

A PATIENT'S GUIDE TO  
**Microwave Ablation**



# WHAT IS Microwave Ablation?

## MICROWAVES

The controlled transmission of electromagnetic energy into targeted tissue during a medical procedure.

## ABLATION

Removal or destruction of body tissue.

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## HOW DOES IT WORK?

Microwave energy is delivered to target tissue and causes water molecules in the cells to rotate millions of times per second, which causes frictional heating. Frictional heating, over 60 degrees Celsius, causes the targeted cells to die. The heating and destruction of the tissue is called an ablation or soft tissue coagulation.

# Overview

## FAST

During microwave ablation the Microwave Tissue Ablation (MTA) system uses a slender needle-shaped applicator to send a controlled amount of microwave energy into the target tissue. The procedure typically lasts 1–2 hours. Depending on the prescribed volume of coagulation the actual ablation takes approximately 2–6 minutes.

## PREDICTABLE

Microwaves are a rapid way of destroying tissue. Microwaves are absorbed by the tissue creating heat by interacting with the water in the tissue. The microwave energy fades away to almost nothing just a few centimeters away from the applicator's microwave feed point. This ensures that the area of heating is very controlled, predictable and precise.



# Procedure

## PLACEMENT

Microwave ablation is a very precise procedure. Using an imaging guidance system such as ultrasound or computed tomography (CT), the doctor places a slender probe directly into the targeted tissue.

## ABLATION

Using a microwave generator, the doctor then allows a carefully-controlled amount of energy to flow through the antennae into the tissue. This causes the tissue to heat up. Heating is sustained for a predetermined length of time, usually just a few minutes.

Upon completion of the treatment the targeted tissue will be coagulated, lack blood flow and will no longer enhance on CT imaging.

## Post Procedure

Based on the size and location of the ablation your physician may require you to stay overnight for observation. In some cases your physician may complete the procedure as an outpatient where you're able to go home the same day. During the microwave surgical procedure anesthesia is commonly used so that you remain comfortable during the ablation. You may experience some discomfort after the ablation including inflammation and a low grade fever as your body heals itself.

# Benefits and Risks

## **BENEFITS:**

- Minimally invasive—usually done on an outpatient basis
- Multiple ablations can be done as prescribed by your physician
- Few complications or side effects

## **PATIENTS MAY EXPERIENCE:**

- Low-grade fevers for a few days following the procedure
- Low risk of skin burns, bleeding, fluid accumulation, injury to adjacent structures and infection

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## **What treatment is best for me?**

Treatment choice depends on each patient's specific condition. Your doctor will help you decide if microwave ablation is the best option for you.

To learn more about microwave ablation visit [www.angiodynamics.com](http://www.angiodynamics.com)

