

Management of Bone Metastases and Kidney Cancer

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Renal Cell Bone Metastases

- ~ 33% of metastatic RCC patients will have bone mets.^{1,2}
- Median survival ~ 12-24 months depending on the study and multiple other factors.^{1,2}
- Who to operate on?
- When?
- What operation to do?
- Adjuvant/alternative therapies?

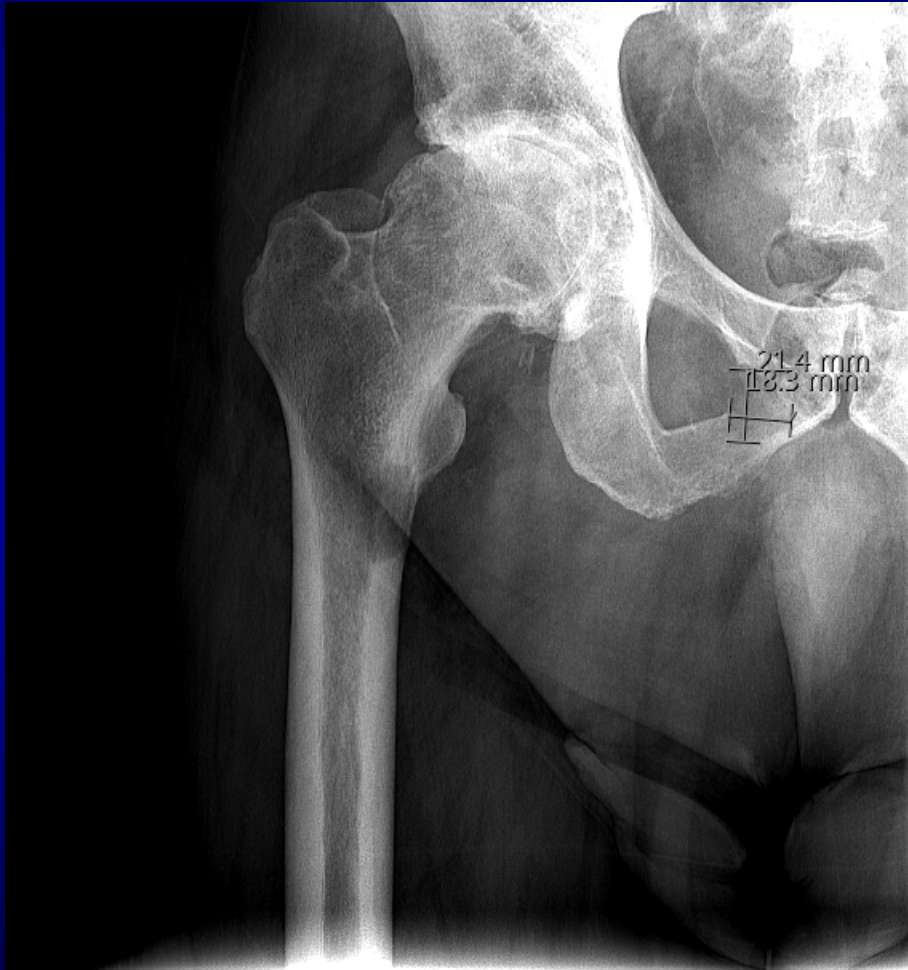
Surgical Caveats

- Renal cell carcinoma bleeds.....a lot.
- VEGF inhibitor medicines can cause wound complications so ~3-4 weeks of pause in treatment around surgery is needed at minimum. Cabozantinib website recommends stopping it *28 days prior to surgery...*
- Traditionally thought to be more resistant to radiation compared to other carcinomas in bone.^{3,4}
- Therefore adjuvant radiation post op may be longer course, higher dose, higher risk of local failure with more conservative surgery?

