

## Global Spine Journal Author Instructions

Thank you for contributing to *Global Spine Journal*. Please read the instructions carefully and observe all the directions given. Failure to do so may result in unnecessary delays in publishing your article.

APC Type	2015 Article Publishing Charge (APC)	2016 Article Publishing Charge (APC)
Regular	\$1,500 – paid upon acceptance if author chooses to publish	\$1,522 – paid upon acceptance if author chooses to publish
AOSpine Member	none (society funded)	none (society funded)

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### SUBMISSION CHECKLIST

All manuscripts must be submitted at the following link:

<http://www.editorialmanager.com/gsj/>

- AUTHOR INFORMATION**
  - All authors: full name, degrees, department, affiliation, e-mail address
  - Corresponding author: mailing address, telephone number
- MANUSCRIPT FILE**
  - Must be digital - hard copy submissions are not accepted
- ABSTRACT AND KEYWORDS**
  - See the section Article Types for word limit
- DISCLOSURES**
  - Every named author must disclose their conflicts or lack thereof and fill out [the ICMJE form](#)
- REFERENCES**
  - Cited sequentially in AMA style
- FIGURES AND TABLES**
  - Cited sequentially and included in the main document in TIFF or JPEG format; files saved and submitted separately
- ART FILES**
  - Must be saved separately from the main document
- PERMISSIONS**
  - Required if you plan to reproduce content from a published source or include a photograph of a patient
  - Patient permission form included at the end of this document

## CONTENTS

<b>MANUSCRIPT FORMAT</b> -----	<b>3-6</b>
Article Types -----	3
General Guidelines -----	4
Title Page -----	4
Abstract and Keywords -----	4
Main Document -----	4
Acknowledgments -----	4
Disclosures -----	5
References -----	6
Figure Captions -----	6
Tables -----	7
<b>DIGITAL ARTWORK PREPARATION</b> -----	<b>7</b>
General Guidelines -----	7
Black and White Art -----	7
Color Art -----	7
Art Labels -----	7
<b>SUBMISSION PROCEDURE</b> -----	<b>8</b>
Article Publishing Charge -----	8
Submission Procedure -----	8
Revision Procedure -----	8
<b>PRODUCTION PROCEDURE</b> -----	<b>8</b>
Page Proofs -----	8
<b>POLICY STATEMENTS</b> -----	<b>9</b>
Statement on Liability -----	9
Definition of Authorship -----	9
Copyright Statement -----	9
Statement of Ethics -----	9
Patient Permission Policy -----	9
<b>EDITORIAL CONTACTS</b> -----	<b>10</b>
<b>PATIENT PERMISSION FORM</b> -----	<b>11</b>
<b>EVIDENCE-BASED SPINE-CARE JOURNAL INSTRUCTIONS</b> -----	<b>12</b>

## MANUSCRIPT FORMAT

### Article Types

The following graph shows what types of articles are accepted for publication, and what requirement they may have. Case Reports are no longer accepted for Global Spine Journal (GSJ) and Evidence-Based Spine-Care Journal (EBSJ) section.

Article Type	Abstract Limit	Keywords Limit	Title Limit
Original Article	Up to 250 words	4 to 8 keywords	No limit
Letter to the Editor	Up to 250 words	4 to 8 keywords	No limit
Invited Review	Up to 250 words	4 to 8 keywords	No limit
Technical Report	Up to 250 words	4 to 8 keywords	No limit
Review	Up to 250 words	4 to 8 keywords	No limit
Cervical Special Issue	Up to 250 words	4 to 8 keywords	No limit
EBSJ Original Research	Up to 250 words	4 to 8 keywords	No limit
EBSJ Systematic Review	Up to 250 words	4 to 8 keywords	No limit

### General Guidelines

- You must submit a digital copy of your manuscript. Hard copy submissions are not accepted.
- Keep the format of your manuscript simple and clear. We will set your manuscript according to our style—do not try to “design” the document.
- The manuscript, including the title page, abstract and keywords, text, references, figure captions, and tables should be typewritten, double-spaced in 12-point font with 1-inch margins all around and saved as one file.
- Each figure or table should be saved as its own separate file. Do not embed figures and/or tables within the manuscript file. This requires special handling by Thieme’s Production Department.
- Keep abbreviations to a minimum and be sure to explain all of them the first time they are used in the text.
- The manuscripts should be written in American English.
- The authors should use Système International (SI) measurements. For clarity, nonmetric equivalents may be included in parentheses following the SI measurements.

