

# SURGICAL TECHNIQUE



## OSTEOTOMY & CURETTE SYSTEM

Thracolumbar

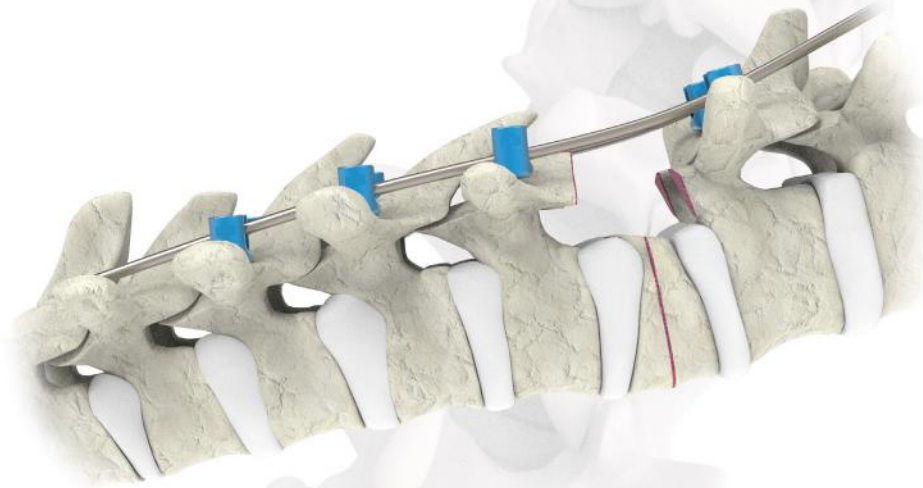
# Thracolumbar Osteotomy & Curette System

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# Thracolumbar Osteotomy & Curette System

## INTRODUCTION



### Osteotomy & Curette System Features

- Provide effective and simple use
- Include a wide selection of specialized instrumentation
- A truly complete set with dedicated instruments for corrective osteotomies
- Accommodate surgical preferences and anatomical variations
- Soft Tissue Retraction and Protection



# Thracolumbar Osteotomy & Curette System

## INTRODUCTION



### Potential Adverse Effects

Incorrect maintenance, cleaning, or handling may render the instruments unsuitable for their intended use, cause corrosion, dismantling, distortion and/or breakage or cause injury to the patient or operating staff. As a result of the mechanical features required, the instruments contained in the **Osteotomy Thracolumbar Curette System** are made from nonimpantable materials. In the event an instrument breaks, no fragment must remain in the patient as this could cause post-operative complications and require further intervention. Below is a list, albeit not exhaustive, of potential complications:

- Neurological lesion, paralysis, pain, lesion of the soft tissues, the visceral organs or the joints, in the event of incorrect use or breakage of the instruments.
- Infection, if the instruments are not properly cleaned and sterilized.
- Dural leaks, compression of vessels, damage to nerves or nearby organs as a result of slippage or poor positioning of a faulty instrument.
- Damage caused by the involuntary releasing of the springs of certain instruments.
- Damage caused by the instruments used to bend or cut in-situ due to excessive forces occurring when they are used.
- Cutting the gloves or the skin of surgical staff.
- Tissue lesions on the patient or surgical staff and/or an increase in operating time as a result of having to disassemble the instruments during surgery.
- Crack, fracture or involuntary perforation of the bone.

# Thracolumbar Osteotomy & Curette System

## SURGICAL TECHNIQUE

1

### Patient positioning



Position the patient in a restored physiological lordosis.

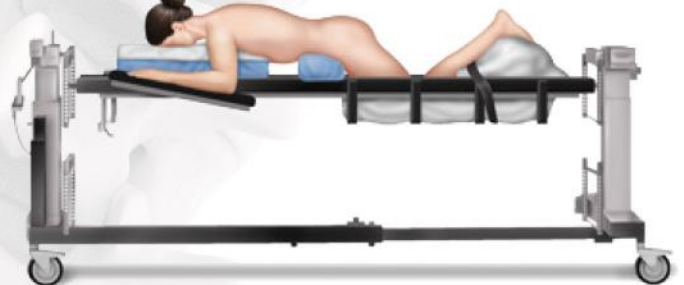


Figure 1a

2

### Exposure



Surgical levels may be verified either clinically or radiographically. To help ensure adequate exposure, the incision is made to extend just beyond the length of the intended fusion.

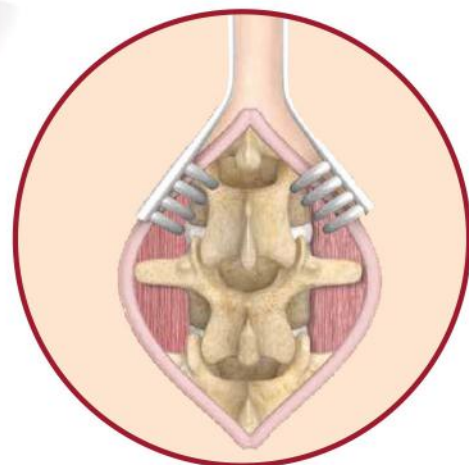


Figure 2a

# Thracolumbar Osteotomy & Curette System

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### Removal Of Transverse Process



The posterior elements in the resection can be removed with rongeurs or curettes.

