

## Spinal Tumor Surgery - Bombay Spine Clinic

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- Spinal Tumor Surgery
- Surgery for Benign & Malignant Tumors of the Spine

### What Is This Surgery?

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- Spinal Tumor Surgery is performed to treat tumors involving the vertebrae, spinal cord, nerve roots or surrounding spinal structures.
- Spinal tumors may be:
  - Benign (Non-Cancerous)
  - Malignant (Cancerous)
- Primary Tumors (Originating in the Spine)
- Metastatic Tumors (Spread from another part of the body)
- The goals of surgery are to:
  - Relieve pressure on the spinal cord and nerves
  - Preserve or improve neurological function
  - Reduce pain
  - Stabilize the spine
  - Obtain tissue for diagnosis (Biopsy)
  - Remove the tumor when feasible
  - Improve mobility and quality of life
- Depending on the type, location and extent of the tumor, surgery may be performed using minimally invasive, microscopic or open surgical techniques.
- Why Is This Surgery Performed?
  - This surgery may be recommended for:
    - Benign Spinal Tumors
    - Metastatic Spine Disease
    - Primary Vertebral Tumors
    - Nerve Sheath Tumors
    - Intradural Tumors
    - Extradural Tumors
    - Spinal Cord Compression
    - Pathological Fractures due to Tumors
    - Progressive Neurological Deficits

- Common symptoms that may lead to surgery include:
- Persistent back pain
- Night pain
- Unexplained weight loss
- Difficulty walking
- Leg weakness
- Numbness
- Loss of balance
- Bowel or bladder dysfunction
- Progressive neurological symptoms
- Who Is A Suitable Candidate?
- You may be a suitable candidate if:
  - ✓ The tumor is causing spinal cord or nerve compression
  - ✓ Significant pain is affecting quality of life
  - ✓ Neurological symptoms have developed
  - ✓ Spinal instability is present
  - ✓ A tissue diagnosis (biopsy) is required
  - ✓ The tumor is progressing despite other treatments
  - ✓ A pathological fracture has occurred
  - ✓ Surgery is expected to improve function or quality of life
- How Is The Surgery Performed?
- Step 1
  - The procedure is performed under general anesthesia.
- Step 2
  - The affected spinal level is identified using advanced imaging guidance.
- Step 3
  - The tumor is carefully exposed while protecting the spinal cord and surrounding nerves.
- Step 4
  - A biopsy may be obtained if tissue diagnosis is required.
- Step 5
  - The tumor is removed partially or completely depending on its type, location and relationship to critical neural structures.
- Step 6
  - If the spinal cord or nerves are compressed, decompression is performed.
- Step 7
  - If spinal instability exists or is expected after tumor removal, fixation using screws and rods may be performed.
- Step 8
  - In selected cases, vertebral body reconstruction, cage placement or bone grafting may be required.

- Step 9
- The wound is closed and sterile dressings are applied.
- The exact surgical approach varies depending on the tumor type and spinal level involved.
- What Are The Advantages?
- Potential benefits include:
  - Relief of spinal cord compression
  - Relief of nerve compression
  - Improvement in neurological function
  - Reduction in pain
  - Improved walking ability
  - Restoration of spinal stability
  - Accurate tissue diagnosis
  - Facilitation of chemotherapy or radiotherapy when required
  - Prevention of further neurological deterioration
  - Improved quality of life
- In appropriately selected patients, surgery can significantly improve comfort, mobility and independence.
- What Are The Risks?
- Every surgical procedure carries certain theoretical risks and potential complications. However, every effort is made to minimise these risks through meticulous surgical planning, advanced technology and comprehensive patient optimisation.
- At Bombay Spine Clinic™, Spinal Tumor Surgery is performed using advanced imaging guidance, microsurgical techniques, neuromonitoring (when indicated) and modern spinal instrumentation systems. These technologies help maximize tumor removal while protecting the spinal cord, nerves and surrounding structures.
- In addition, every patient undergoes a multidisciplinary evaluation involving oncologists, physicians, radiologists, pathologists, anaesthetists and other specialists whenever required. This collaborative approach helps optimise patient safety and treatment outcomes.
- Potential risks that are discussed with patients include:
  - Infection
  - Bleeding
  - Nerve injury
  - Spinal cord injury
  - Dural tear (CSF leak)
  - Persistent neurological symptoms
  - Tumor recurrence
  - Implant-related complications
  - Medical complications associated with major surgery
  - Rare need for additional surgery
- Fortunately, careful planning and modern surgical techniques significantly reduce the risk of major complications.

