



# The AdMIRable Review

## MIRR PHYSICIAN SPOTLIGHT RICHARD C. COLE, MD, FAADEP

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Richard C. Cole, MD, has been an active member of the Medical Impairment Rating Registry since March 2005. His MIR Reports are of the highest quality, for he has attended numerous Medical Impairment Rating Registry (MIRR) training seminars and is also a fellow of the American Academy of Disability Evaluating Physicians (AADEP). He is diplomate of the National Board of Medical Examiners and the American Board of Family Practice. His versatile practice as a family physician allows him to rate injuries utilizing most of the chapters of the *AMA Guides*.

Dr. Cole is currently the senior physician at Spectrum Medical Associates in Tullahoma, Tennessee. In addition to the usual responsibilities of a family physician, he sees many patients recovering from acci-



Richard C. Cole, MD, FAADEP

dents or in need of care for a workers' compensation injury. Consequently, he attended several courses held by the American Academy of Disability Evaluation Physicians, leading him to eventually become a Fellow.

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“After Desert Storm started in 1990, he was stationed at an Air Transportable Hospital (ATH) in Dhahran, Saudi Arabia. “

Dr. Cole grew up in Huntsville, Alabama, and graduated from Grissom High School. He attended college at the University of Alabama in Tuscaloosa, graduating with a Bachelor of Science degree in computer science. In 1983, he received his Medical Degree from the University of South Alabama. He joined the U.S. Air Force in 1986 and was stationed with the 1st TAC Fighter Wing at Langley Air Force Base in Hampton, Virginia, obtaining the rank of Major. While at Langley, he served as chief of Family Practice and Emergency Services. After Desert Storm started in 1990, he was stationed at an Air Transportable Hospital (ATH) in Dhahran, Saudi Arabia. He moved to Tul-



lahoma, Tennessee, in 1991 and set up a Family Practice office. The business was eventually named Spectrum Medical Associates.

Dr. Cole has been on staff at Harton Regional Medical Center in Tullahoma since 1991. He also has staff privileges at Southern Tennessee Medical Center, in Winchester, Tennessee. His professional memberships include the Tennessee Medical Association, the Tennessee Academy of Family Physicians, and the Coffee County Medical Society. He is licensed to practice medicine in Tennessee and was previously licensed in Alabama and Virginia.

An amateur astronomer, Dr. Cole has a Dobsonian telescope, ten inches in diameter, in his backyard. Occasionally he attends local



SPECTRUM MEDICAL ASSOCIATES  
2106 North Jackson Street  
Tullahoma, TN 37388

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# SPINAL IMPAIRMENT CASE EXAMPLES\*

Jeffrey Hazlewood, MD, James B. Talmage, MD, Majorie Eskay-Auerbach, MD, JD



lumbar radiculopathy (March/April 2014 and May/June 2014, respectively). The cases presented below describe how different providers can inconsistently provide ratings, yet the *AMA Guides* methodology should produce a specific and reliable rating.

## TERMINOLOGY

First, it is essential to remember specific definitions and principles in order to accurately apply the guidelines. The following is a summary of the terminology:

Section “General Consideration” explains the following: *“There is a category of patients who present with persistent pain and “nonverifiable” radicular complaints [...] that are documented repeatedly after an identifiable injury. These patients have no objective findings and, therefore, are often given a diagnosis of “chronic sprain/strain” or “non-specific back or neck pain”. The current methodology allows these patients to be rated in impairment class 1, with a range of impairment ratings from 1 to 3% whole person impairment (WPI). The percentage impairment within that range depends on functional assessment, since*

Chapter 17, The Spine and Pelvis, is frequently used when determining a permanent impairment rating at maximum medical improvement (MMI). Spine ratings can be very challenging and require a very detailed knowledge of the chapter. Frequently, ratings for diagnoses of “non-verifiable back pain,” herniated discs, non-verifiable radicular pain, and radiculopathy are requested. In order to provide an accurate and reliable rating, it is essential that the correct *AMA Guides*, Sixth Edition, definitions of these diagnoses be used. The *AMA Guides* definitions may not be the same as the definitions used by some physicians when providing medical care for their patients.

Other *AMA Guides Newsletter* articles have succinctly addressed ratings for non-specific back pain and

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## SPINAL IMPAIRMENT CASE EXAMPLES

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*there are no reliable physical examination or imaging findings in this group.*" (6th ed, 563)

One may use a rating of 2% or 3% WPI if the patient's history of pain is felt to be reliable, valid, and consistent. In such a situation, a physician must make a judgment call as to how credible the patient is in order to determine the appropriateness of using class 1 or class 0 (0% WPI). Remember that with the diagnosis of "non-specific chronic, or chronic recurrent low back pain," there will not be an impairment of 1% WPI because the functional history grade modifier (GMFH) cannot be 0 if the rating class of 1 is used (this is explained thoroughly in the *AMA Guides Newsletter*, March/April 2014).

