



CT Guided Spine Biopsies – Tips and Tricks

Cervical Spine Biopsies

Methods

- **Supine**
 - Transoral (C1 body)
 - Anterolateral (trans-thyroid) (C5-D1)
 - Far anterolateral (C3-D1)
 - Posterolateral (C3-C5)
- **Prone**
 - Midline (spinous process, etc) (all levels)
 - Posterolateral (all levels)
- **Decubitus**

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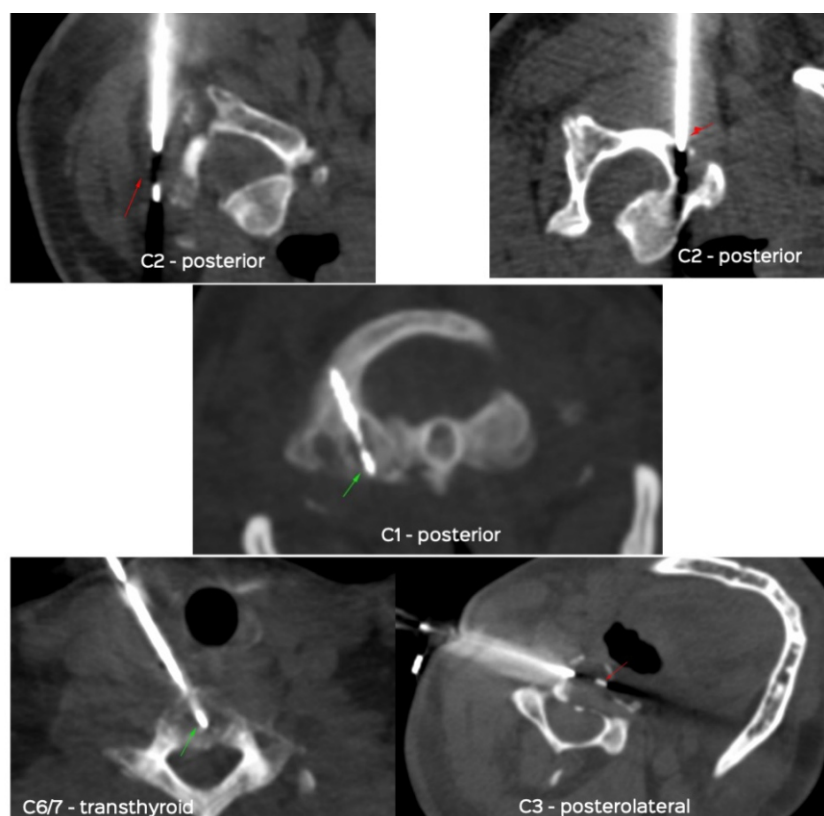


Fig. 1: Cervical spine biopsies. The different approaches are listed and depicted

CT guided biopsies of the spine are an integral part of our diagnostic armamentarium. The indications range from focal to diffuse lesions from infections like tuberculosis and non-tuberculous conditions to inflammatory processes like Langerhans cell histiocytosis to malignancies including metastases, lymphoma and primary bone tumors like giant cell tumor.

Depending on the location of the lesion, the anatomy of the involved vertebra and the condition of the patient, different approaches are used to target the lesion.

Most spine biopsies are performed under intravenous sedation, using a combination of needles and guns ranging from the 11G Cook bone biopsy needle to the core biopsy spring-loaded guns (14G to 20G) with 10mm or 20mm throws.

The images here depict the different approaches in the cervical spine (Fig. 1), dorsal spine (Fig. 2) and the lumbar and lumbosacral spine (Fig. 3).



At a glance:

- ◆ CT guided spine biopsies are a common procedure for focal and diffuse spine lesions
- ◆ The approach has to be tailored to the location of the lesion and the anatomy.

Dorsal Spine Biopsies

Methods

- Prone
 - Transpedicle
 - Costovertebral
 - Transosseous
 - Perivertebral
- Decubitus

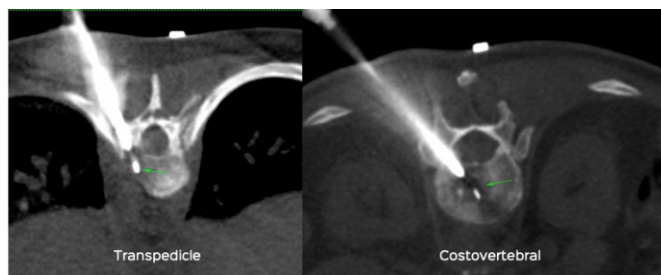
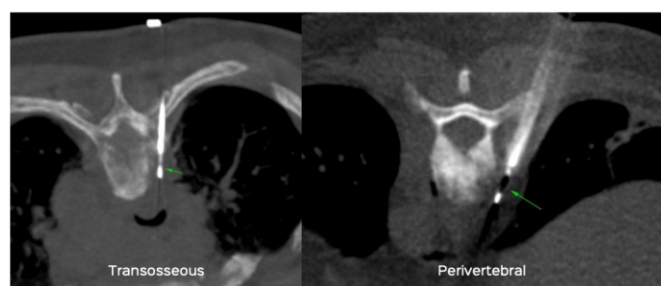


Fig. 2: Dorsal spine biopsies. The different approaches are listed and depicted



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Lumbar and Lumbosacral Biopsies

Methods

- Prone
 - Transpedicle
 - Perivertebral
 - Transosseous
 - Transalar
 - Trans-sacro-iliac joint
- Decubitus

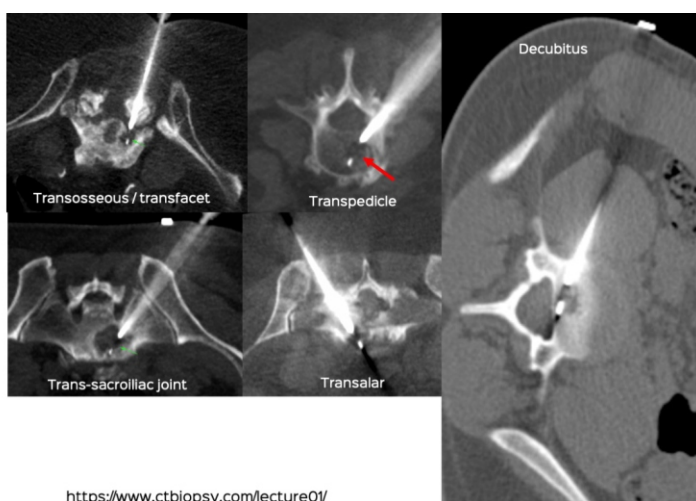


Fig. 3: Lumbar and lumbosacral spine biopsies. The different approaches are listed and depicted.

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