

ASCENSION ST VINCENTS

RENAL MASS CRYOABLATION PATIENT HANDOUT

Radiologist who performed your procedure:

Procedure Description:

- Small kidney (renal) masses are common, are frequently not causing symptoms and are frequently found on imaging performed for unrelated reasons.
- An image-guided renal mass cryoablation is a procedure that uses extreme cold to destroy/kill the cells making up a renal mass. The procedure is often used for a smaller renal mass instead of surgical removal of the mass. During the procedure, a radiologist uses CT or US imaging to precisely target the mass. The skin is cleaned with antiseptic, and local anesthetic is used to numb the area. One or more cryoablation needles are then placed into the mass, and the tip of the needle(s) undergoes freeze and thaw cycles to create an ice ball that destroys the mass while preserving as much normal renal tissue around the mass as possible.
- The procedure itself usually takes 1-2 hours. The patient is then observed for several hours to watch for any procedure complications.
- Most patients go home the same day, although occasionally patients are kept in the hospital overnight or rarely longer.
- The body will slowly resorb the destroyed tissue over weeks to months, generally only leaving a small scar in the kidney.
- CT or MRI imaging of the kidneys will be performed approximately 6 months after the procedure. Additional longer-term follow-up imaging is usually performed on masses that were malignant (cancer) at biopsy.

Benefits:

- Minimally invasive: The procedure uses small needles with no incisions or stitches. This usually means less pain, a shorter hospital stay and a quicker recovery compared to traditional surgery.
- Preserves kidney function: Most patients experience no significant loss of renal function after the procedure. This is particularly important for patients with existing renal disease.
- Effective cancer control: For small masses that prove to be cancers, cryoablation provides high rates of tumor control. Most patients do not need additional treatment, and long-term studies show excellent cancer-specific survival rates.
- Low risk of complications: The risk of serious complications is low, with most side effects being mild and temporary.
- Suitable for higher-risk patients: The procedure is especially helpful for people who may not be good candidates for traditional surgery due to age, other health problems or previous kidney surgery.
- Can be repeated: If the tumor is not completely destroyed in one treatment or regrows over time, the cryoablation can often be repeated.

Risks & Potential Complications:

- Pain: Pain can occur (about 5-10% of cases). The pain is usually mild, usually goes away within a few days and can be managed with over-the-counter pain medicine.

- **Bleeding:** Minor bleeding can occur (up to 10% of cases). Significant bleeding that requires a blood transfusion, another procedure or surgery is uncommon (up to 4% of cases).
- **Infection:** Infection in/around the kidney or in the urine can occur (about 2% of cases). Most infections are mild and can be treated with antibiotics.
- **Decline in kidney function:** A small decline in function can occur (about 5-10% of cases). Most patients have little or no decline in kidney function after the procedure.
- **Mass recurrence:** The mass can come back in the same spot (up to 10% of cases). The procedure can usually be repeated if the mass comes back.
- **Vasovagal reaction:** Feeling faint or lightheaded can occur during or after the procedure (up to 5% of cases). It is usually mild and goes away quickly.
- **Serious complications:** Serious complications such as bleeding requiring surgery, severe infection or injury to other organs can occur (about 2–5% of cases). The risk is higher for larger masses and for masses located more centrally within the kidney.
- **Internal injury:** Injury to nearby organs, bowel/intestine or large blood vessels can occur (up to 3% of cases).
- **Injury to collecting system:** Injury to tube that drains urine from the kidney to the bladder can occur (up to 2% of cases). Most injuries are mild, however some require placement of a temporary stent or drainage catheter.
- **Allergic reaction:** A reaction to the local anesthetic, topical antiseptic or other medications is rare (less than 1% of cases).

Alternatives:

- **Traditional surgery:** Masses can be removed using traditional surgery. Either removal of the mass and a small amount of surrounding normal tissue (partial nephrectomy) or removal of the mass and the entire kidney (total nephrectomy) can be performed. Some patients have conditions that make them high-risk for traditional surgery.
- **Other types of ablation:** Other ablation options are similar to cryoablation and include: radio waves (RFA), microwaves (MWA) or in select patients external radiation therapy (SBRT).
- **Active surveillance:** Watching for growth of the mass with periodic imaging can be performed. This option can be used in patients who decline treatment and in patients with significant health issues or with limited life expectancy.

