

An AACR Special Conference in Cancer Research

Translating Targeted Therapies in Combination with Radiotherapy

in association with the AACR Precision Combination Therapy Task Force
January 26-29, 2025 | Hilton San Diego Bayfront | San Diego, California

CURRENT AS OF 1/25/25

CONFERENCE COCHAIRS:

Silvia C. Formenti, Weill Cornell Medicine, New York, NY

Albert C. Koong, The University of Texas MD Anderson Cancer Center, Houston, TX

Quynh-Thu Le, Stanford Cancer Institute, Stanford, CA

SUNDAY, JANUARY 26, 2025

Registration

2:30 p.m. - 7:00 p.m. | Sapphire North Foyer

Welcome and Opening Keynote

6:15 p.m. - 7:00 p.m. | Sapphire MN

CME-eligible

6:15 p.m. - 6:20 p.m.

Introduction of keynote speaker

Quynh-Thu Le, Stanford Cancer Institute, Stanford, CA

6:20 p.m. - 7:00 p.m.

Moving forward translation of targeted therapy with external beam radiation

Michael Baumann, DFKZ German Cancer Research Center, Heidelberg, Germany

Opening Reception

7:00 p.m. - 9:00 p.m. | Sapphire EFIJ

MONDAY, JANUARY 27, 2025

Breakfast

7:00 a.m. - 8:00 a.m. | Sapphire EFIJ

Plenary Session 1: FLASH

8:00 a.m. - 9:35 a.m. | Sapphire MN

Session chair: Charles Limoli (UCI)

CME-eligible

8:00-8:25 a.m.

FLASH, an opportunity for the treatment of pediatric brain tumors

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Charles L. Limoli, University of California Irvine, Irvine, CA

- 8:25 – 8:35 a.m. **FLASH radiotherapy enhances immune activation and spares lymphocytes tumor draining lymph nodes***
Michael Spiotto, The University of Texas MD Anderson Cancer Center, Houston, TX
- 8:35 – 9:00 a.m. **Proton FLASH radiotherapy: How lessons from preclinical models inform clinical trials**
Constantinos Koumenis, University of Pennsylvania, Philadelphia, PA
- 9:00-9:10 a.m. **Discovery and validation of mTOR as an immune mediator of the FLASH effect***
Danielle P. Johnson Erickson, University of Washington Department of Radiation Oncology, Seattle, WA
- 9:10-9:35 a.m. **Technical and biological strategies for translating FLASH**
Edward E. Graves, Stanford University, Stanford, CA

Break

9:35 a.m.-10:00 a.m. | Sapphire North Foyer

Proffered Talks

10:00 a.m.-10:50 a.m. | Sapphire MN
Session Chair: *Quynh-Thu Le (Stanford)*
CME-eligible
In honor of Dr. C. Norman Coleman

- 10:00 a.m.-10:10 a.m. **Phase III randomized trial of Intensity-Modulated Proton Beam Therapy (IMPT) versus Intensity-Modulated Photon Therapy (IMRT) for the management of head and neck oropharyngeal cancer***
Michael Spiotto, The University of Texas MD Anderson Cancer Center, Houston, TX
On behalf of Steven J. Frank, University of Texas MD Anderson Cancer Center, Houston, TX
- 10:10 a.m.-10:20 a.m. **Spatiotemporal mapping of cytoarchitectural changes in lung adenocarcinoma following radiotherapy***
Gina Bouchard, University of Colorado Anschutz Medical Campus, Aurora, CO

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- 10:20 a.m.-10:30 a.m. **Mapping cellular and microenvironmental determinants of persister populations in pancreatic cancer following neoadjuvant chemoradiation***
Vincent Bernard, The University of Texas MD Anderson Cancer Center, Houston, TX
- 10:30 a.m.-10:40 a.m. **Investigating the role of the tumor microenvironment in the rectal cancer response to preclinical radio-immunotherapy combinations***
Lydia Melissourgou-Syka, CRUK Scotland Institute for Cancer Research, Glasgow, Scotland
- 10:40 a.m.-10:50 a.m. **Countering adenosine (ADO) in rectal cancer to improve RT responses to immune checkpoint blockade: trial to test the safety and efficacy of PD1 (AB122) and ADO dual receptor (AB928) antagonists with chemotherapy after short-course RT***
Encouse Golden, Weill Cornell Medicine, New York, NY