The transverse process can also be removed or disconnected from the pedicle. It is recommended to remove the transverse process in a way as to leave it as a vascularized bone graft bed. (Figure 3a)

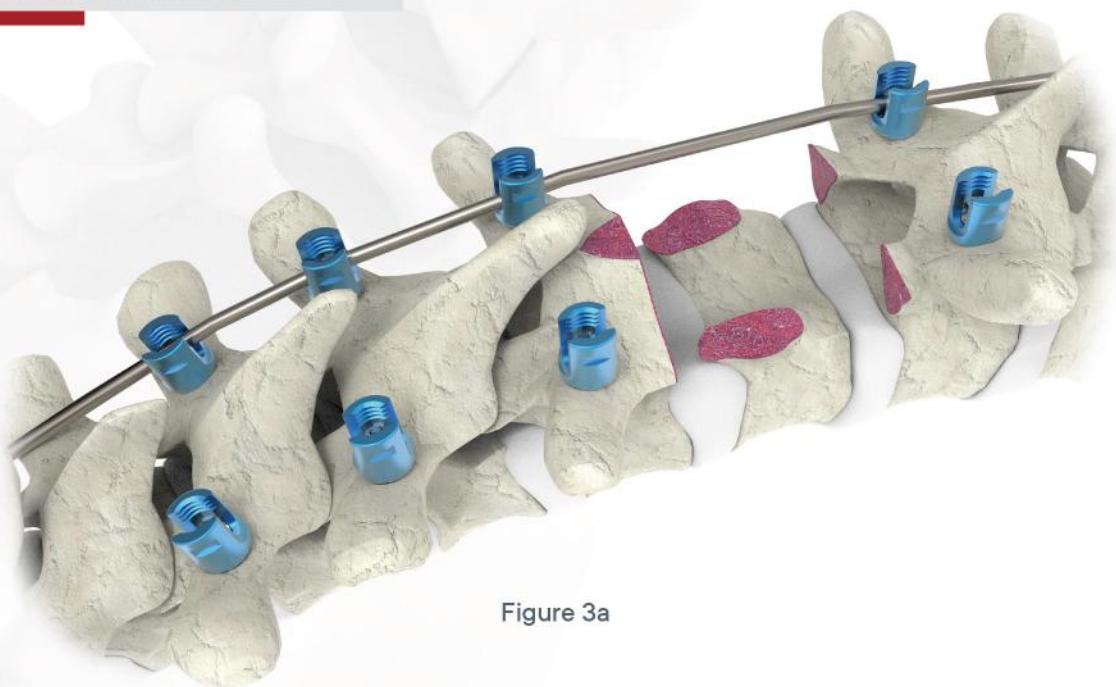


Figure 3a

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### Soft Tissue Retraction



Press the side button to retract the instrument into its final position. (Figure 4a) The tip is located around the vertebral body at its anterior aspect. This anchors the retractor along the soft tissue and allows maximum exposure of the vertebral body to facilitate the performance of the osteotomy. Retractors can be placed unilaterally or bilaterally.

