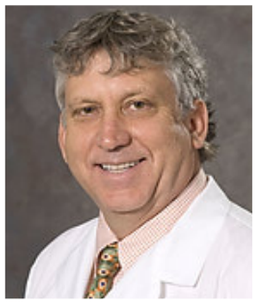

Stanley H. Benedict, M.S., Ph.D.

Philosophy of Care

The American Association of Physicists in Medicine states that the essential responsibility of a Qualified Medical Physicist's clinical practice is to assure the safe and effective delivery of radiation to achieve a diagnostic or therapeutic result as prescribed in patient care.
The responsibilities of the medical physicist include: protection of the patient and others from potentially harmful or excessive radiation; establishment of adequate protocols to ensure accurate patient dosimetry; the measurement and characterization of radiation; the determination of delivered dose; development and direction of quality assurance programs; and assistance to other health care professionals in optimizing the balance between the beneficial and deleterious effects of radiation; and compliance with applicable federal and state regulations.

Clinical Interests

As Chief of Clinical Physics Dr. Benedict works with a team of highly qualified medical physicists and dosimetrists, in accordance with the directives of radiation oncology physicians, to provide a wide array of highly conformal radiation therapy treatments.
A few of the systems that we employ to ensure precise set-up patient positioning, and accurate delivery include: 3D and 4D simulation and delivery confirmation, image guided brachytherapy, stereotactic radiosurgery, and intensity modulated beam delivery techniques.

Research/Academic Interests

1. Developing imaging tools to improve radiation therapy planning co- registration of studies for the accurate determination of tumor and target margins and critical organs at risk (OAR), including the use of MRI-PET, PET-CT, and SPECT-CT.
2. Developing technology for image guided brachytherapy (IGBT), including 3D imaging systems (CT and MRI) for confirming applicator placement, and novel applicator designs that allow patients to be treated with minimal anesthesia (non-OR).
3. Investigating radiobiological considerations for Hypofractionated and Stereotactic Radiosurgery treatment delivery.
4. Designing new arc based treatment delivery approaches that incorporate modulation (gantry speed, dose rate, and MLC) for conformality, and 3D/CBCT for improved target positioning.

Title

Professor
Vice Chair of Clinical Physics

Specialty

Radiation Oncology

Department

Radiation Oncology

Division

Radiation Oncology

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Education
M.S., Radiological Health Physicis, San Diego State University, San Diego CA 1984
Ph.D., Biomedical Physics, UCLA, Los Angeles CA 1992
B.A., UC San Diego, La Jolla CA 1980

Board Certifications
American Board of Radiology, Therapeutic Radiological Physics, 1996

Professional Memberships
American Association of Physicists in Medicine (AAPM)
American Society for Radiation Oncology (ASTRO)
Health Physics Society (HPS)
International Society of Therapeutic Ultrasound (ISTU)

Honors and Awards
Fellow, American Association of Physicists in Medicine (AAPM), 2008
Fellow, American College of Medical Physics (ACMP), 2007

Select Recent Publications

Benedict SH, De Meerleer G, Orton CG, Stancanello J. Point/counterpoint. High intensity focused ultrasound may be superior to radiation therapy for the treatment of early stage prostate cancer. Med Phys. 2011 Jul;38(7):3909-12.

Chen AM, Yu Y, Daly ME, Farwell DG, Benedict SH, Purdy JA. Long-term experience with reduced planning target volume margins and intensity-modulated radiotherapy with daily image-guidance for head and neck cancer. Head Neck. 2014 Dec;36(12):1766-72.

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