Post-Ablation Syndrome:

- After cryoablation, up to 60% of patients experience a group of symptoms called post-ablation syndrome. This is a temporary reaction that can happen as your body responds to the destroyed tissue. Symptoms are usually mild. Most cases begin with the first two days and go away within a week.
- Symptoms of post-ablation syndrome include:
 - **Fever:** Most people have a mild fever (usually less than 101°F) that starts within the first two days.
 - **Malaise (feeling tired or run down):** This is common and may last a few days.
 - **Nausea or vomiting:** About 20% of patients may experience nausea and/or vomiting, but this usually goes away quickly.
 - **Flu-like symptoms:** Some people feel achy or have chills (like having a mild flu).
- Symptoms can be managed with rest, drinking plenty of fluids and acetaminophen (Tylenol).
- Call your provider if symptoms are severe, last longer than a week or if you have high fever (over 102°F).

Renal Mass Biopsy:

- Only approximately 70% of small renal masses smaller are malignant.
- One option when a renal mass is present is to biopsy the mass to determine whether or not the mass is malignant.
- Some patients desire biopsy, while others do not.
- Benefits of biopsy include:
 - Knowing whether the mass is malignant or benign (not cancer).
 - Continued long-term CT or MRI imaging follow-up is usually not needed for benign renal masses.
- Risks of biopsy include:
 - Most of the risks of biopsy are similar to the cryoablation procedure itself.
 - One risk unique to biopsy is tumor seeding. Tumor seeding occurs with cells from a malignant mass fall off the biopsy needle along the path the needle took to perform the biopsy. The risk of tumor seeding with malignant renal masses is approximately 0.2%. Tumor seedings is not known to occur with benign masses. Cases of tumor seeding are generally seen on follow-up imaging and can usually be treated with repeat cryoablation.
 - Approximately 10-20% of biopsies do not provide a definitive biopsy result (inconclusive/nondiagnostic biopsy). This is more common with smaller masses, masses mainly made up of fluid (cystic masses) and masses that are difficult to distinguish from nearby normal kidney tissue.
- Options when a patient decides to have a renal mass biopsied include:
 - Performing the biopsy on a day prior to the cryoablation procedure, waiting for the biopsy results to come back (usually takes several days) and proceeding with cryoablation only if the biopsy results demonstrate cancer or are inconclusive/nondiagnostic.
 - Performing the biopsy on the same day as cryoablation with the knowledge that the biopsy results will not be known until several days after the cryoablation. This option is chosen when the imaging exams shows the mass is almost certainly malignant. Some patients also choose this option for the convenience of having both procedures done in one appointment.
- Biopsy of a renal mass is almost never successful when performed after cryoablation.

Aftercare Instructions:

- One or more bandages will be applied over the procedure site. You may remove the bandage 24 hours after your procedure.
- You may shower and allow water to flow over the site 24 hours after your procedure, however, do not submerge the site in water (bath, pool, hot tub or ocean) until the site has healed.
- Do not apply lotion/ointment to the site until it has healed unless you are instructed to do so.
- Avoid strenuous physical activity for at least 1 week, then increase your activity level as tolerated.
- It is normal to experience pain and bruising after your procedure. You can take acetaminophen (Tylenol) for the first 24 hours after your procedure. After 24 hours, you may switch to aspirin, ibuprofen (Motrin) or naproxen (Aleve) if acetaminophen is not adequately decreasing your pain.
- You may see a small amount of blood in your urine following the procedure. It is normal if it is only a small amount and decreases with time.
- Contact Radiology or your ordering clinician if you have any concerns or experience any of the following: severe pain not responding to medications, significant pain or swelling at the procedure site, significant or increasing blood in your urine, signs of possible infection (significant redness or purulent drainage from the procedure site, severe pain, high fever or foul-smelling urine), shortness of breath and/or chest pain that is

worse than normal for you, dizziness or lightheadedness when standing or a faster than normal heart rate. Call 911 in the event of an emergency.

- Weekdays 8 am to 5 pm call 308-8401 (Riverside), 296-3886 (Southside), 602-1360 (Clay) or 691-1297 (St Johns). Weekdays 5 pm to 10 pm or weekends 6 am to 10 pm call 308-8401. If outside of these hours, call the hospital operator at 308-7300 and ask to speak to the Interventional Radiologist on call.

How Do I Receive Biopsy Results?

- Biopsy results can take up to 5 days (sometimes longer) to become available. Either the radiologist who performed the procedure or the provider who ordered the procedure will contact you with the results.