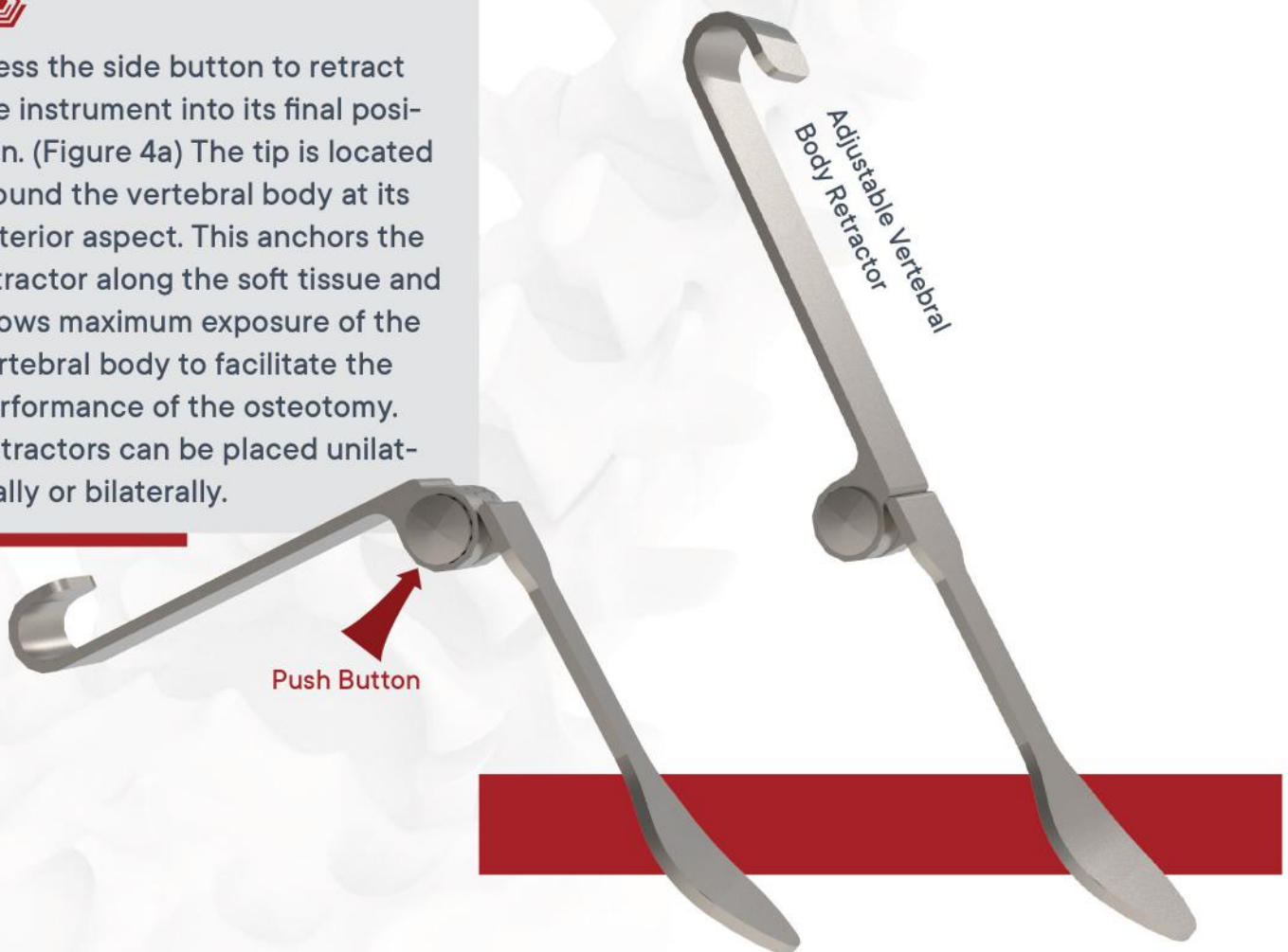


Figure 4a

# Thracolumbar Osteotomy & Curette System

## SURGICAL TECHNIQUE

4

### Soft Tissue Retraction



The **Adjustable Vertebral Body Retractors** are designed to fit along the vertebral body where the front edge tapers to a rounded narrow point. This is designed for a final subperiosteal dissection anteriorly along the vertebral body.



The **Adjustable Vertebral Body Retractors** are offered with two different width spoon tips: **15mm (NOS029)** and **30mm (NOS030)** to allow the surgeon to choose the retractor that is most appropriate for varying patient anatomies.

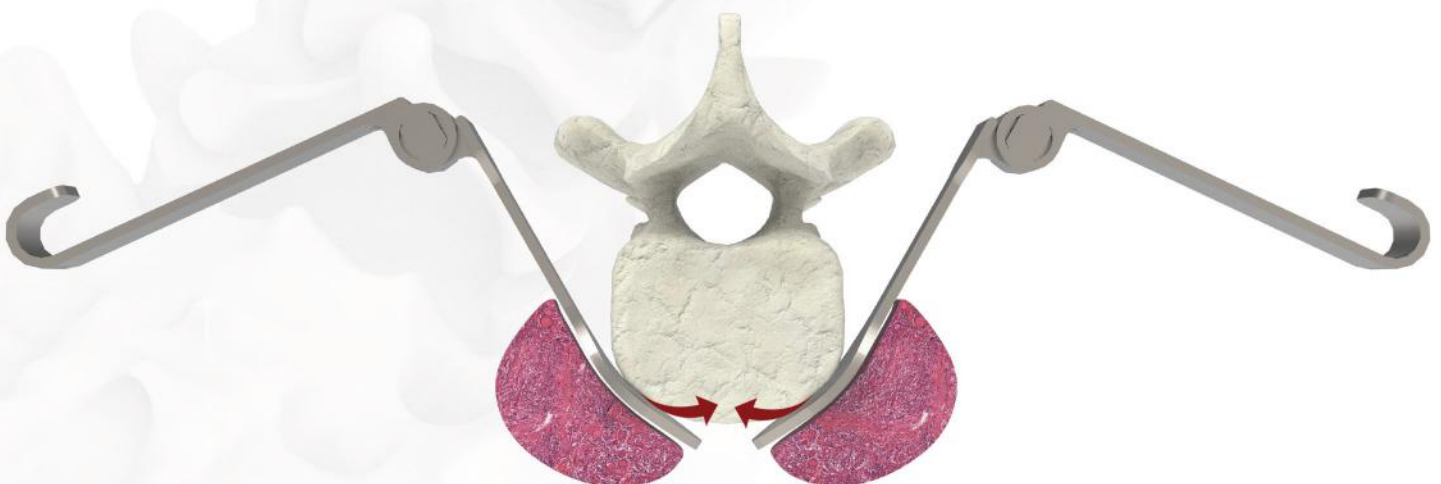


Figure 4b



# Thracolumbar Osteotomy & Curette System

## SURGICAL TECHNIQUE

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### Soft Tissue Protection



The **Bayonet Nerve Root Retractors** are available in **12mm (NOS021)** and **14mm (NOS022)** widths. They can be used to protect soft tissues during use of the bone removal instruments. The small lip on the tip is designed to inhibit movement of retracted tissues while in use. (Figure 5a)

