**Management of Vertebral Compression Fractures**

**Variant 1:** New symptomatic vertebral compression fracture (VCF) identified on radiographs. No known malignancy. Next imaging study.

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  - 2: Moderate
  - 3: High
  - 4: Very High
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### MRI spine area of interest with IV contrast

| Strong | O 0 mSv | O 0 mSv [ped] | 3 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
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| 47 (18831901) | 2 |
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### FDG-PET/CT skull base to mid-thigh

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**Variant 2:** New symptomatic VCF identified on radiographs. History of malignancy. Next imaging study.

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| FDG-PET/CT skull base to mid-thigh | May be appropriate | Moderate | 10-30 mSv | 3-10 mSv [ped] | 6 | 6 | 0 | 1 | 0 | 1 | 6 | 4 | 4 | 0 |
|-----------------------------------|-------------------|----------|------------|----------------|----|----|----|----|----|----|----|----|----|
| References                        | Study Quality     |          |            |                |    |    |    |    |    |    |    |    |    |    |
| 74 (27694173)                     | 4                 |          |            |                |    |    |    |    |    |    |    |    |    |    |
| 73 (32105873)                     | Good              |          |            |                |    |    |    |    |    |    |    |    |    |    |
| 64 (3277565)                      | 4                 |          |            |                |    |    |    |    |    |    |    |    |    |    |
| 61 (12195540)                     | 4                 |          |            |                |    |    |    |    |    |    |    |    |    |    |

| Bone scan whole body              | May be appropriate | Strong | 1-10 mSv   | 3-10 mSv [ped] | 5 | 5 | 0 | 0 | 1 | 2 | 9 | 5 | 3 | 0 | 0 |
|-----------------------------------|--------------------|--------|------------|----------------|----|----|----|----|----|----|----|----|----|----|
| References                        | Study Quality      |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 72 (22487972)                     | 4                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 58 (24694774)                     | 3                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 56 (21165311)                     | 3                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 55 (26364958)                     | 3                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 54 (18349795)                     | 2                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 53 (20706042)                     | 3                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |
| 52 (22927151)                     | 3                 |        |            |                |    |    |    |    |    |    |    |    |    |    |    |

<p>| MRI spine area of interest with IV contrast | May be appropriate (Disagreement) | Expert Opinion | O 0 mSv | O 0 mSv [ped] | 5 | 5 | 6 | 0 | 7 | 0 | 1 | 7 | 0 | 0 | 0 |
|---------------------------------------------|-----------------------------------|----------------|---------|--------------|----|----|----|----|----|----|----|----|----|----|
| References                                  | Study Quality                     |                |         |              |    |    |    |    |    |    |    |    |    |    |    |
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**Variant 4:** Asymptomatic VCF identified on radiographs. History of malignancy. Next imaging study.

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**Variant 6:** Symptomatic osteoporotic VCF with bone marrow edema or intravertebral cleft. Initial treatment.

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**Variant 7:** New symptomatic VCF. History of prior vertebroplasty or surgery. Initial treatment.
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Variant 8:  Benign VCF with worsening pain, deformity, or pulmonary dysfunction. Initial treatment.
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**Variant 9: Pathological VCF with ongoing or increasing mechanical pain. Initial treatment.**

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Appendix Key
A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

**Appropriateness Category:** The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

**SOE:** Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality:** The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

**RRL:** Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

**Rating:** The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Median:** The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Final tabulations:** A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at [www.acr.org/ac](http://www.acr.org/ac).