

The Weill Cornell Low Back Pain Appropriate Use Criteria (AUC) addresses eight clinical conditions common to patients presenting with Low Back Pain and makes recommendations to optimize diagnostic effectiveness.

Common Clinical Conditions – Low Back Pain	
0	Not Lumbar Pain
1	Fracture Suspected or Known, High Energy Trauma
2	Fracture Suspected or Known, No High Energy Trauma
3	History of Lumbar Spine Surgery
4	Infection, Suspected or Known
5	Low Back Pain, 6 weeks or more, No Additional Pathology
6	Low Back Pain, less than 6 weeks, No Additional Pathology
7	Neoplasm Suspected or Known
8	Neurologic Impairment

The Low Back Pain AUC is activated when a user orders one of the following six Advanced Imaging Procedures.

Advanced Imaging Procedures	
1	CT Lumbar Spine with Contrast
2	CT Lumbar Spine without Contrast
3	CT Lumbar Spine with and without Contrast
4	MR Lumbar Spine with Contrast
5	MR Lumbar Spine without Contrast
6	MR Lumbar Spine with and without Contrast

The Low Back Pain AUC recommends one of the following seven Imaging Procedures based on the clinical condition.

Advanced Imaging Procedures	
1	CT Lumbar Spine with Contrast
2	CT Lumbar Spine without Contrast
3	CT Lumbar Spine with and without Contrast
4	MR Lumbar Spine with Contrast
5	MR Lumbar Spine without Contrast
6	MR Lumbar Spine with and without Contrast
7	XR Lumbar Spine

Logic Tables

The following Clinical Condition Logic Tables provide the Low Back Pain AUC logic for each clinical condition.

The logic includes priors, contraindications, metal reduction and advanced US techniques where applicable.

Key

Value	Score
Blank	No Score Assigned
0	AUC Not Applicable
1	Inappropriate
2	Contact Radiology
3	Appropriate
4	Appropriate Preferred

Condition 0 – Not Hip Pain AUC Logic Activated, AUC Not Applicable

	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Base Condition							
Not for Low Back Pain	0	0	0	0	0	0	

Condition 1 - Fracture Suspected or Known, High Energy Trauma

	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Base Condition								
Fracture Suspected or Known, High Energy Trauma		4	1	1	4	1	1	4
Fracture Suspected or Known, High Energy Trauma	MR	4	1	1	1	1	1	4

Condition 2 - Fracture Suspected or Known, No High Energy Trauma

	Priors	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Base Condition									
Fracture Suspected or Known No High Energy Trauma	No Xray		1	1	1	1	1	1	4
Fracture Suspected or Known No High Energy Trauma	Xray		4	1	1	3	1	1	
Fracture Suspected or Known No High Energy Trauma	Xray	MR	4	1	1	1	1	1	
Fracture Suspected or Known No High Energy Trauma	Xray	CT	1	1	1	4	1	1	
Fracture Suspected or Known No High Energy Trauma	Xray	MR, CT	2	2	2	2	2	2	

Condition 3 – History of Lumbar Spine Surgery

	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Base Condition								
History of Lumbar Spine Surgery		3	1	1	3	1	4	
History of Lumbar Spine Surgery	GAD	3	1	1	4	1	1	
History of Lumbar Spine Surgery	MR	4	1	1	1	1	1	
History of Lumbar Spine Surgery	CT	1	1	1	3	1	4	
History of Lumbar Spine Surgery	GAD, CT	1	1	1	4	1	1	
History of Lumbar Spine Surgery	MR, CT	2	2	2	2	2	2	

Condition 4 – Infection, Suspected or Known

Base Condition	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Infection, Suspected or Known		3	3	1	3	1	4	
Infection, Suspected or Known	GAD	3	3	1	4	1	1	
Infection, Suspected or Known	MR	3	4	1	1	1	1	
Infection, Suspected or Known	IOD	3	1	1	3	1	4	
Infection, Suspected or Known	CT	1	1	1	3	1	4	
Infection, Suspected or Known	GAD, IOD	3	1	1	4	1	1	
Infection, Suspected or Known	GAD, CT	1	1	1	4	1	1	
Infection, Suspected or Known	MR, IOD	4	1	1	1	1	1	
Infection, Suspected or Known	MR, CT	2	2	2	2	2	2	

Condition 5 – Low Back Pain, 6 weeks or more, No Additional Pathology

Base Condition	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Low Back Pain, 6 weeks or more, No Additional Pathology		3	1	1	4	1	1	
Low Back Pain, 6 weeks or more, No Additional Pathology	MR	4	1	1	1	1	1	
Low Back Pain, 6 weeks or more, No Additional Pathology	CT	1	1	1	4	1	1	
Low Back Pain, 6 weeks or more, No Additional Pathology	MR, CT	2	2	2	2	2	2	

Condition 6 – Low Back Pain, less than 6 weeks, No Additional Pathology

Base Condition	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Low back pain for less than 6 weeks, no signs of additional pathology	1	1	1	1	1	1	

Condition 7 – Neoplasm Suspected or Known

Base Condition	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Neoplasm, Suspected or Known		3	3	1	3	1	4	
Neoplasm, Suspected or Known	GAD	3	3	1	4	1	1	
Neoplasm, Suspected or Known	MR	3	4	1	1	1	1	
Neoplasm, Suspected or Known	IOD	3	1	1	3	1	4	
Neoplasm, Suspected or Known	CT	1	1	1	3	1	4	
Neoplasm, Suspected or Known	GAD, IOD	3	1	1	4	1	1	
Neoplasm, Suspected or Known	GAD, CT	1	1	1	4	1	1	
Neoplasm, Suspected or Known	MR, IOD	4	1	1	1	1	1	
Neoplasm, Suspected or Known	MR, CT	2	2	2	2	2	2	

Condition 8 – Neurologic Impairment

Base Condition	Contraindications	CT Lumbar Spine WO	CT Lumbar Spine W	CT Lumbar Spine WWO	MR Lumbar Spine WO	MR Lumbar Spine W	MR Lumbar Spine WWO	XR Lumbar Spine
Neurologic Impairment		3	1	1	4	1	1	
Neurologic Impairment	MR	4	1	1	1	1	1	
Neurologic Impairment	CT	1	1	1	4	1	1	
Neurologic Impairment	MR, CT	2	2	2	2	2	2	

Sources

The Low Back Pain AUC has been developed by Weill Cornell Medicine utilizing the following two published sources.

No.	Source
1	Diagnostic Imaging for Low Back Pain: Advice for High-Value Health Care from the American College of Physicians, Chou, et. al., Ann Intern Med. 2011. https://www.ncbi.nlm.nih.gov/pubmed/21282698
2	Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society, Chou, et. al., Ann Intern Med. 2007. https://annals.org/aim/article/736814/diagnosis-treatment-low-back-pain-joint-clinical-practice-guideline-from