Some top-level key questions to think about when reviewing a paper:

- Is it scientifically sound?
- Is it original?
- Is it relevant?
- Is it well presented?

Abstract

- Structured use concise prose (Aims, Patients (Materials) and Methods, Results, Conclusion)
- Take home message – up to three bullet points summing up the clinical relevance of the paper, i.e. where it fits into the literature
- Clear hypothesis/question asked
- The design and the results briefly described

Introduction

- Unbiased background given
- The question being asked/hypothesis tested included
- Study design stated

Patients and Methods

- How many patients and why clearly stated
- Was a power study carried out? If so, details included
- How were the patients chosen? Inclusion/exclusion criteria clearly stated
- Were they randomised? How?
- Demographics included
- What tests were carried out? State measurements/units used
- What outcome scores were used? Were they validated?
- State who recorded results, were they blinded?
- How were the controls chosen?
- Explicitly state the number of patients, cases, joints involved etc
- Information regarding bilateral cases included
- Where percentages are quoted, ensure that the absolute numbers have been given
- Details of patients lost to follow-up included, details given
- What period of time does the study cover? Why?
- Life table/survival analysis included where appropriate
- Ethical approval/informed consent statement

Statistical analysis

- Tests used stated and references included
- Exact p values included for all statistical values, and the test stated
- If you are unsure of the validity of the statistics used, leave a general comment
Results

☐ Absolute number stated where percentages are quoted
☐ Means and ranges, or medians and interquartile ranges (upper and lower quartiles) stated
☐ Presented clearly and in a logical order
☐ Numbers/outcomes/tests/follow-up all match text and tables/figures
☐ Units given for any results

Discussion

☐ It is appropriate to the question?
☐ Is there a statement saying how/if the results support the conclusion? How strongly?
☐ Statement saying how results fit into the current knowledge
☐ Will the results change clinical practice? Statement included saying how

References

☐ Are they from studies within the last 10 years? Are any key references missing?
☐ Are they inclusive?
☐ Reduce bias wherever possible

Tables

☐ Tables should not repeat results presented in the text, only new or additional information
☐ Ensure the legends comprehensive and clearly state what the table shows

Figures

☐ Legends should be comprehensive and clearly state what the figure shows.
☐ Are the figures appropriate to the study?
☐ Are any additional figures needed?