Thoracic – Thoracic Vertebral Body Replacement (Anterior)

An anterior thoracic vertebral body replacement approaches the spine from the front, removes and replaces a damaged vertebra, and stabilizes the spine. The procedure can remove painful pressure on the spinal cord and nerves that has resulted from trauma in which a vertebra is severely fractured, or pressure caused when a tumor has spread to the front of the spine and fractured a vertebra.
**Introduction**

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**Removing Diseased Material**

An incision is made on the side of the chest and vertebrae are approached from the front. Surgical instruments are used to remove the tumor, the surrounding diseased bone, and adjacent discs. Removing these structures reduces the pressure on the spinal cord and nerves that was causing pain.

**Replacement**

A metal cage is filled with bone graft material. The cage with the bone graft is then positioned to replace the vertebral body and discs that have been removed. The cage will act as primary support for the spine as new bone grows in and around the cage, which will eventually fuse the vertebrae.
**Stabilization**
Screws are placed through plates in the adjacent healthy vertebrae. The screws are connected with metal rods that are attached to the metal cage to provide additional support and stability while the bone grows in place.

**Summary**
The incision is closed and dressed to complete the surgery. Radiation treatments are frequently used 2-4 weeks after surgery to treat any tumor remaining in the spine. It generally takes 3-6 months for the bone graft to fuse the vertebrae, and patients should be careful to avoid heavy lifting and excessive motion during the recovery period.