Bayonet Nerve Root Retractor

Figure 5a

# Thracolumbar Osteotomy & Curette System

## SURGICAL TECHNIQUE

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### Vertebral Body Resection



Vertebral body osteotomies are available as angled and straight. **The Straight Osteotomies** come in varying sizes of **small (NOS014)** and **large (NOS015)**. The **Angled Osteotomies** come in varying sizes of **small (NOS012)** and **large (NOS013)**.

The Straight Osteotomies

**Vertebral Body Osteotomies** allows for a simultaneous cut parallel to the nerve root and dura. **6mmx8mm (NOS018)** **8mmx6mm (NOS019)**.



Vertebral Body  
Osteotomy 6mm x 8mm



Vertebral Body  
Osteotomy 8mm x 6mm



Figure 6a

Figure 6b

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### Removing The Cancellous Bone



Remove as much cancellous bone from the desired region as possible while being sure to leave a thin layer of cortical bone intact on the anterior wall to act as a pivot point.

**Triangle Shaver (NOS020)**

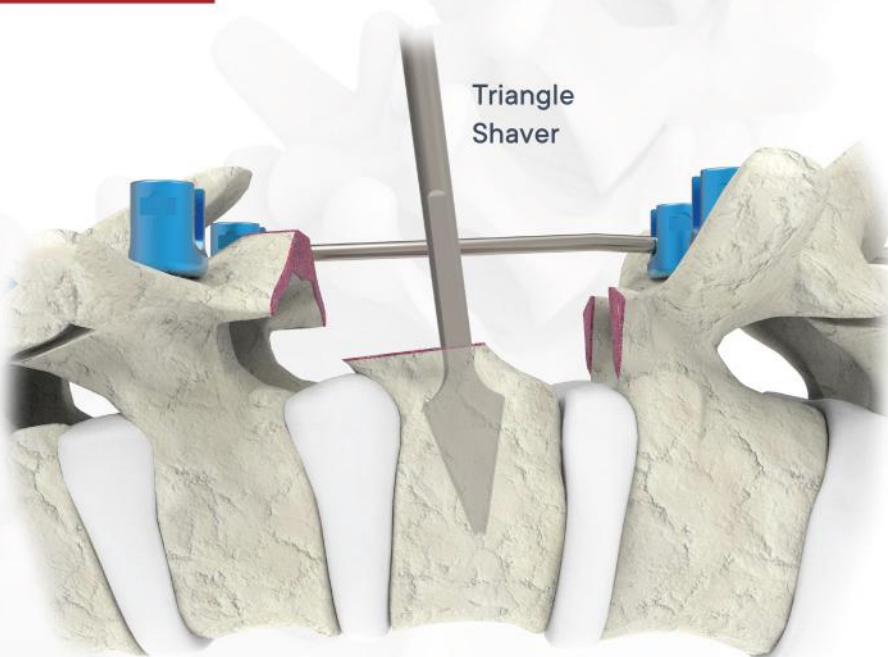


Figure 7a



The **Curettes** can be used this step. **Small Ring Curette(NOS001)**, **Cup Curette Straight(NOS006)** and **Curette Straight(NOS003)**.



Figure 7b



# Thracolumbar Osteotomy & Curette System

## SURGICAL TECHNIQUE

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### Fracturing The Posterior Wall



Posterior **Vertebral Body Punches** are designed with a foot that fits over the posterior wall and a hook that grips the bony edge. (Figure 8b) These design features help prevent sliding of the instrument and help direct forces anterior and medial to the bony elements. It is recommended to choose a Posterior **Vertebral Body Punch** that provides maximum surface area contact with the vertebral body wall.

