FROM THE CO-CHAIRS
PETER J. O’DWYER, MD (LEFT), AND MITCHELL D. SCHNALL, MD, PhD
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Our focus in this issue of the Newsletter is on the NCI Community Oncology Research Program (NCORP), funded through the Division of Cancer Prevention (DCP), led by Worta McCaskill-Stevens, MD, MS. The grant that funds activities in this Program, both therapeutic and prevention/screening/symptom management, was recently recompeted, and we are delighted to report successful funding of the ECOG-ACRIN NCORP Research Base, where we received a priority score of 29, comfortably in the top half of successful applications. We recognize the NCORP sites that received funding under this mechanism, and in particular celebrate the addition of four new NCORP sites, three of which claim ECOG-ACRIN membership. This is a healthy development, and occurs at a time in which we as a group are re-assessing how best to engage community physicians and their research staff in all aspects of our ECOG-ACRIN research.

Many community oncologists participate in EA trials outside of the NCORP structure, and we want to encourage the voice of the community to be heard from all sources. To that end, we are developing a different structure for the Community Cancer Committee, led by new chair Matthias Weiss, MD of ThedaCare in Wisconsin. We will provide additional perspective on planned activities in upcoming issues. There are important questions that lend themselves to community participation. For example, how do the results of our trials, conducted as they are in highly committed academic centers and community practices, compare to results that would be obtained in a real-world setting, in which treatment decisions need to be made independently of restrictions such as eligibility criteria, or dose modifications that might not quite fit the clinical scenario? Can we avail of data analysis that might prompt interpretation of the existing trials using differently sourced control groups? Should successful trials be followed by the equivalent of phase IV registry studies to better understand the overall contribution of an advance?

This last question fits in the Cancer Care Delivery Research (CCDR) Program, headed by Ruth Carlos, MD of the University of Michigan. At the recent NCORP Annual Meeting in Bethesda, this area of research was highlighted as a high priority for future studies by Ann Geiger, PhD, MPH of the Division of Cancer Control & Population Sciences (DCCPS). Ann pointed out that 18 CCDR trials are currently open, and that this field has accrued almost 10,000 patients in the last five years. She articulated the goal “that the NCORP should be the premier laboratory for CCDR trials,” and that funding has increased every year to a projected $20 million in 2019. We encourage participation of interested members in the CCDR Committee Session at our Fall 2019 Group Meeting in Fort Lauderdale this October, where opportunities to discuss priorities and trials will define our activities in this important area.

Accessing clinical data to assess efficacy and impact is of course a challenge of our information-rich age. We want to remind you that the First Robert L. Comis, MD Translational Science Symposium – taking place at the Fall Group Meeting on Thursday, October 24 from 12:00 to 3:30 pm, and open to all attendees – will address this issue: how do we extract meaningful data from the medical record for these purposes? Larry Shulman, MD from Penn (who directs the National Cancer Database) and Neal Meropol, MD from Flatiron Health will both address this issue, and the several research opportunities it provides. In addition, other data-rich sources of information, and their use, will be presented. Among them, a field that has several active projects underway in EA is radiomics, the analysis of data contained in imaging studies (CT, MRI) that may not be visible with the naked eye. As an introduction to this field, and to whet appetites for this opportunity, Despina Kontos, PhD has provided a primer in this issue. Despina heads the Radiomics Committee, and is an enthusiastic collaborator in these clinical studies.

EA’S NCORP RESEARCH BASE: DELIVERING HIGH-QUALITY CARE IN THE COMMUNITY SETTING

ECOG-ACRIN extends a very warm welcome to the group of NCORP sites (both new and returning!) who “officially” came on board with the grant cycle beginning August 1.
EA's NCORP Research Base brings novel and unique strengths to the network—engaging community providers and researchers in a robust program linked to our group's overall scientific themes of precision oncology, immuno-oncology, reducing overtherapy/diagnosis, and leveraging novel biomarker platforms.

This program encompasses the broad scope of cancer as a societal problem—addressing cancer risk and prevention, the symptomatic and psychosocial experiences of the patient, and optimal delivery of cancer care in his/her social context. Priorities include research to identify at-risk populations with precision, to improve outcomes, alleviate anxiety, and manage health care expenditures—all in service of our shared goal of better outcomes, better care, and better quality of life for patients with cancer.

