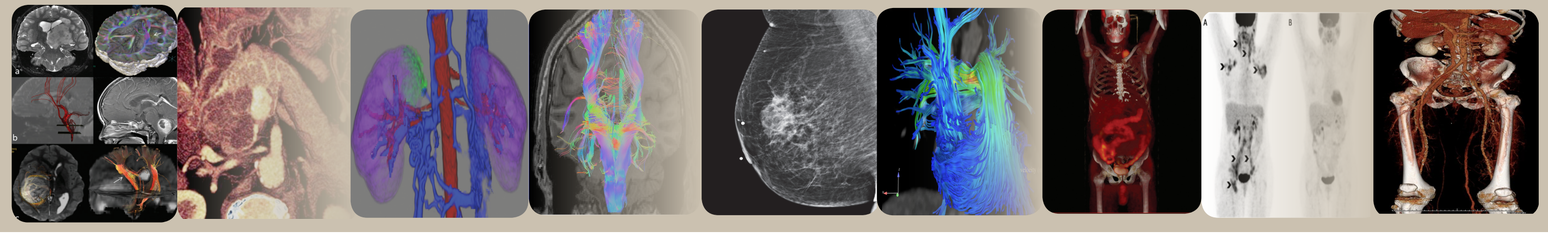
STANFORD SCHOOL OF MEDICINE

Department of Radiology

CME RADIOLOGY GRAND ROUNDS



Etta K. Moskowitz Lectureship

"Molecular Imaging and Targeted Radionuclide Therapy in Oncology"

Steven M. Larson, MD

Donna & Benjamin Rosen Chair in Radiology
Attending, Molecular Imaging & Therapy Service
Department of Radiology
Memorial Sloan-Kettering Cancer Center

Thursday, November 21, 2013
5:30 PM - 6:30 PM
Li Ka Shing Center - Room LK120

ABSTRACT Recent discovery of molecular changes associated with cancers has allowed for application of Molecular Imaging and Targeted Radiotherapy in Oncology using radioactive probes. In this lecture, we will introduce the concept of a theranostic radiopharmaceutical, ie a drug that has both diagnostic and therapeutic properties. For example, the simple formulation sodium iodide has been applied in thyroid cancer as a diagnostic, in the form of 124I-NaI, and as a therapeutic as 131I-NaI. We will discuss how MEK inhibitor therapy effectiveness may be monitored in thyroid cancer using 124I-NaI and PET imaging to show increased uptake and retention sufficient for therapy, and then how 131I-NaI, may be used to induce responses, in the same patient. Another area of rapid advance has been in the development of biologicals as theranostics for therapy in oncology. We will discuss how the specificity of antibodies for a tumor associate antigens, may be used both as a diagnostic to improve staging and patient selection, and for study of transport of toxin and drug immunoconjugates into tumors. The example given with be Zr89 and In111/Lu177 J591 anti-PSMA antibody in prostate cancer. Finally, pediatric oncology applications of the theranostic pair 124I/131I-3F8 anti-GD2 antigen have led to long term responses in CNS recurrences of Neuroblastoma. Theranostic applications in nuclear oncology are being used to select appropriate patients and provide useful therapy for some human neoplasms.

Global Learning Objectives

- Critically analyze research, guidelines and appropriate use criteria to develop best-practice diagnosis and treatment strategies
- Evaluate latest innovations in imaging to assess safety and effectiveness

Session Learning Objectives

- Role of theranostics in clinical practice of Nuclear Medicine, with emphasis on:
  - Thyroid Cancer
  - Pediatric Oncology
  - GU Oncology

Course Directors: Sanjiv Sam Gambhir, MD, PhD
Andrei Iagaru, MD

Accreditation

The Stanford University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation

The Stanford University School of Medicine designates this live activity for a maximum of 1.00 *AMA PRA Category 1 Credit(s)*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Cultural and Linguistic Competency

California Assembly Bill 1195 requires continuing medical education activities with patient care components to include curriculum in the subjects of cultural and linguistic competency. The planners and speakers of this CME activity have been encouraged to address cultural issues relevant to their topic area. The Stanford University School of Medicine Multicultural Health Portal also contains many useful cultural and linguistic competency tools including culture guides, language access information and pertinent state and federal laws. You are encouraged to visit the portal: http://lane.stanford.edu/portals/cultural.html

Biography of Etta Kalin Moskowitz

Etta Kalin Moskowitz was born on Dec. 8, 1909 in Brooklyn, N.Y., the only daughter of Harry and Esther Kalin, Russian Jewish immigrants. She attended Brooklyn public schools, was a star student, and a Dodger fan. She married her childhood sweetheart, Simon Moskowitz, in Brooklyn on September 8, 1930.

Etta worked as a proofreader for the Omaha Herald Tribune while Si completed medical school and internship at Creighton University in Omaha. The couple lived in Arkansas and Southern Utah for two years while Si served as a physician in the Civilian Conservation Corps. In 1938, the couple settled in Brigham City, Utah, a town of 4,000 people located 52 miles north of Salt Lake City. There Dr. Moskowitz established a private practice in family medicine. As Etta would say with a smile, "we were the only Moskowitz's in the phone book." They became Jewish cowboys.

In 1942, Etta started a family with the birth of her daughter, Anne, and son Peter in 1945. Raising the children alone was a struggle in the early years while Dr. Moskowitz served in the US Army in China and Burma between 1941 and 1945.

After the War, Etta became active in civic affairs and a community leader. She was small woman who knew how to get big things done. She served in leadership roles in numerous public school organizations, county health organizations, and the public library board. She chaired numerous charitable drives, and volunteered her time to help the needy.

She was concerned about the welfare of the less fortunate, and the underserved, contributing throughout her life to numerous national and international charities. She loved the outdoors, and gardening. She was a lover of the fine arts, foreign film, and classical music. The works of Beethoven, Bach, Mozart, and Chopin were always wafting through the Moskowitz home, either on records, or played by Etta herself, who was an accomplished pianist.

Always a New Yorker at heart, she was aan avid reader, a follower of current events, and an out-of-the-box thinker. She received the Sunday edition of the New York Times every Wednesday, and read it cover-to-cover by Saturday. Despite living in relative isolation in a small town in Northern Utah, Etta Moskowitz was a stylish, cool lady who was always "with it".

When she developed metastatic colon cancer in 1976, Etta wanted to leave a legacy to help others struggling with cancer. Shortly before her death, she funded the Etta Kalin Moskowitz Lectureship Fund in the Department of Radiology at Stanford University School of Medicien to support an annual lecture on the subject of cancer imaging.

Etta Moskowitz died on May 18, 1978 in her home in Brigham City, Utah, at age 69.