Vertebral Body Punch



Figure 8a

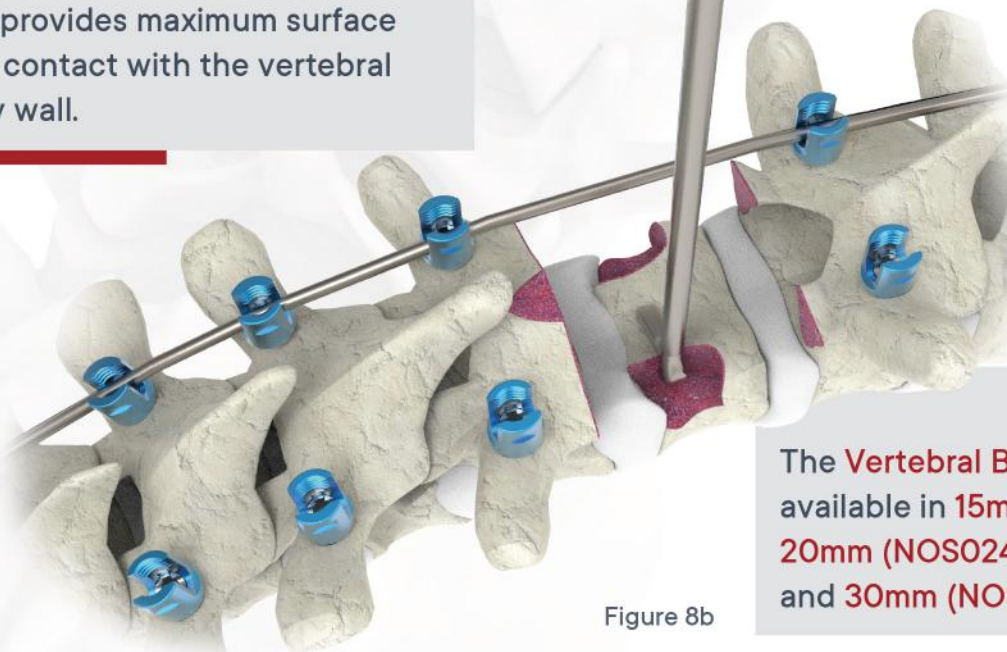


Figure 8b



The **Vertebral Body Punch** are available in 15mm (NOS023), 20mm (NOS024), 25mm (NOS025) and 30mm (NOS026).

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### Bone Removal



The **The Straight Osteotomes** can be utilized to removed the desired wedge of bone from the lateral aspect of the vertebral body. (Figure 9a) **Small (NOS014), Large (NOS015)**

