

Degenerative conditions of the lumbar spine are common and include spinal stenosis, degenerative spondylolisthesis, degenerative lumbar scoliosis, and degenerative disc disease. The conditions can lead to pain and disability. When these problems occur and conservative treatment fails, surgery becomes an option. Evidence for the surgical procedure of lumbar spinal fusion will be presented to the MCAC. The panel questions focus on the treatment of low back pain due to lumbar disc disease. The interpretation of lumbar disc disease can vary from surgeon to surgeon, so the surgical pathology may not be similarly defined from study to study, or even across participating centers in a study, so this condition will be considered in broad terms.

MCAC Questions
Spinal Fusion for the Treatment of Low Back Pain
Secondary to Degenerative Disc Disease

1. What level of confidence does the evidence provide in addressing the outcomes needed to determine the effectiveness of lumbar spinal fusion for low back pain due to lumbar degenerative disc disease?				
<i>1 -Low</i>	<i>-2-</i>	<i>3- Intermediate</i>	<i>-4 -</i>	<i>5- High</i>
<i>Discussion: Is relief of pain the appropriate primary outcome, or should it be restoration of function, return to work, or something else?</i>				
2. What level of confidence does the evidence provide for characterizing the complications, adverse events and other harms from lumbar spinal fusion for degenerative disc disease?				
A. Short Term (up to 2 years post fusion surgery)				
<i>1 -Low</i>	<i>-2-</i>	<i>3- Intermediate</i>	<i>-4 -</i>	<i>5- High</i>
B. Long Term (more than 2 years post fusion surgery)				
<i>1 Low</i>	<i>-2-</i>	<i>3- Intermediate</i>	<i>-4 -</i>	<i>5- High</i>
<i>Discussion: What does the variability in surgical risk depend on? As this procedure is permanent, are there other potential long term harms that have not been discussed?</i>				
3. Based on the evidence presented, how likely is it that lumbar spinal fusion for lumbar degenerative disc disease improves clinical outcomes as compared to conservative treatment?				
A. Short Term (up to 2 years post fusion surgery)				
<i>1- Not Likely</i>	<i>-2-</i>	<i>3- Reasonably Likely</i>	<i>-4-</i>	<i>5- Very Likely</i>
B. Long Term (more than 2 years post fusion surgery)				
<i>1- Not Likely</i>	<i>-2-</i>	<i>3- Reasonably Likely</i>	<i>-4-</i>	<i>5- Very Likely</i>

Discussion: What are the causes of low back pain? Is patient selection important, and if so, what are the clinical and/or patient characteristics that are reliable predictors of satisfactory outcomes? If there is an absence of evidence of long term benefit, would evidence of short term benefit be sufficient to justify a fusion procedure? If one clinical trial were to be done, what should it be?

4. Based on the evidence presented, how likely is it that the various fusion procedures improve health outcomes for lumbar degenerative disc disease? Consider these procedures both with and without instrumentation.

1 – Not Likely 2- 3- Reasonably Likely 4- 5- Very Likely

A. Short Term (up to 2 years post fusion surgery)

Lumbar Fusion Procedure	Without Instrumentation	With Instrumentation
a. Posterolateral (gutter fusion)		
b. Posterior Lumbar Interbody		
c. Anterior Lumbar Interbody		
d. Anterior/Posterior combined		
e. Transforaminal Interbody		

B. Long Term (more than 2 years post fusion surgery)

a. Posterolateral (gutter fusion)		
b. Posterior Lumbar Interbody		
c. Anterior Lumbar Interbody		
d. Anterior/Posterior combined		
e. Transforaminal Interbody		

Discussion: How important is patient selection relative to the type of procedure? What criteria are used in selecting the type of fusion procedure?

5. What level of confidence does the evidence provide that radiographic interpretations are correlated with clinical outcomes for lumbar spinal fusion due to lumbar degenerative disc disease?

1- Low -2- 3- Intermediate -4- 5- High

Discussion: Is there uniform agreement regarding terminology for radiographic interpretations?

6. Based on the evidence presented, how likely is it that the results generalize to the Medicare population?

A. Relief of pain:

<i>1- Not Likely</i>	<i>-2-</i>	<i>3 -Reasonably Likely</i>	<i>-4-</i>	<i>5- Very Likely</i>
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B. Complications, adverse events and other harms:

<i>1- Not Likely</i>	<i>-2-</i>	<i>3- Reasonably Likely</i>	<i>-4-</i>	<i>5- Very Likely</i>
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Discussion: Do studies need to be done in the Medicare population to strengthen the conclusions? Discuss the impact of age and co-morbidities.