The Department of Epidemiology and Biostatistics celebrates Ann Zauber, who has been working at Memorial Sloan Kettering Cancer Center for an impressive 45 years. Ann discovered her passion for statistics while attending a summer research program at the University of Alabama Medical School. This was the summer between her sophomore and junior years of undergraduate school at Hollins College. Thankfully for us at MSK, Ann changed her major from chemistry to statistics.

After graduating undergrad, Ann went directly into a Ph.D. program at Johns Hopkins University. In the early 1970s she explored the newly emerging field of statistics: health services also at John Hopkins. Dr. Zauber did a post-doc in epidemiology working on breast cancer treatment with a randomized clinical trial in Pittsburgh. Ann’s time at MSK began after she settled in New Jersey. She sought to join epidemiologists in their work on cancer epidemiology as well as cancer prevention and control.

Ann’s career has focused on researching colorectal cancer. Some of her career highlights include a 2012 NEJM Paper, done with longtime collaborator Dr. Sidney Winawer, which strongly affirmed that colonoscopies reduce cancer related mortality. The pair were featured for their work on the front page of the New York Times! Ann also worked on CISNET microsimulation modeling, which started in 2000.

This work was eventually a part of the guideline recommendations for 2008 CRC guidelines, 2018 American Cancer Society Guidelines, as well as the updated 2016 and most recent 2021 CRC Guideline recommendations with the United States Preventive Task Force. The new guidelines recommend that all average-risk adults should start CRC screening at age 45 due to the increased incidence of young-onset CRC.

Ann’s work using microsimulation modeling to assess the growth of adenomas and to predict the occurrence of colorectal cancer has led to efficiency examining and optimally screening patients to reduce the burden of colorectal cancer. Some of her current work includes working on the possibility of a blood test, rather than a fecal test, for colon cancer. Dr. Zauber’s work has had significant impact on the field of colon cancer.

Some of Ann’s joys of working at MSK include the collegiate atmosphere with other dedicated employees, the warm and fun people in Epi/Bio who are also lifelong friends, and the opportunity to advise for CRC screening through her microsimulation modeling. Fun fact: Ann has been in 6 different rooms in the same building.

We are fortunate to have had her working with us in the Epidemiology and Biostatistics Department at MSK for so many years. Ann is an absolute treasure for the department and her homemade pound cake is the stuff of legends. Hopefully, she will continue to work with us for many more years to come!

The Population Sciences Research Program, led by Colin Begg and Janine Bernstein, is thrilled to announce the new Population Health Sciences PhD program in conjunction with Weill Cornell! The five year program has opportunities for students in a wide array of fields, including biostatistics, data science, epidemiology, health policy and economics, outcomes research and behavioral sciences. The program will formally begin next fall, and applications are due December 1st, 2023. For more information please consider registering for an upcoming information session.

@MSKBiostats Service Twitter account has reached a follower count of 1620 and is growing every week! We thank our 2022-2023 Social Media Committee members Jasme Lee, Joanne Chou, Jovana Olazola, Tong Fei, Lily Boe and our outgoing chair, I-Hsin Lin, for their engagement with the statistics community online and dedication to showcasing the amazing work of our department.

We are excited to welcome the members of the 2023-2024 committee: Richard Koppenaal, Joseph Bunn, Hannah Fuchs, MSPH and new committee chair Colin Begg, PhD. If you have any content ideas or work you would like us to promote! Open to all interested in our work.

CELEBRATING 45 YEARS OF ANN ZAUBER

October 2023 | VOLUME 15, ISSUE 3

WEB
EPI/BIO COMMUNITY BUILDING INITIATIVE
2023 has been filled with fun activities so far!

UPCOMING EVENTS

BOOK CLUB
The next Book Club will be held on Tuesday, December 5th at 4PM in room 381 and also via Teams. The book to be discussed will be *Between Two Kingdoms: A Memoir of a Life Interrupted* by Suleika Jaouad.

CHIT CHAT WEDNESDAYS
Please join us for Chit Chat Wednesdays, 12:30pm in the Collaboration Café! It’s a great opportunity to have lunch (or a cup of coffee) with your co-workers. Please stay tuned for plans as the weather warms!