*"Nonverifiable radicular complaints are defined as chronic persisting limb pain or numbness which is consistently and repetitively recognized in medical records, in the distribution of a single nerve root that the examiner can name and with the following characteristics: preserved sharp vs. dull sensation and preserved muscle strength in the muscles it innervates, is not significantly compressed on imaging, and is not affected on electrodiagnostic studies (if performed)." (6th ed, 576)*

*"Radiculopathy. For the purposes of the Guides, radiculopathy is defined as significant alteration in the function of a single or multiple nerve roots and is usually caused by mechanical or chemical irritation of one or several nerves. The diagnosis requires clinical findings that include specific dermatomal distribution of pain, numbness, and/or paresthesias. Subjective reports of sensory changes are more difficult to assess; therefore, the complaints should be consistent and supported by other findings of radiculopathy. There may be associated motor weakness and loss of reflex. A root tension sign is usually positive. The identification of a condition that may be associated with radiculopathy (such as a herniated disk) on an imaging study is not sufficient to make a diagnosis of radiculopathy; clinical findings must correlate with the radiographic findings in order to be considered." (6th ed, 576)*

"Resolved radiculopathy" is the previous presence of a true radiculopathy (as defined above) but with such objective findings no longer present at the time of MMI and rating (Table 17-4, Lumbar Spine Regional Grid: Spine Impairments, 6th ed, page 570, footnote "a"). Frequently, one must review previous records and doc-

# SPINAL IMPAIRMENT CASE EXAMPLES

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umentation to determine if, in fact, there was a “true” radiculopathy objectively documented in the past in order to state that it has subsequently “resolved.” In some situations, a surgery has been performed when there was technically only a previous nonverifiable radicular complaint, not an objective “radiculopathy.” Such a distinction is critical in determining the appropriate class as listed in Table 17-4, page 570.

Footnote “a”, Table 17-4, Page 570

*“Or AOMSI in the absence of radiculopathy, or with documented resolved radiculopathy or non-verifiable radicular complaints at the clinically appropriate levels present at the time of examination.”*

Table 17-4, footnote “a,” p. 571, is critical when determining the appropriate class to use in rating intervertebral disk herniation and/or AOMSI (alteration of motion segment integrity). As noted, “the following applies to the cervical, thoracic, and lumbar spine grids: 1) Intervertebral disk herniation excludes annular bulge, annular tear and disk herniation on imaging without consistent objective findings of radiculopathy at the appropriate level(s)

when most symptomatic.” In other words, in order for a disk herniation to be rated as class 1 or class 2, there must have been either a previously objectively documented radiculopathy or a current objectively documented radiculopathy. Otherwise, the rating falls back to the non-specific low back pain/soft tissue and non-specific condition category.

Footnote “a”, Table 17-4, Page 571

*“Note: the following applies to the cervical, thoracic, and lumbar spine grids: 1) Intervertebral disk herniation excludes annular bulge, annular tear and disk herniation on imaging without consistent objective findings of radiculopathy at the appropriate level(s) when most symptomatic. 2) When AOMSI is the diagnosis being rated, imaging is not included in the Net Adjustment Calculation, because imaging is used to confirm the diagnosis.”*

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# SPINAL IMPAIRMENT CASE EXAMPLES

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## CASE EXAMPLES

Following are cases that illustrate these principles.

### CASE 1

Patient presents with reliable and consistent axial low back pain and buttock pain but has no referral into the lower extremities (at any time). The neurologic examination is negative for radiculopathy. The magnetic resonance imaging (MRI) study reveals a disc herniation at L5-S1.

