

# UASI Lunch and Learn: “Spinal Fusions Advanced Applications” will begin shortly.

## Service Stats

- 4 out of 5 UASI clients request ongoing or return services following an initial engagement
- UASI works for top hospitals delivering value tailored to our client’s specific needs
- CONSULTANTS average 18 years in HIM/Coding
- MANAGERS average 26 years in HIM/coding

## REAL-WORLD RESULTS FROM A PROVEN APPROACH

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June 2021

# Spinal Fusions Advanced Applications

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## Course Description:

- This presentation is designed to provide a thorough review of ICD-10-PCS coding for spinal fusions.
- Content will include a review of pertinent anatomy and physiology, coding guidelines and important coding clinic references that provide guidance in correct code assignment.
- Finally, we'll examine a sample operative report to determine what documentation to look for when coding spinal fusions.

## Learning Objectives:

- Review spinal and vertebral anatomy
- Analyze coding guidelines for spinal fusion
- Examine Coding Clinic references applicable to spinal fusion coding
- Assess documentation requirements for PCS code assignment

## Introduction:

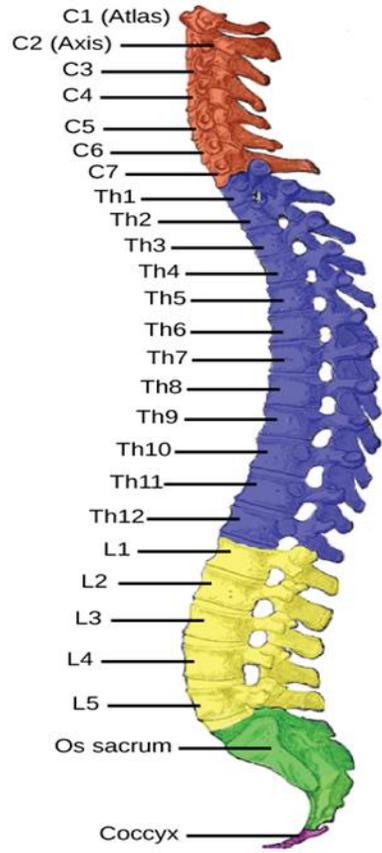
- A spinal fusion surgery is designed to stop the motion at a painful vertebral segment, which in turn should decrease pain generated from the joint.
- Spinal fusion surgery comes in many forms: lumbar spinal fusion, cervical spinal fusion, and PLIFs just to name a few.
- They are all designed to help limit pain caused by the joints, though each surgery is different depending on whether you are trying to treat degenerative disc disease, spondylolisthesis, or another condition.



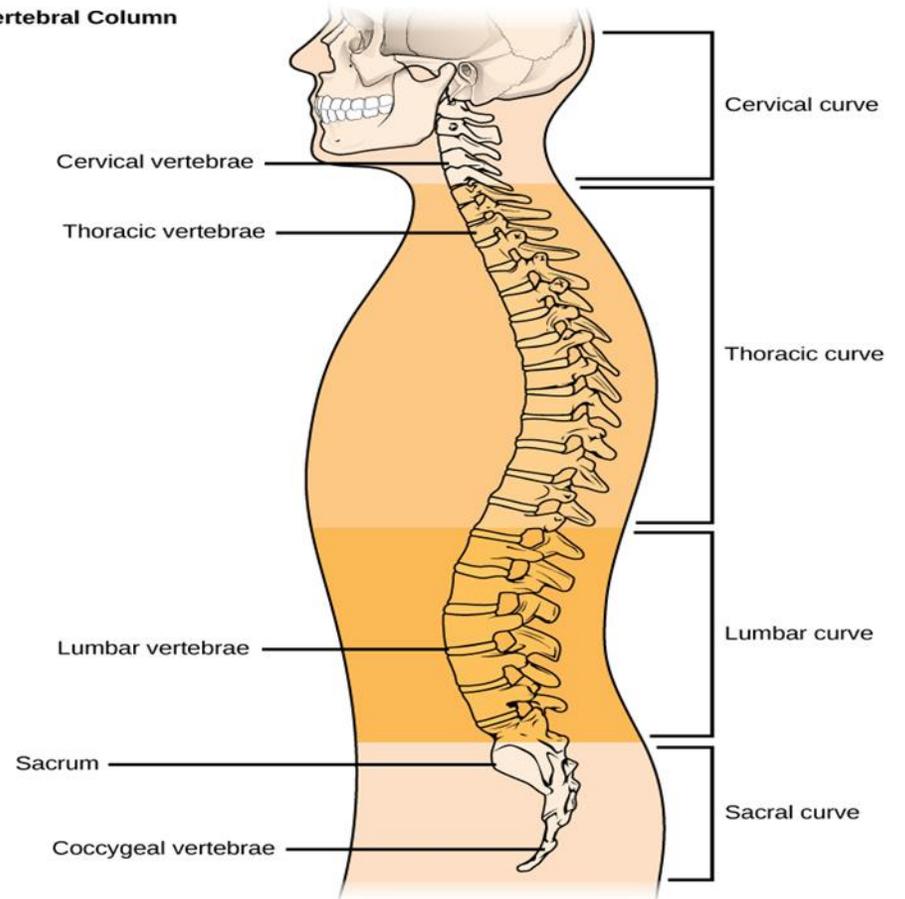
## A&P Vertebral Column:

- The vertebrae in the human vertebral column are divided into different regions, which correspond to the curves of the spinal column.
- The articulating vertebrae are named according to their region of the spine.
- There are seven cervical vertebrae, twelve thoracic vertebrae and five lumbar vertebrae.
- The Sacrum is located behind the pelvis. Five bones (abbreviated S1 through S5) fused into a triangular shape, form the sacrum. The sacrum fits between the two hipbones connecting the spine to the pelvis. The last lumbar vertebra (L5) articulates (moves) with the S1 sacral bone.
- Immediately below the sacrum are five additional bones, fused together to form the Coccyx (tailbone).