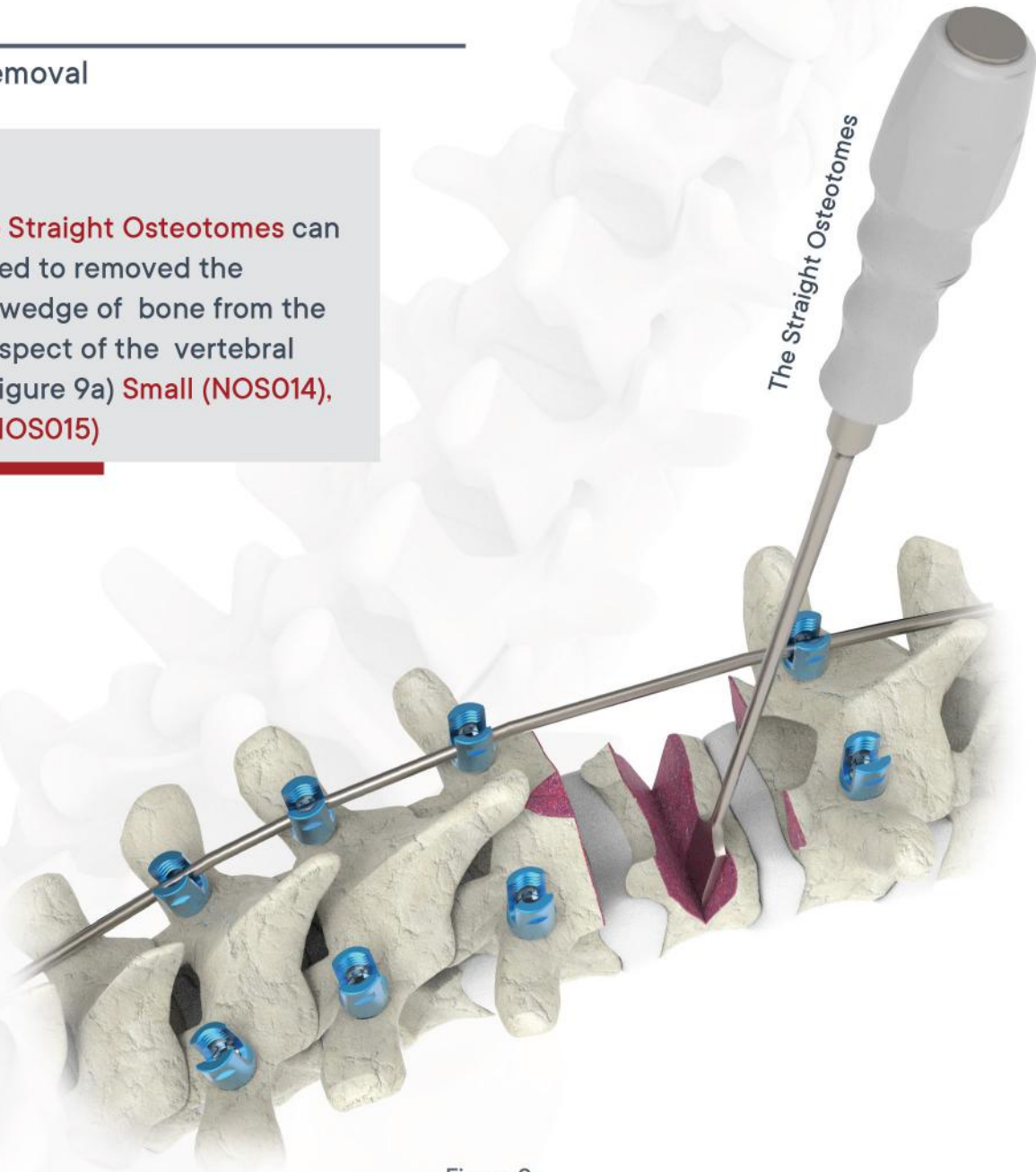


Figure 9a

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### Osteotomy Closure



If not previously placed, a second temporary rod can be placed to help close the osteotomy. The bony elements should naturally relax and compression of the screws and or a table which can break will help achieve closure. If satisfactory, final rods can be used to replace the temporary rods.



Care should be taken to confirm the dura and nerve roots are not compressed.

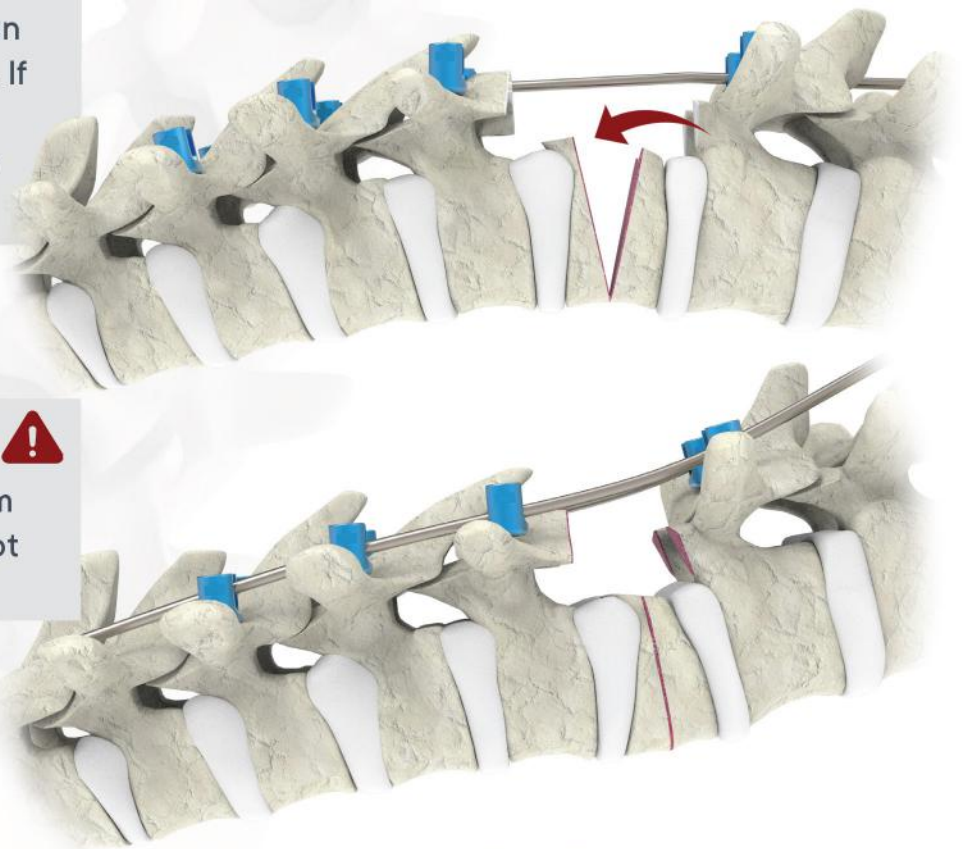


Figure 10a



# Thracolumbar Osteotomy & Curette System

## INSTRUMENT CONTAINER



*This container is made of wiremesh stainless steel. It has a high stability, low weight and good sterilization feature.*

Container



•Osteotomy set is used with the Plexus set.

# Thracolumbar Osteotomy & Curette System

## INSTRUMENT CONTAINER



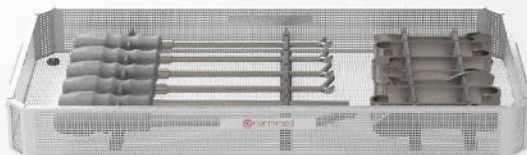
This container is made of wiremesh stainless steel. It has a high stability, low weight and good sterilization feature.



