

Dorsal Root Ganglion (DRG) Stimulator for Sinus Tarsi Syndrome

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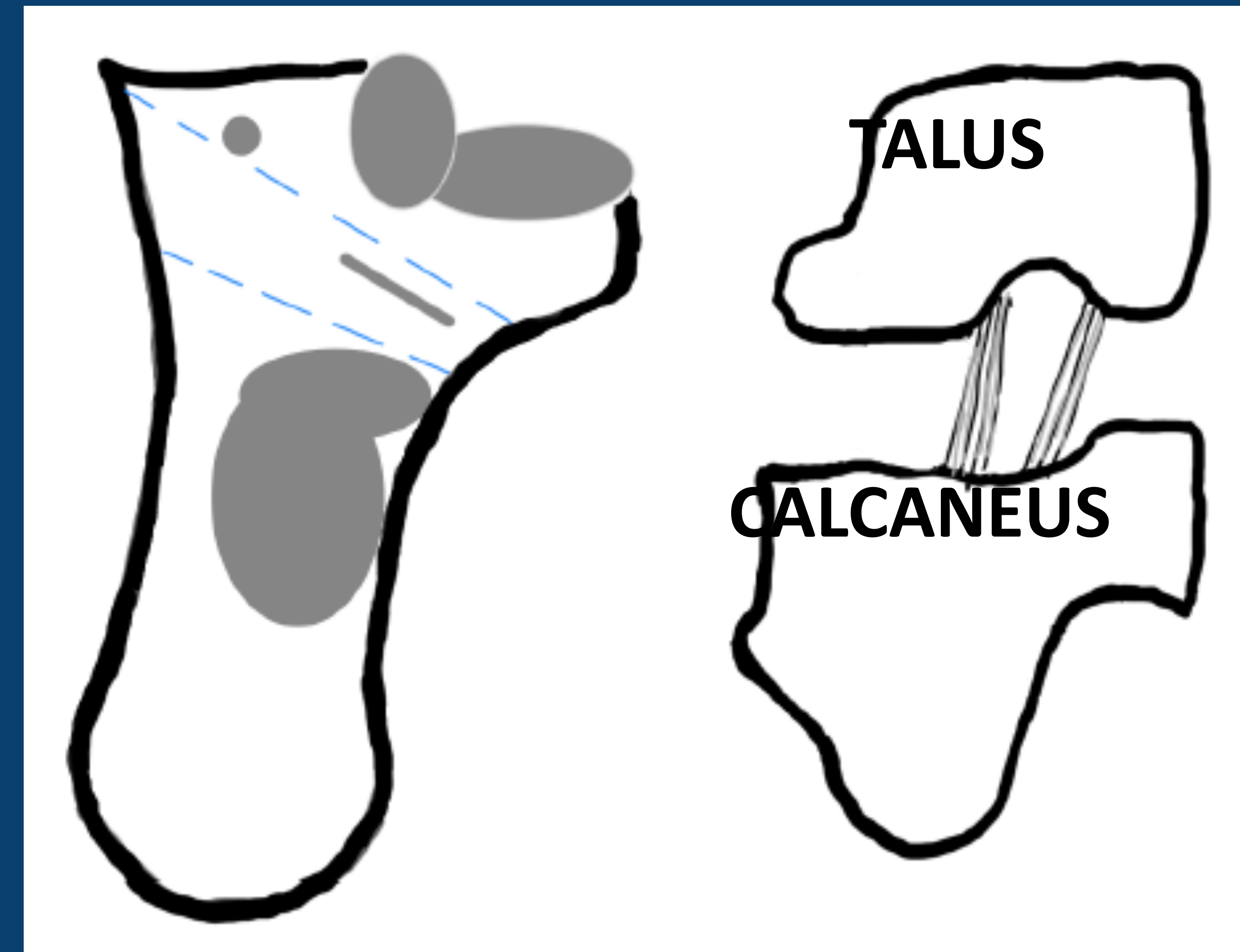
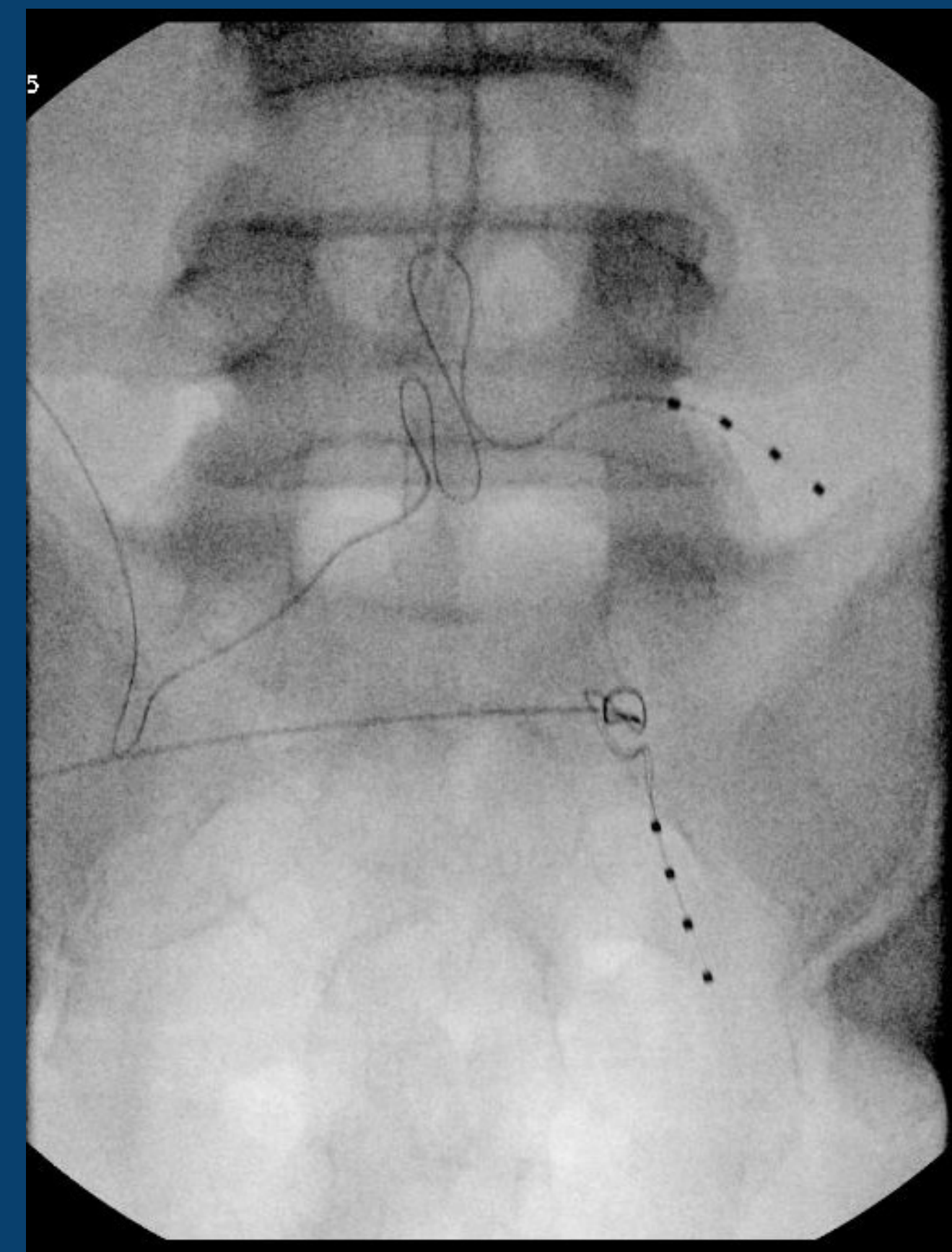
BACKGROUND:

