

# Scheuermann's disease

- Also known as
  - juvenile kyphosis, juvenile discogenic disease
- common condition which results in kyphosis of the thoracic or thoracolumbar spine, or vertebral epiphysitis
- Etiology is unknown
  - but a proposed mechanism is by aseptic necrosis of the ring vertebral apophyses. Excess axial spine load due to heavy weight lifting may also contribute.
- Strong hereditary predisposition (perhaps autosomal dominant) with a high degree of penetrance and variable expressivity.

# Scheuermann's disease

- Wedged-shaped thoracic vertebrae with irregular endplates
  - $\geq 3$  contiguous vertebrae, each showing  $\geq 5^\circ$  of kyphosis
  - Undulation of endplates secondary to extensive disc invaginations
  - Disc spaces narrowed, with greatest narrowing anteriorly
  - Well-defined Schmorl nodes
- 75% thoracic

# Criteria

- Thoracic spine kyphosis  $>40$  deg (normal 25-40 deg) or
- Thoracolumbar spine kyphosis  $>30$  deg (normal 0 deg)
- AND
- At least 3 adjacent vertebrae demonstrating wedging of  $>5$  degrees

# Juvenile kyphosis

## “Scheuermann kyphosis”



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Sagittal T2WI MR (same patient) confirms loss of disc height and signal intensity at multiple thoracic levels. The thoracic spinal cord is normal, and there are no associated thoracic disc herniations into the spinal canal.