Break

10:50 a.m.-11:10 a.m. | Sapphire North Foyer

Plenary Session 2: Nodal management with immune check point therapy

11:10 p.m.-12:45 p.m. | Sapphire MN

Session Chair: Sana Karam (Wash U)

CME-eligible

- 11:10 -11:35 a.m. **To treat or not to treat: Nodal irradiation in the context of immunotherapy**
Sana D. Karam, Washington University School of Medicine, St. Louis, MO
- 11:35-11:45 a.m. **Harnessing macrophage plasticity and radiotherapy for breast cancer immunotherapy***
Nir Ben Chetrit, Weill Cornell Medicine, New York, NY
- 11:45- 12:10 p.m. **Preserving tumor-draining lymph nodes in the era of immuno-oncology: Opportunities for precision chemo-radio-immunotherapy**
J. Sylvio Gutkind, University of California San Diego, San Diego, CA
- 12:10-12:20 p.m. **Mapping the tumor-sentinel node immune migratome demonstrates a key role for CCR7+ dendritic cells in the successful response to immunoradiotherapy***

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Robert Saddawi-Konefka, University of California San Diego, San Diego, CA

12:20 -12:45 p.m. **Tumor draining lymph nodes: Friends or Foes**
Quynh-Thu Le, Stanford Cancer Institute, Stanford, CA

Lunch on own
12:45 p.m.-2:30 p.m.

Plenary Session 3: Theragnostics and external beam
2:30 p.m.-4:05 p.m. | Sapphire MN
Session Chair: Rebecca Wong (PMCH)
CME-eligible

2:30-2:55 p.m. **Chemical strategies to expand the therapeutic window of targeted radiotherapies**
Michael Evans, University of California San Francisco, San Francisco, CA

2:55-3:05 p.m. **Partial tumor volume irradiation by ¹⁷⁷Lu-PNT6555 induces diverse immune responses in a syngeneic murine tumor model***
Maya E. Takashima, University of Wisconsin – Madison, Madison, WI

3:05 – 3:30 p.m. **Theragnostics and external beam radiation dose - similarities, differences and thoughts for the future**
Rebecca K.S. Wong, UHN Princess Margaret Cancer Center, Toronto, ON, Canada

3:30-3:40 p.m. **Fibroblast Activation Protein (FAP)-targeted radioligand therapy as a promising treatment for glioblastoma***
Ines Camille Azrou, University of California Los Angeles, Los Angeles, CA

3:40- 4:05 p.m. **Opportunities and approaches for combining theranostics and other forms of radiation therapy for cancer**
Zachary Morris, University of Wisconsin School of Medicine and Public Health, Madison, WI

Lightning Talks A (2-minute talks)
4:05 p.m.-4:10 p.m. | Sapphire MN
Session Chair: Rebecca Wong (PMCH)

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- **A novel PARP inhibitor PET tracer: implications for theranostics**
Lilie Lin, University of Texas, MD Anderson Cancer Center
- **Activity of antibody-drug conjugates with radiation in preclinical bladder cancer models**
Kent Mouw, Dana-Farber Cancer Institute, Brigham and Women's Hospital

Poster Session A + Reception

4:10 p.m. -5:40 p.m. | Sapphire EF1J

TUESDAY, JANUARY 28, 2025

Breakfast

7:00 a.m. -8:00 a.m. | Sapphire EF1J

Plenary Session 4: AI in radiation therapy

8:00 a.m.-9:35 a.m. | Sapphire MN

Session chair: Ruijiang Li (Stanford U)

CME-eligible

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| 8:00-8:25 a.m. | Personalized oncology, adaptive radiotherapy, and AI agents
Steven B. Jiang, UT Southwestern, Dallas, TX |
| 8:25-8:35 a.m. | A digital pathology multimodal artificial intelligence algorithm is associated with pro-metastatic genomic pathways in oligometastatic prostate cancer*
Matthew P. Deek, Rutgers Cancer Institute, Rutgers, NJ |
| 8:35 – 9:00 a.m. | Evaluating and mitigating medical misinformation risk in large language models
Danielle S. Bitterman, Dana-Farber Cancer Institute, Boston, MA |
| 9:00-9:10 a.m. | Evaluating associations between genomic classifier and digital pathology based mutli-modal AI biomarkers in oligometastatic castration-sensitive prostate cancer*
Philip A. Suter, University of Rochester, Rochester, NY |
| 9:10- 9:35 a.m. | Toward multi-modal foundation AI for precision oncology
Ruijiang Li, Stanford University, Stanford, CA |

