Author Instructions

Authorship listing and responsibility
Each author must warrant that his/her work and any materials submitted as part of this work (including figures, images) is original and that he/she has full power to enter into the agreements required by EBSJ. Publication of the primary findings from the same original research in multiple journals is not considered acceptable. EBSJ runs every manuscript through plagiarism software to ensure that submission content is original. If unoriginal text is found within a manuscript, the manuscript will be returned to the author, and the author will be notified as to what his or her next steps should be. EBSJ will not publish unoriginal works.

Permissions and use of previously copyrighted material
Authors must submit written permission to the copyright owner (usually the publisher) to use direct quotations, tables or illustrations that have appeared in previously copyrighted form elsewhere along with details about the source. Permission fees that might be required by the copyright owner are the author’s responsibility, not the responsibility of EBSJ, its publisher or AOSpine International.

Patient anonymity and informed consent
Authors are responsible for ensuring that patients’ anonymity is protected and to verify that any experimental procedure, drug or device in human subjects reported in the manuscript were performed with informed consent and followed all guidelines for experimental investigation with human subjects (eg, IRB). All patient identifying information (eg, name) should be removed from images, figures or data submissions and patients’ eyes and genitalia should be masked.

Transfer of copyright, financial disclosure and authorship
Download the “Authorship Responsibility, Non-Duplication Statement, Copyright Transfer, and Financial Disclosure” from the Author Main Menu page at www.editorialmanager.com/ebsj/.

Upon submission of your manuscript for publication:
- All authors will be required to complete the form.
- Authors must verify compliance with NIH and other research funding agencies accessibility requirements and report any conflicts of interest.
- Authors will be required to verify compliance with human subjects (e.g., internal review board, IRB) requirements imposed by their institutions.
- Authors will be asked to verify device/drug status with FDA or other regulatory agencies.

Your submission will not be considered or processed further until the forms are received.
Systematic reviews (SRs)

*EBSJ* SRs follow a specific process and are not submitted to *EBSJ* as completed manuscripts; however, physicians and researchers interested in co-authoring an SR are encouraged to contact us with a topic of interest. SRs follow an explicitly stated methodical approach to answer specific focused key questions. SRs provide a comprehensive formal critical appraisal and synthesis of pertinent research studies on a specific clinical issue. If you are interested in co-authoring a systematic review, please contact us at EBSJ@specri.com.

Case reports

*EBSJ* case reports are descriptive patient reports that are controversial or unusual. Each case report receives a commentary that is printed alongside each case report. Only the best, most novel case reports shall be considered for publication in *EBSJ* special issues.

**Title page and author information** (see Original Research Article formatting instructions)

**Structured abstract** (see Original Research Article formatting instructions)

**Manuscript**

The case description should include pertinent clinical and other information presented in a logical fashion as well as a brief discussion of the “evidence” in the literature for the treatment options considered. The following items must be included:

- Introduction
- Report of a case
- Discussion

**Figures and tables** (see Original Research Article formatting instructions)

**References** (see Original Research Article formatting instructions)

**Original Research Articles (All Study Types)**

*EBSJ* is a unique concept with regard to format and streamlined presentation of information. The goal is to provide an accurate, concise presentation of information that can be grasped “at-a-glance” by busy spine surgeons. (Please see example and templates. Your assistance in following the guidelines described here is important to reach this goal. Additional web-based appendices allow the interested reader to obtain additional information and verify study components. They also contain additional study data.)
Detailed instructions for manuscript preparation

All original research articles must follow the formats described below. Manuscripts not following the prescribed formats will be returned to the author prior to peer-review.

Original research article components (see templates)

1. Title page and author information
2. Structured abstract
3. Body of manuscript—prognostic studies
4. Body of manuscript—treatment studies
5. Figures and tables
6. References
7. The review process
8. Selected references
9. Manuscript preparation—font, spacing, and style
1. **Title page and author information**

Please ensure that the spelling, order and affiliation of authors are correct and that all information is provided. EBSJ will not be responsible for misspellings published due to author error.

- Complete manuscript title
- Authors: full names, highest academic degree(s), affiliation, region/country; and potential conflicts of interests
- Corresponding author: Name, address, phone number(s), fax number, email address
- Source(s) of funding that require acknowledgement: You must include disclosure of funding received for this work from any of the following: National Institutes of Health (NIH), Wellcome Trust, Howard Hughes Medical Institute (HHMI) or other sources
- Indication of IRB (or equivalent) approval
- Notation of device status as appropriate (e.g. investigational or approved)

2. **Structured abstract (maximum word count 250)**

Must be structured as stated below:

- Study design
- Objective or clinical question
- Methods
- Results
- Conclusions

3. **Body of the manuscript—prognostic studies**

Please note the maximum word count and formatting of text described in each section (see also template).