# A&P Vertebral Column:



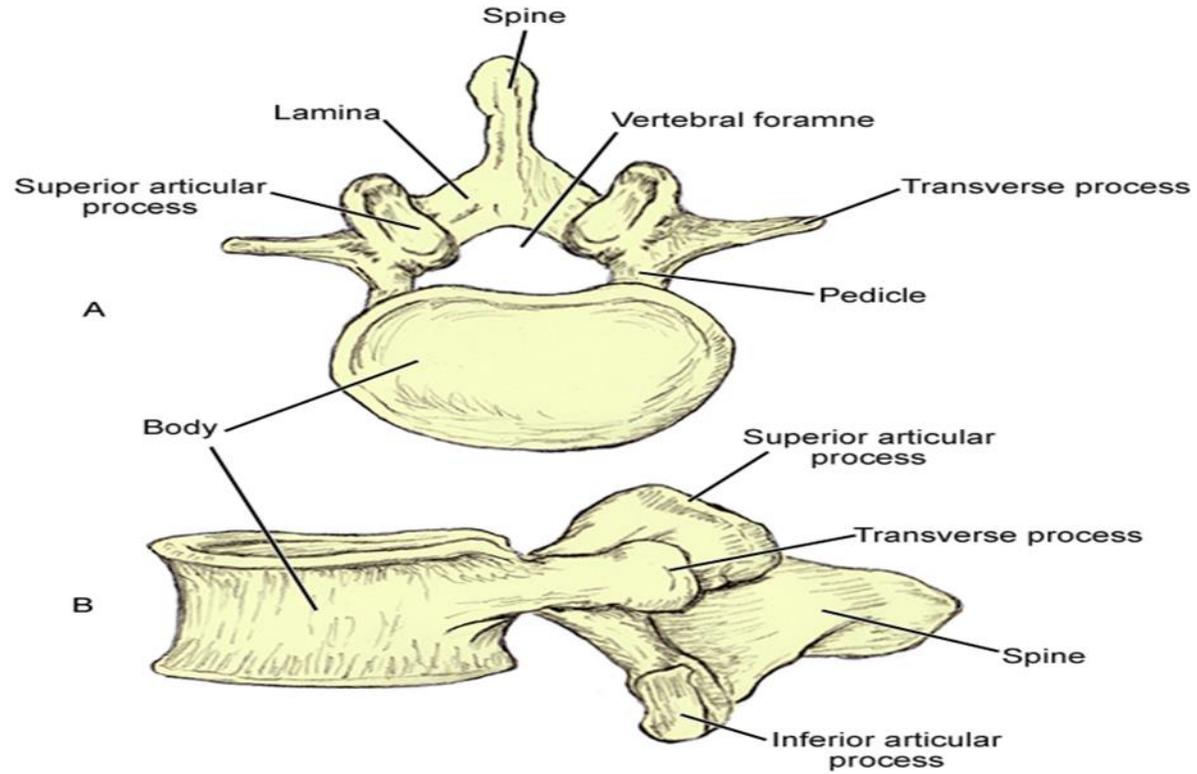
**Vertebral Column**



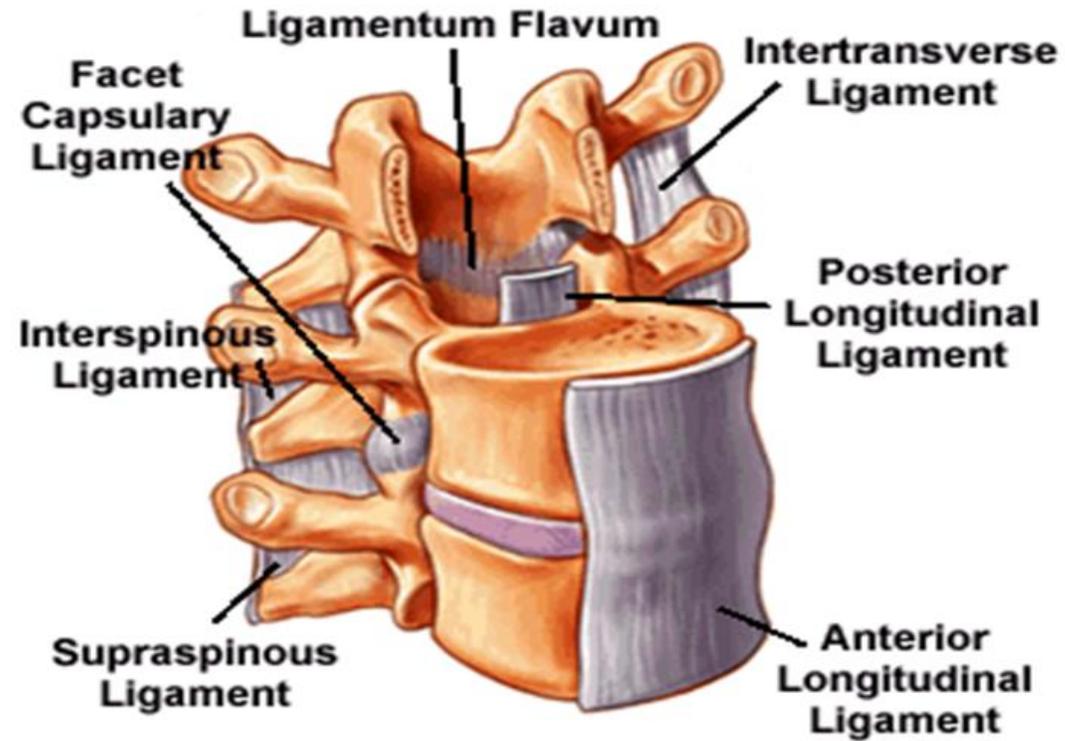
## Vertebral Anatomy:

- Each vertebral segment is comprised of a cylinder-shaped bone in the front of the spine, **called the vertebral body**, a soft cartilage disc between each vertebra, and paired facet joints in the back.
- Each segment is named for its upper and lower vertebra, such as the C6-C7 segment, or the L4-L5 segment.
- The bones in the spinal column surround and protect the spinal cord, which runs behind the vertebral bodies in a canal from the neck down to the top of the lumbar spine.
- At each segment, spinal nerve roots exit the spine through holes in the back of the vertebrae called **foramina**.
- The entire spine is knit together by a series of interconnected ligaments and tendons that help support and stabilize the spine while allowing a great deal of flexibility.

