Clinical question searching exercise:

1. The question: I have many patients with OA. I just saw a patient today with bilateral knee OA, in her 40s. Some providers favor NSAIDS for pain relief, others favor APAP. I have not looked at the data myself as to which of these analgesics is most effective for pain relief in OA, what would be most appropriate first line therapy.

2. To find the article I searched Dyna-med for OA, looked under treatment. Had a reference for systematic review on the subject, so I selected that.

3. Design: 15 randomized controlled trials were evaluated. 7 compared APAP to placebo, 10 compared APAP to NSAIDS.
   Objective: to study the efficacy and safety of APAP vs. NSAIDS vs. placebo in the treatment of OA.
   Outcome variables: pain, function, patient global assessment, physician global assessment and safety.

4. Importance: OA is common among our patients. It is noted that expert opinions and guidelines vary as to whether APAP or NSAIDs should be considered first line.

5. Methods: Lengthy search strategy: “We searched MEDLINE (up to July 2005), EMBASE (2002-July 2005), Cochrane Central Register of Controlled Trials (CENTRAL), ACP Journal Club, DARE, Cochrane Database of Systematic Reviews (all from 1994 to July 2005). Reference lists of identified RCTs and pertinent review articles were also hand searched.” 2 reviewers went over each article and used the data provided for their results.

6. Validity: As for the validity of the search criteria above, appears to be very complete. The individual trials were by and large of good quality:
   - All RCTs were randomized, fourteen double-blinded.
   - Four RCTs had clear evidence for allocation concealment
   - Eleven RCTs either had no withdrawals or used an intention-to-treat analysis. --
   - Sample size calculations present in nine RCTs.

7. Primary results: In 7 studies of APAP vs. placebo, APAP showed a benefit of 5/7. In 12 studies, APAP vs. NSAIDs, NSAIDs were more effective than APAP (in pain, function). Results were compared using 3 measures of pain, measures of function, etc., and comparisons done using standardized mean
difference. The difference between NSAIDS and APAP was most pronounced in those patients with severe OA.

-No difference in adverse GI events in NSAIDS (pooled coxibs and traditional NSAIDs) vs. APAP, but there were increased GI events if ibuprofen/naproxen- traditional NSAIDS- were analyzed as a subgoup vs APAP. NNH was 12.

8. Are the results applicable to my clinic patients: Yes: my patients by and large have hip or knee OA (which was studied). Many patients cannot take NSAIDS but for those who can, this will be useful.

9. Can they be useful in my context: Yes, for one, either NSAIDS or APAP can be used, although NSAIDS are superior. At the same time, NSAIDS increase risk for adverse GI event. So, if the OA is mild/moderate and improved with APAP, that would be a reasonable place to start. But if patients do not have adequate control with APAP, NSAIDs may be the next step given their superiority.