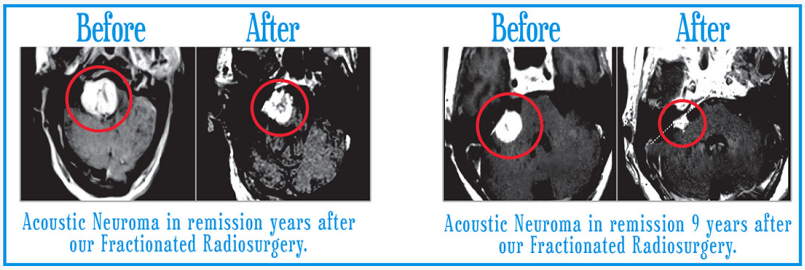
Dr. Lederman’s Advanced Diagnostic Techniques for Acoustic Neuroma

Comprehensive Diagnosis and Treatment Options for Patients with Acoustic Neuroma

Dr. Gill Lederman



Acoustic Neuroma Before & After

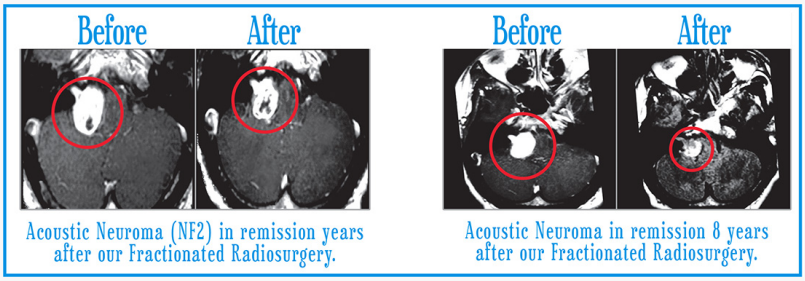
NEW YORK, NY, USA, May 3, 2023 /EINPresswire.com/ -- Acoustic Neuroma is a rare, non-cancerous tumor that develops on the vestibulocochlear nerve, which is responsible for hearing and balance. The tumor is also known as a vestibular schwannoma, as it originates from the Schwann cells that surround the nerve. The exact cause of Acoustic Neuroma is unknown, but it is believed to be the result of a mutation in the genetic material of the Schwann cells.

The symptoms of Acoustic Neuroma can vary from mild to severe and can develop gradually or suddenly. According to the American Association of Neurological Surgeons (AANS), common symptoms of Acoustic Neuroma include hearing loss, tinnitus (ringing in the ear), vertigo (dizziness), and difficulty with balance. In some cases, the tumor may also cause facial numbness, weakness, or paralysis on one side of the face. These symptoms can be debilitating and impact the patient's quality of life.

The AANS reports that the cause of Acoustic Neuroma is not known, but it is believed to be related to a genetic mutation that causes cells in the nerve sheath to grow uncontrollably. The

tumor grows slowly, and it may take years for symptoms to develop.

The diagnosis of Acoustic Neuroma is made through a combination of medical history, physical examination, and diagnostic imaging tests, such as magnetic resonance imaging (MRI) and computed tomography (CT) scans. Treatment options for Acoustic Neuroma include observation, surgery, radiation therapy, or a combination of these approaches.



Acoustic Neuroma Before & After 2

Are you worried about reemerging Cancer?

If left untreated, the tumor can continue to grow, causing permanent damage to the affected nerves. In severe cases, the tumor can even press on the brainstem, which can be life-threatening. Therefore, early detection and treatment are essential to prevent long-term complications.

Dr. Gil Lederman, a renowned radiation oncologist with over 30 years of experience in treating cancer patients, has developed advanced diagnostic techniques for Acoustic Neuroma. These techniques have allowed Dr. Lederman to accurately diagnose and treat patients with this rare condition.

Dr. Lederman's team uses advanced imaging techniques to diagnose Acoustic Neuroma. The most common diagnostic tool used is magnetic resonance imaging (MRI). This technology produces detailed images of the brain and surrounding tissues, which can help detect the presence of a tumor. In some cases, Dr. Lederman may also order a computed tomography (CT) scan or an auditory brainstem response (ABR) test to confirm the diagnosis.

Research has shown that the use of advanced imaging techniques, such as magnetic resonance imaging (MRI) and computed tomography (CT) scans, can significantly improve the accuracy of Acoustic Neuroma diagnosis. A study published in the Journal of Neurological Surgery found that using high-resolution MRI can help detect small tumors that are often missed by traditional imaging techniques. The study also reported that combining MRI with other imaging modalities, such as CT and positron emission tomography (PET), can further improve diagnostic accuracy.

It is important to note that Acoustic Neuroma is a rare condition, and not all tumors require immediate treatment. In some cases, the tumor may not grow, or the symptoms may be mild enough that the patient can manage them without intervention. However, close monitoring is necessary to ensure that the tumor is not growing or causing additional complications.