# Vertebrae Anatomy:



## Vertebral Ligaments:



## Fusion Procedures of the Spine:

### B3.10a

- The body part coded for a spinal vertebral joint(s) rendered immobile by a spinal fusion procedure is classified by the level of the spine (e.g. thoracic).
- There are distinct body part values for:
  - a single vertebral joint – for example C6-C7
  - for multiple vertebral joints at each spinal level – for example T3-T11
  - transitioning levels – for example L5-S1

Example: Body part values specify Lumbar Vertebral Joint, Lumbar Vertebral Joints, 2 or More and Lumbosacral Vertebral Joint and lumbosacral joint.

## Fusion Procedures of the Spine:

B3.10b

- If multiple vertebral joints are fused, a separate procedure is coded for each vertebral joint that uses a different device and/or qualifier.

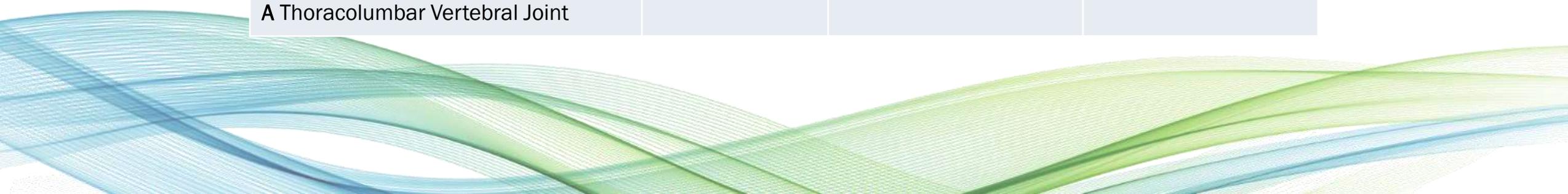
Example: Fusion of lumbar vertebral joint, posterior approach, anterior column and fusion of lumbar vertebral joint, posterior approach, posterior column are coded separately.





## Fusion Procedures of the Spine:

Body Part	Approach	Device	Qualifier
<b>0</b> Occipital-cervical Joint <b>1</b> Cervical Vertebral Joint <b>2</b> Cervical Vertebral Joints, 2 or more <b>4</b> Cervicothoracic Vertebral Joint <b>6</b> Thoracic Vertebral Joint <b>7</b> Thoracic Vertebral Joints, 2 to 7 <b>8</b> Thoracic Vertebral Joints, 8 or more <b>A</b> Thoracolumbar Vertebral Joint	<b>0</b> Open <b>3</b> Percutaneous <b>4</b> Percutaneous Endoscopic	<b>7</b> Autologous Tissue Substitute <b>J</b> Synthetic Substitute <b>K</b> Nonautologous Tissue Substitute	<b>0</b> Anterior Approach, Anterior Column <b>1</b> Posterior Approach, Posterior Column <b>J</b> Posterior Approach, Anterior Column
<b>0</b> Occipital-cervical Joint <b>1</b> Cervical Vertebral Joint <b>2</b> Cervical Vertebral Joints, 2 or more <b>4</b> Cervicothoracic Vertebral Joint <b>6</b> Thoracic Vertebral Joint <b>7</b> Thoracic Vertebral Joints, 2 to 7 <b>8</b> Thoracic Vertebral Joints, 8 or more <b>A</b> Thoracolumbar Vertebral Joint	<b>0</b> Open <b>3</b> Percutaneous <b>4</b> Percutaneous Endoscopic	<b>A</b> Interbody Fusion Device	<b>0</b> Anterior Approach, Anterior Column <b>J</b> Posterior Approach, Anterior Column



## Fusion Procedures of the Spine:

### B3.10c

- Combinations of devices and materials are often used on a vertebral joint to render the joint immobile. When combinations of devices are used on the same vertebral joint, the device value coded for the procedure is as follows:
  - If an interbody fusion device is used to render the joint immobile (containing bone graft or bone graft substitute), the procedure is coded with the device value Interbody Fusion Device
  - If bone graft is the only device used to render the joint immobile, the procedure is coded with the device value Nonautologous Tissue Substitute or Autologous Tissue Substitute
  - If a mixture of autologous and nonautologous bone graft (with or without biological or synthetic extenders or binders) is used to render the joint immobile, code the procedure with the device value Autologous Tissue Substitute

## Fusion Procedures of the Spine:

B3.10c

Examples:

- Fusion of a vertebral joint using a cage style interbody fusion device containing morselized bone graft is coded to the device Interbody Fusion Device.
- Fusion of a vertebral joint using a bone dowel interbody fusion device made of cadaver bone and packed with a mixture of local morselized bone and demineralized bone matrix is coded to the device Interbody Fusion Device.
- Fusion of a vertebral joint using both autologous bone graft and bone bank bone graft is coded to the device Autologous Tissue Substitute.

## Excision for Graft:

### B3.9

- If an autograft is obtained from a different procedure site in order to complete the objective of the procedure, a separate procedure is coded.

### Examples:

- Harvesting a bone graft from the iliac crest for a cervical fusion would require separate code.
- Using small pieces of vertebral bone from the fusion procedure does not require a separate code.



## Release Procedures:

B3.13

- In the root operation Release, the body part value coded is the body part being freed and not the tissue being manipulated or cut to free the body part.

Example: Removing a portion of the posterior longitudinal ligament to decompress the nerve at C6-C7.

## Body System:

Spinal Fusions are coded to one of two Body Systems depending on the level(s) being fused:

- R = Upper Joints – Includes the occipital-cervical, cervical, cervicothoracic, thoracic and thoracolumbar joints.
- S = Lower Joints – Includes the lumbar and lumbosacral joints.

