

# NANOKNIFE™

A MINIMALLY INVASIVE TREATMENT OFFERING  
THE MOST ADVANCED TECHNOLOGY



Cardiovascular and Interventional Associates of Association of Alexandria Radiologists (AAR) and Inova Alexandria Hospital offer highly specialized cancer care treatment options with a personal community based touch. The Cancer Center at Inova Alexandria Hospital is accredited by the American College of Surgeons Commission on Cancer. Additionally, Inova Alexandria Hospital is recognized with an outstanding achievement for care excellence by the Commission on Cancer – awarded to only 19-percent of hospitals nationwide.

Our interventional radiology experts, **Dr. Sandeep Bagla**, and **Dr. Dimitrios Papadouris**, in conjunction with Inova Alexandria Hospital, have added one of the newest targeted weapons against cancer – the NanoKnife™. Inova Alexandria Hospital is the first hospital in Virginia and the Washington, DC metro area to provide this cutting edge technology – one of less than twenty centers nationwide – that destroys soft-tissue tumors, including those that have spread to the liver, kidneys, lungs and pancreas.

## What is NanoKnife™?

NanoKnife™ is a minimally invasive cancer treatment which implements technology known as irreversible electroporation to precisely target and kill hard-to-reach tumors at the cellular level. The ultra-precision of the NanoKnife™ allows our interventional radiologists to treat tumors that in the past would have been complicated or virtually impossible for surgeons to operate on due to their location.

*'NanoKnife™ is a novel, non-thermal ablation device that allows us to perform minimally invasive, precise and targeted cancer therapy. This technology provides patients that may not be candidates for surgery, radiation, or ablation, the potential for treatment. We are excited to be first in the Washington DC Metro Area and the state of Virginia, to offer this treatment for our patients'*

## What Sets NanoKnife™ apart and how does NanoKnife™ work?

The NanoKnife™ works by applying a series of quick bursts of electrical energy through a collection of electrodes inserted directly into and around the tumor. A cell within range of the electric field will form pores in its fatty membrane, allowing ions to rush through. Once exposed to greater voltages and longer pulse duration, the pores in the cell remain permanently open and cause the cancer cells to initiate a programmed 'suicide' and die. Surrounding tissue, veins, nerves and ducts within the targeted areas are largely unaffected by the process around them – providing a compelling tool for procedures in difficult to treat areas of the body. Relying on the body's own natural ability to heal, evidence suggests that healthy cells and tissue will grow back and regenerate within the area.

## About the Minimally Invasive Procedure...

Once the patient is placed under general anesthesia, our interventional radiologists use a CT scan or ultrasound imaging to precisely guide the electrodes to the tumor site and exact location. Our interventional radiologists then inserts the electrodes in or near the tumor, and once the electrodes are in place, the NanoKnife™ generator sends a series of short, intense electric-pulses directly and precisely to the tumor.

## WHAT IS NANOKNIFE™?

- Our physicians can destroy tumors that may not be reachable or treatable with traditional, invasive surgical procedures or radiation therapy
- Our physicians can destroy tumors for patients who have already had surgery, or who may have had all the chemotherapy they can have, however cancer has reoccurred
- Our patients typically experience minimal pain following the procedure, and may only require a brief hospital stay – some patients can go home the same day, most can go home the next day, and usually very little recovery time is needed
- Our patients generally experience few if any complications, unwanted side effects or scarring, and the NanoKnife™ procedure may be repeated - should new lesions develop

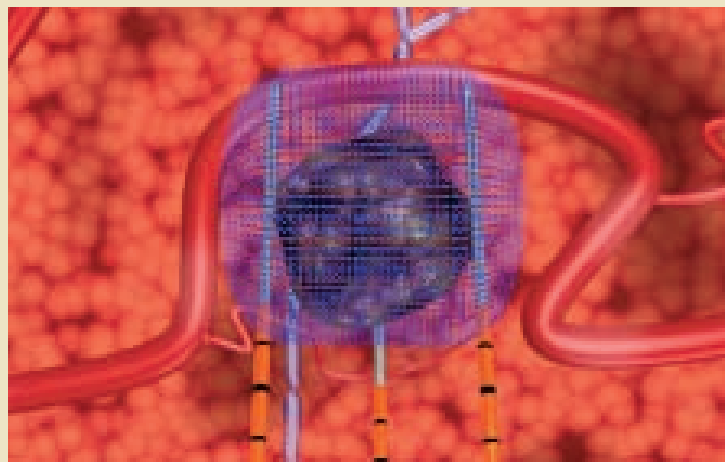
## When can we use NanoKnife™?

NanoKnife™ is an effective option for small tumors, typically less than five centimeters – which are considered inoperable or where radiation therapy is not an option. NanoKnife can be used for both primary tumors or for tumors that have metastasized or spread to other parts or organs of the body.

At Inova Alexandria Hospital, our interventional radiologists use NanoKnife™ to treat tumors that develop in soft tissue, including the liver, lungs, kidneys and pancreas.

## The Most Advanced Technology focused on Personalized Cancer Care and Backed by World Class Expertise...

Personalized cancer care is tailored to the individual patient in conjunction with targeted approaches to their cancer to ensure the best possible outcome. In addition to this leading edge technology, our patients also have access to cancer treatments that are part of the clinical trials network through Inova Alexandria Hospital.



\* NanoKnife™ is FDA approved for use of soft tissue tumor ablation.

A CLEAR VISION FOR BETTER PATIENT CARE

FOR MORE INFORMATION ABOUT INTERVENTIONAL RADIOLOGY AT INOVA ALEXANDRIA HOSPITAL, INCLUDING NANOKNIFE™, OR TO SCHEDULE AN APPOINTMENT FOR A CONSULTATION, PLEASE CALL OUR NANOKNIFE™ COORDINATOR AT 703.504.7950

[www.inova.org/iah](http://www.inova.org/iah) • [www.alexandriaradiology.com](http://www.alexandriaradiology.com)