- Use generic names for drugs. You may cite proprietary names in parentheses along with the name and location of the manufacturer.
- Credit suppliers and manufacturers of equipment, drugs, and other brand-name material mentioned in the manuscript within parentheses, giving the company name and primary location.

### **Title Page**

- This journal adheres to a double-blinded peer-review policy. The title page should be submitted separately from the main document, as its own file to ensure the blind peer review process.
- Do not put any identifying information into your main document (no emails, phone numbers, affiliations, names, etc.). Put it only on the title page.
- The title page should list the article title and the corresponding author's full name, degree, title, department, affiliation, mailing address, e-mail address, and telephone and fax numbers. It should also list the full name, degree, title, department, and affiliation of every co-author.

### **Abstract and Keywords**

See the section Article Types for word limits.

The abstract should briefly outline the content of the article and any conclusions it may reach. This journal requires a structured abstract that must contain the following elements:

- Study Design (maximum **five (5)** keywords) (e.g. Study Design: Retrospective Cohort Study; Study Design: Randomized Control Trial; Study Design: Systematic Review)
- Objective;
- Methods;
- Results;
- And Conclusions.

The keywords should be words a reader would be likely to use in searching for the content of the article.

### **Main Document**

- Please clearly distinguish the hierarchy of headings within the manuscript by using capital letters, underline, italic, and bold styles as necessary.
- As needed, use italic, superscripts, subscripts, and boldface, but otherwise do not use multiple fonts and font sizes.
- Do not insert page or section breaks except where noted in the Author Instructions.
- Use hard returns (the Enter key) only at the end of a paragraph, not at the end of a line. Allow lines of text to break automatically in your word-processing software. Do not justify your text.
- Use only one space, not two, after periods.

### **Acknowledgments**

The source of any financial support received, any conflicts of interest to report, and recognition of personal assistance for the work being published should be indicated at the end of the article, just before the Reference section, under the heading Acknowledgments. If there are no acknowledgments, please clearly state this on title page.

## Disclosures

It is required that a list of disclosures from every named author is submitted alongside the manuscript. In it, each author should identify any financial or non-financial conflicts relevant to the article. If no conflicts exist, please state so in this section. Global Spine Journal will only accept the ICMJE Disclosure Form.

Types of conflicts include: Consulting, Royalties, Research Support, Institutional Support, Ownership, Stock/Options, Speakers Bureau, and Fellowship Support. Any commercial entity whose products are described, reviewed, evaluated, or compared in the manuscript, except for those disclosed in the Acknowledgments section, are potential conflicts.

All authors must fill out the ICMJE Disclosure Form and submit it with their manuscript. This form can be downloaded at <http://www.icmje.org/conflicts-of-interest/>. Each form must be uploaded as separate files.

## References

References should be the most recent and pertinent literature available. It is essential that they are complete and thoroughly checked. If the reference information is incomplete, good online sites to search for full details are the National Library of Medicine: [www.nlm.nih.gov](http://www.nlm.nih.gov); Books in Print: [www.booksinprint.com](http://www.booksinprint.com); PubMed: [www.ncbi.nlm.nih.gov/PubMed/](http://www.ncbi.nlm.nih.gov/PubMed/); or individual publisher Web sites.

- References must be listed in AMA style, using Index Medicus journal title abbreviations.
- References follow the article text. Insert a page break between the end of text and the start of references.
- References must be cited sequentially (NOT alphabetically) in the text using superscript numbers.
- 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.
- References should be styled per the following examples:
  1. Citing a journal article:  
Newburger JW, Takahashi M, Burns JC, et al. The treatment of Kawasaki syndrome with intravenous gamma-globulin. *N Engl J Med* 1986;315:341–347
  2. Citing a chapter in a book:  
Toma H. Takayasu's arteritis. In: Novick A, Scoble J, Hamilton G, eds. *Renal Vascular Disease*. Philadelphia: WB Saunders; 1995:47–62
  3. Citing a book:  
Stryer L. *Biochemistry*. 2nd ed. San Francisco: WH Freeman; 1981:559–596
  4. Citing a thesis:  
Stern I. Hemorrhagic Complications of Anticoagulant Therapy [Ph.D. dissertation]. Evanston, IL: Northwestern University; 1994
  5. Citing a government publication:  
Food and Drug Administration. Jin Bu Huan Herbal Tablets. Rockville, MD: National Press Office; April 15, 1994. Talk Paper T94-22