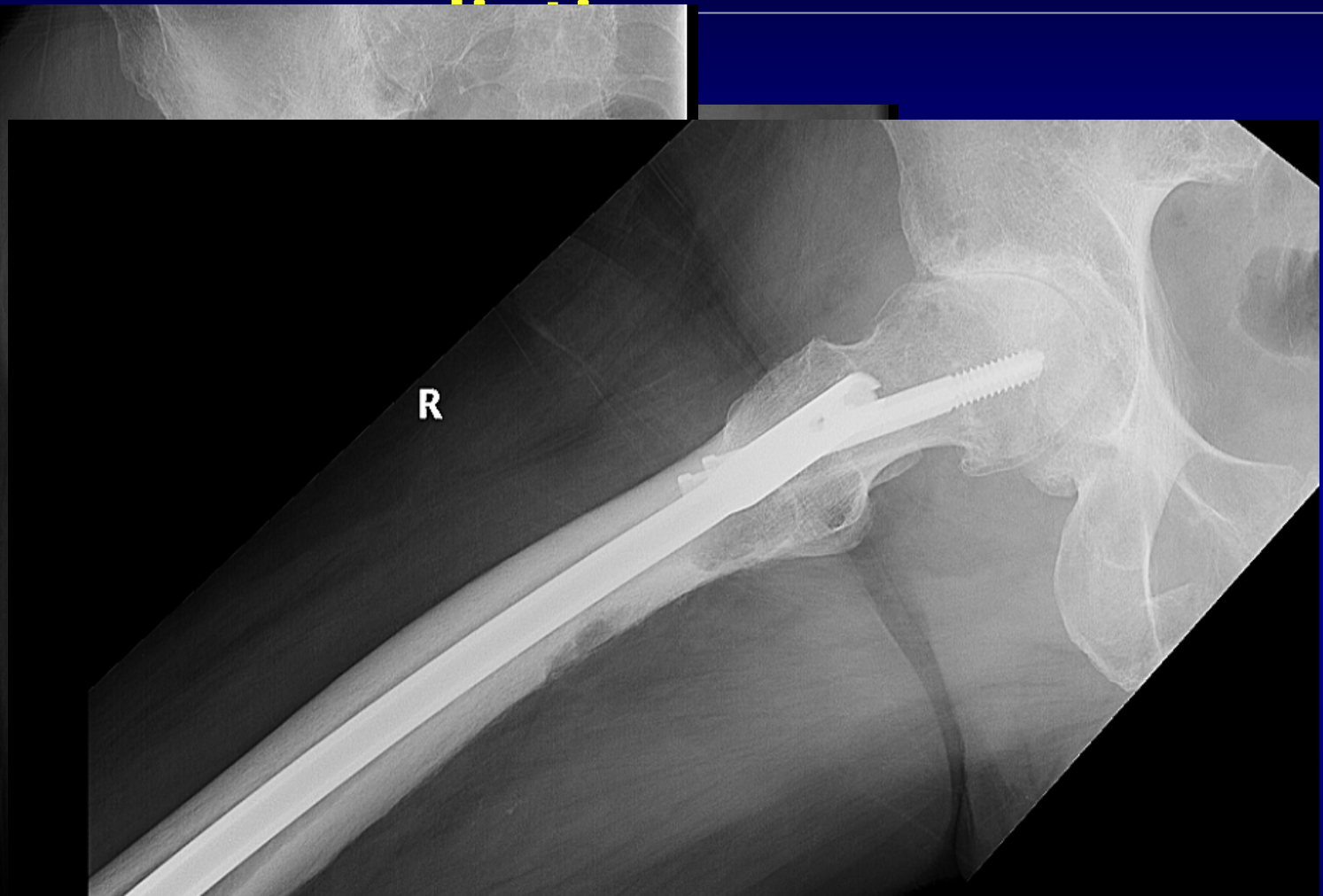
Surgical Goals

- 1. Pain relief- pain worse with weight bearing, decline in mobility
- 2. Maintain or increase functional activity
- 3. Durable construct that will last remaining lifetime.
- 4. Get to the bone lesion before it fractures!
- Displaced pathologic fractures have longer hospital stay, higher costs, more pain, more likely to have implant failure requiring repeat operation.^{5,6}