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Break

9:35 a.m.-10:00 a.m. | Sapphire North Foyer

Plenary Session 5: Ferroptosis and radiation

10:00 a.m.-11:35 a.m. | Sapphire MN

Session Chair: *Albert Koong (MD Anderson)*

CME-eligible

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| 10:00- 10:25 a.m. | Targeting ferroptosis in radioresistance
Boyi Gan, The University of Texas MD Anderson Cancer Center, Houston, TX |
| 10:25-10:35 a.m. | Gadolinium-based nanoparticles sensitize ovarian peritoneal carcinomatosis to targeted radionuclide therapy*
Clara Diaz Garcia-Prada, University of California Los Angeles, Los Angeles, CA |
| 10:35- 11:00 a.m. | Understanding ferroptosis molecular mechanisms to advance ferroptosis therapies in cancer
Scott Dixon, Stanford University, Stanford, CA |
| 11:00-11:10 p.m. | Monitoring cancer ferroptosis with [18F] hGTS13, a system xc- specific radiotracer*
Abraham Moses, Stanford University, Stanford, CA |
| 11:10- 11:35 a.m. | Immune side effects in ferroptosis-targeted therapy
Daolin Tang, UT Southwestern Medical Center, Dallas, TX |

Lunch (on own)

11:35 a.m.-1:00 p.m.

Spotlight Session: Industry perspectives on integrating radiation therapy with pharmaceutical treatments

1:00 p.m.-2:00 p.m. | Sapphire MN

Session Chair: *Albert Koong (MD Anderson)*

Not CME-eligible

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| 1:00 p.m.-1:12 p.m. | ConformalFLASH®: Maximizing the true benefits of proton FLASH
Swati Girdhani, IBA Proton Therapy, Herndon, VA |
| 1:12 p.m.-1:24 p.m. | Title TBA
Karine Al Feghali, RefleXion, Hayward, CA |

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- 1:24 p.m.-1:36 p.m. **Integrating radiation therapy in combination with anchored immunotherapy for solid tumors**
Sailaja Battula, Ankyra Therapeutics, Cambridge, MA
- 1:36 p.m.-2:00 p.m. **Panel Discussion**
Drs. Battula, Girdhani, Al Feghali and Koong

Break

2:00 p.m.-2:30 p.m. | Sapphire North Foyer

Plenary Session 6: Integrating DNA damage repair targeting with radiation therapy

2:30 p.m.-3:55 p.m. | Sapphire MN

Moderator: Simon N. Powell (MSKCC)

CME-eligible

- 2:30- 2:55 p.m. **TITLE TBA**
Simon N. Powell, Memorial Sloan Kettering Cancer Center, New York, NY
- 2:55-3:20 p.m. **Enhancing radiation-induced anti-tumoral immune responses with PARP inhibitors in PDAC and DIPG**
Meredith A. Morgan, University of Michigan, Ann Arbor, MI
- 3:20 -3:30 p.m. **STN1 (OBFC1) promotes DNA double-strand break repair in a potentially CTC1-STN1-TEN1 (CST) complex-independent role in pancreatic cancer***
Tiantian Cui, City of Hope National Medical Center, Duarte, CA
- 3:30-3:55 p.m. **Vulnerabilities of pathologic DNA damage responses**
Gaorav P. Gupta, University of North Carolina at Chapel Hill, Chapel Hill, NC

Break

3:55 p.m.-4:15 p.m. | Sapphire North Foyer

Plenary Session 7: Role of radiation and cell therapy

4:15 p.m.-5:50 p.m. | Sapphire MN

Session Chair: Silvia Formenti (Weill Cornell)

CME-eligible

- 4:15 – 4:40 p.m. **Improving CAR T cell therapy efficacy in hematologic malignancies with low-dose total body irradiation**
Monica L. Guzman, Weill Cornell Medical College, New York, NY

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| 4:40-4:50 p.m. | Sparing blood and immune rich organs significantly reduces immune suppression during lung SBRT: Randomized, phase 2 trial*
Krishni Wijesooriya, University of Virginia, Charlottesville, VA |
| 4:50- 5:15 p.m. | Radiation of hematological malignancies: insights into sublethal dosing and salvage immune therapies enhancement
Joachim Yahalom, Memorial Sloan Kettering Cancer Center, New York, NY |
| 5:15-5:25 p.m. | Low-dose radiation acts as a promising preconditioning regimen for dendritic cell vaccines*
Eric Kwon, Washington University in Saint Louis School of Medicine, St. Louis, MO |
| 5:25 -5:50 p.m. | NK-Cell based CAR Therapy: Current Status and Future Directions
Hind Rafei, The University of Texas MD Anderson Cancer Center, Houston, TX |