**RATING:** 2–3% WPI (depending on the GMFH and subsequent adjustment).

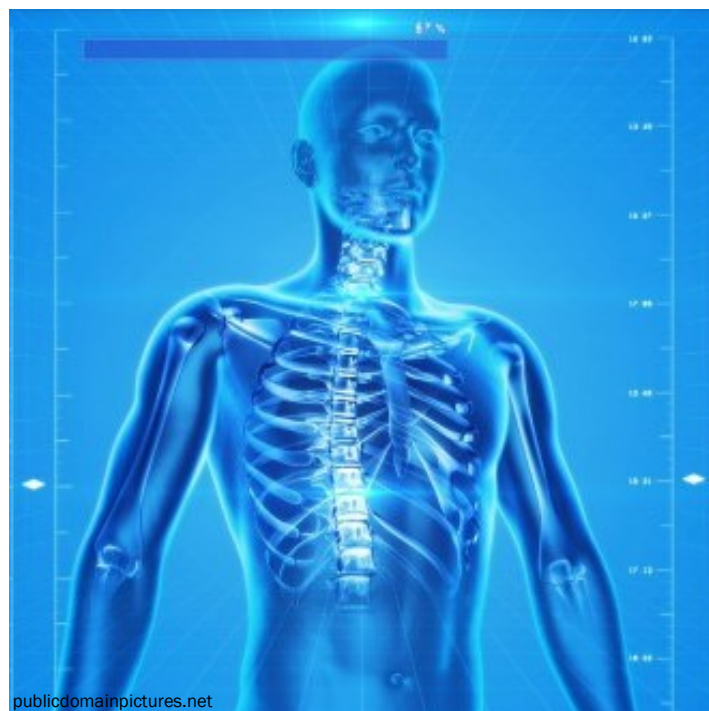
**DISCUSSION:** The patient has mechanical low back pain (probably “discogenic”) without non-verifiable radicular complaints or radiculopathy. Therefore, the rating is not calculated under the intervertebral disk herniation (HNP) category but rather under the soft tissue category (“non-specific chronic or chronic recurrent low back pain”), even though there is an “HNP” on the MRI films that is possibly symptomatic. (See Table 17-4, footnote “a,” 6th ed, 570.) Only the GMFH is used since there is neither currently nor previous radiculopathy. The non-specific back pain diagnosis is therefore used.

### CASE 2

Patient presents with radicular pain clinically matching the level of an HNP on the MRI films, yet neither previously nor currently presents with objective findings of radiculopathy on examination, as defined on page 576.

**RATING:** 2–3% WPI (depending on the GMFH and subsequent adjustment).

**DISCUSSION:** Even though there is an HNP on imaging and radicular pain, there has never been an objectively documented radiculopathy (by the AMA Guides definition). Therefore, as explained in Table 17-4, footnote “a,” the HNP category cannot be used to determine the rating, and the rating defaults back into the



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# SPINAL IMPAIRMENT CASE EXAMPLES

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soft tissue/non-specific low back pain diagnosis category. The footnote is the key to the appropriate rating. Rating for a disc-herniation diagnosis is not appropriate, and rating for ongoing “radiculopathy” is not appropriate.

## CASE 3

Patient presents with current low back pain only; however, previous radicular pain with objectively documented radiculopathy on physical exam is recorded in the medical records. The radiculopathy (both neurologic deficit and limb pain) subsequently resolved and the patient now has axial low back pain only. MRI films revealed an HNP at the clinically appropriate level. The patient had a previously documented radiculopathy that subsequently resolved without surgery.

**RATING:** 5–9% WPI (depending on the functional history, physical examination, and clinical study grade modifiers and subsequent adjustments).

**DISCUSSION:** The rating is determined under the HNP category because at one time there was a radiculopathy (see Table 17-4, footnote “a,” and the definition of radiculopathy on page 576). However, the radiculopathy had resolved.

## CASE 4

Patient presents with current low back pain and current radicular pain (non-verifiable by definition on page 576). There was a previously objectively documented radiculopathy on physical exam documented in the medical records that clinically matched the HNP on the MRI films. However, there is no longer an objective radiculopathy in association with the ongoing radicular pain.

**RATING:** 5–9% WPI (depending on the functional history, physical examination, and clinical grade study modifiers and subsequent adjustments).

**DISCUSSION:** The key fact is that at MMI there was no residual radiculopathy. Consequently, disk herniation class 1, not class 2, is used, even though there is still residual radicular pain. There is often controversy about whether there is ongoing radiculopathy. However, based on the definitions in the AMA Guides, for this case, there is non-verifiable radicular pain without objective signs of ongoing radiculopathy. This case is a good example of the differences in the two definitions on page 576. The fact that other physicians use the clinical diagnosis of radiculopathy does not alter the fact that currently the AMA Guides definition of persisting radiculopathy is not appropriate.

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# SPINAL IMPAIRMENT CASE EXAMPLES

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## CASE 5

Patient presents with no residual pain, yet had low back pain, radicular pain, and a previous HNP (clinically symptomatic) and a previously documented radiculopathy (now resolved) on exam.

