We reveal signs reflective of Physical examination and careful observation during range of motion testing can
Dupeyron’s contracture, metacarpophalangeal(MP) joint sprains, or arthritis,
“Snapping” and “locking” of the fingers or thumb are common clinical complaints
For hand surgeons
osteoarthritis
osteoarthritis
maintenance of the radial collateral ligament (RCL).
we plastic flexion under anesthesia revealed RCL subluxation over the mass
the patient had experienced complete resolution of his symptoms.
the patient had been counseled regarding the benign nature of osteochondroma and gradually returned to activity.
A locked MP joint has been defined in literature as a loss of both active/passive extension of the MP joint, without flexion loss, and while accompanied by normal interphalangeal joint mobility
Due to metacarpal head and neck morphology, a cam effect leads to dynamic changes in collateral ligament tension from flexion to extension
Full assessment of a patient with locking requires observing the proximal interphalangeal (PIP) joint during flexion to rule out classic trigger finger, a problem near the A1 pulley
After ruling out other common causes of subjective locking, the flexor tendon/muscle belly must be evaluated for rare pathologies that affect finger
of approximately 8 x 7 x 10mm in size.
The mass was excised en bloc with a ½" osteotome and sent to pathology where the diagnosis of osteochondroma was later confirmed.
The RCL remained intact throughout the surgery and at the 10-day follow-up visit, the patient had experienced complete resolution of his symptoms.
He was counseled regarding the benign nature of osteochondroma and gradually returned to activity.
If patients complain of subjective catching, snapping, or locking of a finger, several typical etiologies must be considered: Trigger finger (stenosing tenosynovitis), extensor tendon subluxation, rheumatoid arthritis, and osteoarthritis
Based on our case, we recommend detailed assessment of range of motion, full-length examination of the flexor tendon and muscle, and the use of imaging only when the physical exam is inconclusive.
Our case report supports the inclusion of a metacarpal head/neck osteochondroma or other bony prominences on the differential diagnosis of a “trigger finger.”

Discussion
Osteochondroma is the third leading cause of cartilage tumors in the hand, and cartilage tumors account for around 65% of all tumors affecting the metacarpals.
While most in the hand are asymptomatic, those causing deformity, pain, and dysfunction may require surgical intervention.

Case
A 36-year-old healthy male presented with two weeks of painful right index finger locking with a painful snap he could easily reproduce by extending his finger from a flexed position.
Conservative treatment with NSAIDs and activity modifications were previously unsuccessful.
Without typical trigger finger symptoms (i.e., tenderness, crepitus, or a palpable nodule near the A1 pulley) imaging with radiographs and computed tomography were pursued.
Imaging revealed a large protuberance of metaplastic cancellous bone off the radial aspect of the metacarpal neck, approximately 8 x 7 x 10mm in size.
Excisional biopsy was pursued and a mass with an overlying cartilaginous cap was visualized volar to the radial collateral ligament (RCL).
Full systemic evaluation revealed the patient was a healthy young male with no known comorbidities.

Background
A locked MP joint has been defined in literature as a loss of both active/passive extension of the MP joint, without flexion loss, and while accompanied by normal interphalangeal joint mobility
Due to metacarpal head and neck morphology, a cam effect leads to dynamic changes in collateral ligament tension from flexion to extension
Full assessment of a patient with locking requires observing the proximal interphalangeal (PIP) joint during flexion to rule out classic trigger finger, a problem near the A1 pulley
After ruling out other common causes of subjective locking, the flexor tendon/muscle belly must be evaluated for rare pathologies that affect finger
in a different location.
In some cases, advanced imaging techniques are required for proper diagnosis

Introduction
“Snapping” and “locking” of the fingers or thumb are common clinical complaints for hand surgeons.
Most cases are attributable to common conditions such as tenosynovitis, Dupuytren’s contracture, metacarpophalangeal(MP) joint sprains, or arthritis.
Physical examination and careful observation during range of motion testing can reveal signs reflective of common and unique pathologic cases.
We present a rare instance of a previously undiagnosed metacarpal neck osteochondroma causing MP joint locking.

Figure 3: Intraoperative image demonstrating exposure of bony mass with a shiny cartilaginous cup (A), measured with a ½” straight osteotome (B), underlying cadaveric bone (C) and the specimen, measuring approximately 1 cm in length (D).

Figure 2: Preoperative presentation (A) and postoperative radiographs (B and C) and clinical resolution (D) of a patient presenting with a metacarpal neck osteochondroma (E) removed with a ½” osteotome (F).

Figure 1: Metacarpal neck osteochondroma: an atypical cause of “trigger finger.”