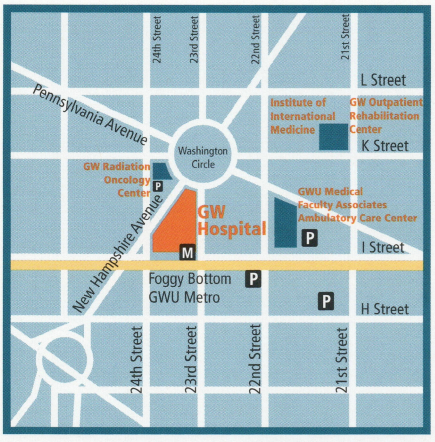
Radiation Oncology Center

The George Washington University Hospital

For more information, please call 202-715-5120.



The GW Radiation Oncology Center
2300 K. Street, NW
Washington DC 20037

Combining breakthrough technology with superior medical care, the new GW Radiation Oncology Center provides the highest standards of care with comfort and convenience.

Patients will have access to a full range of radiation techniques including traditional external beam radiotherapy, 3-D conformal radiotherapy, intensity modulated radiation therapy (IMRT), intracavitary brachytherapy and vascular brachytherapy.

The Center is staffed by a team of specialists that includes: Radiation oncologists, a medical physicist, a clinical nurse, radiation therapists, a medical dosimetrist and supporting administrative personnel.

Since the GW Radiation Oncology Center is conveniently located next to the hospital on Washington Circle (2300 K. Street, NW), many aspects of a patient's care- chemotherapy, inpatient admissions to the oncology unit, surgical procedures, bone marrow transplants and outpatient radiology- will continue to be performed at The George Washington University Hospital.

THERAPIES AVAILABLE

Traditional 2-D External Radiotherapy

Standard radiation therapy treatment utilizing all of the available beam energies on the linear accelerator. Multi-leaf collimation or customized blocking is utilized to protect healthy structures.

Conformal Radiotherapy (3-D)

This technology allows for a computerized 3-D reconstruction or "Beam's Eye View" of tumor and healthy structures resulting in conformal radiation fields that deliver higher doses to the tumor while sparing surrounding tissue.

Intensity Modulated Radiation Therapy (IMRT)

A form of three-dimensional conformal radiation therapy that links treatment planning and driver software to the actual treatment delivery devices. As a result, clinicians can determine and deliver an optimum plan of individualized radiation for each patient.

Intracavitary Brachytherapy

Involves the use of radioactive sources such as Cesium-137 in gynecological cancer patients.

Vascular Brachytherapy

The use of beta and gamma radiation sources to prevent restenosis (narrowing) of blood vessels. Procedures are conducted in the Cardiac Cath Lab in conjunction with the patient's cardiologist.

THE GEORGE WASHINGTON UNIVERSITY HOSPITAL

UHS Universal Health

900 23rd Street, NW
Washington DC 20037-2377
(202) 715-4000
www.gwhospital.com

Linear Accelerator

Varian Medical Systems
Varian Clinac 21EX

Breakthrough Technology

at The George Washington University Hospital Radiation Oncology Center

The Varian 21EX is the most sophisticated and technologically advanced linear accelerator available today. It's capable of delivering both low and high-energy photon beams (6 & 18 MV) as well as multiple energy electron beams (6, 9, 12, 16, & 20 MeV). Specialized features include Multileaf Collimation (MLC) with 120 leaves and dual asymmetric jaws. This enables us to perform conventional therapy techniques as well as the most advanced computer-driven IMRT treatments and Total Body Irradiation.

Additional Features:

- **Instant beam-on for dynamic treatment control.**
- **A large number of energy options to treat the widest range of patients.**
- **Precise focal spot size for optimum portal imaging.**
- **The highest dose rates across the energy spectrum for greater throughput.**

Electronic Imaging

Varian Medical Systems

Electronic portal imaging (PortalVision) will be available on the linear accelerator and offers many benefits over hardcopy x-ray film:

- Fast acquisition & instantaneous display of high quality images.
- Acquisition during treatment to record patient positioning throughout the treatment.
- Online review & physician approval.
- Automated quantitative analysis tools to identify & differentiate random as well as systematic patient positioning errors.

Digital Images and Picture Archiving

The new filmless picture archiving communication system (PACS) is used with all imaging modalities and allows images to be distributed electronically and interpreted on a computer. This hospital-based system is available to the radiation oncologists via wireless network communication in our new facility.

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CT Simulator Philips Medical Systems

Breakthrough Technology

at The George Washington University Hospital Radiation Oncology Center

The Philips ACQSim CT Scanner is the world's only dedicated oncology scanner. With its unique, large bore (85cm) opening and the uncompromising positioning it affords, this scanner lets you perform every CT simulation plan without compromising patient positioning. Its distinctive 85cm large-bore means difficult-to-image exams, like breast and Hodgkin's lymphoma, are remarkably less traumatic for the patient.

The Philips ACQSim CT Scanner also has a localization package, patient marking system and virtual simulator software capable of producing real-time digitally reconstructed radiographs (DRRs). The system offers high-resolution imaging and short examination time for the full range of oncologic procedures, including volumetric localization, simulation and verification for conformal, high-precision radiotherapy planning. By reducing exam times, we minimize the level of frustration that may be experienced by the therapist or the patient alike.

The ACQSIM CT scanner offers many benefits, including:

- **Exclusive 85cm large-bore design for positioning without compromise.**
- **Advanced CT simulation system with integrated lasers.**
- **Ability to see the skin surface in nearly every CT scan, even with large patients**
- **Breast and Hodgkin's lymphoma positioning without compromise.**
- **Multimodality capability for increased treatment planning accuracy and monitoring of treatment progression.**
- **Patient exam times of less than 20 minutes in most cases.**
- **Extreme accuracy in soft tissue and tumor border visualization.**
- **Conformal and non-conformal therapy planning capability.**

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