

## **Microwave ablation patient information sheet**

### **What is microwave ablation?**

Microwave ablation sometimes abbreviated as MWA is another thermal ablation method that uses electromagnetic waves to create heat to shrink treated thyroid nodules. Energy is emitted from a needle-shaped antenna that is guided to the target using ultrasound to ensure it is precisely located. Microwave ablation generally has a larger “footprint” than other thermal methods making it better for bigger thyroid nodules.

### **How effective is microwave ablation?**

Because it treats a volume of tissue compared to other minimally invasive methods, microwave ablation is sometimes preferred for treating larger nodules. A study that summarized data from 9 different studies which included 1845 thyroid nodules treated with microwave ablation showed that at 3, 6, and 12 months after treatment, nodule volume decreased by 54%, 74%, and 89% respectively.

### **How is microwave ablation performed?**

Microwave ablation is an outpatient procedure performed under local anesthesia. You will be awake during the procedure though your doctor may recommend a medication like Xanax to help you relax. Numbing medication will be applied to the skin and around the thyroid gland and then a small 1-2mm incision is made to allow insertion of the antenna. Ultrasound is used to make sure the antenna is in the correct location in the nodule. The procedure usually takes 20-30 minutes, but it may take more or less time depending on the location and size of the nodule being treated.

### **What is recovery like?**

After a microwave ablation, you will be monitored for a short time to make sure you are feeling well before you are discharged to home. You may experience some neck soreness for a few days and sometimes longer. You may also see some bruising over the treatment area. Pain medication like acetaminophen (Tylenol) or ibuprofen (Advil/Motrin) may be recommended and icing your neck for the first day after the procedure may also be helpful. Your doctor will also tell you if you need to avoid any specific activities after the procedure. Follow-up usually involves a post-procedure office visit and neck ultrasound at 1, 6, and 12 months following treatment. Follow-up visits help your doctor determine how much the nodule has decreased in size and whether your initial treatment was been sufficient.

### **What are the risks of microwave ablation?**

In general, microwave ablation is safe and well-tolerated. Mild to moderate discomfort that generally lasts no more than a few days can occur following treatment. Bleeding during the procedure may also occur but is usually not severe. If a treated nodule does not shrink

enough, additional treatments may be required. More serious but rare risks include injury to the tissues near the thyroid such as the vocal cord nerves or the parathyroid glands which control calcium levels in your body. Because microwave ablation does not typically damage a significant amount of normal thyroid tissue, the risk of developing hypothyroidism following treatment is low. While microwave ablation generally has a lower complication rate than surgery, studies that combine data from other smaller studies suggest it may have a somewhat higher complication rate than radiofrequency and laser ablation.