6. Citing an online article:

Rosenthal S, Chen R, Hadler S. The safety of acellular pertussis vaccine vs whole-cell pertussis vaccine [abstract]. *Arch Pediatr Adolesc Med* [serial online]. 1996;150:457–460. Available at: [http://www.ama-assn.org/sci-pubs/journals/archive/ajdc/vol\\_150/no\\_5/abstract/htm](http://www.ama-assn.org/sci-pubs/journals/archive/ajdc/vol_150/no_5/abstract/htm). Accessed November 10, 1996

7. 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

### Figure Captions

- Figures include photographs or radiographs, drawings, graphs, bar charts, flow charts, and pathways, but NOT lists or tables. They must be uploaded as separate files in TIFF or JPEG format.
- Figures must be cited sequentially in the text. Number all figures (and corresponding figure captions) sequentially in the order they are cited in the text.
- Figure legends must be included after the reference list for all figures. Insert a page break between the end of references and the start of figure legends.
- Figure legends should include a description of the figure and/or each lettered part (A, B, etc.) and of any portions of the figure highlighted by arrows, arrowheads, asterisks, etc.
- For a figure borrowed or adapted from another publication (used with permission), add a credit line in parentheses at the end of each figure legend. This credit line should be a complete bibliographic listing of the source publication (as 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

- Tables should be created using the “Table” function in word-processing program.
- Data given in tables should be commented on but not repeated in the text. Be sure that lists or columns of related data are composed in a word-processing program like the rest of the text.
- Do not intersperse tables in the text. Tables should appear after the figure captions. Insert a page break between the end of the figure captions and the start of the tables.
- Tables must be double-spaced and numbered in the same sequence they are cited in the text. A short descriptive title should be provided for each table.
- If a table contains artwork, supply the artwork separately as a digital file.
- For tables borrowed or adapted from another publication (used with permission), add a credit line as the first footnote beneath each table. This credit line should be a complete bibliographical listing of the source publication (as 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.” (“Data from . . .” or “Adapted from . . .” may also be used, as appropriate.)
- Other footnotes for tables should be indicated in the table using superscript letters in alphabetical order.
- Any abbreviations used in the table should be explained at the end of the table in a footnote.
- All figure legends must be uploaded before figures.
- All figures and tables must be uploaded as separate files.

## DIGITAL ARTWORK PREPARATION

### General Guidelines

- All lateral radiograph images must be left facing.
- It is best to use Adobe Photoshop to create and save images, and Adobe Illustrator for line art and labels.
- Do not submit art created in Microsoft Excel, Word, or PowerPoint. These files cannot be used by the typesetter.
- Save each figure in a separate file.
- Do not compress files.
- All black-and-white and color artwork should be at a resolution of 300 dpi (dots per inch) in TIFF or JPEG format. Line art should be 1,200 dpi in EPS or TIFF format. Contact the Production Editor at Thieme if you are unsure of the final size.
- It is preferable for figures to be cropped to their final size (approximately 3½ 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.

**Note:** Lower resolutions (less than 300 dpi) 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.

### Black-and-White Art

- Black-and-white artwork can be halftone (or grayscale) photographs, radiographs, drawings, line art, graphs, and flowcharts. Thieme will only accept digital artwork.
- If possible, do not send color art for conversion to black-and-white. Do the conversion yourself so that you can check the results and confirm in advance that no critical details are lost or obscured by the change to black-and-white.
- For best results, line art should be black on a white background. Lines and type should be clean and evenly dark. Avoid screens or cross-hatching, as they can darken or be uneven in printing and lead to unacceptable printing quality.

### Color Art

- All color artwork should be saved in CMYK, not RGB.