**Study rationale and context—prognostic studies (maximum word count 50)**

This section should briefly describe the context and rationale for the study and lead logically into the statement of the study objective. It is not intended to provide a lengthy background or history regarding the topic.

**Objective or clinical question—prognostic studies (maximum word count 40)**

This should be a very brief statement that encompasses the PPO concept:

<table>
<thead>
<tr>
<th>Patients:</th>
<th>Age, condition, diagnostic characteristics, etc.</th>
<th>Patients who had lumbar fusion for chronic low back pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prognostic factors:</td>
<td>What primary factor is being evaluated as one which might be associated with a bad outcome? What other factors may be associated with a bad outcome?</td>
<td>Primary factor: NSAID use Other factors: smoking, age, levels fused, prior spine surgery</td>
</tr>
<tr>
<td>Outcome:</td>
<td>What is the outcome?</td>
<td>Nonunion and longer time to fusion</td>
</tr>
</tbody>
</table>

Here is a statement of objective:

- To evaluate perioperative NSAID use as a risk factor for delayed union and nonunion following lumbar fusion in patients with chronic low back pain.
Here is how the clinical question might read:

- Does perioperative use of non-steroidal anti-inflammatory drugs (NSAIDS) result in nonunion and longer time to union following lumbar fusion in patients with chronic low back pain?

You might visit the AOSpine’s EBSS.live to see additional examples of PPO for prognostic studies as applied to already published research.

**Methods—prognostic studies (maximum word count 300–325)**

Please follow the format below for this section:

- Study design (e.g. retrospective cohort study)
- Objective/aim (clinical question, key question or hypothesis)
- Inclusion criteria
- Exclusion criteria
- Patient population
- Outcomes and prognostic factors
- Analysis

Prognostic studies explore risk factors (also known as risk exposures) for an outcome, generally a less than desirable outcome. An example of a prognostic question would be: Does smoking increase the risk of nonunion following fracture treatment? With regard to methods and study design, it may be important to consider and control for other factors which may be associated with smoking and associated with nonunion.

There should be sufficient information regarding study design, inclusion/exclusion criteria and what factors and how they were explored to permit study replication. For prognostic studies, the following information should be described:

- Study design and outcome(s) of interest
- Factors which may influence that outcome
- Inclusion/exclusion criteria (including how comparison group was chosen)
- Protocol for evaluation of patients
- Measurement instruments for outcome and factors (exposures) that may be associated with it
- Length of follow-up
- Methods for statistical evaluation, including description of how confounding was controlled that would allow for replication of the study by another investigator

A brief description of treatment characteristics (type, duration etc.) should be provided. Remember that additional detailed information for this section can be included in the web appendix.

The methods for each study accepted for publication will be independently reviewed and an overall “class of evidence” will be assessed based on methodological quality. Authors should ensure that there is sufficient information in the submission (article and/or web appendix) that allows for this assessment.

EBSJ strongly encourages authors to follow guidelines for reporting described by CONSORT and others to ensure the highest quality reporting. Selected references are provided at the end of this document.

The methods section must include the following information on the numbers of patients considered for and completing the study according to the following figure. A template will be provided for you to enter the appropriate data and modify based on your study (see Word-file EBSJ_TemplateForAuthors_PrognosticStudies.doc).
Figure 1. Patient sampling and selection.

Total patients receiving intervention during time period
(n = 205)

Not meeting inclusion criteria* (n = 45)
  Reason 1 (n = 25)
  Reason 2 (n = 20)
  Etc

Eligible
(n = 160)

Not enrolled (n = 0)
  Refused participation (n = 0)
  Other reasons (specify) (n = 0)

Enrolled
(n = 160)

Excluded (n = 20)
  Patients with insufficient data (n = 10)
  Lost to follow-up (n = 5)
  Death (n = 5)
  Other reasons (specify) (n = 0)

Patients available for analysis
(n = 140)

* Percent follow-up is based on information in the diagram and is calculated by dividing the number of patients available for analysis by the number of patients eligible for the study, or here 140/160 or 85.7%. In general, patients with incomplete data, those who have died, etc. are considered as lost to follow-up for purposes of calculating follow-up percent even if the study restricts enrollment to patients with a certain length of follow-up.