MOVIE CLUB
The next Movie Club will be held November 7th at 12PM in conference room 3A-0327. The movie will be *Knives Out!*

EPI/BIO CONNECTIONS GAME CHALLENGE
The Community Building Initiative is kicking off its inaugural Epi/Bio NYT Connections Challenge! Connections in a daily word-grouping game which gives players four tries to guess the correct categories. If you would like to join in on our Connections Challenge, please sign up using the Google sheet [here](https://example.com) by Tuesday, October 31. After which, we will randomly allocate you to teams and be in touch with more details. In the meantime, please reach out to Stephanie Lobaugh ([lobaughs@mskcc.org](mailto:lobaughs@mskcc.org)) or Anne Hahn ([hahna1@mskcc.org](mailto:hahna1@mskcc.org)) with any questions.

JOIN THE MSK RUNNING GROUP!
Are you looking to boost your fitness, unwind after work, and connect with fellow MSK colleagues? Look no further than the MSK Running Group! Whether you’re an experienced runner or just starting out, our weekly runs are designed to accommodate all paces.

**When:** Every Thursday, 5:30 PM - 6:30 PM

**Where:** Right outside the revolving doors · 633 3rd Avenue, New York, NY, USA

**Hosts:** Shaun, Gordie

**Event Details:**
We'll kick off the evening with some stretching at 5:20 PM, depart for a leisurely 3-4 mile run at 5:30 PM, and wrap up with more stretching by 6:30 PM. This is a fantastic opportunity to embrace a healthy lifestyle while building camaraderie with your MSK teammates.

Don't miss out on this exciting chance to get moving and have fun. Grab your running shoes and join us on Thursday evenings! All fitness levels are welcome.

View and RSVP to our events on Heylo ([https://link.heylo.co/U9uM](https://link.heylo.co/U9uM)).

Contact either Gordie Watt ([wattg@mskcc.org](mailto:wattg@mskcc.org)) or Shaun Porwal ([porwals@mskcc.org](mailto:porwals@mskcc.org)) for any questions or concerns.

THE EPI/BIO FALL FAIR
In the Collaboration Cafe of 633 3rd Ave, at 3:30-4:30PM on October 24th, the department will be holding its first Fall Fair! The Epi/Bio Fall Fair will be an afternoon of games, competitions, and light refreshments! Bring your craziest and coolest looking gourd for a chance to win the special "Gourd Award." We will also be hosting our first ever Homemade Pie/Cobbler Baking Competition. Please reach out to Jeffin Naduparambil ([naduparj@mskcc.org](mailto:naduparj@mskcc.org)) if you would like to sign up to bring a Pie or Cobbler!
PROMOTIONS
Nicholas Ceglia promoted to Principal Computational Biologist
Audrey Mauguen promoted to Associate Attending
Genesis Pineda promoted to Senior Administrative Assistant
Li-Xuan Qin promoted to Attending
Meghan Woods promoted to Senior Project Manager

STAFF ACHIEVEMENTS
Helena Furberg Barnes presented findings from her NCI R01-funded Resolve Study at the 7th Annual Cancer Cachexia Conference held in Edinburgh, Scotland. Her findings suggested that CF-derived body composition features may be non-invasive proxies for tumor aggressiveness which is important in a disease like kidney cancer where biopsies are not routinely performed.

Mary Lena Bleie presented at the 2023 MSK Postdoc Research Symposium. Her poster, “A Domain-Oriented Analysis Pipeline for Spatial Transcriptomics With Application to Melanoma” details a novel analysis pipeline for 10X Visium melanoma data, which uses tools from text analysis as well as graph-based clustering to identify and analyze spatial domains.

Jessica Lavery presented the poster, “Assessing Heterogeneous Treatment Effects with Time-to-Event Outcomes”, at the first annual Columbia Biostatistics Annual Research Symposium. The poster included some of her dissertation work, which is joint work with Yuan Chen & Yuania Wang.

PERSONAL MILESTONES
On Friday, August 10th, Farheen Madonia gave birth to Malik Yusuf Madonia. Weighing 6lbs and 12 oz, measuring 18.5 inches, and filled with an abundance of joy, Farheen and Vinny are thrilled to welcome little Malik.

STAFF FAREWELLS
We bid farewell to Jovana Olaizola, a Program Assistant for the Biostatistics service. Jovana is leaving the department at the start of November for a new opportunity at Corporate and Foundation Relations here at MSK. Jovana has been a vital member of the Admin group and will be missed. Wishing you the best!