**RATING:** 5–9% WPI (depending on the functional history, physical examination, and clinical study grade modifiers and subsequent adjustments). The GMFH will be 0, the GMPE will probably be 0 (unless there is residual atrophy, weakness, or reflex change or sharp vs dull sensory loss), and the GMCS will be 2, probably yielding a final rating of grade class A, 5% WPI.

**DISCUSSION:** Even though the patient is now pain free, there was a previously objectively documented radiculopathy on physical exams noted in the medical records, so the rating is from disk herniation, class 1, and not 0% WPI.

## CASE 6

Patient presents with axial low back pain only. Previously, there was radicular pain and a previous radiculopathy in association with an HNP (clinically correlating). The radiculopathy and lower extremity pain have resolved with surgery.

**RATING:** 5–9% WPI (depending on the modifiers and adjustments).

**DISCUSSION:** The key is not the previous surgery but the fact that there was a previously objectively documented radiculopathy on physical exam in the medical records that has resolved. The rating comes from disk herniation, class 1.

## CASE 7

Patient presents with axial low back pain only. Previously there was a radiculopathy that matched clinically with an HNP on the MRI films. There is still a consistent reflex change, but no lower extremity pain.

**RATING:** 5–9% WPI from class 1 for disc herniation (depending on the modifiers and adjustments). The GMPE will be 2 because of the reflex change, and the GMCS will be 2.

**DISCUSSION:** A reflex change alone, without residual radicular pain, does not qualify as residual radiculopathy. The rating for persisting non-verifiable radicular complaints is appropriate.

## CASE 8

Patient presents with low back pain, radicular pain that clinically correlates with the HNP on the MRI films, and has sharp vs dull sensory deficit as the only

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neurologic deficit on exam (no other findings of radiculopathy).

**RATING:** 10–14% WPI from class 2 for disk herniation (depending on the modifiers and adjustments).

**DISCUSSION:** If the patient has lost sharp vs dull discrimination, then, by definition, the patient has persistent radiculopathy, not non-verifiable radicular complaints (page 576). Sensory exam is subjective, yet, as defined by the AMA Guides, such a finding is considered a radiculopathy (by exclusion per the non-verifiable radicular complaints definition). This degree of sensory deficit is equivalent to severity grade 3, Table 16-11; if present, it should be reliable (recognizable by multiple examiners on multiple dates). If a single examiner found this on a single date, but the sensory deficit is not present on subsequent exams, this finding should not be used when diagnosing persistent radiculopathy (class 2 under disk herniation), even though it is used for evidence of prior radiculopathy (class 1 under disk herniation).

## CASE 9

Patient presents pain free after surgery for HNP. Preoperatively the patient had radicular pain that correlated with an HNP on MRI films, yet never had

an objective radiculopathy documented on physical exams before surgery. The surgery was done based on symptoms that matched the HNP on the film.

**RATING:** 0% WPI, or 1% WPI.

**DISCUSSION:** The rating is not based on whether surgery was done, rather it is based on whether there was a previous radiculopathy. Since the patient is asymptomatic, there would be no basis for a current impairment other than 0% based on definitions in Chapter 17, The Spine and Pelvis. However, Table 17-4, class 0 for disk herniation, reads as follows: “imaging findings of intervertebral disk herniation without a history of clinically correlating radicular symptoms.” Thus, if the diagnosis of disc herniation was used in the operation report, this person would not meet the criteria for either class 0 (did have clinically correlating radicular symptoms) or class 1 (did not have objectively documented radiculopathy before surgery). If the diagnosis is defaulted to “non-specific pain,” since the patient is asymptomatic, class 0 (0%) could be the rating. The definition of class 1 requires continued complaints. Thus, this uncommon scenario does not fit into any of the cells in Table 17-4. The discectomy surgery is associated with anatomic loss (removal of part of a body part); with discectomy having a known risk of recurrent

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# SPINAL IMPAIRMENT CASE EXAMPLES

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disc herniation, prior editions of the *AMA Guides* provided for a rating other than 0%. This person would be currently “better off” than the individual with current back pain and functional limitations who would be rated at 2–3 % WPI based on Table 17-4, row titled non-specific back pain. Consequently, in this uncommon situation, a 1% WPI rating might be appropriate. If this 1% rating were used, the examiner would need to cite Section 2.5e, page 26, paragraph 4, which notes that a rating of 1–3% WPI is permitted “if the examiner concludes that with such permanent treatment based on objective findings, the patient has actually not regained his or her previous function, and if the *AMA Guides* has not provided specific criteria to rate such impairment, the physician may choose to increase the impairment estimate by a small percentage (eg, 1% to 3%).” If low back pain and/or radicular pain existed after surgery, with no radiculopathy, then the rating would be 2% or 3% WPI (depending on the GMFH). The same rationale is used for a carpal tunnel release in someone who recovers to normal and never had objective signs. Having had surgery does not always mean a persisting impairment is present. It is possible for surgery to cure disease or injury.