Be sure that reasons for exclusion are noted as well as any loss to follow-up after groups have been identified. Please be sure that the numbers “add-up” and that the % follow-up can be accurately determined. Please note that in a study which includes only patients with a certain length of follow-up, that those who have not been included are considered lost to follow-up.
Results—prognostic studies (maximum word count 150)

The EBJS format is intended to highlight the primary findings and provide an “at-a-glance” summary of pertinent data. This is accomplished via concise, streamlined text in combination with tables, standardized figures and/or diagrams. In general, the bulk of the results will be displayed in a figure, table or graph with very little text for the published portion. Text content should be limited for important explanation of results that are not immediately apparent from tables or graphs. Additional data and text may be provided for the web appendix. Please see example.

The results section should contain the following components:

- Patient characteristics
- Primary outcome results
- Secondary outcome results

Patient characteristics

A table summary (Table 1) of relevant demographic information, patient characteristics and factors which might logically influence outcomes must be provided. For example, factors might include the following:

Table 1. Example—Patient characteristics and prognostic factors.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N = 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (mean ± SD)</td>
<td>41.0 ± xx</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>18 (60)</td>
</tr>
<tr>
<td>Diabetes, n (%)</td>
<td>17 (57)</td>
</tr>
<tr>
<td>Current smoking, n (%)</td>
<td>10 (30)</td>
</tr>
<tr>
<td>Spondylosis, n (%)</td>
<td>8 (27)</td>
</tr>
<tr>
<td>Soft disc hernia &amp; spondylosis, n (%)</td>
<td></td>
</tr>
<tr>
<td>Radiculopathy, n (%)</td>
<td></td>
</tr>
<tr>
<td>Myelopathy, n (%)</td>
<td></td>
</tr>
<tr>
<td>Myeloradiculopathy, n (%)</td>
<td></td>
</tr>
<tr>
<td>Other clinical characteristic, n (%)</td>
<td></td>
</tr>
<tr>
<td>Levels treated, n (%)</td>
<td></td>
</tr>
</tbody>
</table>

For prognostic studies it is important to describe the primary factor you are exploring as well as other factors which may influence the outcome of interest. For instance, if the primary interest is exploring whether NSAID use delays or inhibits union, additional factors you may want to look at are age and smoking status as they may also be associated with these outcomes independent of NSAID use. These are potentially confounding factors, which may need to be controlled in analysis. A table describing the numbers of patients who had such factors may also be helpful.

Primary outcome results—prognostic studies

The results should focus on the primary study endpoint(s).
Typical outcomes results might include one or more of the following:

<table>
<thead>
<tr>
<th>Outcomes by type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional results</td>
<td>Walking range, return to work</td>
</tr>
<tr>
<td>Validated Outcomes scores</td>
<td>SF-36, ODI, see AOSpine books for other scores</td>
</tr>
<tr>
<td>Pain</td>
<td>VAS, Analgesic use</td>
</tr>
<tr>
<td>Radiographic findings</td>
<td>Bone healing, implant integrity, alignment</td>
</tr>
<tr>
<td>Complications</td>
<td>Infection, nonunion, unplanned return to OR, neurologic changes, death</td>
</tr>
<tr>
<td>Disease remission/recurrence</td>
<td>Survival time, return to OR, supplemental interventions</td>
</tr>
</tbody>
</table>

Brief bulleted text, which interprets and compliments information summarized in the tables, figures or diagrams should be provided. Text should provide a synthesis of the finding and not repeat all the data in the table or figure (see example).

An example of a table reporting findings from a prognostic study may look something like this. Sex, indication and neurologic involvement are evaluated as prognostic factors for heterotopic ossification (HO).