### Art Labels

- Arrows, asterisks, and arrowheads (or other markers) should be white in dark or black areas and black in light or white areas, and large in size. If not, these highlighting marks may become difficult to see when figures are reduced in size during the typesetting process.
- Use 1-point (or thicker) rules and leader lines.
- 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.
- Avoid using multiple fonts and font sizes for the labels; use only one or two sizes of a serif font.

## **SUBMISSION PROCEDURE**

### **Article Publishing Charge (APC)**

During the submission process, you will be prompted to confirm that you accept to pay the APC if your manuscript should be chosen for publication. Please refer to the first page of this document for the exact pricing. You will be billed based on the year in which you submitted your manuscript, but you will not receive the bill until and unless your manuscript has been accepted for publication.

### **Submission Procedure**

- Consult the checklist on the first page of this document to ensure that you are ready to submit your manuscript.
- Manuscripts must be submitted electronically at the following link:  
<http://www.editorialmanager.com/gsj/>
- Always review your manuscript before submitting it. You may stop a submission at any phase and save it to submit later. After submission, you will receive a confirmation email. You can also check the status of your manuscript by logging in to the submission system. The Editor in Chief will inform you via email once a decision has been made.

### **Revision Procedure**

- Should the editors decide that your article requires a revision, you will need to make the changes via a word-processing program and resubmit it electronically.
- Log In to the submission system and find your article, which will be marked for revision.
- The best way to make revisions to your manuscript is by enabling the Track Changes mode in Microsoft Word, which will automatically highlight and mark up revised text. Please submit both a marked up copy and a clean copy of your revised manuscript to the submission system.
- Your original files will still be available after you upload your revised manuscript, so you should delete any redundant files before completing the submission.
- You will also be provided space in which to respond to the reviewers' and editors' comments. Please be as specific as possible in your response.

## **PRODUCTION PROCEDURE**

### **Page Proofs**

Page proofs will be sent to you via email. The proofs will be in a PDF file format, which should be opened using Acrobat Reader software. You will receive further instructions with your proofs. Take this opportunity to check the typeset text for typographic and related errors. Elective alterations are difficult to accommodate owing to the associated time and expense of introducing them. Therefore, please be sure that when you submit your manuscript, it is accurate, complete, and final.

## POLICY STATEMENTS

### Statement on Liability

The legislation on product liability makes increased demands on the duty of care to be exercised by authors of scientific research and medical publications. This applies in particular to papers and publications containing therapeutic directions or instructions and doses or dosage schedules. We therefore request you to examine with particular care, also in your own interest, the factual correctness of the contents of your manuscript once it has been copyedited and returned to you in the form of galley proofs. The responsibility for the correctness of data and statements made in the manuscript rests entirely with the author.

### Definition of Authorship

Authorship credit should be based on criteria established by the [International Committee of Medical Journal Editors](#). Each author should have made the following contributions towards the completion of the manuscript:

1. Substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data
2. Drafting the article or revising it critically for important intellectual content
3. Final approval of the version to be published

### Copyright Statement

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### Statement of Ethics

This journal adheres to the ethical standards described by the [Committee on Publication Ethics](#) and the [International Committee of Medical Journal Editors](#). Authors are expected to adhere to these standards.

For all manuscripts reporting data from studies involving human or animal participants, formal review and approval, or formal review and waiver (exemption), by an appropriate institutional review board (IRB) or ethics committee is required, as well as any necessary HIPAA consent, and should be described in the Methods section with the full name of the reviewing entity. All clinical trials must be registered in a public trials registry. Denote the registry and registry number.

## **Patient Permission Policy**

You must obtain a signed patient permission form for every patient whose recognizable photograph will be used. If you do not supply this, the identity of the patient must be obscured before the image is published; this could interfere with the instructive value of the photograph. Attached below is a sample patient permission form/statement of consent.

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## Statement of Consent

The use of images (and videos) is essential for the progress of science and medical and dental treatment.

For this reason, I hereby grant my consent for Thieme Medical Publishers, Inc. and other publishing houses to use all images and videos produced as a result of my treatment for scientific or educational purposes, even though my identity/my child's identity may be recognized. This includes the publication and reproduction in scientific journals, textbooks, scientific documentation, and electronic media forms (e.g. educational film, CD-ROM, DVD, electronic paper, databases, internet, etc.) This also includes usage as a cover illustration or for advertisement of such publications.