We look forward to continuing our close collaboration with these NCORP sites listed below, as we work to ensure that EA trials address clinical problems relevant to community oncology settings where an estimated 80% of patients access their cancer care.

**EA NCORP SITE GRANTEES**

Atlantic Health Cancer Consortium Community Oncology Research Program  
Aurora NCORP  
Baptist Memorial Health Care/Mid South MU NCORP  
National Capital Area Minority Underserved NCORP  
Carle Cancer Center NCORP  
Delaware/Christiana Care NCORP  
CIRI Oncology Research Alliance NCORP  
Columbus NCORP  
Cancer Research Consortium of West Michigan NCORP  
Cancer Research of Wisconsin and Northern Michigan Cons  
Dayton NCORP  
Essentia Health NCORP  
Georgia Cares Minority Underserved NCORP  
Geisinger Cancer Institute NCORP  
Georgia NCORP  
Gulf South Minority Underserved NCORP  
Heartland Cancer Research NCORP  
Iowa–Wide Oncology Research Coalition NCORP  
University of Kansas Cancer Ctr-MCA Rural MU NCORP  
Michigan Cancer Research Consortium NCORP  
Metro Minnesota Community Oncology Res Consortium  
Montana Cancer Consortium NCORP  
Montefiore Minority Underserved NCORP  
Medical University of South Carolina MU NCORP  
Nevada Cancer Research Foundation NCORP  
Cancer Research for the Ozarks NCORP  
Pacific Cancer Research Consortium NCORP  
Puerto Rico MU NCORP  
Sanford NCORP of the North Central Plains  
Stroger Hospital of Cook County MU NCORP  
VCU Massey Cancer Center MU NCORP  
Western States Cancer Research NCORP  
Wisconsin NCORP

**HIGHLIGHTS FROM THE NCORP ANNUAL MEETING**

ECOG-ACRIN representatives joined NCORP program staff, investigators and administrators in Bethesda, Maryland in late August for the Annual Meeting of the NCI Community Oncology Research Program (NCORP). This year’s meeting highlighted the expanded geographic coverage of the program, new goals and ongoing research achievements.

Attendees welcomed principal investigators from four new NCORP sites, who talked about their plans for participating in the network: Gary Doolittle, MD, Kansas MCA Rural NCORP; Missak Haigentz, MD, Atlantic Health NCORP; Scott C. Remick, MD, MaineHealth NCORP; and Lucile Adams-Campbell, MD, National Capital Area MU NCORP. Key benefits they cited as new member sites were opportunities for new collaborations and increasing minority accruals.

In his keynote address, acting NCI Director Douglas Lowy, MD, told attendees that he really appreciates what the NCORP sites are doing: “Your dedication in conducting trials and referring patients for prevention, screening and treatment, are important and are providing high quality care for patients in the community where the vast majority of patients receive their care.”

Several ECOG-ACRIN trials were highlighted at the meeting. Dr. Lowy noted that just under 50% of patients accrued in the MATCH cancer treatment trial were from NCORP sites. Multiple presenters touched on the growing participation of NCORP sites in the TMIST screening trial. The breakout session on accrual planning and opportunities gave active sites the opportunity to share
best practices for TMIST accrual. The legacy of NCORP Principal Investigator Arti Hurria, MD, who died tragically in 2018, was honored in a session on geriatric oncology. Dr. Hurria inspired and directly contributed to the development of EA’s Geriatric Oncology Working Group.

Visit the NCORP website to read a meeting summary.

MENTOR & MENTEE: NOW BOTH NCORP PRINCIPAL INVESTIGATORS

The NCORP Annual Meeting is an opportunity for NCORP staff to share updates and research advances – but it is also a chance to connect with colleagues and friends, as was the case this year for Missak Haigentz, Jr., MD, principal investigator of the new NCORP site Atlantic Health Cancer Consortium, and his longtime mentor and colleague Joseph Sparano, MD, principal investigator of Montefiore Minority Underserved NCORP and Vice Chair of ECOG-ACRIN Cancer Research Group. Learn more below from Dr. Haigentz about how Dr. Sparano helped shape his career.

How did you and Dr. Sparano meet and begin working together?