Once a patient is diagnosed with Acoustic Neuroma, Dr. Gil Lederman, a renowned radiation oncologist, works with a team of experts to develop a comprehensive treatment plan tailored to the patient's specific needs. Dr. Lederman is known for his pioneering work in Microbeam Radiation Therapy (MRT), a non-invasive treatment that delivers high doses of radiation to the tumor while minimizing damage to the surrounding healthy tissue. This technique has been proven effective in treating Acoustic Neuroma, as it can shrink the tumor size, preserve hearing, and reduce the risk of long-term side effects.

MRT, or Microbeam Radiation Therapy, is a type of radiation therapy used to treat certain types of cancerous tumors. It works by using multiple beams of radiation, each only a few microns wide, to target the tumor with high precision. This allows the radiation to be delivered directly to the tumor, while minimizing exposure to the surrounding healthy tissue.

MRT uses a synchrotron, a type of particle accelerator, to generate the microbeams of radiation. The beams are then directed at the tumor from multiple angles to create a complex pattern of intersecting beams. The radiation dose is delivered in a series of pulses, with each pulse lasting only a fraction of a second. This allows the tumor to be treated with high doses of radiation while minimizing the risk of damage to nearby healthy tissue.

According to the American Society for Radiation Oncology (ASTRO), MRT is still an experimental treatment and is not widely available. However, clinical trials have shown promising results in treating certain types of cancer, including brain tumors and melanoma.

As a result of the high precision of MRT, patients who undergo this treatment typically experience fewer side effects than those who undergo traditional radiation therapy. However, some patients may still experience temporary side effects, such as fatigue, skin irritation, and hair loss.

In addition to MRT, Dr. Lederman offers a range of treatment options for patients with Acoustic Neuroma, including observation, surgery, and other radiation therapies. The treatment plan depends on the size and location of the tumor, as well as the patient's overall health. For example, patients with small tumors may be candidates for observation, which involves regular monitoring to ensure the tumor is not growing or causing additional complications.

Surgery, stereotactic radiosurgery, and proton therapy are treatment options for certain types of cancerous tumors, including Acoustic Neuroma. The specific type of treatment recommended for a patient depends on the size and location of the tumor, as well as the patient's overall health

and medical history.

Surgery may be recommended for larger tumors or if the tumor is causing significant symptoms or affecting the patient's quality of life. During the surgery, the tumor is removed through a procedure known as craniotomy. This involves making an incision in the skull and removing a portion of the bone to access the brain. While surgery is effective in removing the tumor, it can also cause damage to the surrounding nerves, leading to long-term complications such as hearing loss and facial paralysis.

Stereotactic radiosurgery is a non-invasive treatment option that uses focused radiation to target the tumor with high precision. This type of radiation therapy is typically delivered in a single session or a small number of sessions. Stereotactic radiosurgery is often used for smaller tumors or tumors that are difficult to reach with surgery.

Proton therapy is a type of radiation therapy that uses protons instead of X-rays to treat cancer. Protons are heavier particles than X-rays, which means they can be more precisely targeted to the tumor while minimizing damage to surrounding healthy tissue. Proton therapy is often used for tumors that are located near critical organs or tissues, such as the brain or spinal cord.

The American Association of Neurological Surgeons (AANS) reports that surgical removal is a commonly used treatment for larger tumors or those that cause severe symptoms. The surgery can be highly effective in removing the tumor, but it can also cause damage to the surrounding nerves leading to long-term complications like hearing loss and facial paralysis.

According to the AANS, the decision to remove a tumor surgically is based on several factors, including the tumor size, location, and its relationship to nearby structures. In some cases, doctors may recommend radiation therapy or chemotherapy before or after surgery to help shrink the tumor or to prevent recurrence.

Surgical removal is often the first line of treatment for brain tumors, and it can significantly improve a patient's quality of life. However, like any surgical procedure, it carries risks and potential complications, including bleeding, infection, and damage to surrounding tissues. It is essential that patients fully understand the benefits and risks of the procedure and discuss them with their doctors before making a decision.

Dr. Lederman understands that a diagnosis of Acoustic Neuroma can be overwhelming, and he and his team are committed to providing compassionate care to their patients. Dr. Lederman’s patients appreciate his ability to explain complex medical information in simple terms, ensuring that they are fully informed about their diagnosis and treatment options.

Acoustic Neuroma is a rare condition, and patients may struggle to find experienced doctors who can accurately diagnose and treat the condition. Dr. Lederman’s advanced diagnostic techniques and pioneering work in MRT have made him a leader in the field. Patients who are

diagnosed with Acoustic Neuroma can be confident in Dr. Lederman's expertise and ability to provide effective treatment options.

In conclusion, Dr. Lederman’s advanced diagnostic techniques and pioneering work in Microbeam Radiation Therapy (MRT) have allowed him to accurately diagnose and effectively treat patients with Acoustic Neuroma. Dr. Lederman’s compassionate care and ability to explain complex medical information in simple terms make him a trusted provider for patients facing this rare condition.

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