### **Frequently Asked Questions**

#### 1. How does radiation kill cancer?

Cancer is made of abnormal cells that tend to grow without control. Cancer DNA is more sensitive to radiation than normal cells. Radiation kills cancer cells directly or when the cells attempt to multiply while normal tissue in the region is able to repair and recover.

#### 2. What is Brachytherapy?

The prefix "brachy" is the Greek word for "short" distance. Brachytherapy is a form of radiation treatment where radioactive sources are placed in or near cancerous tissues. The radiation sources may be inserted either permanently or temporarily. The two most common forms of brachytherapy treatment are low dose rate (LDR) permanent seeds for prostate cancer and high dose rate (HDR) temporary brachytherapy, that can be used for any localized cancer.

#### 3. What is High Dose Rate (HDR) Brachytherapy?

HDR brachytherapy is a technically advanced form of brachytherapy. A high intensity radiation source is delivered with millimeter precision under computer guidance directly into the tumor killing it from the inside out while avoiding injury to surrounding normal healthy tissue.

#### 4. What are the advantages of HDR Brachytherapy?

- · Improved accuracy and precision of radiation dose delivery.
- Knowledge of radiation dose distribution before treatment is given and a minimized area of radiation overdose (hot spots) or underdose (cold spots).
- Ability to shape the radiation dose to fit the tumor.
- · Control of adjacent organ doses resulting in fewer side effects.
- No risk of radiation source (seeds) migration into other organs and no radiation exposure to other people.
- Shortest course of treatment (days rather than weeks to months as required for permanent seeds or external beam).
- Excellent coverage of possible microscopic extension of cancer and effective treatment for cancer recurrence, "salvage" therapy.
- Organ motion (target movement) is not a problem for HDR as it is with external beam.

#### 5. How successful is HDR Brachytherapy?

HDR brachytherapy is proven to be effective for the treatment of local disease in many forms of cancer including **prostate**, **gynecologic**, **breast**, **head and neck**, **esophagus**, **lung**, **anal/rectal**, **bile duct**, **sarcoma**, and other primary cancers or localized metastasis as reported in medical literature. CET's findings on prostate cancer, for example have demonstrated 90% 10-year tumor control for HDR/EBRT combined therapy and a 96% 5 and 8 year disease free survival rate for HDR monotherapy. Success rates for other tumors vary according to the type and stage of cancer being treated.



Oakland, CA 94609 Phone: 510-986-0690 Fax: 510-986-0159 email: askcet@cetcancercenter.com www.cetcancercenter.com Hours: Mon-Fri, 8:30AM to 5:00PM Pacific Time

To learn more about CET and HDR Brachytherapy or to schedule a personal consultation please call or e-mail us.



=Summit Campus

P=Parking

\*Map not to scale

1=Merritt Pavilion, 350 Hawthorne Ave.
2=Samuel Merritt College, 370 Hawthorne Ave.
3=Health Education Center, 400 Hawthorne Ave.
4=Providence Pavilion, 3100 Summit St.
5=Providence Pavilion South, 3012 Summit St.
6=Providence MOB, 350 - 30th St.
7. Pavilta Pavilian 450, 20th St.

7=Peralta Pavilion, 450 - 30th St. 8=Peralta MOB, 3100 Telegraph Ave.











# About CET

Treatment for cancer may consist of many modalities including surgery, chemotherapy and/or radiation. Radiation can be delivered externally or internally. At California Endocurietherapy Cancer Center (CET), we have over 25 years specializing in internal radiation treatment, also known as brachytherapy and specifically in High Dose Rate brachytherapy. Located at the Summit campus of Alta Bates Summit Medical Center, the center is easily accessible to patients throughout the bay area and conveniently situated near major freeways, BART, and Oakland Intl. Airport.