I met Dr. Sparano when I was interviewing for my first faculty position at Albert Einstein College of Medicine, straight out of fellowship. As part of my interview day he took me on a tour of the hospital and I remember distinctly, as we were walking the oncology floor, we stopped to talk to a fellow and he introduced me as "your new attending."

Soon afterward, in 2001, I applied to present at the very first ECOG-ACRIN Young Investigator Symposium, which Joe founded. I really valued that experience, and it has been tremendous to watch nearly a generation of early-career researchers benefit from the opportunity to share their work in a national venue, gaining confidence and improving their presentation skills.

I became a head and neck medical oncologist – very different from Joe's interest in breast oncology – but we share a passion for clinical research. He identified that in me early on and provided me many opportunities to shine, both within and outside of Einstein. I am extremely grateful for that. In 2004, he helped me get my first investigator-initiated clinical trial through the NCI's Cancer Therapy Evaluation Program (CTEP). I secured an ASCO Career Development Award with Joe as one of my referees. He also introduced me to Dr. Arlene Forastiere, who was chair of the EA Head and Neck Core Committee at that time.

How do you hope participation in the NCORP network will impact your site and your community?

We are very excited to be building something new in our community: a research consortium of oncologists who will work as a team to prioritize and enroll patients in clinical trials. We are the first and only NCORP consortium based in New Jersey, and our six centers cover 73% of the state's population. Overall, Atlantic Health is increasing the NCORP catchment area by 6.5 million people.

Beyond helping improve the quality of cancer treatment our patients receive, NCORP participation will also allow us to contribute to cancer prevention, cancer control, and cancer care delivery research. These areas, though somewhat outside our comfort zone as medical oncologists, are critically important.

Joseph Sparano, MD (left) and Missak Haigentz, Jr., MD
Aurora NCORP will continue to play a leading role in bringing innovative clinical trials to patients. As part of the merged Advocate Aurora Health, Wisconsin-based Aurora Health Care recently accepted a six-year $10.2 million National Cancer Institute (NCI) Community Oncology Research Program (NCORP) grant, the largest research grant in the health system's history (National Institutes of Health award number 2UG1CA190140-06).

The grant will help the community site expand its NCI clinical trials, including ECOG-ACRIN trials, to 13 local cancer clinics, bringing Aurora NCORP's total number of sites to 31 throughout Illinois and Wisconsin. Aurora merged with Illinois-based Advocate Health Care in 2018 to form one of the 10 largest not-for-profit health systems in the country.

Aurora NCORP, led by two co-principal investigators – Thomas Saphner, MD, and Michael Thompson, MD, PhD – now supports more than 100 investigators and nearly 100 research team members, including research coordinators, managers and regulatory specialists.

This new grant recognition builds on Aurora's initial five-year NCORP funding award. During the initial five-year grant, Aurora NCORP opened 78 new NCI trials that enrolled more than 1,200 participants.

Aurora NCORP’s expansion across Illinois and Wisconsin ensures that patients living in Advocate Aurora Health communities will continue to have opportunities to access the latest investigational oncology treatments available from ECOG-ACRIN. For example, hematologist and oncologist Shamsuddin Virani, MD, is the nation's top enroller in the ECOG-ACRIN/NHLBI National Myelodysplastic Syndromes Study, and three of the top five enrolling sites in the study belong to Aurora NCORP.

Aligned with NCI's mission, the expansion of Aurora NCORP also makes certain that oncology research is conducted in "real world" communities, which contributes to findings that are generalizable and effective in improving health outcomes and reducing disparities for patients across the country.

Aurora NCORP supports 18 Wisconsin cancer clinics across eastern Wisconsin, as far north as Marinette and as far south as Kenosha. The 13 Advocate cancer clinics joining Aurora NCORP span northeastern Illinois, from Advocate Children’s Hospital-Oak Lawn on Chicagoland's south side to Advocate Condell Medical Center, Libertyville in the north Chicago metropolitan area. The Illinois sites include a children’s hospital with two campuses, which will enable Aurora NCORP to participate in pediatric clinical trials. Of these 13 new sites, 10 are first-time members of ECOG-ACRIN. Sigrun Hallmeyer, MD, serves as the principal investigator for the Advocate locations.