## Root Operation:

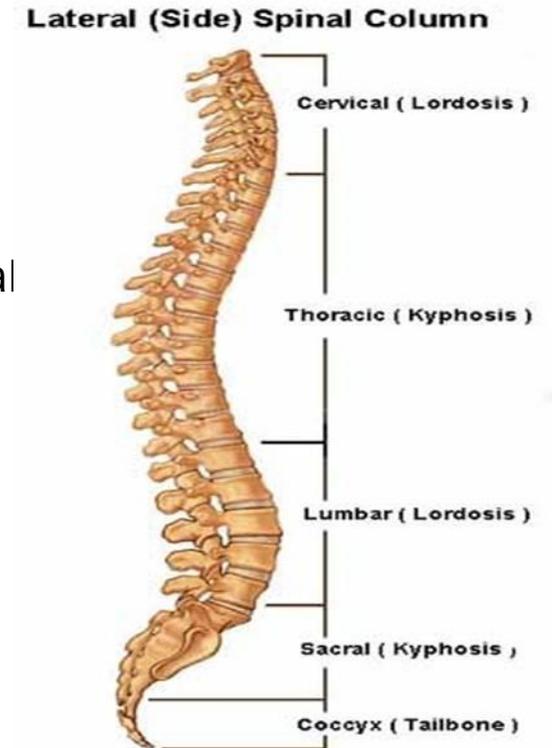
- Fusion (G) - Joining together portions of an articular body part rendering the articular body part immobile
- Explanation: The body part is joined together by fixation device, bone graft, or other means

## Body Part:

The correct body part character reflects:

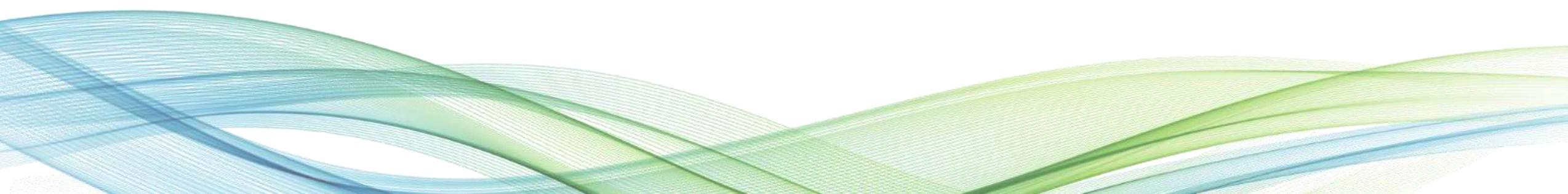
- the level of the vertebrae (cervical, thoracic, lumbar and/or sacral)
- the number of vertebral joints fused

The intervertebral joint is the space that is located between any two adjacent vertebrae.



## Body Part Characters:

Body System: Upper Joints (R)	Body System: Lower Joints (S)
<p>0 Occipital-cervical Joint            1 Cervical Vertebral Joint            2 Cervical Vertebral Joints, 2 or more            4 Cervicothoracic Vertebral Joint            6 Thoracic Vertebral Joint            7 Thoracic Vertebral Joints, 2to 7            8 Thoracic Vertebral Joints, 8 or more            A Thoracolumbar Vertebral Joint</p>	<p>0 Lumbar Vertebral Joint            1 Lumbar Vertebral Joints, 2 or more            3 Lumbosacral Joint</p>



## Approach:

- The most common approach for spinal fusion is open (0).
- However, percutaneous endoscopic (4) approach procedures are becoming more common.

## Device:

Spinal fusion can be performed using several different techniques. These techniques include:

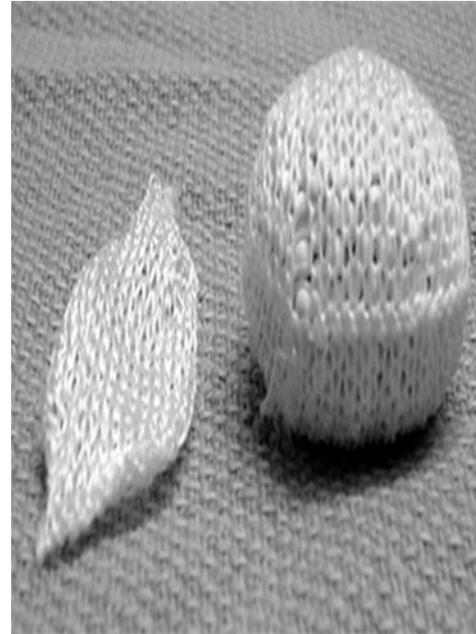
- Interbody fusion devices (A) - Stabilize and fuse the disc spaces and provide an immediately stable segment for the fusion. These devices are also known as interbody fusion cages, BAK cage, synthetic cage, or bone dowels.
- Autologous Tissue Substitute (7) – A bone graft obtained from the patient during the procedure. Bone grafts may be harvested locally using the same incision or from another part of the body requiring a separate incision. Harvesting of the bone requires a separate procedure code when it is performed through a separate incision. (Guideline B3.9) Morselized bone fragments harvested from the same incision during the approach to operative site does not require a separate code.
- Nonautologous Tissue Substitute (K) – The bone is harvested by a tissue bank from a cadaver.
- Synthetic Substitute (J) – these types of grafts are synthetic or a manipulated naturally occurring product.

