

Key Stats for Gynecological Cancer

- » Estimated 14,480 new cases in the U.S. in 2021.
- » Estimated **4,290** deaths in the U.S. in 2021.
- » 66.3% Five-year survival rate for all incidents.
- » 91.9% Five-year survival rate if detected before spread to lymph node.

Willis-Knighton Brachytherapy Program Delivers Advanced Care for Gynecological Cancer Patients using Zephyr® HDR

Under the guidance of Dr. Lane R. Rosen, Medical Director, Radiation Oncology, the Willis-Knighton Cancer Center has become a leader in the clinical use of advanced radiation therapy technology, including a comprehensive, image-guided brachytherapy program. Brachytherapy allows highly conformal dose delivery to tumors with lower dose delivered to surrounding, healthy tissue. As a result, it has emerged as a leading treatment for gynecological cancers, providing high rates of local disease control with relatively lower toxicities compared to other radiation therapy treatment techniques.



Advanced Treatment

Equipment







Improved Patient Outcomes

Specialized Brachytherapy Team

The Willis-Knighton program supports more than 400 gynecological treatments each year with a dedicated brachytherapy team consisting of a physician, a brachytherapy nurse, a dosimetrist, and a physicist. Each member of this team has been developing and revising treatment techniques over the past 15 years to make the brachytherapy process more efficient and comfortable for patients, while constantly identifying new ways to improve patient outcomes and satisfaction.



This team not only delivers high-quality patient treatment but also supports external clinical training to advance the understanding and application of brachytherapy to other cancer treatment programs worldwide.

Advanced Systems Optimized for Brachytherapy and Patient Comfort

Using cutting-edge technology, including an industry-leading Elekta brachytherapy afterloader with Elekta treatment planning software, a dedicated Neurologica BodyTom portable CT, and the Zephyr HDR Patient Positioning and Transfer System, Willis-Knighton has been able to optimize its brachytherapy workflow and deliver superior patient comfort and effective treatment outcomes.

When the patient arrives on the treatment day, they are prepared and positioned comfortably on the Zephyr HDR and positioned for imaging using the patient stirrups. The patient is moved to the imaging suite and transferred almost effortlessly using the Zephyr hoverboard to the CT couch. After the brachytherapy applicator is placed and the patient CT imaging is completed, the patient is transferred back to the Zephyr stretcher with the applicator still in place.

"With Zephyr, you can use one person to move the patient, and it's a very smooth transition. Zephyr helps ensure that the applicator stays in its correct position during treatment, which is absolutely critical for these types of patients," says Daniel Spier, Chief Therapist and Compliance Officer, Willis-Knighton Cancer Center.

According to Daniel Spier, one of the advantages of using the Zephyr HDR system is that none of the Willis-Knighton clinical staff has been injured moving a patient from a stretcher to the imaging CT couch and back again. Zephyr HDR uses a patented, hover technology to create smooth movement, even for larger patients. "Other systems make much more of a jerking motion,

The Zephyr HDR Patient Positioning and Transfer System

Built upon the Zephyr patient transfer system, the Zephyr HDR leverages patented hover technology to transfer patients between a mobile stretcher and imaging systems. It uses a hoverboard configured with patient stirrups to comfortably maintain the patient treatment position from setup and application insertion, through MR or CT imaging and treatment planning, and during treatment delivery. The Zephyr hoverboard is uniquely designed to have an artifact free imaging area of interest and is also MRI compatible. The Zephyr HDR delivers the benefit of reducing the risk of injury to clinicians during the movement of a patient while ensuring the treatment applicator stays in position from time of insertion through treatment delivery.



which can cause a lot of back strain for therapists and irritation for patients. With the Zephyr equipment, we can transfer patients more easily and safely, while ensuring they are as comfortable as possible," Spier explained.

The Importance of Patient & Applicator Positioning

Image-guided brachytherapy allows clinicians to develop very precise treatment plans at the time of delivery based on the patient's current anatomy. This ensures that the tumor coverage is complete as prescribed while reducing dose to normal tissue by maintaining very tight margins. To deliver these very precise treatments, it is critical that the patient and applicator positions are maintained during the entire workflow.

After imaging, the patient is moved to the brachytherapy suite maintaining the patient position at time of imaging while the treatment plan is completed. Completing the treatment plan can take up to an hour while the Zephyr HDR comfortably maintains the patient position to ensure that the applicator remains in place. When the treatment plan is ready, the patient is transferred using the Zephyr hoverboard to the treatment table for delivery. A typical patient will undergo three to five treatments over one to two weeks.

Because Zephyr HDR includes built-in hoverboard technology and patient stirrups, it has become a critical element of the Willis-Knighton image-guided brachytherapy program. Zephyr HDR helps Willis-Knighton deliver the most precise treatment plans by ensuring the patient and applicator positions are maintained during the entire workflow. The stirrups designed into the Zephyr HDR support patient comfort from imaging to treatment delivery. And the Zephyr hoverboard technology ensures that the patient transfers can be completed safely by the treatment team.

About Willis Knighton Cancer Center

The Willis-Knighton Cancer Center is a world leader in the implementation and clinical advancement of breakthrough technology and treatment techniques and serves as a demonstration and education center helping transition leading-edge imaging and radiation therapy technology into community cancer centers.

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About Orfit

Orfit is the exclusive distributor of Zephyr radiation oncology solutions throughout North America. Orfit brings high precision and comfort to the positioning and immobilization of cancer patients through a complete family of Orfit systems for brain, head and neck, supine and prone breast treatment, pelvis and abdomen treatment, SRS, SBRT, extremities, pediatric, MR, brachytherapy, and proton therapy. To learn more about Zephyr, **visit orfit.com/zephyr.**

About Lane R. Rosen M.D.

Dr. Lane R. Rosen, Medical Director, Radiation Oncology, has developed the Willis-Knighton Cancer Center into a technology leader making



advanced cancer fighting technologies available to Southern Louisiana and Arkansas-Louisiana-Texas area before they are available outside of research or academic hospitals. He is an international leader in

the application of leading-edge radiation therapy treatment techniques that include High Dose Rate Brachytherapy for Gynecological cancers, Tomotherapy Body Radiosurgery, and Image-Guided Intensity Modulated Proton Therapy.

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ORFIT INDUSTRIES AMERICA 810 Ford Drive Norfolk, VA 23523 | USA T 516-935-8500 welcome@orfit.com