## CASE 10

Patient presents with radicular symptoms or radiculopathy related to osteophytic disease, not HNP.

**DISCUSSION:** The case could be rated as “spinal stenosis” (depending on the criteria listed on page 571). A rating as spinal stenosis and not a non-specific back pain assumes that there was a true “aggravation” by the causation criteria in the jurisdiction involved.

## CASE 11

Patient presents after an accepted “injury” incident with recurrent radicular symptoms or radiculopathy attributed to scar tissue from previous (prior, unrelated) surgery; there is no current correlating HNP.

**DISCUSSION:** The case would be rated as HNP or spondylolisthesis, depending on the reason for the prior surgery and assuming there was a true “aggravation” injury. In jurisdictions that apportion, the rating after the prior surgery would be subtracted from the current rating.

## CASE 12

Patient presents with an HNP on MRI films, current low back pain; previous radicular symptoms have resolved. At MMI there is residual weakness that clinically correlates with the nerve root involved on MRI.

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# SPINAL IMPAIRMENT CASE EXAMPLES

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**RATING:** 10–14% WPI (depending on the modifiers and adjustments).

**DISCUSSION:** The key is that there is objective evidence of radiculopathy (the weakness) even though the radicular pain and numbness symptoms have resolved. The rating comes from disk herniation, class 2.

## CASE 13

Patient presents with low back pain and radicular symptoms that match a bulging disc or annular tear on the films; no HNP is present.

**RATING:** 2–3% WPI (depending on the GMFH).

**DISCUSSION:** The key is that there is no HNP and no nerve root dysfunction (logically, the neurologic exam would be normal). Consequently, as defined on page 570, the disk herniation diagnosis would not be used and the motion segment lesion category would not be used.

## CASE 14

Patient presents with a residual objectively documentable radiculopathy at MMI that clinically correlates with a disc bulge. By the time the MRI was performed, there was no disc herniation at the appropriate level. It is very probable that there was, in

fact, an HNP that caused permanent nerve root damage and that the HNP resorbed spontaneously. The alternative is that no disc herniation occurred and instead a sciatic nerve stretch injury occurred.

**RATING:** 10–14% WPI.

**DISCUSSION:** The appropriate rating is class 2 under disc herniation, not soft tissue/non-specific low back pain. This would be an unusual situation that should be labeled as such by the examiner. If the radiculopathy had been documented by needle electromyography (EMG), the radiculopathy would be more “believable.” If an EMG was not performed, the examiner would be wise to request one. This would help establish whether a nerve root injury (Chapter 17) or a peripheral nerve injury (sciatic nerve, Chapter 16) occurred, as the results of the EMG might indicate the wrong diagnosis and wrong chapter were used.

## CASE 15

Patient presents with history of traumatic injury and had 1 or more transverse process or spinous process fractures on imaging studies.

**RATING:** 0% WPI (if pain free) or 2–3% WPI (if residual pain).

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## SPINAL IMPAIRMENT CASE EXAMPLES

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**DISCUSSION:** Even though Table 17-4 lists “fractures of the posterior elements” in the diagnostic class column, the descriptions under the rating classes 1–4 comment on “fractures of the vertebral bodies with or without pedicle and/or posterior element fracture.” Therefore, the appropriate ratings for these “simple” fractures, which usually heal without residual sequelae, would most appropriately be rated under the soft tissue/ non-specific back pain category. Patients with multiple transverse process fractures more frequently have persisting back pain syndromes.

### SUMMARY

Accurate and fair ratings of common cases of injury-related back and leg pain require a thorough knowledge of the definitions outlined in the *AMA Guides*, Sixth Edition, as well as thorough knowledge of the peripheral nervous system. An accurate and detailed subjective history of pain reports (including true “radicular” referral patterns); an objective physical examination; and thorough review of the medical records and previous documentations are also essential.

(END)



## MIRR PHYSICIAN SPOTLIGHT RICHARD C. COLE, MD, FAADEP

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star parties or goes with friends to Nashville or Huntsville where they have larger telescopes. As a member of the Highland Rim Shooters Club, he shoots skeet and trap on the weekends. He also enjoys water skiing on the Tims Ford Lake and scuba diving in the Caribbean. He especially likes the Cayman Islands. He and his wife Lisa have a son named Taylor.

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### Medical Impairment Rating Registry

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