Advanced imaging, such as CT and MRI, is often indicated in the traumatically injured patient. The question of whether findings pre-dated the injury is a common question in the medical-legal arena. One finding that can give the clinician difficulty is Schmorl’s nodes. This paper was published in *Spine*. Recognized internationally as the leading journal in its field, *Spine* is an international, peer-reviewed, bi-weekly periodical that considers for publication original articles in the field of spine care. It is the leading subspecialty journal for the treatment of spinal disorders. Only original papers are considered for publication, with the understanding that they are contributed solely to *Spine*. The journal does not publish articles reporting material that has been reported at length elsewhere.

This paper points out that, historically, most spine physicians...
accept that Schmorl’s nodes occur as a result of trauma. No studies have shown a direct causal relation between a traumatic episode and the formation of an acute Schmorl’s node. From a medical-legal perspective, particularly in the clinical setting, it is important that the association between trauma and acute Schmorl’s nodes be determined.

This study utilized 70 thoracolumbar spines that were obtained from individuals killed in motor vehicle accidents. The idea was to determine whether Schmorl’s nodes occur acutely as a result of trauma.

The manuscript points to the fact that Schmorl’s nodes can be caused by a single traumatic event (Fahey, & Silberstein, 1998, p. 2227). The diagnosis of an acute Schmorl’s node requires the clinician to dig deep into their knowledge of imaging techniques. It was determined that acute Schmorl’s nodes cannot be seen as such on plain radiographs, and must be visualized utilizing MRI. This is due to the lack of bony callus formation in the acute phase, as Schmorl’s nodes are vertical disc herniations that break through the endplates of the vertebral bodies. This is often the case when a patient receives plain film radiographs during an emergency evaluation post accident, which are reported negative for pathology. They then are referred for MRI of the spine, to determine the integrity of the intervertebral discs and surrounding soft tissue, which is then positive for Schmorl’s node formation. Chronic Schmorl’s node formation will show a callus formation on both plain film radiographs and the MRI.

The most common cause of acute Schmorl’s nodes is axial loading of the spine as a result of a traumatic event, especially in younger patients whose annulus fibrosis is intact. It has been shown that axial loading may be produced from a fall off a ladder or jumping from a height, but loading may also occur when an occupant hits his head on the roof of the vehicle after a rear impact, or hyper-extends the thoracolumbar spine as a result of significant whiplash forces (Fahey, & Silberstein, 1998, p. 2224). The acute Schmorl’s nodes in this paper were detected in individuals 11-30 years of age, with a male to female ratio of 9:1, and were localized to the region of T8-L1. It was determined that the anatomical orientation of the facet joints in the thoracolumbar spine made it particularly susceptible to injury due to compressive forces.

When evaluating the traumatically injured patient, considering the difference in imaging techniques and how to use them can have a profound impact on a doctor’s ability to properly diagnosis a traumatic lesion. Obtaining all imaging studies and reviewing them is a critical step in the proper care of trauma victims, especially in the case of acute Schmorl’s nodes, since they are not present on plain film radiographs post accident.

Each issue, a clinical topic will be provided by Drs. Mark Studin & William J. Owens of the American Academy of Medical Legal Professionals (AAMLP), which is a national non-profit organization comprised of doctors and lawyers. The purpose of the organization is to provide its members with current research in trauma and spinal-related topics to keep the professional on the cutting edge of healthcare. Members may also sit for a Diplomate examination and be conferred a DAAMLP. The organization also offers support to the individual member’s practice. To learn more, go to www.aamlp.org or call 1-716-228-3847.