# Common Interbody Devices:

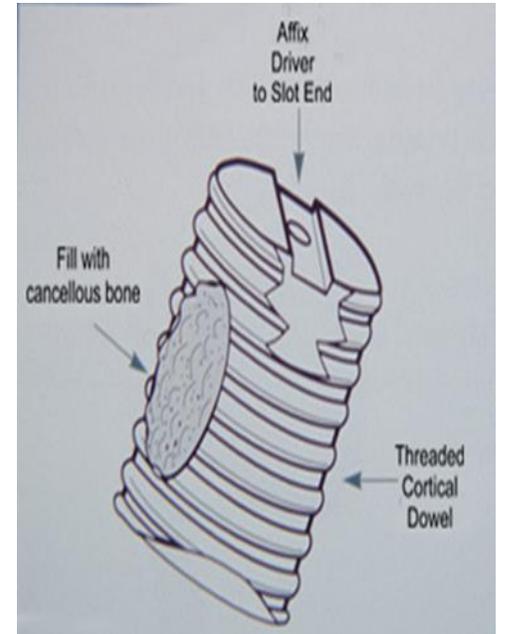
PEEK Cage



Optimesh



Bone Dowel



## Common Interbody Devices:

### VERTE-STACK



## Fusion Procedure Devices:

- For FY 2019 revisions were made to tables **ORG Fusion of Upper Joints** and **OSG Fusion of Lower Joints** by removing the device character “No Device (Z)” from all rows for all body parts.
- Because a fusion procedures, including spinal fusion, always requires some type of device codes with the device character “Z- No Device” are considered clinically invalid.

## FY 2018 Updates

The FY 2018 PCS updates created separate row for the Device character “A Interbody Fusion Device”. This row only has clinically valid choices for the qualifiers specifying Anterior Column – see example below.

<i>Section</i> <b>O</b> Medical and Surgical <i>Body System</i> <b>S</b> Lower Joints <i>Operation</i> <b>G</b> Fusion: Joining together portions of an articular body part rendering the articular body part immobile			
Body Part	Approach	Device	Qualifier
<b>0</b> Lumbar Vertebral Joint <b>1</b> Lumbar Vertebral Joints, 2 or more <b>3</b> Lumbosacral Joint	<b>0</b> Open <b>3</b> Percutaneous <b>4</b> Percutaneous Endoscopic	<b>A Interbody Fusion Device</b>	<b>0</b> Anterior Approach, Anterior Column <b>J</b> Posterior Approach, Anterior Column

## Qualifier:

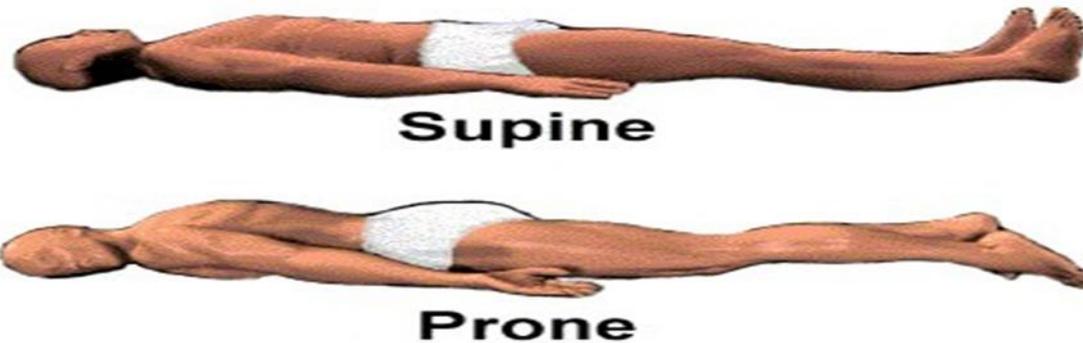
The qualifier characters identify the **portion of the spine being fused (anterior or posterior)** and if the **surgical approach is from the front or back of the body.**

Anterior Approach, Anterior Column (0)	Posterior Approach, Posterior Column (1)	Posterior Approach, Anterior Column (J)
Look for supine (face up) Positioning	Look for prone (back up) positioning	Look for prone (back up) Positioning
Look for an incision made on the front or side of the body	Look for an incision made on the back	Look for an incision made on the back
The vertebral body will be fused (Interbody fusion)	Structures on the posterior spine are fused.	The vertebral body will be fused (Interbody fusion)

## Qualifier Approach:

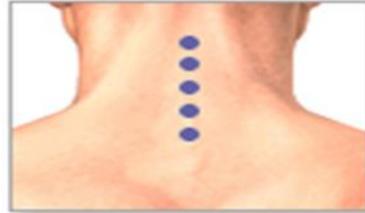
Supine - the position of a person lying on the back. This position is normally utilized for anterior approach.

Prone - is a body position in which one lies flat with the chest down and the back up. In anatomical terms of location, the dorsal side is up, and the ventral side is down. This position is normally utilized for posterior approach.