Although new to NCORP, Advocate has participated in hundreds of NCI clinical trials. Likewise, Aurora has been offering best-in-class care through cancer clinical trials for years. Our clinical trial participation helps provide more options to patients to achieve the best possible results.

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THE EMERGING POTENTIAL OF RADIOMIC BIOMARKERS IN ONCOLOGY CLINICAL TRIALS

DESPINA KONTOS, PHD
ASSOCIATE PROFESSOR OF RADIOLOGY, UNIVERSITY OF PENNSYLVANIA

Imaging to determine response and outcomes of therapy is a standard part of our therapeutic trials. Measurement of the tumor, typically by estimates of size, longest diameter, or volume, both at baseline and longitudinally, is perhaps the most important criterion of the success of therapy, both on trials and in standard practice. What is not usually appreciated in reviewing the image on the scan is that the actual image represents the summation of individual signals from tiny parts of the whole (pixels), and therefore contains a great deal more information than we can see with the naked eye. This information potentially contains structural and other components of the appearance of the tumor if it could be analyzed in detail.

Until recently, the enormous volume of data involved made such analyses challenging. However, in recent years this so-called radiomic analysis, namely the high-throughput extraction of radiologic imaging features, has become possible in several ECOG-ACRIN institutions, and is now incorporated in a scientific committee devoted to expanding its value to science in the Group. The rationale is that imaging non-invasively captures in-vivo patterns of heterogeneity for the entire tumor, providing complementary phenotypic information with prognostic and predictive value. This scientific activity is one of the pillars of our Big Data analyses in EA, and will be a focus of the First Robert L. Comis, MD Translational Science Symposium at our Fall 2019 Group Meeting in Fort Lauderdale, Florida. The Radiomics Committee is co-led by Dr. Habib Rahbar MD, Associate Professor of Radiology at the University of Washington and myself. Trials incorporating such endpoints are being analyzed, including radiomic markers of DCIS aggressiveness (E4112). The goal is to leverage computational analysis of routinely acquired multi-modality imaging to provide rapid, non-invasive, and relatively inexpensive imaging biomarkers that can augment precision therapy for patients diagnosed with cancer.

A recent initiative of the EA Radiomics Working Group is a group concept proposal submission to perform radiomic analysis of the NCI-MATCH trial data. This concept will be discussed in the Radiomics Working Group Session, which is open to all ECOG-ACRIN members. The analysis of the imaging data collected in the NCI-MATCH protocol provides a unique opportunity to perform unprecedented radiomic-genomic correlative analyses. Images acquired in patients that were screened, but did not go on study arms, will be used for primary analysis. About 75% of imaging data available are CT scans, while additional modalities including US, PET, and MRI will be used when available. A review of the available imaging data would indicate there are at least 4,620 cases that would meet criteria for analysis. To maximize efficiency in data sharing among participating investigators, all lesion annotations will be uploaded in a commonly accessible data repository using the ACR DART platform. To extract radiomic signatures from the MATCH trial data, segmented lesions will be analyzed for a full spectrum of high-throughput extraction of radiomic features. Investigators will explore a breadth of cutting-edge algorithms to extract a range of radiomic descriptors and will be able to implement and test custom AI algorithms, including machine learning and deep-learning methods (such as the one presented by Drs. Lehman and Barzilay in the General Session). The extracted radiomic descriptors will be correlated to the available genomic data collected by the NCI-MATCH protocol, including all genes tested by NCI-MATCH's Customized Thermo Fisher OncomineTM panel. Secondary analysis will expand the work proposed to include available digital pathology images.

While related statistical and machine learning methodologies are still in development, the important question that the radiomics community needs to address is to which extent imaging phenotypes can provide additional information to current histopathologic and emerging molecular assays to ultimately augment clinical decision making for guiding precision therapy of cancer. ECOG-ACRIN is uniquely positioned to move the field forward in this direction. To this end, it is important to adopt common standards for the extraction of radiomic biomarkers (efforts currently in process by the Quantitative Imaging Network) to mitigate effects of the continuously evolving imaging technology, promote data sharing practices to accelerate independent validation and generalizability of findings, and foster interdisciplinary collaborations to enable the evaluation of radiomic biomarkers in prospective, ideally randomized, oncology clinical trials.