Tray 1



Tray 2



Tray 3



### Container

Include the first, second and third trays

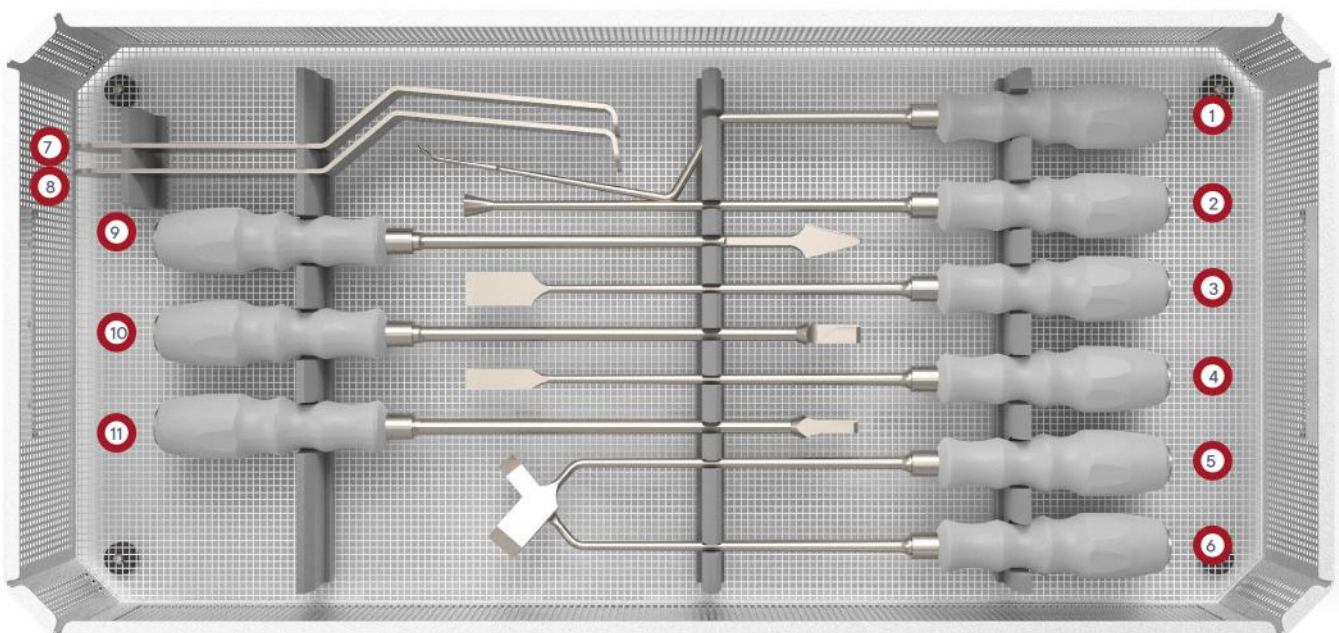
# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES



•Osteotomy Thracolumbar Curette System is used with the Plexus System.

Tray 1



Set No.	Catalogue No.	Description	Piece
01	NOS017	Nerve Root Retractor	1
02	NOS016	Bell Curette	1
03	NOS015	Large Osteotomy Straight	1

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# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES

	Set No.	Catalogue No.	Description	Piece
	04	NOS014	Small Osteotomy Straight	1
	05	NOS013	Large Osteotomy Angled	1
	06	NOS012	Small Osteotomy Angled	1
	07	NOS021	Bayonet Nerve Root Retractor 12mm	1
	08	NOS022	Bayonet Nerve Root Retractor 14mm	1
	09	NOS020	Triangle Shaver 30	1
	10	NOS018	Vertebral Body Osteotomy 6mm x 8mm	1
	11	NOS019	Vertebral Body Osteotomy 8mm x 6mm	1

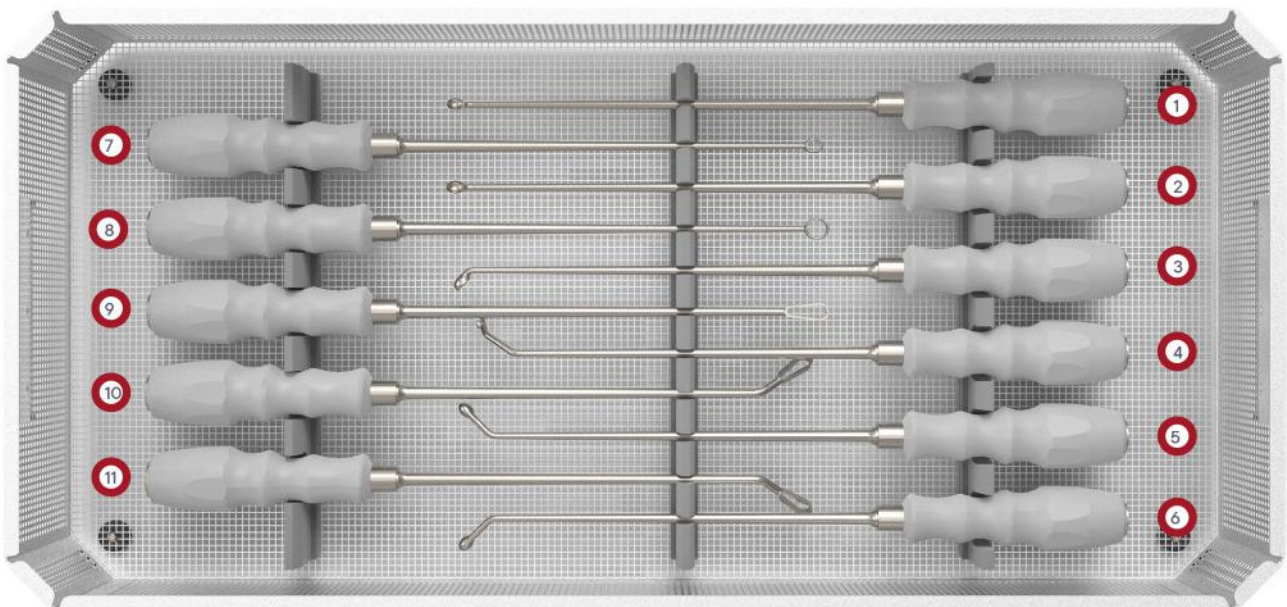
# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES



