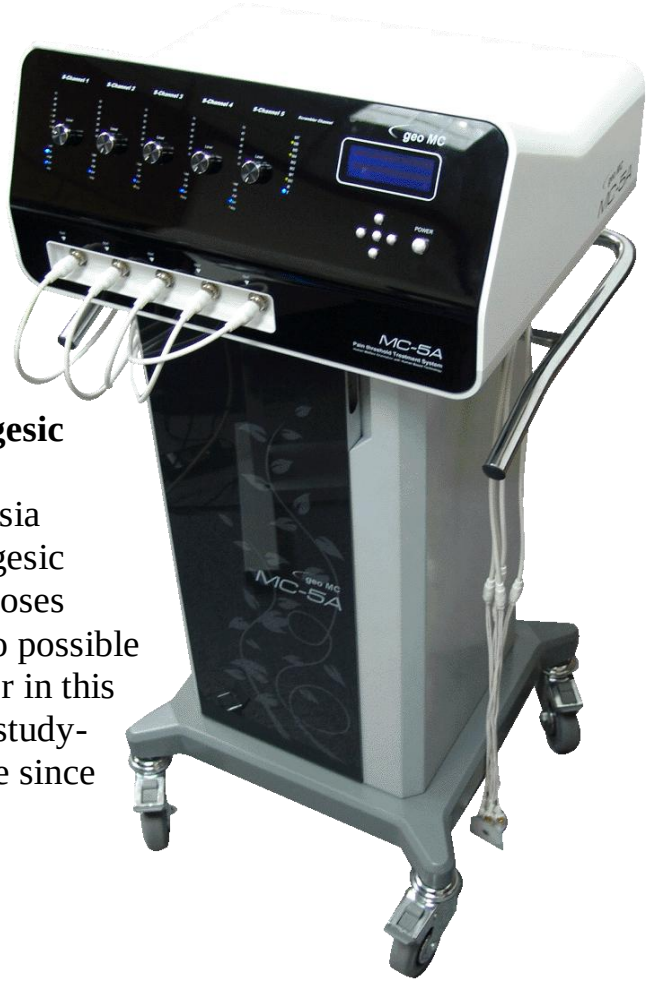
Department of Neurology
Kernodle Clinic
Dr. Hemang Shah

Scrambler Therapy is a proven, unique, non-invasive method for rapid treatment of chronic intractable neuropathic and cancer related pain.

Who is it for?
Scrambler Therapy is a new electroanalgesia methodology specifically studied for neuropathic pain, oncologic pain, and in general for pain non-responsive to other types of drugs and forms of electrical stimulation therapies (TENS, spinal cord stimulator).

How Scrambler Therapy® Technology Works?
Five independent channels are available to transmit the artificial "no pain" messages via surface electrodes **(non-invasive)** placed on the skin in the dermatome region of the patient's pain. Protocols are different based on the types of pain treated. It stimulates C fibers (pain carrying fibers) in a physiological form vs. TENS unit excessively stimulates A-Beta fibers to suppress signal transmission by C-fibers.

History of Scrambler Therapy
It was invented by Prof. Giuseppe Marineo around 2003 at the University of Rome, Italy. It received FDA clearance in 2009.



What are the success possibilities?
In general, it is operator and patient (type of condition) dependent. In clinical trials of CINP, efficacy has been around 60%, however they can be higher than 80%.

Which are the effects of combinations with other analgesic therapies?
Scrambler Therapy is a stand-alone medical electroanalgesia device and does not require combinations with other analgesic therapies. The usage of anticonvulsants for analgesic purposes generally calls for a higher number of treatments. It is also possible to continue the anticonvulsants analgesic therapy, however in this case, results are not as good and relapse is quicker. From study-phase data the combination with Ketamine is incompatible since it seems to block the analgesic efficacy of the treatment.

Indications for Use:
- Painful Peripheral Neuropathy
- Complex Regional Pain Syndrome (CRPS / RSD)
- Chemotherapy-Induced Peripheral Neuropathy (CIPN)
- Intractable Cancer Pain

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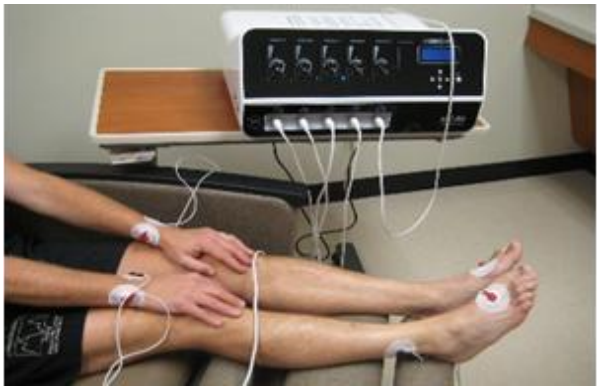
- Failed Back Surgery Syndrome
- Sciatic and Lumbar Pain
- Post-Herpetic Neuralgia (PHN)
- Brachial Plexus Pain
- Chronic Neuropathic Pain, Allodynia, Hyperalgesia

Scrambler Therapy® Technology Treatment Protocol
The patient visits the practice for 10 treatment sessions on average. One session per day over a period of two weeks (weekdays). Treatment sessions may last from 30 to 45 minutes. Booster cycles are given when needed for symptoms recurrence.



During the first session, after the correct electrode positioning and fine-tuned stimulation levels, the patient may notice significant improvements in a short period of time. In the subsequent sessions, the patient may realize that pain relief is prolonged (reduced intensity and duration). So far Scrambler Therapy does not have any known side effects except mild irritation at the site of electrode placement.

Scrambler Therapy may exclude some patients

- Pacemaker, implantable defibrillator or Spinal Cord Stimulator
- Vena cava, aneurysm clips
- Pregnancy
- History of epilepsy, symptomatic brain metastases
- Prior celiac plexus block, or other neurolytic pain control treatment within 4 weeks
- Wounds or skin irritation in areas where the electrodes are required to be placed
- Cardiac Ischemia within the previous 6 months or severe arrhythmia
- Artificial joints, spinal plates, screws are COMPATIBLE with scrambler therapy.

Scrambler Therapy® Technology MC-5A is a U.S. FDA 510(k)-cleared (# K142666) and European CE mark-certified (#CE 0470) pain therapy medical device. The Scrambler Therapy device has been in active use at MD Anderson Cancer Center, Mayo clinic, John Hopkins, MUSC (Medical University of South Carolina), and Walter Reed Army hospital.

Scrambler Therapy is still considered investigational by most insurance companies and not usually covered. We will file a claim to the patient's insurance company. The patient gets the first treatment session free to see if it is effective for them or not. The cost is $175/session for 10 sessions. Payment arrangements can be made as $200/month for 9 months.