PUBLICATIONS
In collaboration with exercise scientist Lee Jones, Jessica Lavery and Chaya Moskowitz utilized data from the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial to analyze the association between exercise and survival among over 11,000 individuals diagnosed with cancer. The study, Pan-Cancer Analysis of Postdiagnosis Exercise and Mortality, published in the Journal of Clinical Oncology, found that self-reported exercise consistent with guidelines was associated with a 25% reduction in the risk of mortality when compared with cancer survivors that did not exercise. Additionally, the study found that only 38% of survivors report meeting exercise guidelines, suggesting a need for individual and broader systemic changes to increase exercise in this population, as highlighted in the editorial published alongside the article.

Xiyu Peng, Jasmine Lee, Margaret K. Callahan, Katherine S. Panageas, Ronglai Shen, and colleagues in other departments in MSK published methodology work on TopicFlow, a computational framework for flow cytometry data analysis in Cell Reports Methods. “A topic modeling approach reveals the dynamic T cell composition of peripheral blood during cancer immunotherapy”. The TopicFlow framework employs a Latent Dirichlet Allocation (LDA) model, adapting the concept of topic modeling in text mining to flow cytometry. They analyzed ~17 million T cells collected from 138 peripheral blood samples in 51 patients with melanoma undergoing treatment with immune checkpoint inhibitors (ICIs), and identified three latent dynamic topics that related to treatment resistance and toxicity. This approach can be broadly applied to mine high-parameter flow cytometry data for immunological insights with clinical relevance.

Over the past several months, Anne Reiner has led three manuscripts with Katherine Panageas and Eli Diamond to understand the symptomatology and identify best treatment practices for patients with rare histiocytic neoplasms such as Erdheim-Chester Disease (ECD) and understand dyadic communication between these patients and their caregivers. Using a registry-based study design of ECD patients, Reiner and colleagues found that fatigue and pain were prevalent, severe, interfered in the daily lives of patients, and were unrelated to treatment responses emphasizing the importance of PRIO (Pain Relief Indicators) assessments when evaluating the impact of therapies. In a separate study of patients with rare histiocytic neoplasms on targeted therapy, Reiner and colleagues identified select patients suitable for limited-duration treatment. Finally, in a cross-sectional study of patients with ECD and their caregivers, Reiner and colleagues identified several patient- and caregiver-related factors affecting dyadic communication amenable to intervention.

Gordie Watt, Anne Reiner, Xiaolin Liang, Meghan Woods, Jonine Bernstein, and colleagues published a paper in Radiation Research entitled “Trends in Radiation Dose to the Contralateral Breast During Breast Cancer Radiation Therapy.” Radiation oncology practice has changed over the previous decades to reduce the unwanted stray dose to the untreated contralateral breast, but it is not known whether these changes have produced quantifiable declines in stray dose. This study assessed whether there has been an actual decline is dose received to different parts of the contralateral breast during radiation therapy for participants in the Women’s Environment, Cancer, and Radiation Epidemiology (WECARE) Study treated for local/regional breast cancer from 1985-2008. The authors found that there was a significant decline in dose received to each area of the contralateral breast (inner quadrants, outer quadrants, and areola region), with the largest decline in the inner quadrants. However, the authors noted that the average dose received to the inner quadrants of the untreated contralateral breast remained >1 gray (Gy), suggesting that continued efforts to reduce stray dose are warranted to reduce the risk of radiation-associated contralateral breast cancers.

JOIN THE BEACH NEWSLETTER COMMITTEE!
The Newsletter Committee is always looking for new members. If you’re interested in working on the newsletter, feel free to contact Joey Kanik!
**NEW STAFF**

**Maria Andrade Aray, Assistant to the Chair**

Maria joins the Department of Epidemiology and Biostatistics as the new assistant to chair, Colin Begg. She recently graduated with her MBA from Hofstra University. Prior to joining MSK, she worked in operations management at the Northwell Health Cancer Institute at the Manhattan Eye, Ear, and Throat Hospital. She is looking forward to growing with the department and collaborating with all colleagues.

**Setor Amuzu, Research Fellow**

Setor Amuzu is the inaugural Henry and Alexia Fernandez postdoctoral research fellow in Computational Oncology. Setor joins as a postdoctoral research fellow co-mentored by Jian Carrot-Zhang and Sohrab Shah. His research focuses on investigating associations between somatic alterations and genetic ancestry in common cancers, and integrating multimodal data for the prediction of homologous recombination deficiency and treatment outcome in ovarian cancer. Previously, he was a postdoctoral research associate at McGill University where he also received his PhD in Human Genetics.