**Table 2. The risk (%) and unadjusted relative risk (RR) of HO by patient characteristic**

<table>
<thead>
<tr>
<th></th>
<th>n/N (%)</th>
<th>RR</th>
<th>95%CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4/12 (33.3)</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12/18 (66.7)</td>
<td>2.0</td>
<td>0.8, 4.7</td>
<td></td>
</tr>
<tr>
<td><strong>Indication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft disc hernia</td>
<td>8/17 (47.1)</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spondylosis</td>
<td>4/8 (50.0)</td>
<td>1.1</td>
<td>0.4, 2.5</td>
<td></td>
</tr>
<tr>
<td>Soft disc hernia &amp; spondylosis</td>
<td>3/5 (60.0)</td>
<td>1.3</td>
<td>0.5, 3.1</td>
<td></td>
</tr>
<tr>
<td><strong>Neurological involvement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiculopathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myelopathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myeloradiculopathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Secondary outcome results—prognostic studies**

Brief bulleted text which interprets and compliments information summarized in the tables, figures or diagrams should be provided.
Discussion—prognostic studies (maximum word count 180)

This section should briefly put your study in the context of previous studies and describe the primary strengths and limitations of your study. We suggest using bullet points to allow for more concise presentation of the key insights gained from your study.

- The first bullet or two should provide a brief, concise synthesis of what is known from previously published studies and how findings from your study compare
- A bullet briefly describing the primary strengths of your study
- A bullet briefly describing study limitations and as possible how they may have affected the results
- A bullet briefly addressing possible surprising findings in your study and list possible reasons
- A bullet providing salient clinical perspective (implications and applications)
- A bullet suggesting future research needs (optional)

Summary and Conclusion—prognostic studies (maximum word count 50 words)

This section should include only a brief summary of primary “take-home messages,” the evidence-based bottom line.

Web-based appendices—prognostic studies

The web-based appendices provide additional context, data and references that allow the interested reader to gain a deeper appreciation of the study and its details. Authors are encouraged to keep these brief while providing sufficient information that the study could be replicated.

Required components:
- PPO table: provide addition criteria for inclusion/exclusion (as shown above)
- Study protocol specifications for patient follow-up and technical/surgical procedures not fully described in manuscript
- Specific definitions of prognostic factors and how they were measured; some discussion on potentially confounding factors and how they were addressed
- Specific definitions of outcomes and how they were measured
- Sufficient detail on statistical methods and interpretation
- Additional data on secondary outcomes or sub-analyses not represented in table or figures in the main article but described in the results

Optional components:
- Additional background or discussion
- Additional information on devices, detailed technical or procedural aspects, descriptions of outcomes measures used, advanced statistical methods used
- Supplementary data or figures from subanalyses or additional outcomes
- Additional references
- Images, such as clinical pictures or radiographs
- Acknowledgements
4. Body of the Manuscript—treatment studies

Please note the maximum word count and formatting of text described in each section (see template).

Study rationale and context—treatment studies (maximum word count 50)

This section should briefly describe the context and rationale for the study and lead logically into the statement of the study objective. It is not intended to provide a lengthy background or history regarding the topic.

Objective/aim or clinical question—treatment studies (maximum word count 40)

This should be a very brief statement that encompasses the PICO concept:

| Patients: | What age, condition, diagnostic characteristics, etc. define the study population? | Patients less than 50 years old presenting with acute neurological deficit resulting from disc herniation |
| Interventions: | What treatment is being investigated? | Treatment A |
| Comparator: | To what is the investigational treatment being compared? | Treatment B |
| Outcome: | What is the primary study end-point or patient outcome on which the two treatments are to be compared? Is there a specific validated measure used? | Oswestry Disability Index (ODI) |

For example, here is how the objective might read:

- To compare Oswestry Disability Index (ODI) scores following treatment A with those following treatment B in patients less than 50 years old presenting with acute neurological deficit resulting from disc herniation.

This may take the form of a clinical question. For example:

- In elderly patients presenting with radiculopathy, is there a clinically significant difference in 12 month, post-surgical NDI scores between those treated with treatment A compared with treatment B?

You might visit the AOSpine's EBSS.live to see additional examples of PPO for prognostic studies as applied to already published research.

Methods—comparative studies of treatment (maximum word count 300–325)

Please follow the format below for this section:

- Study design (e.g. prospective cohort study)
- Objective/aim (clinical question, key question or hypothesis)
- Inclusion criteria
- Exclusion criteria
- Patient population, intervention and comparator
- Outcomes and analysis

For a study comparing treatments, there should be sufficient information regarding study design, inclusion/exclusion criteria, randomization method (including concealment of allocation) or protocols for assignment of treatment, protocol for evaluation of patients, measurement instruments for primary outcome or endpoints, length of follow-up for primary outcome and methods for statistical evaluation that would allow for replication of the study by another investigator.
The methods for each study accepted for publication will be independently reviewed and an overall “class of evidence” will be assessed based on methodological quality (See section on “independent methods evaluation” below). Authors should ensure that there is sufficient information in the submission (article and/or web appendix) that allows for this assessment. EBSJ strongly encourages authors to follow guidelines for reporting described by CONSORT and others to ensure the highest quality reporting. Selected references can be found at the end of this document.