## Qualifier Approach:

Posterior  
cervical incision



Anterior  
cervical incision



Posterior  
lumbar incision



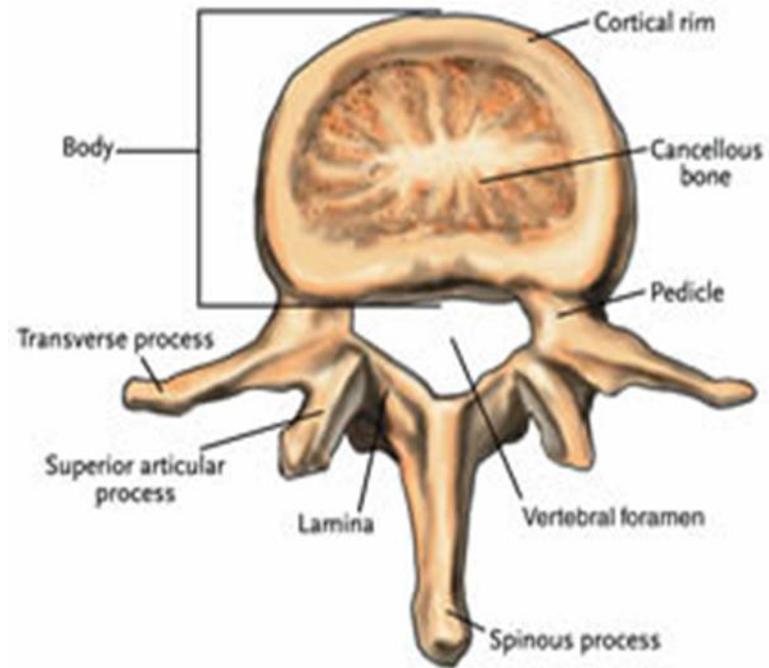
Anterior  
lumbar incision



## Qualifier Column:

Anterior  
Column

Posterior  
Column



## Common Abbreviations Anterior Column Fusions:

Procedure	Approach	Qualifier
Anterior lumbar interbody fusion (ALIF)	Incision made in front of the spine through a minilaparotomy or Laparoscopy	<b>O</b> Anterior Approach, Anterior Column
Posterior lumbar interbody fusion (PLIF)	Incision made through a midline incision in the back	<b>J</b> Posterior Approach, Anterior Column
Extreme lateral interbody fusion (XLIF)	Incision made in the patient's side	<b>O</b> Anterior Approach, Anterior Column
Direct lateral interbody fusion (DLIF)	Incision made in the patient's side	<b>O</b> Anterior Approach, Anterior Column
Transforaminal lumbar interbody fusion (TLIF)	Incision made through a midline incision in the back	<b>J</b> Posterior Approach, Anterior Column

## Coding Clinic References:

Reference	Answer/Advice
1st Q 2020 P. 33	<p>A patient with progressive idiopathic thoracolumbar scoliosis, spondylosis with foraminal stenosis and rib cage deformity was admitted for spinal fusion surgery. Through a right thoracotomy approach, a right anterior spinal fusion was performed with placement of screws into the vertebral body and seating of a rod cord at T5-T11. Significant correction of the scoliosis curve was obtained across the thoracic levels. The patient was repositioned for exposure of the left side to complete left anterior spinal fusion at T11-L4. Screws were placed into the vertebral body and a rod cord was secured across the levels with significant correction of the scoliosis and derotation of the lumbar segments. What are the code assignments for this procedure?</p> <p><b>In ICD-10-PCS, this procedure is not classified as a fusion, but rather as an anterior vertebral tethering procedure because no bone graft is used. Reposition is the appropriate root operation</b></p>

## Coding Clinic References:

Reference	Answer/Advice
3 <sup>rd</sup> Q 2019 P. 35	<p>An interbody fusion device <b>must contain bone graft material</b> or other material like bone graft material in order to immobilize and join the vertebrae. Guideline B3.10 refers to the hierarchy in reporting the combinations of devices that may be used for fusion of the vertebral joint. When an interbody fusion device is used, assign the device value "A, Interbody fusion device." "Alone" in the guideline refers to interbody fusion devices such as cortical bone dowels or intervertebral body spacers that are composed of bone. Other interbody fusion devices are made of metal or plastic and are packed with bone or bone-like material that is placed in or around the implant to join the vertebrae to stabilize the spinal column and prohibit movement. "A, Interbody fusion device" is appropriate in both instances.</p>

## Coding Clinic References:

Reference	Answer/Advice
2 <sup>nd</sup> Q 2019 P. 35	The DTRAX Spinal System is a set of instruments intended and indicated for access and preparation of a spinal joint to aid in fusion. When assigning ICD-10-PCS codes for procedures using DTRAX spinal instruments, coding professionals should code the procedure based on what was done, rather than the device used. In this case, a posterior fusion between the facet (interfacet) was done, not an interbody fusion. If the documentation is unclear, query the physician for clarification.
1 <sup>st</sup> Q 2019 P. 30	In this case, the <b>decompressive laminectomy was performed to treat a separately documented diagnosis of lumbar spinal stenosis</b> . Since there is a distinct objective, it is appropriate to code decompressive laminectomy even though it was performed at the same level as the lumbar spinal fusion. The root operation Release is coded separately when decompression is documented, and there is a distinct surgical objective, not just incidental removal of the lamina to reach the site of the procedure. If the laminectomy is done as an operative approach to prepare for the spinal fusion, it is not coded separately.

## Coding Clinic References:

Reference	Answer/Advice
3 <sup>rd</sup> Q 2018 CC P. 30	Decompression was performed bilaterally from L2-L3, L3-L4 and L4-L5. The <b>thecal sac</b> was then free of compression. For this type of procedure, the surgeon will typically document release of "thecal sac." The appropriate body part for the decompressive laminectomies is lumbar spinal cord.
1 <sup>st</sup> Q 2018 CC P. 22	The root operation of "fusion" does not require the use of bone graft <b>however</b> , the spinal fusion guideline indicates that a spinal fusion requires bone graft.
1 <sup>st</sup> Q 2018 CC P. 8	Reporting a code for the placement of BMP is optional and facilities may code it, if desired. When an open approach is used, assign the following ICD- 10-PCS code: <b>3E0U0GB</b> Introduction of recombinant bone morphogenetic protein into joints, open approach

## Coding Clinic References:

Reference	Answer/Advice
2 <sup>nd</sup> Q 2016 P. 17	During an interbody fusion at C6-C7 with anterior discectomy and anterior neural foraminal decompression, <u>a rongeur was used to remove the right third of the posterior longitudinal ligament at the C6-C7 level.</u> In addition to coding the interbody fusion and discectomy <u>a code is assigned separately for the removal of the ligament “Release”.</u> The root operation “Release” meets the objective of removing the ligament in order to fully decompress the C7 nerve root.
2 <sup>nd</sup> Q 2015 P. 21	A patient with cervical myelopathy and the surgeon performed an open total decompressive laminectomy of C3-C6. The laminectomy procedure to release the spinal cord is coded only once because the cervical spinal cord is classified as a single body part. Each spinal and or nerve root has a distinct body part character for each level so a code should be reported for each level.

