The first midline myelotomy for cancer pain was performed in 1926. Today it remains a useful and often effective procedure for certain types of cancer pain.
Deep within the center of the spinal cord lies a very important pain pathway. It is through this tract, thought to be the major pathway of visceral pain, that pain is transmitted from the organs of the abdomen, pelvis and bottom of the spine to parts of the brain. Midline myelotomy targets this pathway, located in the dorsal column of the spinal cord. By interrupting these fibers, the pain signal is stopped from reaching the brain.

**Who May Benefit from a Midline Myelotomy?**
Those with midline or bilateral visceral pain of the abdomen or pelvis that is not responsive to pain medication including rectal, vaginal, perineal, liver, pancreas, ovarian, and sacral pain.

**How is a Myelotomy Done?**
There are two ways to do a myelotomy - open and percutaneous. An open myelotomy is a surgical procedure done with the patient under general anesthesia. A small incision is made over the thoracic spine, a small amount of bone removed and the lining over the spinal cord (dura) is opened. Using the operating microscope, the exact midline of the spinal cord is located and the correct fibers are disrupted, interrupting communication with the pain centers of the brain. A percutaneous myelotomy is a non-surgical outpatient procedure done with the patient awake using a needle and a radiofrequency probe. The skin is carefully washed and numbed using local anesthetic. Using a CT scanner, the midline of the spinal cord is located and a needle placed in the spinal fluid, where small amount of dye is injected, allowing visualization of the spinal cord. The electrode is then placed through the needle and precisely placed within the spinal cord. The tip of the electrode is heated, disconnecting the nerve fibers. The patient is monitored in the hospital overnight and is usually discharged the following morning.

**What Risks are Involved in the Procedure?**
If an open myelotomy is done, the risks are the same as for any surgical procedure. For the open or percutaneous myelotomy, risks include leakage of spinal fluid resulting in a spinal headache, infection, bleeding, possible sensory loss, unusual sensations, bowel or bladder weakness, unsteadiness when walking.

**How Effective is a Midline Myelotomy?**
Data strongly suggests this is an effective procedure for the right patient with cancer-related pain. From 60% to 70% of patients report good to satisfactory reduction in cancer pain. The effects can be immediate, although, on occasion, may take a few days to appear. While there is no guarantee the effect will be long-lasting, decreased pain may last for several years or longer.