The methods section must include the following information on the numbers of patients considered for and completing the study according to the following figure based on the CONSORT guidelines for reporting a therapeutic study. A template is available for you to enter the appropriate data and modify based on your study.

**Patient sampling and selection flow chart**

![Flowchart](image)

Assessed for eligibility
\( (n = \) \)

Enrollment
\( (n = \) \)

- Excluded \( (n = \) \
- Not meeting inclusion criteria \( (n = \) \
- Refused to participate \( (n = \) \
- Other reasons \( (n = \) \

Group or Treatment

Group A
\( (n = \) \\
If study is prospective or RCT complete the following, otherwise delete
- Received allocated intervention \( (n = \) 
- Did not receive allocated intervention \( (n = \) 
  - Give reasons

Lost to follow-up \( (n = \) 
  - Give reasons
  - Discontinued intervention \( (n = \) 
    - Give reasons

Analyzed \( (n = \) 
  - Excluded from analysis \( (n = \) 
    - Give reasons

Group B
\( (n = \) \\
If study is prospective or RCT complete the following, otherwise delete
- Received allocated intervention \( (n = \) 
- Did not receive allocated intervention \( (n = \) 
  - Give reasons

Lost to follow-up \( (n = \) 
  - Give reasons
  - Discontinued intervention \( (n = \) 
    - Give reasons

Analyzed \( (n = \) 
  - Excluded from analysis \( (n = \) 
    - Give reasons
Be sure that reasons for exclusion are noted as well as any loss to follow-up after groups have been identified. Please be sure that the numbers “add-up” and that the % follow-up can be accurately determined. Please note that in a study that includes only patients with a certain length of follow-up, that those who have not been included are considered lost to follow-up.

**Results—treatment studies (maximum word count 150)**

The EBSJ format is intended to highlight the primary findings and provide an “at-a-glance” summary of pertinent data. This is accomplished via concise, streamlined text in combination with tables, standardized figures and/or diagrams. In general, the bulk of the results will be displayed in a figure, table or graph with very little text for the published portion. Text content should be limited for important explanation of results that are not immediately apparent from tables or graphs. Additional data and text may be provided for the web appendix. Please see example.

The results section should contain the following components:

- Patient characteristics
- Primary outcome results
- Secondary outcome results

**Patient characteristics—treatment studies**

A table summary (Table 1) of relevant demographic information, patient characteristics and factors that might logically influence outcomes must be provided. For example, factors might include the following:

<table>
<thead>
<tr>
<th>Patient characteristics</th>
<th>Group A (n = )</th>
<th>Group B (n = )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years) (± sd)</td>
<td>55.6 (± 8.4)</td>
<td>59.3 (± 6.4)</td>
</tr>
<tr>
<td>Male (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current smoking (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASIA score (admission)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of levels involved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other baseline characteristic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For prognostic studies, instead of columns for each treatment, the characteristics of those who had the outcome of interest should be in the 1st column and those who didn’t have the outcome of interest would be in the 2nd column. Factors (exposures), including the primary factor being investigated should be listed in the rows.

**Primary outcome results—treatment studies**

Brief bulleted text, which interprets and compliments information summarized in the tables, figures or diagrams should be provided. Text should provide a synthesis of the finding and not repeat all the data in the table or figure (see example).

The results should focus on the primary study endpoint(s).
Typical outcomes results might include one or more of the following:

<table>
<thead>
<tr>
<th>Outcomes by type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional results</td>
<td>Walking range, return to work</td>
</tr>
<tr>
<td>Validated Outcomes scores</td>
<td>SF-36, ODI, see AOspine books for other scores</td>
</tr>
<tr>
<td>Pain</td>
<td>VAS, Analgesic use</td>
</tr>
<tr>
<td>Radiographic findings</td>
<td>Bone healing, implant integrity, alignment</td>
</tr>
<tr>
<td>Complications</td>
<td>Infection, nonunion, unplanned return to OR,</td>
</tr>
<tr>
<td></td>
<td>neurologic changes, death</td>
</tr>
<tr>
<td>Disease remission/recurrence</td>
<td>Survival time, return to OR, supplemental</td>
</tr>
<tr>
<td></td>
<td>interventions</td>
</tr>
</tbody>
</table>

Secondary outcome results—treatment studies

Brief bulleted text which interprets and compliments information summarized in the tables, figures or diagrams should be provided.