•Osteotomy Thracolumbar Curette System is used with the Plexus System.

Tray 2



Set No.	Catalogue No.	Description	Piece
01	NOS006	Cup Curette Straight	1
02	NOS007	Cup Curette Straight Threaded	1
03	NOS008	Cup Curette 45 Angled	1

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# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES

	Set No.	Catalogue No.	Description	Piece
	04	NOS009	Cup Curette Offset	1
	05	NOS010	Cup Curette Right	1
	06	NOS011	Cup Curette Left	1
	07	NOS001	Small Ring Curette	1
	08	NOS002	Large Ring Curette	1
	09	NOS003	Curette Straight	1
	10	NOS004	Curette Left	1
	11	NOS005	Curette Right	1



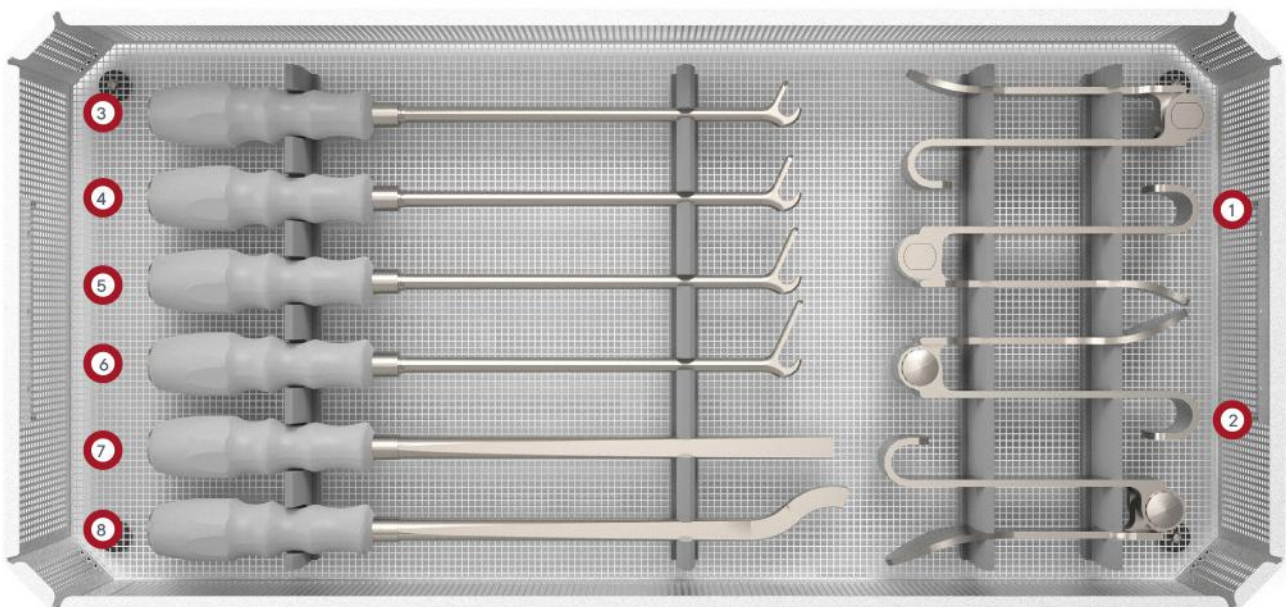
# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES



•Osteotomy Thracolumbar Curette System is used with the Plexus System.

Tray 3



Set No.	Catalogue No.	Description	Piece
01	NOS029	Adjustable Vertebral Body Retractor 15 mm	2

# Thracolumbar Osteotomy & Curette System

## INSTRUMENT TYPES

	Set No.	Catalogue No.	Description	Piece
	02	NOS030	Adjustable Vertebral Body Retractor 30 mm	2
	03	NOS023	Vertebral Body Punch 15 mm	1
	04	NOS024	Vertebral Body Punch 20 mm	1
	05	NOS025	Vertebral Body Punch 25 mm	1
	06	NOS026	Vertebral Body Punch 30 mm	1
	07	NOS027	Straight Bone Impactor	1
	08	NOS028	Offset Bone Impactor	1

# Thracolumbar Osteotomy & Curette System

## CONTACT



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