

## **Please structure your review using the following headings**

### **Brief summary of manuscript:**

What is the intent of the study?

What conclusions do the authors reach?

Do you believe this study has previously been published in whole or in part?

### **The Title**

- Does the title adequately reflect the content of the manuscript?

### **The Key words**

- Are the key words appropriate?

### **The Abstract**

- Is it structured?
- Does the Abstract adequately summarize the manuscript?
- Can the abstract be understood without reading the manuscript?
- Does it specify outcome measures, and provide salient statistics?
- Do any discrepancies exist between the Abstract and the rest of the paper?

### **The Introduction**

- Is the Introduction brief?
- Is the rationale for conducting the study explained based on a review of the medical literature?
- Is the purpose of the study clearly defined? Is there a well-described hypothesis?

### **Materials and methods**

- Is the design of the methods appropriate to allow the hypothesis to be tested?
- Could another investigator reproduce the study using the Methods as outlined?
- Is the sample or participant recruitment described in detail with the inclusion and exclusion criteria?
- Have the authors obtained Informed Consent and Ethical Committee Approval (if relevant)?
- Do the authors specify the data acquisition and evaluation (e.g., the index test, the reference standard)?
- Are the statistical methods described? Are they appropriate?

### **Results**

- Are the Results clearly explained?
- Is the order of presentation of the Results parallels the order of presentation of the Methods?
- Are the Results convincing and reasonable?
- Are there any Results given that are not preceded by an appropriate discussion in the Methods?

### **Discussion**

- Is the Discussion concise?
- Does it begin with the most important finding and summarize key results?
- Does it relate exclusively to the results of the study?
- Does it compare the results with the relevant literature?

- Are the conclusions justified by the results found in the study?
- Are the unexpected results explained sufficiently?
- Is the clinical applicability of the study findings discussed?
- Are the limitations of the study clearly stated?

### Figures and Graphs

- Are all figures referred to in the text?
- Are the figures and graphs correct and appropriately labeled?
- Do the figures and graphs adequately show the important results?
- Do arrows need to be added to depict important or subtle findings?
- Are the figure legends self-sufficient and understood without making reference to the remainder of the manuscript?

### Tables

- Do the tables appropriately describe the Results?
- Are the abbreviations used in the tables explained at the bottom?

### References

- Does the reference list follow the style for the journal?
- Does the reference list contain obvious mistakes?
- Do any important references need to be added?

### Final appraisal and decision

- Please summarize the **Major strengths** and **Major weaknesses** of the manuscript, and make your decision according to your answer to following questions;
1. Does the article provide novel information (data, techniques or idea) that is not already available in the literature?  
If **yes**, please describe what you believe is new.  
If **no**, ask the authors to explain what they consider new in their work. Otherwise unless the paper has something else extremely important to present, the manuscript should likely be rejected.
  1. Do the authors provide a solid rationale for conducting this study?  
If **no**, then the manuscript should likely be rejected.
  2. Has the data analysis been performed appropriately?  
If **no**, then the manuscript should likely be rejected or major revisions should be requested.
  3. Have the results been clearly and accurately presented?  
If **no**, then a major revision should likely be requested.
  4. If the article is scientifically acceptable, but the text is poorly written, then a minor revision should likely be requested.