Discussion—treatment studies (maximum word count 180)

This section should briefly put your study in the context of previous studies and describe the primary strengths and limitations of your study. We suggest using bullet points to allow for more concise presentation of the key insights gained from your study.

- The first bullet or two should provide a brief, concise synthesis of what is known from previously published studies and how findings from your study compare
- A bullet briefly describing the primary strengths of your study
- A bullet briefly describing study limitations and as possible how they may have affected the results
- A bullet briefly addressing possible surprising findings in your study and list possible reasons
- A bullet providing salient clinical perspective (implications and applications)
- A bullet suggesting future research needs (optional)

Summary and Conclusion—treatment studies (maximum word count 50 words)

This section should include only a brief summary of primary “take home” messages, the evidence-based bottom line.

Web-based appendices—treatment studies

The web-based appendices provide additional context, data and references that allow the interested reader to gain a deeper appreciation of the study and its details. Authors are encouraged to keep these brief while providing sufficient information that the study could be replicated. The following are examples of additional information that might be available:
Required components:

- PICO table: provide addition criteria for inclusion/exclusion

<table>
<thead>
<tr>
<th>Included</th>
<th>Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients:</td>
<td></td>
</tr>
<tr>
<td>Intervention:</td>
<td></td>
</tr>
<tr>
<td>Comparator</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td></td>
</tr>
</tbody>
</table>

- Study protocol specifications for patient follow-up and technical/surgical procedures
- Specific definitions of outcomes and how they were measured
- Sufficient detail on statistical methods and interpretation
- Additional data on secondary outcomes or sub-analyses not represented in table or figures in the main article but described in the results

Optional components:

- Additional background or discussion
- Additional information on devices, detailed technical or procedural aspects, descriptions of outcomes measures used, advanced statistical methods used
- Supplementary data or figures from subanalyses or additional outcomes
- Additional references
- Images, such as clinical pictures or x-rays

5. Body of the Manuscript—other studies

If your original research manuscript does not fit into one of the two categories above (prognostic studies or treatment studies), it may still be of high interest to EBSJ. Please inquire at EBSJ@specri.com.

6. Figures and tables

Figures
Do not place author names in file names. Reviews must be blind.

Each figure must be its own file.

Color images are expensive to reproduce and cannot be accepted unless the author pays for the production costs incurred. We will convert color illustrations to black-and-white unless accompanied by a letter from the author requesting color and assuming responsibility for the cost of printing color. (Upon request, we will provide you with a cost estimate for the color printing.)

Figures must be cited sequentially in the text. Number all figures sequentially in the order they are cited in the text.
Figure captions

Figure captions should be written after the reference list. Insert a page break between the end of references and the start of figure captions.

Images must be at a resolution of **300 dpi in TIFF format** (save your JPEG files as TIFF files).

For a figure borrowed or adapted from another publication (used with permission), add a credit line in parentheses at the end of the figure legend. This credit line should be a complete bibliographic listing of the source publication (as for a reference), or other credit line as supplied by the copyright holder. For example, (Reprinted with permission from Calfee DR, Wispelwey B. Brain abscess. Semin Neurol 2000;20:357)

Tables

Do not place author names in file names. Reviews must be blind.

Each table must be its own file.

Data given in tables should be commented on but not repeated in the text.

Tables must be numbered in the same sequence they are cited in the text.

For tables borrowed or adapted from another publication, see second bullet point in Figure instructions.

Footnotes for tables should be indicated in the table using superscript symbols in the following order: * (asterix), † (dagger), ‡ (double dagger), § (section mark), || (parallel mark), ¶ (paragraph symbol), # (number sign), ** (asterix [repeated]), †† (dagger [repeated]).

Abbreviations used in the table should also be explained at the end of the table in footnotes.

Digital Art

Submit art created in Adobe Illustrator, version 4.0 or higher (for line art and labels); or Adobe Photoshop, version 7.0 or higher (for grayscale or color images).

Do not submit art created in MS Excel, MS Word, PowerPoint, Publisher, Lotus 1-2-3, Corel Draw, GIF, PICT, WMF, BMP, ONG, PCX, PNG, XBM. These files cannot be used by the typesetter, and the art will need to be scanned from the hardcopy.