- Preparing For Surgery
- Before surgery:
  - Clinical evaluation
  - MRI review
  - CT scan review
  - X-rays (if required)
  - Blood investigations
  - Medical fitness assessment
  - Medication review
  - Anaesthesia assessment
- Additional investigations may include:
  - PET-CT scan
  - Tumor markers
  - Biopsy
  - Whole-body screening
  - Oncology consultation
- Patients should inform their doctor regarding:
  - Previous cancer treatment
  - Chemotherapy
  - Radiotherapy
  - Blood thinning medications
  - Diabetes
  - Heart disease
  - Allergies
- What Happens During Hospital Stay?
  - Day of Surgery
  - Hospital admission
  - Surgery

## Recovery room observation

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- Pain management
- Neurological monitoring
- First 24–72 Hours
- Assisted mobilization
- Physiotherapy guidance
- Wound care
- Neurological assessment

- Review of pathology reports when available
- Discharge
- Most patients are discharged within:
- 3–7 days
- depending on the complexity of surgery and overall recovery.

## Recovery After Surgery

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- Week 1
- Expected symptoms:
- Surgical site discomfort
- Improvement in tumor-related pain
- Walking encouraged under supervision
- Gradual increase in mobility
- Weeks 2–6
- Follow-up consultations
- Pathology review
- Oncology review if required
- Progressive increase in activity
- 6 Weeks–3 Months
- Strengthening exercises
- Improvement in mobility
- Additional treatment such as radiotherapy or chemotherapy may be initiated if required
- Long-Term Recovery

## Recovery depends on:

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- Tumor type
- Neurological status before surgery
- Extent of tumor removal
- Response to additional treatments
- Many patients experience significant improvement in pain, mobility and quality of life.

## Frequently Asked Questions

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- 1. Why do I need this surgery?
- Because the tumor is causing pain, spinal instability, nerve compression or neurological symptoms that may worsen without treatment.
- 2. Does every spinal tumor require surgery?
- No. Some spinal tumors can be managed with observation, radiotherapy, chemotherapy or other treatments. Surgery is recommended when it is expected to provide meaningful benefit.

- 3. Will the tumor be completely removed?
- This depends on the type, size and location of the tumor. In some cases complete removal is possible, while in others partial removal combined with other treatments may be safer and more effective.
- 4. How long will I stay in hospital?
- Most patients remain in hospital for approximately 3–7 days depending on the complexity of surgery and recovery.
- 5. When can I start walking after surgery?
- Most patients are encouraged to begin walking within 24–48 hours under supervision, depending on the extent of surgery.
- 6. When can I start outdoor walking?
- Outdoor walking is generally started after approximately 1–2 weeks depending on recovery and comfort.
- 7. When can I travel after surgery?
- Short local travel is usually possible after approximately 2–3 weeks. Long-distance travel is generally recommended after 6–8 weeks depending on recovery.
- 8. When can I return to work?
- Typical timelines are:
  - Work From Home (WFH): Approximately 3–4 weeks
  - Office-Based Work: Approximately 6–8 weeks
  - Light Physical Work: Approximately 8–12 weeks
  - Heavy Manual Labour: Individualized based on diagnosis and recovery
- 9. When can I drive, exercise, dance or resume sports?
- Driving is generally permitted after 4–6 weeks.
- Sports, gym workouts and high-impact activities are resumed based on recovery, spinal stability and the need for additional cancer treatment.
- 10. What is the success rate of Spinal Tumor Surgery?
- Success depends on several factors including tumor type, location, neurological status and overall health.
- In appropriately selected patients, surgery is highly effective in relieving spinal cord compression, reducing pain, improving mobility and preserving neurological function.
- 11. Can the tumor come back?
- Some tumors may recur after treatment, while others can be cured completely. Regular follow-up imaging and clinical assessment are important for long-term monitoring.
- Myth vs Fact
  - Myth:
    - A spinal tumor always means cancer.
  - Fact:
    - Many spinal tumors are benign (non-cancerous) and can be successfully treated.
  - Myth:
    - Nothing can be done once a spinal tumor affects the spine.
  - Fact:

- Modern spine surgery, radiotherapy and oncology treatments offer effective options for many patients and can significantly improve quality of life.
- When Should I Contact My Surgeon After Surgery?
- Contact your surgeon if you experience:
  - Fever
  - Increasing wound discharge
  - Progressive weakness
  - Difficulty walking
  - New numbness
  - Severe pain
  - Difficulty passing urine
  - Any sudden neurological deterioration
- Related Conditions
  - Spinal Tumor
  - Metastatic Spine Disease
  - Pathological Vertebral Fracture
  - Spinal Cord Compression
  - Nerve Sheath Tumor
- Related Procedures
  - Fracture Fixation Surgery
  - Spinal Infection Surgery
  - Spino-Pelvic Fixation Surgery
- Need Expert Advice?
- If you have been diagnosed with a spinal tumor, metastatic spine disease or spinal cord compression, or would like a second opinion regarding your MRI, CT scan, PET-CT scan or biopsy reports, you may schedule a consultation or upload your reports for specialist review.
- Dr. Siddharth Katkade Consultant Spine Surgeon
- Bombay Spine Clinic™

#### **Need Clinical Evaluation or Second Opinion?**

This educational document was prepared by **Dr. Siddharth Katkade**. For appointments or to share MRI scan reports for clinical review, call **+91 88507 73095** or consult at Byculla (E) / Khar (W) clinics.