## Coding Clinic References:

Reference	Answer/Advice
3 <sup>rd</sup> Q 2014 P. 30	Fixation devices (rods, plates, screws) used in conjunction with a spinal fusion procedure is included in the fusion root operation and no additional code is assigned.
3 <sup>rd</sup> Q 2014 P. 36; 2 <sup>nd</sup> Q 2014 P. 6	The correct codes for a posterior lumbar interbody fusion of L3-L5 using autologous bone graft harvested from the right iliac crest and pedicle screw instrumentation , L3-L5 discectomy are: OSG107J – Fusion of 2 or more lumbar vertebrae with autologous tissue, anterior column, posterior approach OSB20ZZ – Excision of lumbar vertebral disc, open OQB20ZZ – Excision of right pelvic bone, open

## Coding Clinic References:

Reference	Answer/Advice
2 <sup>nd</sup> Q 2014 P. 7	<p>The correct codes for an anterior cervical-thoracic (C7-T1) spinal fusion, using interbody cage packed with autograft and demineralized bone matrix, placement of plates and screws with total discectomy are:</p> <p>ORG40A0 – Fusion of cervicothoracic vertebral joint with interbody fusion device, anterior column anterior approach, open</p> <p>ORT50ZZ – Resection of cervicothoracic vertebral disc, open</p> <p>Spinal fusion using an interbody cage <i>with</i> demineralized bone matrix and autograft is coded to the device value “Interbody Fusion Device” (PCS Guideline B3.10c). The fixation instrumentation is included in the fusion root operation and no additional code is assigned.</p>
3 <sup>rd</sup> Q 2013 P. 25	<p>A 360 degree fusion involves fusing both the anterior and posterior column and there fore each procedure is going to have a different Qualifier (PCS Guideline B3.10b). 360 degree fusions often utilize different devices for the anterior and posterior column.</p>

## Coding Clinic References:

Reference	Answer/Advice
1 <sup>st</sup> Q 2013 P. 21	<p>Fusion of T6 – L2 requires three fusion codes based on distinct body part values for the vertebrae fused. (PCS Guidelines B3.2a and B3.10a). All fusions performed with autologous tissue substitute, posterior approach posterior column</p> <p>ORG7071 – Fusion 2-7 thoracic (T6-T12) vertebral joints</p> <p>ORGA071 – Fusion thoracolumbar (T12-L1) vertebral joints</p> <p>OSG0071 – Fusion one lumbar (L1-L2) vertebral joint</p>
1 <sup>st</sup> Q 2013 P. 21	<p>Autografts, allografts and BMP placement are identified by the device character in the fusion code</p>
1 <sup>st</sup> Q 2013 P. 29	<p>A Smith-Robinson approach to a C7-T1 fusion involves an anterior approach anterior column.</p>

## Report Additional Procedure Codes for:

- “Excision” or “Resection” of intervertebral disc for each vertebral level (cervical, thoracic, lumbar) not individual discs.
- Removal of previously placed interbody fusion devices that are removed due to pseudoarthrosis and/or complication.
- Decompression of spinal nerves and/or spinal cord using the root operation “Release”.
- Harvesting of bone or bone marrow if harvested from a different site requiring a new incision or approach.
- Fixation devices placed above or below the level of the spinal fusion.

## Description of Procedure:

The patient was placed prone onto a Jackson spinal frame. Her back was prepped and draped in usual sterile fashion and a straight midline approach to the lumbar spine was performed through a 4.5 inch incision. Subperiosteal exposure was carried out from the tip of the transverse process from L2-L5 bilaterally and decortication was carried out using a rongeur. Transpedicular screws were then placed in the pedicles at L2, L3, L4 and L5 bilaterally. Segmental decompression was then carried out by using a rongeur to take down supraspinous and interspinous ligaments. Rongeurs and Kerrison were utilized to perform bilateral hemilaminectomies from L2-L5. Direct decompression of bilateral nerve roots was carried out through foraminotomies and pedicle to pedicle decompression. Complete decompression of the nerve root was achieved. Probe was passed into each neural foramen and confirmed wide decompression. Annulotomy was then made in the disks between L2-L5. Using intradiscal scrapers I was able to distract and reduce the spondylolisthesis at L4-L5 and endplates were curetted down to bleeding subchondral bone. The Optimesh mechanical body device was then selected, appropriately sized, and packed with structural allograft bone, thereby providing a rigid anterior column support and biomechanical device at each of the 3 levels. Two rods were cut and contoured into lordosis, placed into the screws from L2-5, reduction maneuvers performed, which thereby reduced the degenerative scoliosis. Set screws were placed and torqued using manufacturers' provided torque wrench. Two cross connectors were placed and torqued and final Xrays were taken. A separate skin incision had been made over the right iliac crest, Jamshidi needle introduced and bone marrow was aspirated. This bone marrow was processed in the arterial site system, returned back to the patient as packed cells and the bone marrow concentrate was retained for bone grafting and mixed with allograft bone demineralized bone matrix and a gram of vancomycin. This bone graft was packed in direct continuity at the transverse process from L2-5 bilaterally. This was done after the wound was pulsatile lavaged out with 3 L of antibiotic containing saline plus 1 additional liter of normal saline. Final check of the wound was performed. There was no active bleeding. Devitalized muscular tissue was debrided sharply with pickups and scissors, and deep fascia was closed using interrupted and running #1 Vicryl sutures.

## PCS Coding Example Answers:

Answers: Rationale for each individual code is on subsequent slides followed by a copy of the Op Note with documentation color coded based on the codes below.

- **0SG10AJ** – Fusion 2-4 Lumbar Joints, Posterior Approach, Anterior Column
- **0SG1071** – Fusion 2-4 Lumbar Joints, Posterior Approach, Posterior Column
- **07DR3ZZ** – Extraction of Iliac Bone Marrow, Percutaneous Approach
- **01NB0ZZ** - Release of Lumbar Nerve, Open

## OSG10AJ – Fusion 2-4 Lumbar Joints, Posterior Approach, Anterior Column

PCS Code	Rationale
0	Medical & Surgical Section
S	Lower Joints – the lumbar and sacral vertebrae are considered lower joints
G	Fusion –
1	Lumbar vertebral joints 2 or more - the number of joints fused is three and include L2-3, L3-4 and L4-5
0	Open - the Op Note states “Her back was prepped and draped in usual sterile fashion and a straight midline approach to the lumbar spine was performed through a 4.5 inch incision. Subperiosteal exposure was carried out from the tip of the transverse process from L2-L5 bilaterally and decortication was carried out using a rongeur.
A	Interbody fusion device - The Optimesh mechanical body device was then selected, appropriately sized, and packed with structural allograft bone, thereby providing a rigid anterior column support and biomechanical device at each of the 3 levels.
J	Posterior Approach Anterior Column – the Op notes states the patient was placed in “prone’ or face down position which represents a posterior approach. Interbody devices are placed between 2 vertebral bodies which is the anterior column.