All black-and-white **halftones** (grayscale) should be at a resolution of **300 dpi** (dots per inch) in TIFF format in final size.

All color artwork should be 300 dpi in TIFF format, CMYK, not RGB, in final size.

All drawn line art (no screens) should be 1200 dpi in EPS format in final size; all scanned line art should be 1200 dpi in TIFF format in final size.
It is preferable for figures to be **cropped to final size** (approximately 3 inches for a single column and up to 7 inches for a double column), or larger, and in the **correct orientation**. If art is submitted smaller and then has to be enlarged, its resolution (dpi) and clarity will decrease.

Do not compress files.

**Note:** Lower resolutions (less than 300 dpi) and JPEG format (.jpg extension) for grayscale and color artwork are strongly discouraged due to the poor quality they yield in printing, which requires 300 dpi resolution for sharp, clear, detailed images. JPEG format, by definition, is a lower resolution compressed format designed for quick upload on computer screens. If you must submit files that are JPEGs, save files as large as possible and to the highest resolution possible.

**Please follow these instructions when labeling electronic artwork:**

- For grayscale, color, and scanned TIFF line art files, **labels should be in an EPS file** linked to the TIFF file.
- For drawn line art (EPS files), **labels should be in the EPS file**.
- Avoid using multiple fonts and font sizes for the labels; use only one or two sizes of a serifen font. Do not use TrueType fonts. Be sure to provide all fonts you use.
- Capitalize the first word of each label and all proper nouns. Consider using all capitals if you need a higher level of labels.
- Where there are alternate terms or spellings for a named structure, use the most common one and make sure it is consistent with what is used in the text.
- Do not drop out a white label from a solid black background. Do not put type over shaded or dark areas.
- Arrows, asterisks, or arrowheads (or other markers) should be light on dark background or dark on light background in figures. Because figures often are reduced in size for publication, these markers will be reduced and the entire figure will become slightly darker; be sure the markers are large with enough contrast in the original.
- Use 1-point (or thicker) rules and leader lines. Avoid the use of finer lines—these may break up and disappear or not reproduce well after reduction.

**7. References (10 maximum recommended)**

References should be directly related to or quoted in the primary portion of the study report. It is suggested that they be limited to 10. Additional references may be listed in the web appendices. Authors are responsible for the accuracy of references.

The reference list follows the article text. Insert a page break between the end of text and the start of references.

Citations in the text **must** be sequential.

References **must** be listed in the order they appear in the text.

Use Index Medicus for journal title abbreviations.

Do not link citation numbers with references in the list.
References are in AMA style (see exceptions below).

By way of exception to AMA style, do not italicize book titles or journal title abbreviations and do not put a period at the end of a reference.

List all author names, up to and including six names. For more than six authors, list the first three followed by et al.

**Examples:**

Citing a journal article:

Citing a chapter in a book:

Citing a book:
Stryer L. Biochemistry. 2nd ed. San Francisco: WH Freeman; 1981:559–596

Citing a thesis:

Citing a government publication:

Citing an online article:

Citing a symposium article:
Eisenberg J. Market forces and physician workforce reform: why they may not work. Paper presented at: Annual Meeting of the Association of American Medical Colleges; October 28, 1995; Washington, DC

**8. The review process**

Again, EBSJ is unique in that all original research articles will be reviewed by Ph.D. methodological experts in clinical research as well as clinical peer reviewers. Authors are expected to respond to a review within one week.

Independent methods evaluation

The methodological aspects of the final original research article will be independently reviewed prior to publication and a class of evidence (CoE) rating given based on the criteria described below, which will be included in the published version. The criteria described below may assist authors in assuring that the manuscript describes the various methodological components.
**Definition of the different classes of evidence (CoE) for articles on prognosis or risk:**