I also grant consent to link the illustrations with the clinical picture and medical therapy.

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City

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Date

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Signature

\_\_\_\_\_  
Signature of Legal Representative (if applicable)

To be filled in by the author:

**Name of author:**

**Journal:**

**Title of Manuscript:**

**Manuscript no. (if applicable):**

Please complete the form and submit it online with your manuscript or return it to the publisher via email/fax (see Author Instructions - Editorial Contacts).

## **Evidence-Based Spine-Care Journal (EBSJ) Author Instructions**

### **EBSJ Systematic reviews (EBSJ-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 [globalspinejournal@aospine.org](mailto:globalspinejournal@aospine.org).

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

Evidence-Based Spine-Care Journal (EBSJ) is a leading edge journal dedicated to finding, describing and developing the highest quality evidence. This peer-reviewed journal sets the stage for evidence-based practice and will influence the future of spine surgery for years to come. EBSJ focuses on comparative studies of effectiveness and seeks to stimulate further areas of high-quality spine-related research.

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.

EBSJ Author Instructions—Original Research Articles

### **Detailed specifications 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 blind peer-review.

### **Original research article components**

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

### **Title Page**

- This journal adheres to a double-blinded peer-review policy. The title page should be submitted separately from the main document, as its own file to ensure the blind peer review process.
- Do not put any identifying information into your main document (no emails, phone numbers, affiliations, names, etc.). Put it only on the title page.

- The title page should list the article title and the corresponding author's full name, degree, title, department, affiliation, mailing address, e-mail address, and telephone and fax numbers. It should also list the full name, degree, title, department, and affiliation of every co-author.

**Abstract and Keywords**

See the section Article Types for word limits.

The abstract should briefly outline the content of the article and any conclusions it may reach. This journal requires a structured abstract that must contain the following elements:

- Study Design (limit to a few keywords);
- Objective;
- Methods;
- Results;
- and Conclusions.

The keywords should be words a reader would be likely to use in searching for the content of the article.

**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:

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

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

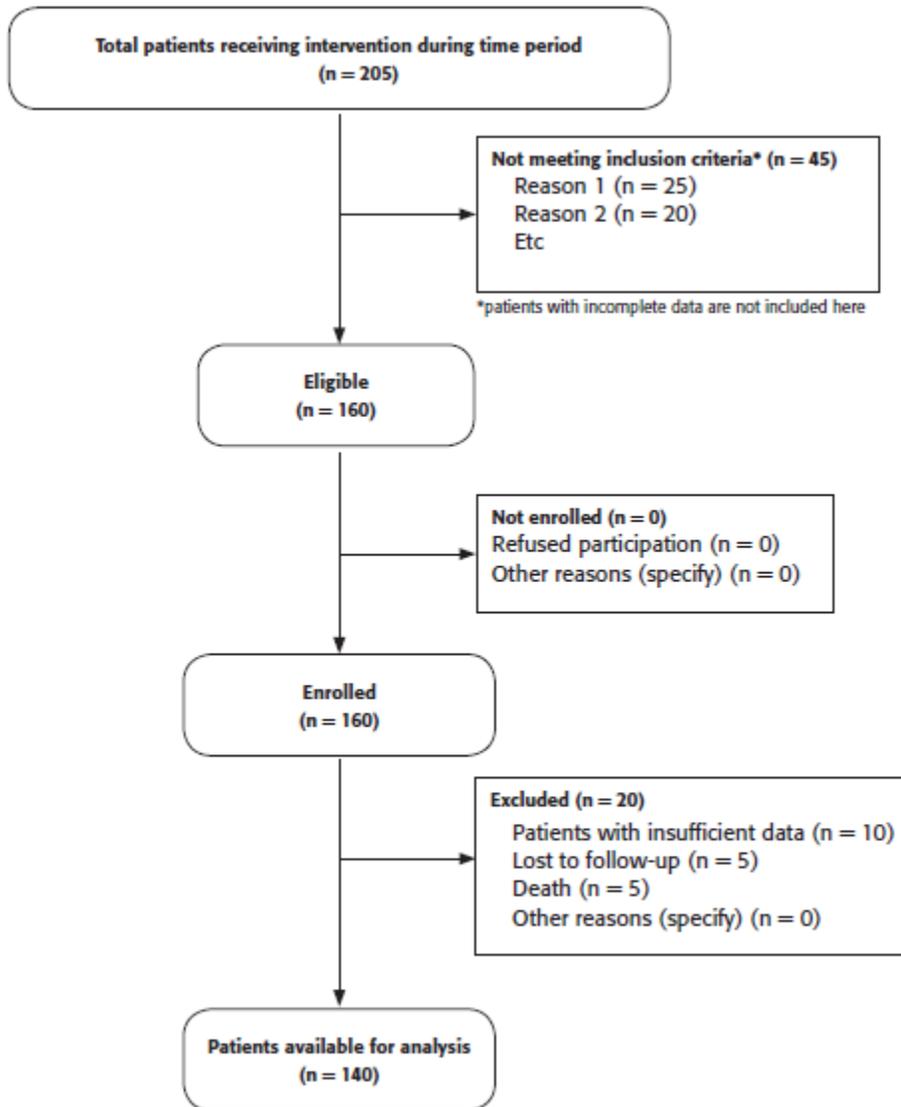
A brief description of treatment characteristics (type, duration etc.) should be provided. Remember that additional detailed information for this section can be included in the web appendix.

