### How Radiofrequency Treatment Relieves Chronic Knee Pain

1. Genicular nerves transmit pain signals from the knee joint.



2. A needle is inserted at each treatment site. Stimulation is used to locate the nerve.





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www.cosmanmedical.com

76 Cambridge Street Burlington, MA 01803 USA info@cosmanmedical.com Tel +1 781 272 6561 Fax +1 781 272 6563

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# Radiofrequency Pain Management

for Chronic Knee Pain





#### Pain Management with Radiofrequency

Chronic knee osteoarthritis (OA) is a painful disorder common among adults of advanced age.<sup>1</sup>

Imagine an outpatient procedure that could treat your knee pain, and allow you to quickly return to your normal activities. All this is possible using the Radiofrequency (RF) technology pioneered by COSMAN scientists and engineers over the last sixty years.

#### Radiofrequency Treatment

Radiofrequency ablation (RFA) is a safe, proven means of interrupting pain signals, such as those coming from irritated genicular nerves in the knee. Radiofrequency current is used to heat up a small volume of nerve tissue, thereby interrupting pain signals from that specific area. Clinical data shows that radiofrequency treatment can effectively provide lasting pain relief.<sup>1,2,3</sup>

Radiofrequency treatment should not be considered for patients taking anticoagulants, for patients with local infections, for patients with serious psychological problems, for patients with allergies to local anesthetics, and for pregnant patients.<sup>3</sup>

Radiofrequency Ablation (RFA) Therapy is a simple and effective treatment for chronic pain originating from the knee. RFA is also known as denervation or thermocoagulation. Your doctor can determine if RFA treatment is right for you.

#### During the Procedure

A radiofrequency nerve ablation procedure is performed by a doctor in a treatment room setting. Both local anesthesia and a mild sedative may be used to reduce discomfort during the procedure.

During the procedure you will be lying on your back with a pillow under your leg. Your doctor will insert several small needles in your knee. Using x-ray imaging, the doctor will guide the needles to the treatment locations near the joint. Electrodes are inserted through the needles to stimulate nearby sensory and motor nerves. During stimulation, your doctor will ask if you are able to feel a tingling sensation. The object of stimulation is to determine the optimal treatment locations for pain relief.

Once the needle and electrode placement is verified, a small RF current will travel through the electrodes into the surrounding tissue, causing the tissue to heat and eliminate the pain pathways. You should alert your doctor if at any time during the procedure you experience any discomfort.

Your doctor will treat more than one location during the same procedure to minimize treatment time.



This pamphlet is for general education only. All medical questions and concerns should be addressed with your doctor. Your doctor can explain possible outcomes of treatment including risks and side effects.

#### After the Procedure

You may experience some soft tissue discomfort at the needle placement sites following the procedure. Like other soft tissue wounds, the discomfort should subside over several days or weeks. If there are no complications, the procedure can usually be done on an outpatient basis.

Your knee pain should subside over the next several weeks. Radiofrequency treatment of nerves usually blocks pain signals for a prolonged period of time. <sup>1,2,3</sup> The procedure can be repeated if the nerves regenerate and your pain returns.

Radiofrequency treatment should not limit your daily activities. You should be able to resume your normal activities, including work. Physical restrictions you had prior to the procedure may still remain. As with any medical procedure, however minor, there are certain risks involved. Please ask your doctor for details regarding the potential risks with radiofrequency ablation and what activities are appropriate after radiofrequency treatment.

Ask your doctor about pain treatment with COSMAN radiofrequency equipment.

#### The Leader in Radiofrequency Medicine

COSMAN has been a major innovator in the field of radiofrequency pain treatment since 1952 when Bernard J. Cosman built the first medical RF generator at his company Radionics, Inc. No other company has longer experience in RF medicine. Visit our website at cosmanmedical.com for more detailed information on COSMAN RF generators and pain management. Email our global headquarters at info@ cosmanmedical.com for the location of a pain management clinic near you.

- Choi WJ. Radiofrequency treatment relieves chronic knee osteoarthritis pain: a double-blind randomized controlled trial. Pain 2011;152: 481-7.
- 2. Ikeuchi M. Percutaneous radiofrequency treatment for refractory anteromedial pain of osteoarthritic knees. Pain Medicine 2011;12(4): 546-51.
- 3. Gauci CA. Radiofrequency treatment of the lumbar medial branch. Cosman Procedure Technique Series. USA; 2009.