- The **sinus tarsi** is a cone-shaped **canal** located over the anterosuperior Calcaneus coursing medial to lateral and posterior to anterior next to the neck of the Talus.
- Sinus Tarsi Syndrome (STS) has remained **poorly understood** and an **uncommon** cause of lateral **ankle and foot pain**.
- Symptoms include **diffuse pain** in the lateral hindfoot that worsens with weight-bearing and ankle **instability**. Physical exam, shows **pain with palpation** of the sinus tarsi opening.
- Treatment consists of **conservative management** including rest, corticosteroid injections, orthotics, and physical therapy. **Surgical treatment** has varying success and depends on underlying etiology.

CASE DESCRIPTION:

- 39 year-old male with chronic right **lateral ankle pain** and instability. Continuous for 5 years after a **severe sprain**
- Failed **physical therapy**, analgesics, calcaneal navicular and fibrous coalition **resection**, and subtalar **arthrodesis**.
- Referred to Pain Medicine for consideration of **neuromodulation**.
- After a right common peroneal nerve block provided greater than 50% relief, we opted to place a **peripheral neurostimulator (PNS)** over the common peroneal nerve.
- Patient had good **relief for 28 days** until lead fractured. Instead of replacing the lead the patient and his care team chose to proceed with **dorsal root ganglion (DRG) stimulation** trial.
- He underwent a 7 day right L5 and S1 DRG trial, which provided **80% relief** of his pain. He proceeded to **implant** and at 4 months post-implant reports **60%-80% relief** of his right ankle pain.