- CET is the first brachytherapy only center in the U.S.
- Dedicated solely to High Dose Rate (HDR) brachytherapy since 1991 and the most experienced HDR brachytherapy center in the country.
- Over 8,500 implants performed and over 17,000 treatments delivered.
- A training destination for physicians and residents.
- Dedicated to long-term patient follow-up, outcome studies, and publications in medical journals.



### What kinds of cancer do we treat?

HDR brachytherapy is an effective treatment method for localized cancers including:

esophagus & lung

• anal/rectal

• bile duct

skin

- prostate
- breast
- bicasi
- GYN (cervix, uterus, vaginal)
- head & neck

Our Medical Staff



D. Jeffrey Demanes, M.D. founded California Endocurietherapy Cancer Center (CET) in 1981. He graduated from the University of California, Los Angeles (UCLA) Medical School where he also served his residencies in internal medicine and oncology. From 1978-1981 he held fellowships at UCLA, and the University of Califor-

nia, San Francisco (UCSF), and at Memorial Hospital in Long Beach. Dr. Demanes is board certified in three medical specialities: Radiation Oncology, Medical Oncology, and Internal Medicine. He is on the voluntary clinical staff at Stanford University and UCLA medical centers. He is presently serving as President of the American College of Radiation Oncology (ACRO) and is a member of various governmental liaison committees for the American Society for Therapeutic Radiology and Oncology (ASTRO). Stanford University Medical Center requested that CET become a clinical affiliate in their residency program. Stanford residents now rotate through CET for their HDR brachytherapy training.



Dennis R. Hill, M.D. joined CET in 2004. He graduated from the University of Oregon Medical School and did his radiation oncology residency at the University of California, San Francisco (UCSF). From 1972-1974 he was the Director of Radiation Oncology at the Naval Medical Center in San Diego and Assistant Clinical Professor at

the University of California, San Diego (UCSD). From 1975-1986 he was on the faculty at UCSF, and became Clinical Professor in 1984. He was also Vice-Chairman of the Department of Radiation Oncology at UCSF from 1981-1986. Dr. Hill is board certified in radiation oncology, and practiced external beam radiation in private practice at Davies Medical Center in San Francisco prior to joining CET.



Marie-Claire Barnaba, NP joined CET in 2004. She completed her nurse practitioner degree from Massachusetts General Hospital Institute for Health Professions in 2002. She is a board certified Family Nurse Practitioner where she practiced in a community health care setting before joining CET. She is also certified by the

Oncology Nursing Society and continues to enjoy expanding her nursing practice in the field of Oncology and Radiation Oncology.

# The CET Difference

- HDR is an advanced form of radiation technology that demands a high level of attention and careful adherence to quality procedures. For this reason, there are fewer treatment centers and physicians trained to perform HDR compared to external beam radiation. CET's physicians have the greatest expertise and most experience in HDR brachytherapy in the country.
- CET radiation therapists are among the most experienced in the country. They are all registered in Radiation Therapy by the American Registry of Radiologic Technologists, and also have California State certifications.
- CET dosimetrists are certified by the Medical Dosimetrist Certification Board. They have many years of experience with external beam and brachytherapy dosimetry.
- We are dedicated to patient follow-up that allows us to evaluate the quality and effectiveness of our treatments. We now have long-term clinical data on our patients and have published results. We are not only interested in survival and cure rates, but also the side effects and quality of life of our patients after our treatment.

## Alta Bates Summit Medical Center

Alta Bates Summit Medical Center offers comprehensive services to the diverse communities of the greater East Bay Area with three main campus locations in Berkeley and Oakland. Alta Bates Summit Medical Center makes up the East Bay's largest private, not-for-profit medical center, offering two acute care hospitals, cardiovascular services, birthing services, rehabilitation services, and a full array of the most advanced and comprehensive oncology services.

The Medical Center grew out of and continues the traditions begun nearly a century ago by Providence, Samuel Merritt, Peralta, and Herrick Hospitals. CET Cancer Center is located at the Summit Campus in the Providence Pavilion South building.

For more details, please visit our website.