Management of Bone Metastases and Kidney Cancer

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Robert J. Wilson II M.D.
Assistant Professor of Orthopaedic Oncology
University of Pennsylvania
Department of Orthopaedic Surgery
Renal Cell Bone Metastases

- ~ 33% of metastatic RCC patients will have bone mets.\textsuperscript{1,2}
- Median survival ~ 12-24 months depending on the study and multiple other factors.\textsuperscript{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 radiation
74 yo male persistent pain, unable to bear weight 3 years s/p XRT.

- RCC since 2008
- First bone met in 2016, solitary
- Given 50 Gy of radiation in 2016
- "Wide" surgery would have entailed an internal hemipelvectomy
- Patient wanted an operation with better chance at function
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.\textsuperscript{10}
- Percutaneous cementoplasty\textsuperscript{11} +/- 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.
References