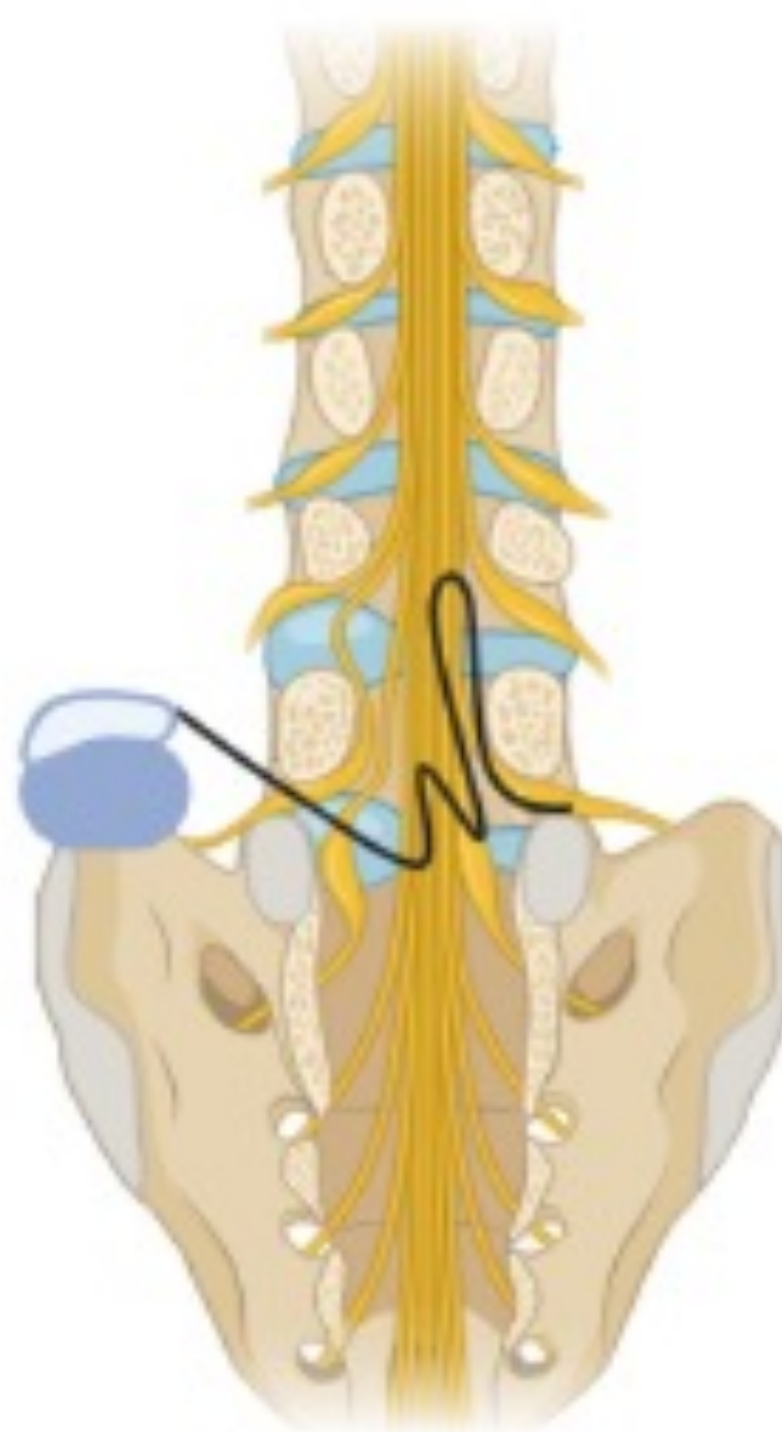
Dorsal Root Ganglion stimulation effectively treats Sinus Tarsi Syndrome pain.



Axial and coronal views of the ligaments of the sinus tarsi in right ankle.
Course of the sinus tarsi shown with blue lines.

CONCLUSION:

- Sinus Tarsi Syndrome (STS) is an uncommon cause of lateral hindfoot pain.
- In our patient, it appears that STS was the result of a traumatic injury followed by 2 unsuccessful surgeries.
- Peripheral neuromodulation provided adequate coverage and relief of his pain, however the fragile lead fracture at 3 weeks.
- Trial and implant of a DRG stimulator has provided significant pain relief to our patient.



References:

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2. Khan I, Peters J, Welck M, Saifuddin A. Sinus tarsi and sinus tarsi syndrome: An imaging review. Eur J Radiol. 2023 Apr;161:110725. doi: 10.1016/j.ejrad.2023.110725. Epub 2023 Feb 3. PMID: 36773427.



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