



Clinical Applications of Proton Beam Irradiation in Ophthalmology

April 8, 2011

University of California, Davis
Cancer Center Auditorium
Sacramento, CA



Needs Assessment

The current guidelines for treating ocular melanoma are based on results of the Comparative Ocular Melanoma Study (COMS) which showed equal survival benefit for medium-size ocular melanomas treated with brachytherapy when compared to enucleation. COMS did not study proton beam irradiation, a technology considered by many to be the ideal mode of radiotherapy for eye disorders. This technology is available currently at only a few institutions nationwide, including the Crocker Nuclear Laboratory at UC Davis. The Crocker Nuclear Laboratory has been treating ocular melanoma with proton beam for over 15 years and has the longest clinical experience providing this technology in the western United States. More recently, proton beam shows promise as a new adjunct treatment for exudative macular degeneration.

This course will describe to eye specialists and oncologists the advantages of proton beam technology over other forms of radiation in treating eye diseases, ranging from melanomas to exudative macular degeneration. This course is designed to change physician practice and performances in selecting ophthalmic treatments.

Education Objective:

At the end of the program, participants should recognize:

- The basics of the proton beam technology
- The advantages of using this technology in ophthalmology
- Success rate with this treatment compared to other types of radiotherapy
- Long-term visual outcome after treatment
- Potential side effects or risk factors
- Eye conditions that may benefit from proton beam treatment
- How treatment is administered
- How to access treatment at UC Davis



The Crocker Cyclotron Center for Eye Treatment (CCCET) at UC Davis

Crocker Nuclear Laboratory houses a 76-inch cyclotron. It was constructed in the 1960s using components from a 60-inch machine originally located at UC Berkeley. The 70-million-electron-volt protons generated using its 268-pound magnets cannot penetrate more than an inch or two inside the body, making it perfect for treating ocular tumors. UCSF physicians currently collaborate with scientists at the UC Davis CCCET to offer proton-beam therapy for ocular melanoma. Since 1994, the cyclotron housed in the Crocker Nuclear Laboratory on the UC Davis campus has generated protons used in the treatment of about 1,000 eye tumors in patients from as far away as New Zealand.

Course Agenda:

7:30	Check-In / Coffee & Pastries
8:00	Welcome Susanna Park MD, PhD, UC Davis
8:05-8:20	History of the Crocker Nuclear Laboratory at UC Davis Carlos Castaneda PhD, UC Davis
8:20-8:45	Properties of Proton Beams Lynn Verhey PhD, UCSF
8:45-9:10	Use of Proton Beams as Radiotherapy in Ophthalmology Inder Daftari PhD, UCSF
9:10-9:20	Questions & Answers
9:20-9:30	Break
9:30-10:00	Clinical Experience Using Proton Beam Irradiation as Treatment for Ocular Melanoma Kavita Mishra MD, MPH, UCSF
10:00-10:30	Proton Beam Irradiation as Treatment for Other Eye Tumors Ted Phillips MD, UC Davis/UCSF
10:30-11:00	Proton Beam Irradiation as Treatment for Exudative Age-Related Macular Degeneration Susanna Park MD, PhD, UC Davis
11:00-11:15	Questions & Answers
11:15-Noon	Optional Tour of Crocker Nuclear Lab

Registration:

Regular Fee (For CME credit)	\$30
UCDMC Employees	Free
UCDMC Housestaff/Students	Free
Attendees without CME	Free

To register:

Contact Shon Elmer via e-mail or telephone:
(916) 734-6891
protonbeamcme@gmail.com

LOCATION:

UC Davis Cancer Center Auditorium
4501 X Street
Sacramento, CA 95817

COURSE INSTRUCTORS:

Susanna S. Park, MD PhD (Course Chair)

Dr. Park is a professor of ophthalmology at UC Davis Eye Center. She is a vitreo-retinal specialist who provides both surgical and medical management of all vitreo-retinal disorders including macular degeneration, diabetic retinopathy, retinal detachment, posterior uveitis and trauma. She also treats patients with intraocular tumors including proton beam irradiation for ocular melanomas. She is the Director of Clinical Trials and currently the principal investigator of several clinical trials for macular degeneration and diabetic retinopathy, including an investigator-initiated trial investigating the use of proton beam irradiation combined with anti-VEGF (vascular endothelial growth factor) therapy for treatment of exudative macular degeneration. Her other research interests includes using new imaging techniques to study macular disorders and using stem cells to treat retinal disorders including macular degeneration and diabetic retinopathy.

Dr. Park holds both her MD and PhD from Yale University and completed her residency at Harvard Medical School. She practices ophthalmology at the Lawrence J. Ellison Ambulatory Care Center in Sacramento and serves as a faculty member of the UC Davis Medical School.

Susanna Park, MD PhD

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Carlos Castaneda, PhD

Dr. Castaneda is the head of Operations at the Crocker Nuclear Laboratory on the UC Davis campus and oversees the operation of the cyclotron. He has been with the CNL for 32 years and holds a degree from Indiana University.

Carlos Castaneda, PhD

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Inder Daftari, PhD

Dr. Daftari is a Senior Medical Physicist responsible for treatment planning and delivery, safety and quality assurance, and supervision of proton beam therapy for ocular tumors. He was instrumental in developing the program for proton beam therapy treatment of ocular melanoma in northern California. This UCSF program was initiated at the Crocker Nuclear Laboratory cyclotron at UC Davis in 1994. The program was an outgrowth of research performed at Lawrence Berkeley National Laboratory.