## OSG1071 – Fusion 2-4 Lumbar Joints, Posterior Approach, Posterior Column

PCS Code	Rationale
0	Medical & Surgical Section
S	Lower Joints – the lumbar and sacral vertebrae are considered lower joints
G	Fusion –
1	Lumbar vertebral joints 2 or more - the number of joints fused is three and include L2-3, L3-4 and L4-5
0	Open - the Op Note states “Her back was prepped and draped in usual sterile fashion and a straight midline approach to the lumbar spine was performed through a 4.5 inch incision. Subperiosteal exposure was carried out from the tip of the transverse process from L2-L5 bilaterally and decortication was carried out using a rongeur.
7	Autologous Tissue Substitute – the Op Note states “the bone marrow concentrate was retained for bone grafting and mixed with allograft bone demineralized bone matrix and a gram of vancomycin” as directed in PCS Guideline B3.10c
1	Posterior Approach Posterior Column - the Op notes states the patient was placed in “prone’ or face down position which represents a posterior approach. This bone graft was packed in direct continuity at the transverse process from L2-5 bilaterally – the transverse processes are part of the posterior column.

## 07DR3ZZ – Extraction of Iliac Bone Marrow, Percutaneous Approach

PCS Code	Rationale
0	Medical & Surgical Section
7	Lymphatic & Hemic System – in this case bone marrow is being used not actual bone
D	Extraction – 4 <sup>th</sup> Q CC P.111 states biopsy of bone marrow is coded to the root operation “Extraction” the technique to retrieve the bone marrow whether for biopsy or other reason is the same.
R	Bone Marrow Iliac Op Note states “A separate skin incision had been made over the right iliac crest, Jamshidi needle introduced and bone marrow was aspirated.”
3	Percutaneous – Although the Op Note documents an incision was made the iliac crest is a superficial bone that can easily be palpated through the skin it would only require a minor incision to expose the bone. The definition of “Percutaneous” includes entry by minor incision. Without further documentation to support an Open approach Percutaneous is the correct approach.
Z	No Device
Z	No Qualifier

## 01NB0ZZ - Release of Lumbar Nerve, Open

PCS Code	Rationale
0	Medical & Surgical Section
1	Peripheral Nervous System
N	Release The Op Note states “Direct decompression of bilateral nerve roots was carried out through foraminotomies and pedicle to pedicle decompression. Complete decompression of the nerve root was achieved.” CC 2 <sup>nd</sup> Q 2016 P. 17 states to code spinal nerve decompression is coded to the root operation “Release”
B	Lumbar Nerve THE Op Note states “Rongeurs and Kerrison were utilized to perform bilateral hemilaminectomies from <b>L2-L5</b> . Direct decompression of bilateral nerve roots was carried out through foraminotomies and pedicle to pedicle decompression.
0	Open the Op Note states “Her back was prepped and draped in usual sterile fashion and a straight midline approach to the lumbar spine was performed through a 4.5 inch incision. Subperiosteal exposure was carried out from the tip of the transverse process from L2-L5 bilaterally and decortication was carried our using a rongeur.
Z	No Device
Z	No Qualifier

## Description of Procedure:

The patient was placed prone onto a Jackson spinal frame. Her back was prepped and draped in usual sterile fashion and a straight midline approach to the lumbar spine was performed through a 4.5 inch incision. Subperiosteal exposure was carried out from the tip of the transverse process from L2-L5 bilaterally and decortication was carried out using a rongeur. Transpedicular screws were then placed in the pedicles at L2, L3, L4 and L5 bilaterally. Segmental decompression was then carried out by using a rongeur to take down supraspinous and interspinous ligaments. Rongeurs and Kerrison were utilized to perform bilateral hemilaminectomies from L2-L5. Direct decompression of bilateral nerve roots was carried out through foraminotomies and pedicle to pedicle decompression. Complete decompression of the nerve root was achieved. Probe was passed into each neural foramen and confirmed wide decompression. Annulotomy was then made in the disks between L2-L5. Using intradiscal scrapers I was able to distract and reduce the spondylolisthesis at L4-L5 and endplates were curetted down to bleeding subchondral bone. The Optimesh mechanical body device was then selected, appropriately sized, and packed with structural allograft bone, thereby providing a rigid anterior column support and biomechanical device at each of the 3 levels. Two rods were cut and contoured into lordosis, placed into the screws from L2-5, reduction maneuvers performed, which thereby reduced the degenerative scoliosis. Set screws were placed and torqued using manufacturers' provided torque wrench. Two cross connectors were placed and torqued and final Xrays were taken. A separate skin incision had been made over the right iliac crest, Jamshidi needle introduced and bone marrow was aspirated. This bone marrow was processed in the arterial site system, returned back to the patient as packed cells and the bone marrow concentrate was retained for bone grafting and mixed with allograft bone demineralized bone matrix and a gram of vancomycin. This bone graft was packed in direct continuity at the transverse process from L2-5 bilaterally. This was done after the wound was pulsatile lavaged out with 3 L of antibiotic containing saline plus 1 additional liter of normal saline. Final check of the wound was performed. There was no active bleeding. Devitalized muscular tissue was debrided sharply with pickups and scissors, and deep fascia was closed using interrupted and running #1 Vicryl sutures.

## Questions?

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UASI has always provided a way for the company and our employees to give back through charitable events such as:

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