

*Each year 38,000 people are diagnosed with kidney cancer in the United States.<sup>1</sup> Today, kidney tumors are often found early when they are still small. As a result, survival rates are very high. As with all cancer, the sooner it is treated the greater the chances for cure.*

Kidney tumors that are discovered early can be successfully treated without surgically removing all or part of the kidney. Advances in medical technology now allow physicians to ablate (destroy) the tumor in the body, thereby reducing both the risks and the long recovery from open surgery.

Cryotherapy (also called Cryosurgery, Cryoablation or just Cryo) is a treatment for small kidney masses that ablates the tumors by freezing the cancerous tissue. This brochure can answer the most common questions about Kidney Cryotherapy.



### *What does “Cryotherapy” mean?*

The word Cryotherapy comes from two ancient Greek words. Cryo is the word for cold and therapy is the word for healing. In other words, Cryotherapy means healing by using extreme cold.

### *What is the procedure like?*

After anesthesia is administered, one or more slender needles (cryoprobes) are inserted into or near the tumor. The doctor uses imaging technology such as ultrasound or CT scans to guide the probe placement and verify that the tip is precisely positioned.

Once each cryoprobe is in place, argon gas is circulated inside the probe to create a very cold iceball at the tip. The iceball encompasses the entire tumor plus a safety margin past the tumor edges. When the correct low temperature is reached, the doctor thaws the iceball and the probes are removed.

### *How does ice destroy cells and what is left?*

Lethal ice destroys tumors with a combination of effects. Simply put, freezing dries out each cell, damaging it beyond repair, and ultimately cuts off the tumor's blood supply. It leaves behind harmless tissue that is absorbed by the body over time.

### *What are the advantages of cryotherapy for kidney cancer?*

Freezing is a natural process that is typically well tolerated by the body. Usually there is minimal to no pain and a relatively short recovery. While no cancer treatment comes with a guarantee of a cure, studies show five-year survival rates near 100%.<sup>2</sup>

### *Will I still have my kidney and will it work?*

Only a small part of the kidney containing the tumor is frozen. Typically, the rest of your kidney will continue to work as usual. Thus, cryo is a “nephron or kidney sparing” treatment.<sup>3</sup>

### *Is cryotherapy new?*

Freezing is not new. It has a proven track record in other organs. For example, cryo has been an accepted treatment for prostate cancer for more than a decade.

### *How successful is kidney cryo?*

In a recent study of cryoablation for renal cancer (168 cases), at five years there were no deaths as a result of kidney cancer (100% survival), and only three patients needed further treatment within that period.<sup>2</sup>

### *How long does the procedure take?*

Your physician can best answer that question but a typical Kidney Cryo procedure takes about 1–2 hours.

### *How long is the recovery period?*

While each person is different, most patients recover relatively fast. Typically, patients spend only one night in the hospital or may even go home the same day. Most patients have fully recovered within a week or so. And because this is not major surgery, there is usually little pain during recovery. However, as with any medical procedure there are risks, and you should always closely follow your doctor's advice.

### *How will I know that the procedure was a success?*

Your physician will be able to gauge success by taking a CT scan shortly after the procedure. Follow-up scans, usually at 6 months and 1 year, will further confirm that the tumor has been successfully destroyed.

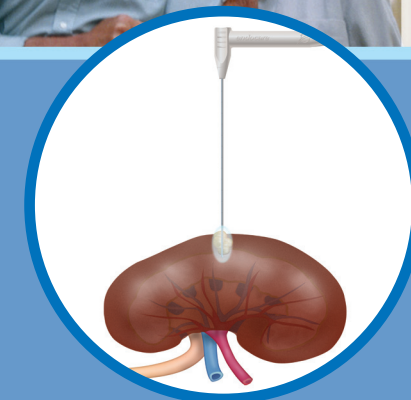
### *How can I obtain more information on treating kidney tumors with cryotherapy?*

Call 1-877-355-CRYO and a patient advocate can answer questions you may have regarding the CRYOCARE minimally invasive procedure.

1) American Cancer Society, "Cancer Facts and Figures 2006:"

2) Hegarty et al. "Renal cryoablation: 5-year outcomes" presented at AUA 2006 May (Atlanta, GA).

3) Hegarty et al. Urology 2006 Jul; 68(1 Suppl).



### *Renal Tumor Cryotherapy*

This illustration demonstrates the use of a cryoprobe positioned at the center of the tumor. The freeze encapsulates the entire tumor with lethal ice. In this illustration the ice ball from the cryoprobe is still forming and will eventually reach its maximum size (typically at 10 minutes). Also an extra safety margin is created by extending the ice beyond the tumor.

# CRYOCARE®

Cryotherapy is a minimally invasive treatment for small kidney tumors. As with any medical procedure there are potential risks and complications. Remember, this brochure is not a substitute for medical advice. If you are diagnosed with a kidney tumor, ask your physician if kidney cryotherapy is the right choice for you.

## 1-877-355-CRYO

(1-877-355-2796)

Email: [info@cryocare.org](mailto:info@cryocare.org)

what does  
that mean?

## KIDNEY CRYOTHERAPY GLOSSARY GUIDE

### *Cryotherapy*

Destruction (ablation) of tissue by freezing. Cancerous tumors are frozen in the body as an alternative to surgical removal. Treatment is minimally invasive and may be performed as an outpatient procedure.

### *Carcinoma*

Cancer involving tissue that lines the internal surface of body tubes and hollow organs.

### *Kidney*

One of a pair of essential organs that maintains water balance in the body, and filters waste from the blood, directing it into the bladder for excretion in the form of urine. The kidneys also produce three important hormones that assist in producing red blood cells, regulating blood pressure, and vitamin D production to help in calcium use for healthy bones.

### *Kidney Cancer*

A malignant (cancerous) tumor growing within the kidney. Several types of cancer can develop in the kidneys, but the most common is renal cell carcinoma [see below]. Early diagnosis is important. Tumors discovered at an early stage usually respond well to treatment.

### *Nephron*

The functional unit of the kidney, responsible for the actual filtration of the blood. Each kidney contains about a million nephrons. Cryotherapy is called a "nephron-sparing" treatment, because it treats just the tumor without damaging the ability of the kidney to perform its vital filtering function.<sup>3</sup>

### *Renal*

Of or pertaining to the kidneys, as in "renal cancer" (kidney cancer).

### *Renal Cell Carcinoma(RCC)*

The most common form of kidney cancer, accounting for approximately 85% of all cases. In RCC, cancerous (malignant) cells develop in the lining of the kidney's tubules (very small, long tubes connected to nephrons) and grow into a tumor [see carcinoma]. Usually a single tumor develops, though more than one tumor can develop in one or both kidneys.



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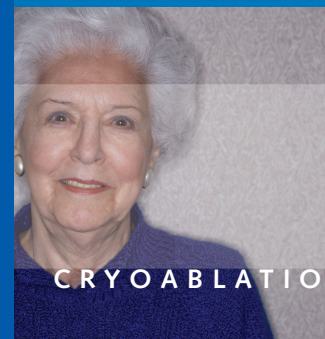
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## PATIENT INFORMATION GUIDE

# TREATING KIDNEY TUMORS WITH CRYOTHERAPY



## CRYOABLATION OF THE KIDNEY

ANSWERS TO YOUR  
QUESTIONS ABOUT KIDNEY  
CRYOTHERAPY TREATMENT

CRYOCARE®