<table>
<thead>
<tr>
<th>Class</th>
<th>Risk of bias</th>
<th>Study design</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| I       | Low risk:    | Good quality cohort* | • Prospective design  
• Patients at similar point in the course of their disease or treatment  
• F/U rate of ≥ 80%†  
• Patients followed long enough for outcomes to occur  
• Accounting for other prognostic factors‡ |
|         | Study adheres to commonly held tenets of high quality design, execution and avoidance of bias | Moderate quality cohort | • Prospective design, with violation of one of the other criteria for good quality cohort study  
• Retrospective design, meeting all the rest of the criteria in class I |
| II      | Moderately low risk: | Poor quality cohort | • Prospective design with violation of 2 or more criteria for good quality cohort, or  
• Retrospective design with violation of 1 or more criteria for good quality cohort  
• A good case-control study§  
• A good cross-sectional study** |
|         | Study has potential for some bias; does not meet all criteria for class I but deficiencies not likely to invalidate results or introduce significant bias | Good quality cohort case-control or cross-sectional study | • Other than a good case-control study  
• Other than a good cross-sectional study  
• Any case series†† design |
| III     | Moderately high risk: | Poor quality cohort | • Prospective design with violation of 2 or more criteria for good quality cohort, or  
• Retrospective design with violation of 1 or more criteria for good quality cohort  
• A good case-control study§  
• A good cross-sectional study** |
|         | Study has flaws in design and/or execution that increase potential for bias that may invalidate study results | Good quality cohort case-control or cross-sectional study | • Other than a good case-control study  
• Other than a good cross-sectional study  
• Any case series†† design |
| IV      | High risk:   | Poor quality case-control or cross-sectional Case series§ | • Other than a good case-control study  
• Other than a good cross-sectional study  
• Any case series†† design |

*Cohort studies follow individuals with the exposure of interest over time and monitor for occurrence of the outcome of interest.

†Applies to cohort studies only.

‡Authors must consider other factors that might influence patient outcomes and should control for them if appropriate.

§A good case-control study must have the all of the following: all incident cases from the defined population over a specified time period, controls that represent the population from which the cases come, exposure that precedes an outcome of interest, and accounting for other prognostic factors.

**A good cross-sectional study must have all of the following: a representative sample of the population of interest, an exposure that precedes an outcome of interest (e.g., sex, genetic factor), an accounting for other prognostic factors, and for surveys, at least a 80% return rate.

††A case-series design for prognosis is one where all the patients in the study have the exposure of interest. Since all the patients have the exposure, risks of an outcome can be calculated only for those with the exposure, but cannot be compared with those who do not have the exposure. For example, a case-series evaluating the effect of smoking on spine fusion that only recruits patients who smoke can simply provide the risk of patients who smoke that result in pseudarthrosis but cannot compare this risk to those that do not smoke.
Definition of the different classes of evidence (CoE) for articles on therapy:

<table>
<thead>
<tr>
<th>Class</th>
<th>Bias Risk</th>
<th>Study design</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| I     | Low risk: | Good quality RCT | • Random sequence generation  
• Allocation concealment  
• Intent-to-treat analysis  
• Blind or independent assessment for important outcomes  
• Co-interventions applied equally  
• F/U rate of 80%+  
• Adequate sample size |

| II    | Moderately low risk: | Moderate or poor quality RCT  
Good quality cohort | • Violation of one of the criteria for good quality RCT  
• Blind or independent assessment in a prospective study, or use of reliable data* in a retrospective study  
• Co-interventions applied equally  
• F/U rate of 80%+  
• Adequate sample size  
• Controlling for possible confounding† |

| III   | Moderately High risk: | Moderate or poor quality cohort  
Case-control | • Violation of any of the criteria for good quality cohort  
• Any case-control design |

| IV    | High risk: | Case series | • Any case series design |

*Outcome assessment is independent of healthcare personnel judgment. Reliable data are data such as mortality or re-operation.
†Authors must provide a description of robust baseline characteristics, and control for those that are unequally distributed between treatment groups.
9. Selected references

Several guidelines have been published to assist writers to publish high-quality papers based on their clinical research studies. Information is available either through websites dedicated to these guidelines or through published articles.

For randomized controlled trials:

CONSORT (Consolidated Standards of Reporting Trials)
- [http://rctbank.ucsf.edu/consort/cplus.html](http://rctbank.ucsf.edu/consort/cplus.html)

For observational studies including cohort studies:

STROBE (Strengthening the Reporting of Observational Studies in Epidemiology)
- [http://www.strobe-statement.org](http://www.strobe-statement.org)

A more general set of guidelines:

SQUIRE (Standards for Quality Improvement Reporting Excellence)
- [http://www.squire-statement.org/resources/](http://www.squire-statement.org/resources/)

10. Font, spacing, and page numbering

All submitted manuscripts must be typed double spaced in 12 point font in Times or Times New Roman and formatted for standard 8.5” x 11” or DIN A4 (21 x 29.7 cm) paper.

Please format the manuscript to include line numbers and page numbers.