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.

**Figure 1. Patient sampling and selection**



\* 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**

	N = 30
Age, years (mean ± SD)	41.0 ± xx
Male, n (%)	18 (60)
Diabetes, n (%)	17 (57)
Current smoking, n (%)	10 (30)
Spondylosis, n (%)	8 (27)
Soft disc hernia & spondylosis, n (%)	
Radiculopathy, n (%)	
Myelopathy, n (%)	
Myeloradiculopathy, n (%)	
Other clinical characteristic, n (%)	
Levels treated, n (%)	

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:

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

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

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

### 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

## Body of the Manuscript—treatment studies

Please note the maximum word count and formatting of text described in each section.

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:

		EXAMPLE
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
Intervention:	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**



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:

Patient characteristics	Group A (n = )	Group B (n = )
Mean age (years) (± sd)	55.6 (± 8.4)	59.3 (± 6.4)
Male (%)		
Diabetes (%)		
Current smoking (%)		
ASIA score (admission)		
Number of levels involved		
other baseline characteristic		

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:

Outcomes by type	Examples
Functional results	Walking range, return to work
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Pain	VAS, Analgesic use
Radiographic findings	Bone healing, implant integrity, alignment
Complications	Infection, nonunion, unplanned return to OR, neurologic changes, death
Disease remission/recurrence	Survival time, return to OR, supplemental interventions

### **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

	Included	Excluded
Patients:		
Intervention:		
Comparator		
Outcome		

- 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

### **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 [globalspinejournal@aospine.org](mailto:globalspinejournal@aospine.org).

### **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 blind 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:

		Studies of Prognosis	
Class	Risk of bias	Study design	Criteria
I	<b>Low risk:</b>  Study adheres to commonly held tenets of high quality design, execution and avoidance of bias	Good quality cohort*	<ul style="list-style-type: none"> <li>• Prospective design</li> <li>• Patients at similar point in the course of their disease or treatment</li> <li>• F/U rate of <math>\geq 80\%</math><sup>†</sup></li> <li>• Patients followed long enough for outcomes to occur</li> <li>• Accounting for other prognostic factors<sup>‡</sup></li> </ul>
II	<b>Moderately low risk:</b>  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	Moderate quality cohort	<ul style="list-style-type: none"> <li>• Prospective design, with violation of one of the other criteria for good quality cohort study</li> <li>• Retrospective design, meeting all the rest of the criteria in class I</li> </ul>
III	<b>Moderately high risk:</b>  Study has flaws in design and/or execution that increase potential for bias that may invalidate study results	Poor quality cohort Good quality case-control or cross-sectional study	<ul style="list-style-type: none"> <li>• Prospective design with violation of 2 or more criteria for good quality cohort, or</li> <li>• Retrospective design with violation of 1 or more criteria for good quality cohort</li> <li>• A good case-control study<sup>§</sup></li> <li>• A good cross-sectional study<sup>**</sup></li> </ul>
IV	<b>High risk:</b>  Study has significant potential for bias; does not include design features geared toward minimizing bias and/or does not have a comparison group	Poor quality case-control or cross-sectional Case series <sup>§</sup>	<ul style="list-style-type: none"> <li>• Other than a good case-control study</li> <li>• Other than a good cross-sectional study</li> <li>• Any case series<sup>††</sup> design</li> </ul>

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

<sup>†</sup>Applies to cohort studies only.

