Sidebar 1: Initial Individualized Treatment Plan

Discuss a self-management program:
- Regular self-directed exercise
- Comprehensive lifestyle intervention for weight reduction: refer to the current VA/DoD CPG for the Management of Adult Overweight and Obesity
- Bracing for OA of the knee (prescription of adaptive equipment such as a cane and knee braces may also be offered in conjunction with the above to help decrease weight burden/provide stability for knee OA)
- Offer referral for physical therapy

Pharmacotherapy:
- Initial treatments:
  - Topical agents for OA of the knee (e.g., NSAIDs or capsaicin)
  - Acetaminophen
  - NSAIDs or COX-2 inhibitors

Sidebar 2: Second-line and Combination Pharmacotherapy

Second-line or combination treatments:
- Consider combining two initial treatments (see Sidebar 1)
- Consider intra-articular CSI for knee and hip OA:
  - CSI should be avoided for the three months preceding joint replacement surgery
  - CSI for the hip should be image-guided
- Duloxetine: consider adding duloxetine as an alternative or adjunct to initial treatments (see Sidebar 1)
- Consider intra-articular VSI in patients with inadequately controlled knee pain with core pharmacologic and non-pharmacologic treatments

Sidebar 3: Pharmacotherapy Considerations

- Acetaminophen: because of safety concerns (e.g., hepatotoxicity), the lowest clinically effective dose should be used; in addition, a maximum of 4 g/day should never be exceeded
- NSAIDs or COX-2 inhibitors: should generally be avoided in patients with or at risk for CVD, CKD, and in those patients at risk for serious UGI toxicity
  - Consider adding a PPI or misoprostol in patients at risk for UGI events who require treatment with NSAIDs or COX-2 inhibitors
  - Assessment of renal function should occur and NSAIDs and COX-2 inhibitors should be avoided in patients with eGFR <30 ml/min/1.73 m²
- Opioids: in most patients, treatment with an opioid should be avoided; for those already on opioids, refer to the current VA/DoD CPG for the Management of Opioid Therapy for Chronic Pain

Abbreviations: CKD: chronic kidney disease; COX-2: cyclooxygenase-2; CPG: Clinical Practice Guideline; CSI: corticosteroid injection; CVD: cardiovascular disease; DoD: Department of Defense; eGFR: estimated glomerular filtration rate; g: grams; m²: square meters; min: minute; ml: milliliters; NSAIDs: non-steroidal anti-inflammatory drugs; OA: osteoarthritis; PPI: proton-pump inhibitor; UGI: upper gastrointestinal tract; VA: Department of Veterans Affairs; VSI: viscosupplementation injections

a See the VA/DoD Clinical Practice Guideline for the Management of Adult Overweight and Obesity. Available at: https://www.healthquality.va.gov/guidelines/CD/obesity
b Consider early referral to physical therapy based on pain severity, functional limitations, and adherence
c See the VA/DoD Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Available at: https://www.healthquality.va.gov/guidelines/Pain/cot/
Bones are capped with cartilage, which cannot be seen on x-ray. The joint space on x-ray estimates the amount of cartilage remaining.

Osteoarthritis is the loss of the bone’s cartilage cap, as seen here. This is known as “bone on bone” (or “severe”) osteoarthritis.

Access to the full guideline and additional resources are available at the following link: https://www.healthquality.va.gov/guidelines/cd/oa/