**Nikolaos Dimitriou, Research Fellow**

Nikos has joined the Department of Epidemiology and Biostatistics as a postdoctoral research fellow with Jian Carrot-Zhang. His research focuses on mutation interactions and genotype-phenotype mapping. He received his PhD in Bioengineering from McGill University in Montreal.

**Ashley Stephen Doane, Postdoctoral Research Associate**

Ashley has joined the department as a postdoctoral associate with Benjamin Greenbaum and the Merghoub-Wolchack lab at Weill Cornell Medicine. His research focuses on the regulatory genomics of tumor and immune cell development. Previously, he was a postdoctoral research fellow at New York Genome Center with Marcin Imieliński studying the chromatin architecture of structurally rearranged tumor genomes. Ashley completed his PhD in the Tri-I Computational Biology and Medicine Program where he focused on mechanisms of transcriptional reprogramming during B cell development under Olivier Elemento and Ari Melnick.

**Riccardo Lenì, Research Fellow**

Riccardo, a resident in pathology at San Raffaele Hospital in Milan, Italy, has joined the Department of Epidemiology and Biostatistics for a one-year research fellowship with Andrew Vickers. His main research interest is prostate cancer, specifically early detection and management of localized disease. Riccardo is currently working on research projects aimed at determining the effects of overdiagnosis, overtreatment, and active surveillance for early prostate cancer.

**Taylor McCready, Per Diem Data Analyst**

Taylor joins the Department of Epidemiology and Biostatistics as a part-time data analyst, as part of Andrew Vickers team. Taylor previously worked as a Clinical Research Coordinator and Data Analyst for 5.5 years at the Josie Robertson Surgery Center. During that time, she pursued her MPH at NYU and is now pursuing a PhD in Epidemiology at NYU Grossman School of Medicine. She is passionate about improving cancer survival and treatment disparities.

**Yasmeen Mustafa, Administrative Assistant**

Yasmeen joins the Department of Epidemiology and Biostatistics as the new administrative assistant for the Epidemiology service. Previously, Yasmeen was an office coordinator for Dr. Mark Schattner in MSKCC’s Gastroenterology service. She has continued her journey in the healthcare field for 4 years and she is grateful for the opportunity to continue upwards at MSK.

**Aleksei Pakharev, Research Scholar**

Alekssei has joined the Department of Epidemiology and Biostatistics as a postdoc with Ruslan Soldatov. His research focuses on extending existing frameworks and developing new approaches to modeling RNA velocity in single-cell data. He received his PhD in Mathematics from Northeastern University, Boston.

**Nuria Gendrau-Sanclemente, Fulbright Scholar**

Nuria is a 5th year PhD candidate in the Catalan Institute of Oncology in Barcelona, Spain. She has joined the Department of Epidemiology and Biostatistics to conduct a predoctoral research stay of one year in Sohrab Shah’s group. Her PhD project is focused on understanding the molecular mechanisms that drive high-grade serous ovarian cancer (HGSOC) metastasis. In parallel, Nuria is enrolled in a Bioinformatics and Biostatistics Master’s Degree. During her stay, she will study genomic instability in HGSOC pre-malignant lesions by scWGS and scRNAseq, combining wet lab and computational techniques.

**Asher Preska Steinberg, Senior Computational Biologist**

Asher has joined the Department of Epidemiology and Biostatistics as a computational biologist with Andrew McPherson and Sohrab Shah. His research focuses on developing computational methods to define the genomics, proteomics, and evolution of cancers in children and young adults. Previously, he was a Simons Fellow of the LSFR at NYU, where he worked on understanding the role of homologous recombination in microbial genome evolution. He received his PhD in Physical Chemistry from the California Institute of Technology for his work on the biopolymer physics of the gut.

**Mohammad Yosofvand, Research Fellow**

Mohammad has recently been appointed as a postdoctoral research fellow in the Department of Epidemiology and Biostatistics, working under Dr. Ronglai Shen. He earned his Ph.D. in Mechanical Engineering from Texas Tech University in Lubbock, TX. Throughout his doctoral research, he utilized advanced computer vision and deep learning methodologies to analyze and score tumor-infiltrating lymphocytes in H&E breast cancer slides from the Cancer Center at TTU School of Medicine. He is excited to continue his work in biomedical mIF and H&E image analysis, aiming to identify biomarkers associated with immunotherapy and further MSK’s mission to end cancer for life.