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

<sup>§</sup>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.

<sup>\*\*</sup>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.

<sup>††</sup>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:

Class	Bias Risk	Studies of Therapy	
		Study design	Criteria
<b>I</b>	<b>Low risk:</b>  Study adheres to commonly held tenets of high quality design, execution and avoidance of bias	Good quality RCT	<ul style="list-style-type: none"> <li>• Random sequence generation</li> <li>• Allocation concealment</li> <li>• Intent-to-treat analysis</li> <li>• Blind or independent assessment for important outcomes</li> <li>• Co-interventions applied equally</li> <li>• F/U rate of 80%+</li> <li>• Adequate sample size</li> </ul>
<b>II</b>	<b>Moderately low risk:</b>  Study has potential for some bias; study does not meet all criteria for class I, but deficiencies not likely to invalidate results or introduce significant bias	Moderate or poor quality RCT Good quality cohort	<ul style="list-style-type: none"> <li>• Violation of one of the criteria for good quality RCT</li> <li>• Blind or independent assessment in a prospective study, or use of reliable data* in a retrospective study</li> <li>• Co-interventions applied equally</li> <li>• F/U rate of 80%+</li> <li>• Adequate sample size</li> <li>• Controlling for possible confounding<sup>†</sup></li> </ul>
<b>III</b>	<b>Moderately High risk:</b>  Study has significant flaws in design and/or execution that increase potential for bias that may invalidate study results	Moderate or poor quality cohort Case-control	<ul style="list-style-type: none"> <li>• Violation of any of the criteria for good quality cohort</li> <li>• Any case-control design</li> </ul>
<b>IV</b>	<b>High risk:</b>  Study has significant potential for bias; lack of comparison group precludes direct assessment of important outcomes	Case series	<ul style="list-style-type: none"> <li>• Any case series design</li> </ul>

\*Outcome assessment is independent of healthcare personnel judgment. Reliable data are data such as mortality or re-operation.

<sup>†</sup>Authors must provide a description of robust baseline characteristics, and control for those that are unequally distributed between treatment groups.

## 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://www.consort-statement.org/>
- <http://rctbank.ucsf.edu/consort/cplus.html>
- EQUATOR is associated with educational efforts and the CONSORT guidelines: <http://www.equatornetwork.org/resource-centre/library-of-health-research-reporting/>
- Altman DG, Schulz KF, Moher D, et al. The revised CONSORT statement for reporting randomized trials: explanation and elaboration. *Ann Intern Med* 2001;134(8):663–694
- Ioannidis JP, Evans SJ, Gotzsche PC, et al. Better reporting of harms in randomized trials: an extension of the CONSORT statement. *Ann Intern Med* 2004;141(10):781–788
- Piaggio G, Elbourne DR, Pocock SJ, Evans SJ, Altman DG. Reporting of noninferiority and equivalence randomized trials: extension of the CONSORT 2010 statement. *JAMA* 2012;308(24):2594–2604

For observational studies including cohort studies:

**STROBE** (Strengthening the Reporting of Observational Studies in Epidemiology)

- <http://www.strobe-statement.org>
- Vandembroucke JP, von Elm E, Altman DG, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. PLoS Med 2007;4(10):e297
- von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandembroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. PLoS Med 2007;4(10):e296

A more general set of guidelines:

**SQUIRE** (Standards for Quality Improvement Reporting Excellence)

- <http://www.squire-statement.org/resources/>
- Ogrinc G, Mooney SE, Estrada C, et al. The SQUIRE (Standards for Quality Improvement Reporting Excellence) guidelines for quality improvement reporting: explanation and elaboration. Qual Saf Health Care 2008;17 Suppl 1:i13-32

### **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.