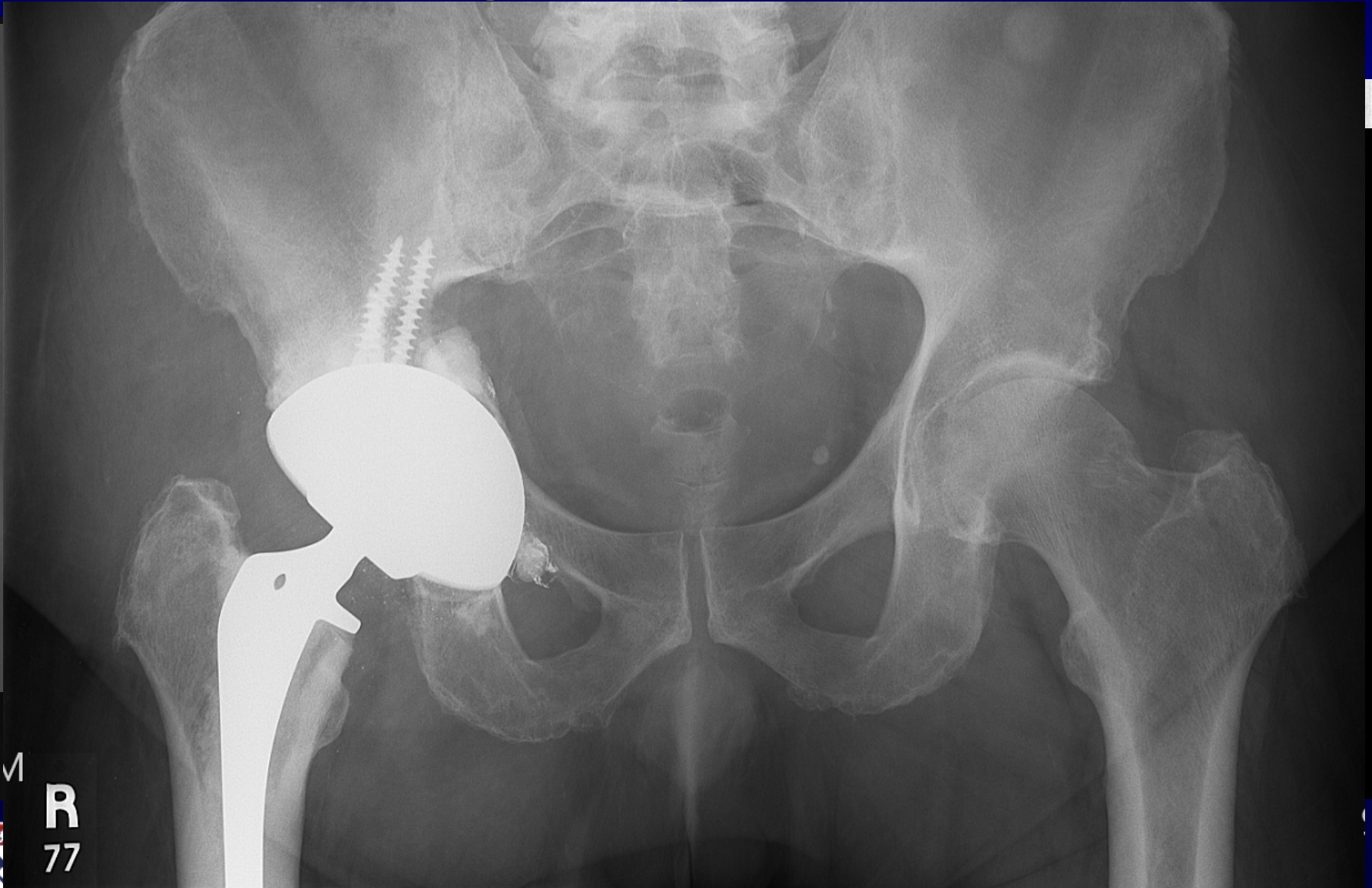
68 year old, Factor V Leiden on chronic anticoagulation, mechanical pain, other lesions in lungs and bone



