**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**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |
| Not for Low Back Pain | 0 | 0 | 0 | 0 | 0 | 0 |  |

**Condition 1 - Fracture Suspected or Known, High Energy Trauma**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |
| 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**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Base Condition** | 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 |
| 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**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |
| 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> |