Lightning Talks B (2min talks)

5:50 p.m.-6:00 p.m. | Sapphire MN

Session Chair: Quynh-Thu Le (Stanford)

CME-eligible

- **Targeting the angiotensin receptor in cancer-associated fibroblasts improves tumor perfusion, oxygenation, and radiotherapy response**
Kevin Bennewith, BC Cancer Research Institute, Vancouver, Canada
- **Pre-vaccine radiation and CTLA-4 blockade increase adjuvant effects of SARS-COV-2 mRNA vaccines**
Adam Grippin, The University of Texas MD Anderson Cancer Center, Houston, TX
- **CD163+ tumor-associated macrophage evasion contributes radiation resistance and poor prognosis in estrogen receptor-negative breast cancer**
Danushka S. Seneviratne, Oklahoma University Health Science Center, Oklahoma City, OK
- **Dual checkpoint blockade mitigates the immunosuppressive effects of radiotherapy amplified by experimental liver metastasis**
James Lee, University of California San Francisco, San Francisco, CA

Poster Session B + Reception

6:00 p.m. -7:30 p.m. | Sapphire EFJ

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WEDNESDAY, JANUARY 29, 2025

Continental Breakfast

7:00 a.m. -8:00 a.m. | Sapphire EFJJ

Plenary Session 8: Update on radiation and immunotherapy

8:00 a.m.-9:35 a.m. | Sapphire MN

Session chair: Silvia Formenti (Weill Cornell)

CME-eligible

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| 8:00-8:25 a.m. | Challenges and opportunities of combining radiation and immunotherapy in sarcoma
David G. Kirsch, UHN Princess Margaret Cancer Center, Toronto, Canada |
| 8:25-8:35 a.m. | Optimizing macrophage-mediated abscopal effects for enhanced clinical translation: Radiation therapy combined with CD47 blockade*
Yoko Nishiga, Stanford University, Stanford, CA |
| 8:35 –9:00 a.m. | Preliminary results of a multicentric, prospective randomized trial testing focal radiotherapy and immunotherapy in HR+ breast cancer patients
Silvia C. Formenti, Weill Cornell Medicine, New York, NY |
| 9:00-9:10 a.m. | Targeting SPP1 to enhance CAR T cell therapy in glioblastoma: Implications for integrating radiation therapy in resistant solid tumors*
Sharareh Gholamin, City of Hope, Duarte, CA |
| 9:10 -9:35 a.m. | Inflammatory memory and resistance to radiation and immunotherapy
Andy J. Minn, University of Pennsylvania, Philadelphia, PA |

KEYNOTE

9:35 a.m.-10:15 a.m. | Sapphire MN

Session Chair: Albert Koong (MD Anderson)

CME-eligible

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| 9:35 a.m. -9:40 a.m. | Introduction of keynote speaker
Albert C. Koong, The University of Texas MD Anderson Cancer Center, Houston, TX |
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9:40 a.m. -10:15 a.m.

Radiotherapy immunotherapy interactions: What determines success or failure?

Ralph R. Weichselbaum, University of Chicago, Chicago, IL

Break

10:15 a.m.-10:45 a.m. | Sapphire North Foyer

Plenary Session 9: Emerging therapeutics or biomarkers for radiation therapy

10:45 a.m.-12:20 p.m. | Sapphire MN

Session chair: Maximillian Diehn (Stanford U.)

NOT CME-eligible

10:45 – 11:10 a.m.

Therapeutic strategies and biomarker approaches for chromosomal instability

Samuel F. Bakhoun, Volastra Therapeutics, New York, NY

11:10- 11:35 a.m.

Combining radiation with Ras inhibition: insights for pancreatic cancer

Albert C. Koong, The University of Texas MD Anderson Cancer Center, Houston, TX

11:35-11:45 a.m.

Circulating tumor DNA kinetics identify prodynorphin signaling as a target to radiosensitize non-small cell lung cancer *

Ziwei Wang, Stanford University, Stanford, CA

11:45- 12:10 p.m.

Liquid biopsies for noninvasive detection and characterization of cancers

Maximillian Diehn, Stanford University, Stanford, CA

Closing Remarks and Departure:

12:10 p.m. | Sapphire MN