent and sustained federal funding for radiology and biomedical imaging research. This annual Showcase allows our members to educate policy makers and their staff in a collaborative and relaxed forum regarding the importance of federal funding of research to advancing imaging science.

This year the Academy/CIBR showcased 14 collaborative teams representing a wide array of research topics and interests. Early career investigators from 17 academic institutions, our patient keynotes, and industry partners conducted over 90 congressional visits to articulate research taking place in their departments, how imaging impacts their care, and the important strides being made in the science and medical imaging research areas.

"New Imaging Analytics to Advance Cancer Care," represented by Matt Rielly, PhD, Anant Madabhushi, PhD, Robert Gilkeson, MD, and Oliver Steinbach, PhD, pose with Ohio Senator Rob Portman’s staff member.
3D Printing for Surgical Planning of Kidney Cancer
Focused Ultrasound Foundation / Action to Cure Kidney Cancer / Brigham & Women’s Hospital / FUJIFILM

Neonatal MRI
Spina Bifida Association / UC San Diego / TIME Medical

CT Imaging Research for Coronary Heart Disease
Men’s Health Network / Johns Hopkins Medicine / Toshiba Medical

New Imaging Analytics to Advance Cancer Care
FORCE: Facing Our Risk of Cancer Empowered / Case Western Reserve University / University Hospitals / Philips

Early and Accurate Detection of Breast Cancer in Mammograms
Katherine Snedaker (patient breast cancer survivor) / CureMetrix / UC San Diego

Dynamic Chest X-ray Imaging: One Exam, One Visit, Loaded with Information
Mount Sinai / Konica Minolta

Addressing Patient Satisfaction and Underserved Populations
Case Western Reserve University / University Hospitals / Hitachi

Li-rads: Liver Image Reporting and Data Systems
Beat Liver Tumors / UC San Diego / ACR / Nuance

NIBIB Discoveries in Technology
NIBIB

One Size Does Not Fit All: Personalizing Breast Care for Better Outcomes
Nancy J. Sauers (patient breast cancer survivor) / Beth Israel Deaconess Medical Center / GE Healthcare

X-ray Dose Reduction
Image Gently / Lung Cancer Alliance / Johns Hopkins Medicine / AGFA

Mixed-Reality for Breast Surgical Planning
Stanford Medicine
The Academy hosted 17 research investigators this year who were awarded travel stipends to participate in the Showcase activities. For them it included a day-long trip to the NIH and visits with teams from the National Cancer Institute and the National Institute for Biomedical Imaging and Bioengineering (NIBIB). Each Institute shared their insights regarding the culture of each Institute, the process for grant application, review, and approval as well as how to reach out for support.

CECI² On the Hill for Congressional Meetings
An important aspect of the researcher’s experience in Washington, DC is engagement on grassroots advocacy. The Academy provides the opportunity for each member to visit their congressional representatives to advocate on the local and national levels and garner a greater understanding of the legislative process.

Academy Senior Director of Government and Strategic Affairs, Martha Nolan, conducted a training session for successful meetings and how to craft their messaging for maximum impact in the interaction with the member or his/her staff.

The following institutions had participating CECI members this year: University of Chicago, University of California San Francisco, University of Michigan, UT Southwestern Medical Center, University of California San Diego, Massachusetts General, Mallinckrodt Institute of Radiology, Brigham and Women’s Hospital, University of Southern California, Stanford University, University of Vermont College of Medicine, Johns Hopkins University, Ohio State University, University of California, Davis, and Mayo Clinic.

The Academy’s Council of Early Career Investigators in Imaging (CECI²) accompanied by Ronald Arenson, MD, Carolyn C. Metzler, MD, Steven E. Seltzer, MD, and senior Academy staff at NIBIB.

Helmet PET/AMPET Project: A Wearable PET Brain Scanner
West Virginia University / University of Washington / University of Virginia / UC Davis / GE Healthcare

Ultrasound Patch for Treating Chronic Wounds
Drexel University

Academic Council of Investigators in Imaging

CECI² Members Nicholas Burris, MD and Jadranka Stojanovska, MD, both from the University of Michigan pose with Michigan Senator, Debbie Stabenow (D) in her office.
The strength of the Academy’s CIBR Coalition is the diversity of membership; imaging societies, academia, patient advocates and industry. Creating opportunities for our members to interact in meaningful and valuable is important to our long-term success.

This year, the Academy hosted for the first time, an academic industry research round table forum. Participants included representatives from 13 industry partners and 14 academic institutions. The purpose was to facilitate dialogue between our academic department heads and industry leadership to gain a better understanding of research priorities and the identification of collaborative opportunities. CIBR Chair, Dr. Steven E. Seltzer led off the event with a presentation that highlighted the Academy’s history and its advocacy achievements and remaining challenges.

