"The best prevention, is Early Detection"

EDRN Today

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CANCER BIOMARKERS RESEARCH GROUP

IN THIS ISSUE

Early Detection Research Network (EDRN)
by Felicia Evans Long, MBA and Isabel Zaru-Roque, MPH

Happy New Year from Dr. Srivastava and the entire CBRG Team!

From the 33rd EDRN Steering Committee Meeting in Boston, NCI IMAT PI Meeting, Translational Liver Cancer (TLC) Consortium to the collaborative Group meetings and many others, it has been a productive year. Including the launch of this new *EDRN Today* eNewsletter.
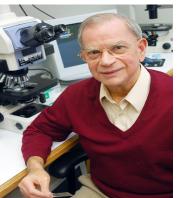
The EDRN Meeting in September marked the half waypoint for this cycle of the EDRN. The presentations made during the meeting will help NCI to evaluate the network, plan for its future and address questions and concerns moving forward in the New Year.

We're preparing and looking forward to our annual EDRN Steering Committee Meeting slated for March 18-20, 2019 in Nashville, Tennessee.

Looking ahead and hoping for another year of accomplishments in Cancer Prevention and Early Detection.

CBRG is increasing its social media presence! Tweets and Instagram updates will be sent out weekly to the NCI pages. NCI Blog updates will be forwarded on a monthly basis. Please forward all topics or ideas to Isabel Zaru-Roque.

In Memory of Dr. Adi Gazdar

Dr. Adi Gazdar passed away unexpectedly (and peacefully) on Dec 29, 2018. It was a loss of a very dear friend and colleague to many of us.

Dr. Gazdar was a pre-eminent pathologist and noted oncology researcher at UT Southwestern who shared valuable insights and discoveries of human cancers with the world.

An Adi F. Gazdar, M.D. Scientific and Remembrance Symposium will be held February 12, 2019 at the University of Texas Southwestern Medical Center from 10am to 3pm. There will be several short scientific talks by young investigators focusing on neuroendocrine cancers and SCLC with the young investigators that Dr. Gazdzar had been working with.

Dr. Sudhir Srivastava has been invited to speak at this memorial symposium.

RESEARCH SPOTLIGHT

Dr. Ziding Feng, Ph.D.

Dr. Ziding Feng, PhD, is a full member and Co-Program Head of Biostatistics Program at the Fred Hutchinson Cancer Research Center in Seattle. He is the Data Management and Coordinating Center (DMCC) Principal Investigator of the EDRN since its inception. The DMCC provides the logistic and administrative support for the EDRN and coordinates EDRN biomarker validation studies. The DMCC is known for its innovations in developing guidelines (EDRN 5-Phase guidelines) and study design standards (EDRN PRoBE standards) that have helped the field to conduct more rigorous studies. The DMCC helps the EDRN investigators to develop validation study proposals and protocols, develop and maintain the data management system and specimen tracking system, conduct QA/QC to ensure study quality, and perform statistical analyses for validation study data. The EDRN specimen reference sets have been used by many academic and industrial labs to test their biomarkers in an unbiased and blinded fashion. The DMCC has also been a power house for statistical methodology development for cancer biomarker evaluation for risk prediction, early detection and diagnosis, and prognosis. In addition to his role as the PI, Ziding is also the lead biostatistician in many EDRN validation studies in prostate, liver, and colorectal cancers. He is also the coordinating center PI for the Translational Liver Cancer Consortium (TLC) to improve liver cancer early detection and the New Onset Diabetes (NOD) cohort study to detect pancreatic cancer patients from new onset diabetes patients. He is also a multi-PI (with Sam Hanash) on a grant to further validate a lung cancer biomarker panel they developed from CARET cohort specimens and validated in EPIC cohort (JAMA Oncology, 2018 Oct 1; 4(10): e182078.).

Investigator Spotlight

Steve Skates, Ph.D.

Dr. Skates trained as a statistician before joining Massachusetts General Hospital over 30 years ago where he became involved in the first two early detection trials for ovarian cancer. The trials tested women annually for levels of a blood marker CA125 with referral to ultrasound when it was elevated above a single threshold, with suspicious scans referred to a gynecologic oncologist for consideration of surgery.

Screening the first 1,000 women detected one ovarian cancer by a scan but only after multiple rising CA125 values whereas most other women had relatively flat CA125 profiles, a ptern repeated in subsequent trials. While the specificity for these trials was excellent, the sensitivity for early stage disease was limited. With Dr. Ian Jacobs in the UK, Dr. Skates developed an algorithm exploiting this differential over time where each woman serves as her own control. This improved early stage sensitivity while maintaining the same high specificity. They implemented the algorithm in five prospective screening trials in the US and UK. All trials showed a significant increase in detection of early stage disease in contrast to other CA125 trials using a single threshold with no change. Dr. Skates is the PI of an Early Detection Research Network BDL (co-PI M. Birrer) to discover additional plasma biomarkers to further increase early stage sensitivity while maintaining the same specificity. Discovery encompasses mass spectrometry of proximal fluids and of longitudinal plasma samples from these screening trials to identify plasma proteins rising over time in women subsequently diagnosed with ovarian cancer while having a relatively flat profile in most women without ovarian cancer. In parallel, Dr. Birrer leads a discovery project to identify early stage genomic biomarkers which may complement the plasma protein biomarkers and further increase early stage sensitivity.

Dr. Debbie M. Winn, DCP Acting Director

Effective January 2019, Dr. Ned Sharples named Dr. Debbie Winn as DCP Acting Director upon the retirement of longtime DCP Director, Dr. Barry Karmer.

Debbie brings to her new responsibilities at DCP 18 years of exceptional leadership and service at NCI. Debbie will step down from her current role as Deputy Director of the Division of Cancer Control and Population Sciences (DCCPS) where she has played a central role in the planning, priority setting, development, and management of DCCPS' large, integrated extramural programs. In addition, Debbie has also provided leadership for a number of high-profile special initiatives, including as co-chair of an NCI Implementation Team to address one of the Cancer Moonshot℠ recommendations for accelerating cancer research.

We are indeed fortunate at NCI to have a deep bench of strong leaders like Debbie to step up during transition periods. Her steady hand will ensure that DCP's excellent staff and portfolio have the support needed to continue NCI's broad portfolio of important prevention research activities.

Norman E. Sharpless, M.D. NCI Director – December 20, 2018
Announcing the new DCP Acting Director

Debbie M. Winn, PH.D.

Program Director of the Month, Dr. Natalie Abrams

Dr. Natalie Abrams is a Program Director in the Cancer Biomarkers Research Group in the Division of Cancer Prevention at the National Cancer Institute. She provides scientific and programmatic leadership to the grants and cooperative agreements funded under the Informatics Technology for Cancer Research initiative. Additionally, Dr. Abrams manages a contract with the Frederic National Laboratory for Cancer Research (FNLCR), which aims to assess the feasibility and utility of a Cancer Biomarker Data Aggregator. The proposed initiative aims to accelerate the development of artificial intelligence applications for risk assessment and early detection of cancer. She also serves as a Genomic Program Administrator for the Division of Cancer Prevention and as a Divisional representative in many trans-NCI scientific initiatives.

Before joining NCI, Dr. Abrams was a Scientific Lead/Manager in the Informatics Core in the Advanced Biomedical Computing Center at the FNLCR. Prior to that, she was an Assistant Professor at the J. Craig Venter Institute, conducting independent research in bioinformatics and comparative genomics. Dr. Abrams received a doctoral degree from the Engelhard Institute of Molecular Biology in Moscow, Russia.