



An AACR Special Conference
Aging and Cancer
November 17-20, 2022
San Diego, CA



Conference Cochairs:

Steven E. Artandi, Stanford Cancer Institute, Stanford, California

Joanna L. Groden, University of Illinois, Chicago, Illinois

Eileen P. White, Rutgers Cancer Institute of New Jersey, New Brunswick, New Jersey

[U]- On-demand recording unavailable

THURSDAY, NOVEMBER 17

5:30-5:45 p.m. Welcome & Introduction

Sapphire Ballroom MN

Joanna L. Groden, University of Illinois, Chicago, *Illinois*

5:45-6:45 p.m. Opening Keynote [CME Eligible]

Sapphire Ballroom MN

DNA damage repair: Impact on aging and cancer and applications of nutritional interventions

J.H.J (Jan) Hoeijmakers, Erasmus Medical Center, Rotterdam, The Netherlands

6:45-7:45 p.m. Plenary Session 1: DNA Repair [CME Eligible]

Sapphire Ballroom MN

Session Chair: Joanna L. Groden, University of Illinois, Chicago, Illinois

6:45-7:15 p.m.

Inherited DNA repair defects and premature aging

Alan D. D'Andrea, Dana-Farber Cancer Institute, Boston, Massachusetts

7:15-7:45 p.m.

Neuronal genome stability and plasticity

Andre Nussenzweig, National Cancer Institute, Bethesda, Maryland

7:45-9:00 PM

OPENING RECEPTION

Promenade Plaza

FRIDAY, NOVEMBER 18

7:00-8:00 a.m. Continental Breakfast

Sapphire Ballroom I-J

8:00-10:00 a.m. Plenary Session 2: Inflammation and Aging [CME Eligible]

Sapphire Ballroom MN

Session Chair: Ami S. Bhatt, Stanford University, Stanford, California

*Short talk selected from proffered abstracts

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- 8:00-8:30 a.m. **Defining immunological age in the context of breast cancer progression and therapeutic response**
Sandra S. McAllister, Harvard Medical School, Boston, Massachusetts
- 8:30-8:45 a.m. **Dissecting the role of aging and inflammation on clonal hematopoiesis***
Marco De Dominici, University of Colorado Anschutz Medical Campus, Aurora, Colorado
- 8:45-9:15 a.m. **From hematopoiesis to immunity: Delineating the impact of aging on B-cell acute lymphoblastic leukemia progression**
Curtis J. Henry, Emory University School of Medicine, Atlanta, Georgia
- 9:15-9:30 a.m. **Cytokines surge in the blood years prior to a cancer diagnosis in elderly individuals***
Guangbo Chen, Stanford University, Stanford, California
- 9:30-10:00 a.m. **Measuring the microbiome: Improving the predictive power of microbiome analysis in cancer outcomes**
Ami S. Bhatt, Stanford University, Stanford, California

10:00-10:30 a.m. Break
Sapphire North and Northwest Foyers

10:30 a.m.-12:00 p.m. Plenary Session 3: Effect of Racial Injustice and Stress on Cancer [CME Eligible]
Sapphire Ballroom MN
Session Chair: Robert A. Winn, VCU Massey Cancer Center, Richmond, Virginia

- 10:30-11:00 a.m. **The impact of place on cancer: Socioeconomic status, access and discrimination**
Electra D. Paskett, The Ohio State University, Columbus, Ohio
- 11:00-11:30 a.m. **Role of race in accelerating progression of colorectal cancer**
John M. Carethers, University of Michigan, Ann Arbor, Michigan
- 11:30-12:00 p.m. **Structure matters: A call to action**
Robert A. Winn, VCU Massey Cancer Center, Richmond, Virginia

12:00-2:00 p.m. Lunch On Own

2:00-3:45 p.m. Plenary Session 4: Somatic Mutations and the Aging Process [CME Eligible]
Sapphire Ballroom MN
Session Chair: Joanna L. Groden, University of Illinois, Chicago, Illinois

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- 2:00-2:30 p.m. **The DNA damageome and cancer**
Susan Rosenberg, Baylor College of Medicine, Houston, Texas
- 2:30-2:45 p.m. **Apoptotic DNase DFFB mediates stress-induced mutagenesis***
Matthew J. Hangauer, UC San Diego, La Jolla, California
- 2:45-3:00 p.m. **Older adult-specific microbes correlate with treatment response and markers of T-cell senescence in NSCLC***
Daniel Spakowicz, The Ohio State University, Columbus, Ohio
- 3:00-3:30 p.m. **Breast cancer suppressor BRCA2 and separation of function alleles in the mouse [U]**
Maria Jasin, Memorial Sloan Kettering Cancer Center, New York, New York
- 3:30-3:45 p.m. **TP53 somatic evolution in healthy fallopian tube across the full spectrum of human lifespan***
Rosana Risques, University of Washington, Seattle, Washington

3:45-4:00 p.m. Break
Sapphire North and Northwest Foyers

4:00-5:00 p.m. Keynote Lecture [CME Eligible]
Sapphire Ballroom MN
Session Chair: Steven E. Artandi, Stanford Cancer Institute, Stanford, California

Mutations in normal cells
Michael R. Stratton, Wellcome Sanger Institute, Cambridge, England

5:00-6:30 PM POSTER SESSION A / RECEPTION
Sapphire Ballroom I-J

SATURDAY, NOVEMBER 19

7:00-8:00 a.m. Continental Breakfast
Sapphire Ballroom I-J

8:00-10:15 a.m. Plenary Session 5: Aging in the Tumor Microenvironment [CME Eligible]
Sapphire Ballroom MN
Session Chair: Sheila A. Stewart, Washington University in St. Louis, St. Louis, Missouri