**Rebecca Yu, Assistant Research Biostatistician**

Rebecca has joined the Department of Epidemiology and Biostatistics as an assistant research biostatistician with Andrew Vickers. Rebecca has recently attained her master’s degree in biostatistics from NYU School of Global Public Health where she contributed significantly to Dr. Farzana Kapadia’s research, focusing on the investigation of disparities in cancer screenings among individuals living with HIV. Now, Rebecca is eager to leverage her extensive skills in quantitative research, statistics, and programming to drive improved patient outcomes.
GRANT SUCCESS

Sigrid Carlsson, Jennifer Hay, Jada Hamilton, Yuelin Li, Andrew Vickers and Dr. Michael Healey, received a 5-year grant from the American Cancer Society for “Improving informed choice and guideline-concordant prostate cancer screening: a randomized controlled trial comparing a gist-based versus traditionally designed decision aid.”

Stephen Martis, Research Fellow in the Greenbaum Lab, received the Marie-Josée Kravis Fellowship in Quantitative Biology for his project titled “Disentangling the ecological determinants of T cell activation, proliferation and function”.

Aaron Mitchell received a grant titled “Prescription Drug Prices, Financial Incentives, and Cancer Care Quality in Medicare Part B” co-sponsored by Arnold Ventures and The Commonwealth Fund.

Kathy Panageas, Jonine Bernstein, Deborah Schrag, and Jun Mao received a training grant from the NCI for their T32 program “Oncology-focused Postdoctoral Training in Care Delivery and Symptom Science (OPTICS)”.

Eduard Reznik received the KCRP Idea Development Award – Early Career Investigator from the DoD for his project titled “Coevolution of Metabolism and Immune Microenvironment as a Driver of Therapeutic Response and Metastasis in ccRCC” Other investigators include Irena Ostrovnaya.

Ronglai Shen and Colin Begg received an R21 award from the National Cancer Institute for their project titled “Leveraging the Hidden Genome to Recover the Missing Heritability of Cancer”.

ED&I CORNER

• “Save the date!” ED&I will be hosting the upcoming panel titled “Addressing Bias in Clinical Prediction Tools” to discuss clinical algorithms and their impact on disparities on November 2nd, at 12 PM in Conference Room 223 (633 3rd Avenue). A hybrid option (Zoom) will also be made available!
• Snapshot of recommended reads and resources for anyone who is interested in reading more on this topic:
  • Dissecting racial bias in an algorithm used to manage the health of populations (Obermeyer, Powers, Voegli, Mullainathan, 2019)
  • Hidden in Plain Sight- Reconsidering the Use of Race Correction in Clinical Algorithms (Vyas, Eisenstein, Jones, 2020)
  • Awareness of Racial and Ethnic Bias and Potential Solutions to Address Bias With Use of Health Care Algorithms (Jain et al, 2023)
• Be aware of the new accessibility icons and instructions (see below) sent with all departmental seminars (both in-person and hybrid).

ALEXIA AND MARGARET’S NIGERIA TRIP

After a 48-hour escapade, including spending nearly 24 hours within 10 minutes of the Atlanta airport, Alexia Iasonos and Margaret Du recently attended a conference focused on “Changing the Cancer Care Landscape in Nigeria” held September 26th-28th at Obafemi Awolowo University in the ancient Yoruba city of Ile-Ife, Nigeria. This event was hosted by and corresponded to the 10th anniversary of the African Research Group for Oncology. Over 20 members of the MSK Global Cancer Disparities Initiative attended. Alexia and Margaret are collaborating with multi-disciplinary colleagues within this initiative to conduct studies in screening, prevention, or treatment of cancer patients in Nigeria. During the conference, Alexia presented a scientific lecture on clinical trial design and gave a full day workshop on scientific writing and publishing to Nigerian Cancer Research Training scholars. Margaret presented recent findings from an NCI funded study of risk factors and biology of colorectal cancer in the region and gave tips on grant writing. They are grateful for the opportunity to meet partners and trainees in Nigeria and happy to report the trip home only took a little over 30 hours.

MAKE YOURSELF HEARD DURING ZOOM!

Did you know?

Some meetings on Zoom will mute you automatically.

On PC unmute via the icon on the bottom left

In a conference room dial #61 then press 2 to unmute