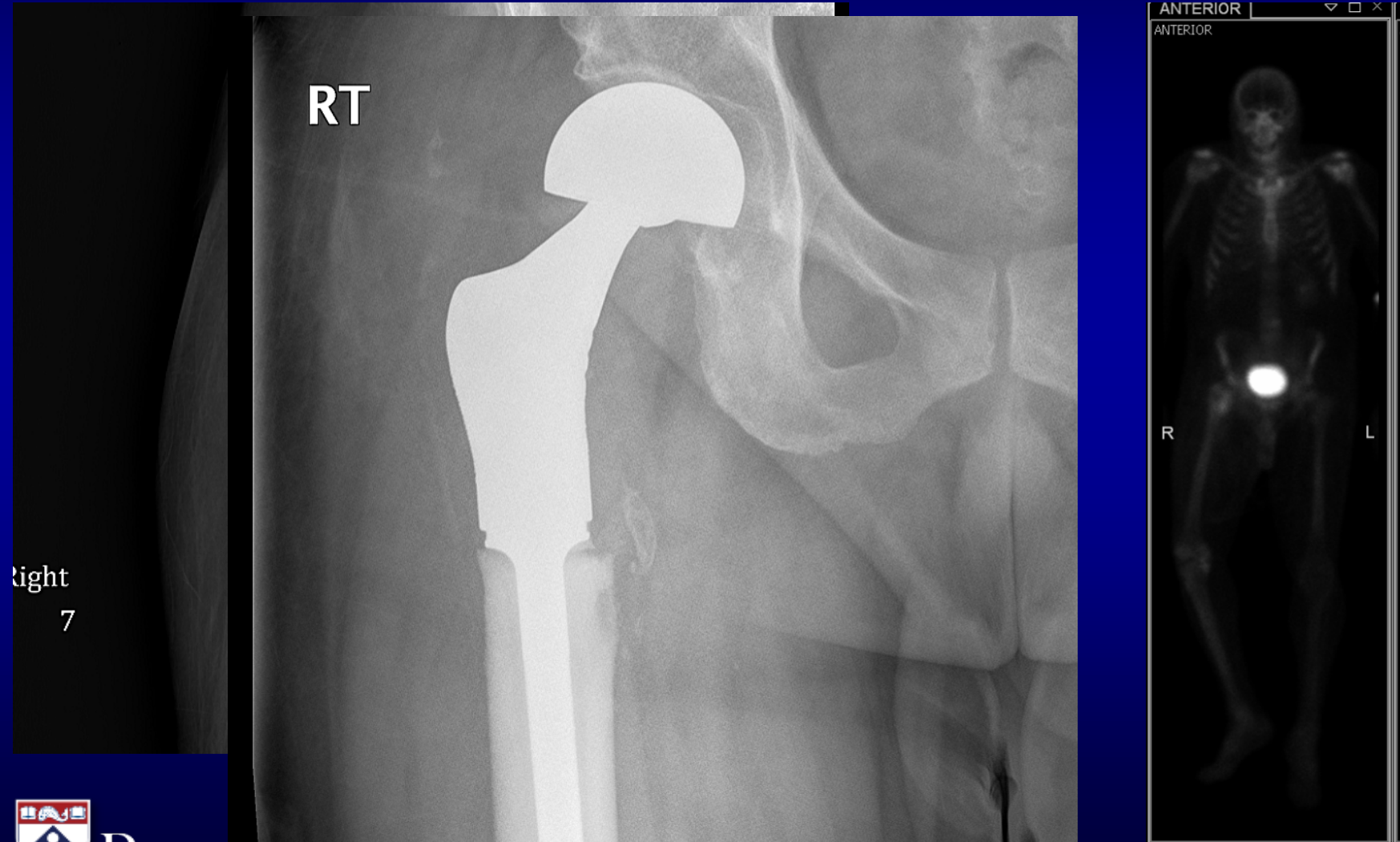
Mechanical pain despite 30 Gy



74 yo male persistent pain, unable to bear weight 3 years s/p XRT.



64 yo male, hx of known RCC, new solitary bone met. Wide resection surgery, 50 Gy adjuvant XRT



Wide Resection and Survival

- Wide resection of bone and soft tissue mets likely prolongs survival in retrospective series.^{7,8}
- Especially if a solitary bone met.⁹
- Location in bone matters for feasibility of reconstruction and morbidity of surgery (i.e. pelvis/acetabulum)

Alternative modalities

- Cryotherapy: 82% local control @ 35 months.¹⁰
- Percutaneous cementoplasty¹¹ +/- embolization
- Embolization alone for pain control
- These modalities primarily reserved for poor surgical candidates or locations such as the pelvis for which surgery would be high risk with prolonged recovery expected.

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