

Nasal Bone Fractures

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- When there is concern for multiple facial fractures CT is the study of choice.
- If the concern is for an isolated nasal bone fracture consider ordering CT instead of plain radiography.
 - Alternatively, close follow up with a facial specialist and an outpatient CT is reasonable.
 - A CT will assist the facial specialist with operative planning.
 - Remember to check for a nasal septal hematoma.
- Consider no imaging if the patient has mild isolated nasal bone tenderness and otherwise looks well, is breathing well, has no septal hematoma, and no deformity.
- Plain radiographs of the nasal bone have a limited role in diagnosing nasal bone fractures.
 - While a fracture may be identified, information will be missing that is important to the facial surgeon, such as whether or not the fracture is displaced, comminuted, unilateral, or bilateral.
 - Sensitivity of a plain radiograph of the nasal bone is 60-70%.
 - If negative and your suspicion is high, this will likely still be followed by a CT either in the emergency department or outpatient.
 - If a fracture is identified on a radiograph it is still likely that the patient may need a CT for the surgeon to assess the need for surgery.
 - If a CT cannot be easily obtained in the emergency department a radiograph may help to make the diagnosis and initiate the outpatient referral to a facial surgeon.
- Ultrasound has been studied for nasal bone fractures and in some studies has higher sensitivity and specificity than plain radiographs.

References

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3857976/>

CorePendum: Facial Trauma <https://www.emrap.org/corependium/chapter/recus-e84SpZ8sk0C5/Facial-Trauma#h.bs2mgen8760>

EMA 2006 August: Analysis Of Nasal Bone Fractures
<https://www.emrap.org/episode/ema-2006-8/abstract25>