Dr. Daftari has been involved in numerous research projects including topics in experimental high-energy physics, conventional and charged particle therapy and image-guided radiation therapy. His research interests include topics in conventional and proton beam dosimetry, planning, and image-guided radiation therapy.

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Kavita Mishra, MD, MPH

Dr. Kavita K. Mishra is an Assistant Professor and radiation oncologist at UCSF. She has a clinical interest in the treatment of uveal melanomas with proton beam radiotherapy. She believes in a multidisciplinary approach to ocular oncology care with the aim to provide the most efficacious and individualized therapy for her patients. She is focused on studying the clinical outcomes of uveal melanoma patients, particularly with respect to tumor control, preservation of the eye, and quality of life issues.

Kavita earned her medical degree at the UCSF School of Medicine and completed a Masters degree at the Harvard School of Public Health. She completed her residency in radiation oncology at the UCSF Medical Center and thereafter joined the faculty at UCSF.

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Theodore L. Phillips, MD

Dr. Theodore Phillips is Professor of radiation oncology at UC Davis and distinguished Professor Emeritus of radiation oncology at UCSF. Dr. Phillips is a radiation oncologist and a renowned expert in ocular melanoma, Gamma Knife and intra-operative radiotherapy. Phillips is the recipient of numerous awards and has served as president of various medical and scientific associations, including the Radiation Research Society, American Society for Therapeutic Radiology and Oncology and North American Hyperthermia Society.

Dr. Phillips earned his MD at the University of Pennsylvania and completed a residency in radiation oncology at UCSF. He held the position of the Wun-Kon Fu distinguished Professor of Radiation Oncology at UCSF and is a member of the Institute of Medicine of the National Academy of Sciences. He has also served as a Research Radiobiologist and Lieutenant Commander with the US Navy.

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Lynn J. Verhey, PhD, FAAPM, FASTRO

Dr. Verhey is Professor Emeritus of Radiation Oncology. He was the Chief of the Division of Physics from 1993 until 2008. His research interests are in the development and implementation of new methods of radiation delivery that can increase the ratio of tumor dose to normal tissue dose. Specifically, this has involved the use of proton beams, stereotactic radiosurgery with the Gamma Knife, and Intensity Modulated Radiotherapy (IMRT) using linear accelerators. He is the author or co-author of more than 120 peer-reviewed scientific papers, as well as multiple contributions to proceedings and chapters in technical books. He holds a MS and PhD from the University of Illinois, Urbana and has taught at UCLA and Harvard Medical School.

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CREDIT DESIGNATION

ACCREDITATION

The University of California, Davis Health System is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Physician Credit: The University of California, Davis Health System designates this educational activity for a maximum of 3.00 AMA PRA Category 1 Credits. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CALIFORNIA AB 1195

With the passage of California Assembly Bill 1195, signed November 2005, continuing medical education courses with patient care components are required to include curricula in the subject of cultural and linguistic competency. It is the intent of the bill, which went into effect on July 1, 2006, to encourage physicians and surgeons, CME providers in the state of California, and the Accreditation Council for Continuing Medical Education to meet the cultural and linguistic concerns of a diverse patient population through appropriate professional development. The planners, speakers, and authors of this CME activity have been encouraged to address issues relevant in their topic area. In addition, a variety of resources are available to address cultural and linguistic competency, some of which will be included in the syllabus or handout materials. Additional resources and information about CA AB 1195 can be found on our website at <http://cme.ucdavis.edu>.

DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIPS

As a provider accredited by the Accreditation Council for Continuing Medical Education, the University of California, Davis Health System Office of Continuing Medical Education must ensure balance, independence and objectivity in all CME activities to promote improvements in health care and not proprietary interests of a commercial interest. The provider controls all decisions related to identification of CME needs, determination of educational objectives, selection and presentation of content, selection of all persons and organizations that will be in a position to control the content, selection of educational methods and evaluation of the activity. Course directors, planning committee members, presenters, authors, moderators, panel members and others in a position to control the content of this activity are required to disclose relevant financial relationships with commercial interests related to the subject matter of this educational activity. Learners are able to assess the potential for commercial bias in information when complete disclosure, resolution of conflicts of interest, and acknowledgment of commercial support are provided prior to the activity. Informed learners are the final safeguards in assuring that a CME activity is independent from commercial support. We believe this mechanism contributes to the transparency and accountability of CME.

UC DAVIS HEALTH SYSTEM CME MISSION

In concert with the University of California, Davis Health System mission of discovering and sharing knowledge to advance health, the continuing medical education mission focuses on the lifelong learning commitments of physicians who practice in the health system and in the greater Northern California region. UC Davis CME is at the nexus between scientific discovery and its translation to practice with a commitment to provide a variety of educational formats for evidence-based education that fulfills identified needs and produces changes in physician practice resulting in improved competence, performance and/or patient care. With an emphasis on multidisciplinary programs, content is based on competencies and bona fide needs assessments as well as clinical requirements. The CME Advisory Committee reviews the content and quality of CME offerings in accordance with the Accreditation Council for Continuing Medical Education's Essential Areas and Their Elements and the American Medical Association's Physician Recognition Award accredited provider information.

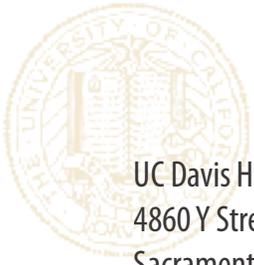
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