The discussion focused on the impact of legislation passed under the 21st Century Cures Act as well as the Interagency Working Group on Medical Imaging (IWGMI), which focuses on sharing research, resources and data through interagency coordination of imaging research and long-range planning. Also, the NIH’s proposed budget cuts were discussed from their impact on research and employment within healthcare and science to understanding how this community could engage on these issues collectively.

As follow-up to the robust discussions, the Academy is in the early stages of spearheading an imaging symposium in the fall of 2017 and will expand this round table forum next year.

**Industry Attendees:**
- Agfa Healthcare Corporation
- Canon U.S.A., Inc.
- CureMetrix
- GE Healthcare
- High Precision Devices
- Hitachi
- Konica
- Nuance Healthcare
- Philips Healthcare Strategy
- Siemens
- TeraRecon
- Time Medical
- Toshiba

**Academic Attendees:**
- Beth Israel Deaconess Medical Center
- Brigham and Women’s Hospital
- Case Western Reserve University/ University Hospital
- Duke University
- Emory University
- Johns Hopkins University
- Memorial Sloan Kettering Cancer Center
- Mount Sinai
- Stanford University
- University of Pennsylvania
- UC San Diego
- UC San Francisco
- UT Southwestern
- Washington University
Patient Keynotes

This year’s Showcase featured three patient keynotes; each addressing how imaging has impacted their diagnosis, treatment and ongoing care. Their compelling stories help make real the impact imaging and imaging research plays in patient care at every step of the process. Our patient guests also participated in Hill visits; sharing their very personal stories with their representatives and senators.

Mr. Brad Booth
Brad Booth (33) grew up in Baton Rouge, LA, and now resides in Birmingham, AL, with his wife, Stacey, and their two children, Nola (3) and Grey (2). Diagnosed with a rare, incurable sarcoma at 26, Brad currently receives treatment at the Cleveland Clinic, including full abdominal surgery, a tumor cell vaccine, frequent imaging, and an image-guided procedure to freeze tumors in his liver called cryoembolization.

As a precaution his physician ordered an MRI of his brain. The test revealed a cancerous, Grade III tumor, located in an area of the brain associated with creativity and emotion.

Within three weeks of his diagnosis Johnson’s tumor was removed. After two months of oral chemotherapy and 33 sessions of radiation, his cancer was stable. Johnson’s routine meant having follow-up MRIs for the rest of his life. In 2012, something new appeared on a scan, so they recommended a second surgery.

In the three years between Johnson’s surgeries, advances in imaging enabled surgeons to remove a higher percentage of cancerous tissue utilizing a combination of procedures with navigation tools and imaging technologies including MRI, CT (computed tomography), PET (positron emission tomography), fluoroscopy, angiography, and ultrasound. [Link to Brett Johnson’s website]

Mr. Brett Johnson
In 2009, Brett Johnson was a healthy 47-year-old enjoying his life as a singer, teacher, and pianist when he began to suffer from nagging headaches.

As a precaution his physician ordered an MRI of his brain. The test revealed a cancerous, Grade III tumor, located in an area of the brain associated with creativity and emotion.

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Ms. Cindy Parlow Cone
Cindy Parlow Cone (38): – US Women’s National Team player – 2 Olympic gold medals, one silver and a World Champion – suffered several concussions that forced an early retirement from professional soccer. Cindy is also the former head coach for Portland Thorns FC in the National Women’s Soccer League. She regularly undergoes MRIs to track her brain’s status. [Link to Cindy Parlow Cone’s article on CNN]

Other Events at Showcase

Reception
In addition to the Showcase, CECI visits to the NIH, Hill and the round table, there was also the very popular first night reception. Everyone from all divisions of the Academy came together for an evening of networking and discussion. This year over 150 people participated in the reception.

A special feature of the reception was the exceptional research posters that were on display. All of the Academy’s CECI investigators displayed their work. The most easily understood poster was voted on by the reception guests and Matthew Lungren, MD, MPH, of Stanford University won first place.

CIBR Luncheon
This year’s CIBR luncheon again had an overflow crowd and featured Daniel C. Sullivan, MD. Dr. Sullivan is Professor Emeritus, Department of Radiology at Duke University. His remarks focused around “Imperative for Imaging in the Era of Personalized Medicine.”

Hill Training
The Academy’s Senior Director of Government and Strategic Affairs, Martha Nolan, conducted a special training session for everyone who was participating in Congressional visits. This opportunity enabled new attendees to ask questions about how to structure a congressional meeting, key points to highlight, how to follow-up and maintain a relationship with their representatives office long after the initial meeting. In total, well over 90 Hill visits were held. This grassroots advocacy is an important component of the Showcase and another way the Academy works to keep the messaging for research funding and imaging awareness and education at the forefront of the legislative agenda.