8:00-8:30 a.m. **Age-related changes in the tumor microenvironment drive tumor progression**
Sheila A. Stewart, Washington University in St. Louis, St. Louis, Missouri

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- 8:30-8:45 a.m. **Integrating noise into a signal: Luminal epithelial cells integrate variable responses to aging into stereotypical changes that underly breast cancer susceptibility***
Mark A. LaBarge, Beckman Research Institute at City of Hope, Duarte, California
- 8:45-9:15 a.m. **Age-related changes in pancreatic fibroblasts enhance pancreatic cancer growth and invasion**
Daniel J. Zabransky, Johns Hopkins University, Baltimore, Maryland
- 9:15-9:30 a.m. **Physical and metabolic aspects of therapy induced senescence and polyploidy in an evolving tumor microenvironment***
Michelle R. Dawson, Brown University, Providence, Rhode Island
- 9:30-9:45 a.m. **Identification and characterization of the cancer permissive environment in companion dogs***
Jaime F. Modiano, University of Minnesota, Minneapolis, Minnesota
- 9:45-10:15 a.m. **The role of aging in reactivation from metastatic melanoma dormancy**
Mitchell Fane, Johns Hopkins School of Public Health, Baltimore, Maryland

10:15-10:45 a.m. Break
Sapphire North and Northwest Foyers

10:45 a.m.-12:45 p.m. Plenary Session 6: Epigenetics and Aging [CME Eligible]
Sapphire Ballroom MN
Session Chair: Michelle C. Barton, OHSU Knight Cancer Institute, Portland, Oregon

- 10:45-11:15 a.m. **The tick tock of epigenetic clocks in patients with cancer**
Christin E. Burd, The Ohio State University, Columbus, Ohio
- 11:15-11:30 a.m. **Revisiting the bad luck hypothesis: Cancer risk and aging are linked to replication-driven changes to the epigenome***
Morgan E. Levine, Yale School of Medicine, New Haven, Connecticut
- 11:30a.m.-12:00 p.m. **Epigenetic mechanisms of tissue aging**
Payel Sen, National Institute on Aging, Baltimore, Maryland
- 12:00-12:15 p.m. **Aging-induced reprogramming of the cell of origin defines lung cancer evolution***
Xueqian Zhuang, Memorial Sloan Kettering Cancer Center, New York, New York

*Short talk selected from proffered abstracts



12:15-12:45 p.m. **An oncogenic histone reader promotes metaplastic TNBC**
Michelle C. Barton, OHSU Knight Cancer Institute, Portland, Oregon

12:45-2:45 p.m. Lunch On Own

2:45-4:15 p.m. Plenary Session 7: Senescence and Aging [CME Eligible]

Sapphire Ballroom MN

Session Chair: Steven E. Artandi, Stanford Cancer Institute, Stanford, California

2:45-3:15 p.m. **Immune-mediated targeting of senescent cells**
Corina Amor, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York

3:15-3:30 p.m. **TXNRD1 drives innate immune response in senescent cells to promote tumor immune surveillance and age-associated inflammation***
Xue Hao, The Wistar Institute, Philadelphia, Pennsylvania

3:30-3:45 p.m. **Pre-malignant plasma cells exhibit a senescence-like phenotype and accumulation of transposable elements***
Gabriel Alvares Borges, Mayo Clinic, Rochester, Minnesota

3:45-4:15 p.m. **Telomerase in aging, cancer, and evolution**
Steven E. Artandi, Stanford Cancer Institute, Stanford, California

4:15-6:00 PM POSTER SESSION B / RECEPTION

Sapphire Ballroom I-J

SUNDAY, NOVEMBER 20

7:00-8:00 a.m. Continental Breakfast

Sapphire Ballroom I-J

8:00-10:00 a.m. Plenary Session 8: Cancer, Aging, and Metabolism [CME Eligible]

Sapphire Ballroom MN

Session Chair: Eileen P. White, Rutgers Cancer Institute of New Jersey, New Brunswick, New Jersey

8:00-8:30 a.m. **Increased mitochondrial DNA mutation burden with age limits lung cancer [U]**
Eileen P. White, Rutgers Cancer Institute of New Jersey, New Brunswick, New Jersey

8:30-8:45 a.m. **BH3 profiling of senescent cancer cells to identify mechanisms of resistance to ABT-263***

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Fleur Jochems, The Netherlands Cancer Institute, Amsterdam, The Netherlands

8:45-9:15 a.m. **Studies of aging, morphology, and cancer in the domestic dog**
Elaine A. Ostrander, NIH National Human Genome Research Institute, Bethesda, Maryland

9:15-9:30 a.m. **Sugar intake and premature aging in adult of childhood cancer in the St. Jude Lifetime (SJLIFE) cohort***
Tuo Lan, Washington University School of Medicine, St. Louis, Missouri

9:30-10:00 a.m. **Age-induced metabolic reprogramming: A bridge between the aging process and tumorigenesis**
Ana P. Da Silva Gomes, H. Lee Moffitt Cancer Center, Tampa, Florida

10:00-10:30 a.m. Break
Sapphire North and Northwest Foyers

10:30-11:30 a.m. Closing Keynote [CME Eligible]
Sapphire Ballroom MN
Chair: Steven E. Artandi, Stanford Cancer Institute, Stanford, California

Age against the machine: How the aging microenvironment drives tumor progression
Ashani T. Weeraratna, Johns Hopkins University, Baltimore, Maryland

11:30-11:45 a.m. Closing Remarks
Sapphire Ballroom MN
Steven E. Artandi, Stanford Cancer Institute, Stanford, California

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